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U.S. Homeowners Insurance Rate Regulation–A Regulatory Perspective

Regulation, Consumer Protection, and Market Dynamics in the Modern Era

Casualty Actuarial and Statistical (C) Task Force

2026

Executive Summary

Insurance regulators are frequently asked if a multi-state insurer could try to charge more premium to homeowners in a state with lower risk of natural disasters to make up for heavy losses in a state with higher risk. This paper addresses this scenario, commonly referred to as "cross-state subsidization" and concludes that, under the state-based system of insurance regulation, homeowners rates are designed and reviewed to reflect the expected future cost of risk in the state where the policy is written, not to intentionally and systematically shift costs from one state's policyholders to another's.

State insurance regulators protect consumers by requiring insurers to justify rates with state-specific data and actuarial analysis. Although the regulatory framework varies by state, insurance rates are generally subject to standards requiring that they not be excessive, inadequate, or unfairly discriminatory. Actuaries evaluate data, assumptions, and methods used to estimate future losses, including inflation, catastrophe risk, and reinsurance costs. Although not all state laws require actuaries to be involved in the development of filed rates, state insurance laws or regulations often include language mandating that proposed rates be "actuarially sound" or justified by data that is "actuarially credible". Regulators assess rate filing support and its adherence to the Actuarial Standards of Practice (ASOPs) promulgated by the Actuarial Standards Board (ASB) and alignment with the Casualty Actuarial Society's (CAS) Statement of Principles Regarding Property and Casualty Insurance Ratemaking. Regulators also oversee how



insurers classify risk, ensuring that price differences are tied to real differences in risk and are not arbitrary or unfair.

The existing U.S. regulatory frameworks are designed to constrain cross-state subsidization with the help of laws, actuarial standards, and markets.

So how would those legal, actuarial, and market challenges play out in the real world for our hypothetical multi-state insurer attempting cross-state subsidization?

First, insurers support their homeowners rates with state-specific data and actuarial analysis showing that the rates reflect the expected future cost to cover insured homes in that state.

Regulators review rate filings to identify anything unsupported or inconsistent with the state's actual risk and can challenge the rate, require revisions, or reject the filing altogether. Depending on the state, this process can happen before and/or after the rates go into effect. If an insurer inflates rates to account for losses in another state, it will show up in this review in inflated loss projections, excessive catastrophe loadings, or unsupported expenses.

Regulators look for mismatches between the risk in the state and the costs built into the rate. For example, if an insurer tried to hide cross-state subsidization by charging certain groups more without a risk-based reason, that would likely be deemed excessive or unfairly discriminatory and disallowed.

Second, oversight continues after rates take effect. Follow-up spot checks by regulators verify insurers are treating their customers fairly and help ensure insurers are actually charging the filed rates, not deviating from what was approved. Even if a rate filing is approved, companies could misapply rating factors, overcharge specific consumers, or use unfiled surcharges. Market conduct exams can catch real-world deviations and protect consumers by, for example, requiring consumer refunds, imposing fines or penalties, or requiring changes to rating practices. When a state takes regulatory action against an insurer as a result of a market conduct exam, it notifies regulators in other states where that insurer does business.

Third, competitive market pressures act as a backstop. Insurers that price above the risk of the market *in that state* will lose business to competitors *in that state*, making it difficult to sustain rates that are artificially high.

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These safeguards help explain why any attempts at cross-state subsidization would face several structural layers of protection designed to prevent them. Premiums are forward-looking estimates of future costs, not a way to recover past losses. Differences across states reflect local risks, timing, data limitations, coverage requirements, legal or regulatory requirements, or broader economic factors like inflation and reinsurance, not cross-state cost shifting. While major disasters *can* indirectly affect costs nationwide by raising rebuilding costs due to higher costs of materials and labor, or reinsurance prices, those are market-wide effects, not insurers shifting losses from one state to another.

In short, the regulatory system exists so that if an insurer tried to make one state pay for another, multiple layers of regulatory review are designed to catch it.

Overall, this paper concludes that state-based rate regulation supported by actuarial professionalism creates a holistic core consumer protection system; it ties rates to risk, subjects them to appropriate review, and helps ensure that insurance remains both available and financially sound.

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Introduction

Regulators have been asked by legislators, researchers, media, and consumer advocates whether homeowners insurance policyholders in relatively low-risk states are financially subsidizing policyholders in states with high catastrophe exposure. The question is whether insurers spread catastrophic losses across their entire book of business, causing premiums in less disaster-prone states to rise to offset losses sustained in states with recent natural catastrophes.

At the 2026 Spring National Meeting, the NAIC Property and Casualty Insurance (C) Committee adopted the following charge for the Casualty Actuarial and Statistical (C) Task Force:

> ***Draft a white paper that explains how homeowners' insurance rates are regulated across states,[1] with particular attention to public questions and academic claims regarding potential cross-state subsidization of catastrophic losses.***

This white paper is intended to explain the framework for state-based homeowners insurance rate regulation in the U.S. and to examine how that framework addresses concerns regarding potential cross-state subsidization of catastrophe losses. The paper focuses on the legal, actuarial, regulatory, and market mechanisms that govern the development, review, and oversight of homeowners insurance rates. It discusses how rates are established, how catastrophe risk, reinsurance, credibility procedures, and other ratemaking components are evaluated, and how regulators assess whether rates comply with statutory standards. The paper is designed to provide a regulatory perspective on these issues and to describe the safeguards intended to promote rates that are risk-based, actuarially supported, and consistent with applicable state law. It is not intended to serve as an empirical study of insurer-specific conduct; it does not attempt to determine whether any particular company has engaged in cross-state subsidization; and it does not recommend or endorse any particular actuarial methodology for evaluating the actuarial soundness of rates. Such determinations are appropriately left to the professional judgment of the actuary, based on the specific facts, data, assumptions, and circumstances underlying each filing.

[1] "States" refers to all 56 NAIC member jurisdictions throughout the paper.

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Accordingly, this paper should not be interpreted as concluding that insurer-specific cross-state subsidization is impossible or that empirical evidence could never support such a finding. Rather, the focus is on explaining how homeowners' insurance rates are regulated across states, with particular attention to safeguards that protect against cross-state subsidization of catastrophic losses.

I. What is Homeowners Rate Regulation?

Homeowners rate regulation is the framework through which insurance regulators oversee the rates charged for homeowners insurance. It governs the filing and review of proposed rates, the actuarial support insurers must provide, the timing of rate implementation, and the regulator's assessment of whether rates are legal and not excessive, not inadequate, and not unfairly discriminatory. Although many insurers operate across multiple states, homeowners rates are regulated on a state-specific basis.

This section first describes the legal foundations of state-based insurance regulation, explains the core rate regulatory standards, and describes how market forces also impact homeowners rates.

A. State Rating Statutes and Market Regulation

Insurance regulation in the U.S. is conducted at the state level rather than the federal level. This decentralized structure traces its legal origin to the Supreme Court's 1944 decision in United States v. South-Eastern Underwriters Association, which held that insurance transactions crossing state lines constituted interstate commerce subject to federal regulation. Congress responded with the McCarran-Ferguson Act of 1945, which explicitly preserved the primacy of state regulation by providing that the continued regulation and taxation of the business of insurance by the several states is in the public interest, and that no act of Congress shall invalidate, impair, or supersede any law enacted by any state for the purpose of regulating the business of insurance.

Within each state, the legislature delegates primary regulatory authority over insurance to the Insurance Commissioner, Superintendent, or Director (collectively, the "commissioner"). That official, whether appointed by the governor or elected by the public, exercises broad authority over market entry and behavior, financial solvency, policy forms, and rates.

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The cornerstone of rate regulation in nearly every American jurisdiction is a three-part standard derived from the All-Industry Bills and later the *NAIC Model Rating Law*, which is adopted across all states with variations. Under this standard, insurance rates must be: 1) not excessive, meaning they do not result in unreasonably high profits or financial gains to the insurer; 2) not inadequate, meaning they are sufficient to cover expected losses and expenses and maintain insurer solvency; and 3) not unfairly discriminatory, meaning they do not differentiate among similarly situated risks without an actuarial or otherwise justifiable basis.[2]

Each state legislature also defines the regulatory rate filing frameworks, which reflect different calibrations of regulatory oversight of the rate filing process itself. These are broadly categorized as prior approval, modified prior approval, flex rating, file and use, use and file, and no file. See "Rate Filing Methods for Property/Casualty Insurance, Workers' Compensation, Title"[3] for definitions. This filing framework varies by lines of business within the state. Included in the architecture of rate regulation are the filing requirements, support of rates (actuarial justification), and review authority.

Rate regulation, as conventionally understood, involves the review of prospective rates that insurers propose to charge. Market conduct regulation addresses a different but complementary set of concerns: whether insurers are, in practice, treating consumers fairly in their claims handling, underwriting, marketing, and billing practices. Market conduct regulation ensures that consumers are being charged premiums in accordance with filed rates and, in coordination or consultation with actuaries, may assess whether rates are excessive, inadequate, or unfairly discriminatory.

Homeowners rate regulation is a customizable framework for evaluating whether the rates charged to consumers are justified, sustainable, and fair. That framework matters because homeowners insurance affects not only the private transfer of risk, but also household financial security, mortgage lending, and the stability of insurance markets. Regulatory oversight of rates, forms, underwriting practices, and market conduct provides a layered system of consumer

[2] See state laws for definitions that apply in each state. For example, some state insurance laws specifically prohibit risk classification based upon race, religion, etc.
[3] https://content.naic.org/sites/default/files/model-law-chart-pa-10-rate-filing-methods-for-property-casualty-insurance-workers-comp-title.pdf



protection that compensates for the limitations of consumer sophistication and the vulnerability of individual homeowners to market failure.

B. Homeowners Insurance and the Importance of Market Forces

Insurers consider competitive dynamics when they price homeowners insurance. Thus, the market can discipline homeowners insurance pricing. This works best when there are a large number of insurers active in the homeowners markets and consumers shop around for insurance. Competitive market dynamics are meaningful, but they do not always work efficiently. Homeowners insurance policies are complex, which makes comparisons between companies difficult. Markets can also be disrupted by coverage withdrawals in high-risk areas, insolvencies following catastrophic events, and persistent availability and affordability problems in coastal and wildfire-exposed regions. There may also be other issues such as areas with vacant properties and high crime rates. Thus, regulatory engagement complements competitive markets in affecting rates for the consumers' benefit.

Competition remains an important discipline on prices, but homeowners insurance presents conditions in which market forces alone may not fully protect consumers, preserve availability, or ensure that rates remain adequate and fair. The next question is how that balance is implemented in practice: how insurers develop homeowners rates, how those rates are supported actuarially, and how regulators evaluate the data, assumptions, and methods underlying them.

II. How Homeowners Rates Are Built and Reviewed

This section turns to the mechanics of regulatory oversight. Homeowners rates are not arbitrary charges, nor should they be retrospective attempts to recover past losses. They are prospective estimates of the cost of providing coverage during a future policy period, supported by actuarial analysis and reviewed against applicable regulatory standards. The price paid for a homeowners policy provides the consumer with protection during the policy period, referred to as risk transfer, whether or not the policyholder has a claim. This is not a flaw of insurance pricing; it is the purpose of insurance. Rates are established before the outcome is known and are intended to fund the expected cost of coverage, the expenses of providing that coverage, the cost of capital and reinsurance needed to support the obligation, and a reasonable return for assuming the risk.

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This section explains how those estimates are developed, how state-specific and broader data may be used, and how catastrophe risk and reinsurance are incorporated into the analysis.

A. Homeowners Insurance Rating

Homeowners Rating Overview

Homeowners insurance is a promise to cover uncertain future losses. The ultimate cost of an insurance policy is unknown at the time of sale, which complicates the pricing process.[4] As a result, the price consumers pay, referred to as the premium, is calculated based on the expected risk of loss to the home. The premium is an estimate of the future costs associated with transferring risk over the policy period. To support this estimate, insurers pool the risks of many policyholders, which allows losses to be financed by the premiums collected from many insureds. This results in diversification across risks and produces more stable outcomes.

A homeowners insurance premium generally includes provisions for expected losses, loss adjustment expenses, underwriting expenses, and profit and contingencies.

$$Premium = Expected\ Losses + Loss\ Adjustment\ Expenses + UW\ Expenses + Profit\ and\ Contingencies$$

For homeowners insurance, the largest component of the premium is the expected losses, also referred to as pure premium or loss cost. This is an estimate of the expected losses over a policy term. Historical loss data is typically used to estimate the expected losses of relatively high-frequency perils, such as fire or water damage. For lower-frequency but higher-severity events, such as hurricanes, wildfires, and earthquakes, insurers may rely on catastrophe models, as discussed in the catastrophe pricing in Section II. The premium is expected to cover future losses; thus, adjustments are made to the historical data to ensure it is predictive of future costs. Trending, the process of adjusting historical data to reflect expected future conditions, is one of the principal tools used in that process. Actuarial Standard of Practice 13[5] (ASOP No. 13), part of a comprehensive set of standards promulgated by the Actuarial Standards Board (ASB) to govern ratemaking analysis, addresses trending procedures in property/casualty (P/C) insurance and states that actuaries can consider historical insurance and non-insurance data when estimating

[4] https://www.casact.org/sites/default/files/old/studynotes_werner_modlin_ratemaking.pdf
[5] https://www.actuarialstandardsboard.org/asops/trending-procedures-propertycasualty-insurance-2/, Effective Date: Nov. 1, 2009.



future expected values. In homeowners insurance, that is especially important because the cost to repair or rebuild a home may change materially between the historical experience period and the future period for which the filed rates are intended to apply. In addition to trending, actuaries adjust historical data for development (the maturation of claims over time) and on-level factors (the conversion of historical premiums to current rate levels).

Insurers also typically refine premiums based on characteristics of the home and the policyholder that are associated with differences in loss experience. These characteristics, known as rating factors, may include such things as the home's construction type, age of the home, geographical location, credit-based insurance score, and roof type. For example, houses with clay tile roofs tend to be more fire resistant than houses with architectural shingle roofs, and thus usually receive lower premiums if all other characteristics are the same. When developing these rating factors, actuaries consider applicable actuarial standards, including ASOP No. 12,[6] Risk Classification. All rating factors need to be supported by analyses demonstrating differences in expected loss experience. In addition to expected losses, the premium should also cover the cost of adjusting claims and the expenses associated with issuing, servicing, and administering the policy. Additionally, the premium includes a provision for profit and contingencies, which reflects the need to support the business amid uncertainty. Actuaries consider applicable actuarial guidance, including ASOP No. 30,[7] when developing such provisions. The level of that provision may be influenced by expected after-tax investment income and the return required on the capital supporting the insurer's operations.

Homeowners Rating Influences

Although the general actuarial methodology used to determine homeowners premiums is consistent across lines and jurisdictions, homeowners ratemaking is fundamentally state-based. Expected losses are usually derived from expected state experience and from the conditions affecting insured risks in that state, such as local peril exposure, geographic concentration of risk, construction characteristics, legal environment, and claims settlement patterns. However, this does not mean that every input to a homeowners filing is derived solely from local data or is

[6] https://www.actuarialstandardsboard.org/asops/risk-classification-practice-areas/, Effective Date: May 1, 2006.
[7] https://www.actuarialstandardsboard.org/asops/treatment-profit-contingency-provisions-cost-capital-propertycasualty-insurance-ratemaking/, Effective Date: Dec. 1, 1997



unaffected by broader market conditions. Some influences on the indicated rate level can extend beyond a single state, even where the filing itself remains state-specific. One example is repair-and-rebuild cost inflation. Homeowners claim severity is directly affected by the costs of labor, construction materials, transportation, and related rebuilding inputs, some of which can be influenced by regional, national, and even global conditions.

Another broader influence is reinsurance. Reinsurance is part of the mechanism through which insurers manage the impact of catastrophes on their enterprise solvency and, consequently, their ability to pay claims. Changes in reinsurance conditions can affect the cost structure underlying homeowners filings.

Broader inputs may also arise for other components of a homeowners rate indication. For example, underwriting expense provisions are often supported by company or countrywide analyses rather than a single state's experience alone. Likewise, where company-specific state data is limited, actuaries may supplement that experience with industry data and apply credibility-weighting,[8] a technique that blends limited state data with broader experience to produce more reliable estimates of future loss and projected loss trends.

Given that insurance companies derive their profits from both underwriting and investment income, capital market conditions can also affect homeowners ratemaking. When anticipated investment income is projected to be high, companies often need lower future underwriting profits and vice versa. Higher expected after-tax investment returns can lead to the need for a lower profit provision in the ratemaking process, and ultimately lower rates.

In summary, homeowners rates are derived from the expected future costs of losses and expenses associated with the insured risks in the state being rated, including catastrophe exposure where applicable. However, some inputs relevant to a state filing may be influenced by broader economic and insurance-market conditions, including rebuilding-cost inflation, reinsurance conditions, capital market expectations, nationwide expense analyses, and updates to catastrophe models. Regulators reviewing rate filings are expected to examine each element of the ratemaking analysis: the adequacy of the historical period; the credibility procedures used

[8] ASOP No. 25 provides guidance concerning credibility procedures and relevant experience. The use of broader information does not eliminate the need for the selected data and resulting adjustments to be appropriate for the risks being rated in the state.



to blend the insurer's state-specific experience with other data or experience; the appropriateness of the assumptions used to bridge from broader datasets to the specific risks of the state in question; the reasonableness of development factors; the appropriateness of trend selection (particularly in a period of rapidly changing loss cost environments); the justification for expense loads; the support for the profit provision; and more. A filing that relies exclusively on nationwide data without any state-specific adjustments, or that applies implausible adjustment factors, raises legitimate regulatory concerns regardless of the ultimate requested rate level. States vary in the depth and formality of this review, but the actuarial framework provides a common language for insurer submissions and for regulatory responses. Two of these influences, catastrophe risk and reinsurance, warrant closer examination because of their significance to homeowners ratemaking and their relevance regarding cost distributions across states.

B. Catastrophe Pricing and Reinsurance Implications in Homeowners Rating

Catastrophe Risk and Pricing

Catastrophe risk is one of the most important and most challenging components of homeowners insurance ratemaking. Catastrophe risk fits within the same prospective pricing framework described in the homeowners rating section but it requires unique treatment because catastrophe losses are materially different from the types of losses that occur regularly and independently from house to house. A kitchen fire, theft, non-weather water loss, or isolated liability claim may affect one policyholder at a time. In contrast, a hurricane, wildfire, earthquake, tornado outbreak, hailstorm, or other event can produce concentrated losses across thousands of policyholders. That potential for concentrated losses creates pricing, capital, solvency, and reinsurance considerations that are not fully captured by traditional pricing techniques.

Catastrophe losses are not synonymous with all severe weather or other high-severity losses. Certain catastrophe perils, such as hurricanes, earthquakes, wildfires, and severe convective storms (SCS), are commonly evaluated using catastrophe models, although model availability and usage vary by peril and jurisdiction. Other weather-related or high-severity losses may instead be evaluated using historical experience, other models, scenario analysis, or a combination of methods. Accordingly, "severe weather," "high-severity loss," and "modeled catastrophe peril" should not be treated as interchangeable terms.

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Because catastrophe losses may be relatively infrequent, severe, and spatially correlated, historical pricing techniques may be insufficient on their own for evaluating these perils. A state may not experience any major hurricane, earthquake, or wildfire losses during a five-, 10-, or even 20-year historical experience period, even though the risk of such an event remains material. Conversely, one or more unusually severe events may dominate a recent experience period and produce an estimate that is not representative of the long-run expected cost for the risk. ASOP No. 39[9] provides guidance to actuaries in evaluating catastrophe exposure and determining a provision for catastrophe losses and loss adjustment expenses in property/casualty insurance ratemaking. It defines a catastrophe as a relatively infrequent event or phenomenon that produces unusually large aggregate losses and defines catastrophe ratemaking procedures as procedures that adjust for catastrophe losses in experience data and determine a provision for catastrophe losses and loss adjustment expenses.

For these reasons, catastrophe risk is often evaluated separately from non-catastrophe homeowners losses. Non-catastrophe losses may be estimated using several years of historical claim experience, adjusted for trend, coverage changes, claim settlement practices, inflation, and other changes in conditions as described in the prior section. For catastrophe losses, historical data remain relevant but may be incomplete or insufficient because the historical period may not include the full range of possible events or may not reflect current exposures, building characteristics, property locations, and environmental conditions. For perils for which suitable models are available, catastrophe models are one commonly used method of addressing these limitations.

A natural catastrophe model is a computerized process that simulates many scientifically plausible catastrophic events and estimates their financial impact on a portfolio of insured properties. For commonly modeled perils, the catastrophe provision included in the overall indicated rate level in a homeowners rate filing may be based, in whole or in part, on the long-term expected annual cost generated by a catastrophe model. Other rate components, such as retained risk or reinsurance provisions, are also often based at least in part on catastrophe models.

[9] https://www.actuarialstandardsboard.org/asops/treatment-catastrophe-losses-propertycasualty-insurance-ratemaking/, Effective Date: Dec. 15, 2000.

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Because catastrophe models are complex and rely on specialized scientific and engineering assumptions, their use in ratemaking requires judgment and review. Depending on the purpose and materiality of the model output, applicable actuarial standards, and jurisdiction-specific filing requirements, relevant filing support and regulatory review may address the specific model or models used, the exposure data entered into the model, the treatment of policy terms, the inclusion or exclusion of secondary perils (e.g., storm surge or wildfire smoke), demand surge, loss adjustment expenses, secondary uncertainty, the selection of model options, and any adjustments made to the model results. This list is illustrative, intending to show the importance of regulatory review of assumptions, and is not intended to suggest that every item is required in every filing by regulation or an ASOP.

Actuaries performing actuarial services involving catastrophe models should consult applicable standards, including ASOP No. 38,[10] which addresses the selection, use, review, and evaluation of catastrophe models; ASOP No. 39,[11] which addresses the treatment of catastrophe losses in property/casualty ratemaking; and ASOP No. 41,[12] which addresses actuarial communications. As relevant under applicable filing requirements, regulators may also review the vendor model documentation, the insurer's use and validation of the model, as well as any rating factors, surcharges, or discounts that may have been informed by catastrophe model output.

When used appropriately, catastrophe modeling is consistent with the broader actuarial principle that rates should reflect expected future costs. ASOP No. 53[13] states that actuaries estimating future costs should select appropriate methods or models, use reasonable assumptions, consider adjustments for changes in conditions, and consider the treatment of catastrophes and reinsurance when those items are reflected in future cost estimates. For example, a home with materially greater exposure to wildfires, hurricanes, earthquake, or SCS is expected to incur greater losses than an otherwise similar home with lower exposure. Cost-based rating attempts to reflect these differences through rating variables such as territory, construction, roof characteristics, deductible, coverage, and mitigation discounts, among other factors.

[10] https://www.actuarialstandardsboard.org/asops/actuarial-standard-of-practice-no-38-revised-edition/, Effective Date: December 1, 2021.
[11] https://www.actuarialstandardsboard.org/asops/treatment-catastrophe-losses-propertycasualty-insurance-ratemaking/, Effective Date: December 15, 2007.
[12] https://www.actuarialstandardsboard.org/asops/actuarial-communications/, Effective Date: May 1, 2011
[13] https://www.actuarialstandardsboard.org/asops/estimating-future-costs-prospective-propertycasualty-risk-transfer-risk-retention/, Effective Date: August 1, 2018.



This risk differentiation is also tied to the regulatory standard that rates should not be excessive, inadequate, or unfairly discriminatory. In actuarial terms, unfair discrimination does not mean that all policyholders pay the same rate. Rather, it generally concerns whether differences in premiums bear a relationship to differences in expected losses and expenses. For catastrophe risk, rating factors such as location, roof characteristics, construction type, or mitigation are often appropriate when supported by data, catastrophe modeling, or other credible evidence showing differences in expected costs.

Cost of Reinsurance

Reinsurance is closely related to catastrophe pricing because catastrophe risk can threaten an insurer's surplus, profitability, and solvency. Reinsurance is insurance purchased by an insurer to transfer part of its risk to a reinsurer. In other words, it is often necessary for insurers to have reinsurance which allows them access to market capital in the event of a catastrophic loss. In homeowners insurance, catastrophe reinsurance often protects against losses on a per-risk basis, losses arising from an individual event or occurrence, aggregate losses over a defined period, or a blend of these structures.

The cost of reinsurance is an actuarial component of the cost of providing homeowners insurance, though its inclusion in the price is subject to state insurance laws and regulations. When reinsurance is considered, reinsurance costs must be allocated carefully. Many insurers purchase reinsurance at a portfolio level rather than separately for each state. A single catastrophe reinsurance program may cover homeowners exposures in multiple states and may respond to losses from multiple perils, thereby diversifying the insurer's catastrophic risk. For purposes of allocating reinsurance cost to the states in the reinsurance program, it should not be interpreted that the cost should be spread evenly across all policyholders or all states. The actuarially sound approach is to allocate costs in a manner that reflects the expected benefit and risk contribution of the business being rated. Relevant measures may include modeled catastrophe losses, expected reinsurance recoveries, contribution to reinsured layers, exposure distribution, premium, coverage, peril, and other risk characteristics.

Because the cost of reinsurance ultimately flows into homeowners rates, fluctuations in the cost of reinsurance can cause homeowners rates to change, particularly in catastrophe-exposed markets. The reinsurance market is global, with many reinsurers operating internationally to provide coverage for multiple insurers and risks. At a fundamental level, reinsurance pricing is



risk-based, as with primary insurers, and reinsurance protection is not unlimited. The market generally has limited capacity to take on risk before reinsurance may become unavailable or unaffordable. Recent loss experience on a global scale can impact reinsurer profitability and short-term capacity. As such, seemingly unrelated catastrophe events can affect U.S. homeowners insurance rates. For example, if a major typhoon were to impact Japan, reinsurers would likely pay out on reinsurance contracts and potentially would have lower capacity in the following years to take on additional risk, even in the U.S. This constrained reinsurance market can drive general reinsurance costs upward, causing U.S. insurers to pay more for their reinsurance, and thus pass these higher costs on to their policyholders. While global events may impact the overall reinsurance market conditions and capacity, the reinsurance cost for an individual insurer's program remains specific to the risk characteristics of the underlying exposures.

Reinsurance also interacts with the profit and contingency provision and the cost of capital. Catastrophe-exposed homeowners insurance requires capital because actual losses can deviate substantially from expected losses. Reinsurance can provide an insurer with relief from required capital by transferring tail risk, but it comes at a cost. Conversely, retaining more catastrophe risk may reduce reinsurance premium but increase required capital and earnings volatility. A rate indication should avoid double-counting by consistently treating modeled losses, reinsurance recoveries, reinsurance premiums, retained risk, and profit or cost-of-capital provisions. ASOP No. 53 specifically states that when reinsurance is reflected in future cost estimates, the actuary should select appropriate methods or models and reasonable assumptions for estimating the cost associated with expected reinsurance arrangements.

In summary, catastrophe pricing in homeowners insurance applies the same risk-based prospective ratemaking framework used for other homeowners costs, but with additional tools and considerations. Catastrophe models help estimate losses that are too infrequent, severe, and correlated to be measured reliably using only recent historical experience. Reinsurance helps insurers manage the volatility and capital strain created by those losses, and its cost is an appropriate part of homeowners premiums when it is actuarially supported and allocated in relation to risk and expected benefit. Together, catastrophe modeling, risk classification, reinsurance allocation, and capital provisions support the central ratemaking objective: premiums



should be an actuarially sound estimate of the expected future cost of the risk being transferred during the policy period.

III. What is Cross-State Subsidization?

A. Defining Cross-State Subsidization

It is important for researchers and others to define cross-subsidization. At the May 12, 2026, meeting of the Casualty Actuarial and Statistical (C) Task Force, Mike Goldman (Perr & Knight) identified three distinct claims of cross-subsidization. The first was residual markets, such as the Fair Access to Insurance Requirements (FAIR) plan and the Texas Windstorm Insurance Association, where costs are spread within the same state. The second was cross-state subsidization within national carrier portfolios. The third was a federal cross-subsidization through the National Flood Insurance Program (NFIP) and disaster aid, which can be analyzed with NFIP subsidies. This paper is focused only on the second type.

In theory, cross-state subsidization could be structural and systemic across the market or could be focused on an individual company's actions. For purposes of this white paper, the question is whether there is systemic cross-subsidization between states. Structural cross-state subsidization can be described as follows:

> Policyholders in one state systematically pay rates that are inadequate for their own expected costs while policyholders in another state pay more than their expected costs to offset it.

In order for **structural** cross-state subsidization to occur, two conditions need to be met:

1. **Market-Wide Distortion:**
   Structural cross-state subsidization is a market-wide phenomenon. If an individual company determines rates in a way that causes one state to subsidize another, and the subsidization exists only within that company's portfolio, that would likely not be considered structural cross-state subsidization (unless the insurer was of significant, material size). *(Note: This is still an issue regulators address; it just does not meet the definition of structural cross-state subsidization.)*

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2. **Not-Actuarially-Justified Rates in Both States:**
   If rates in one or both states are determined to be actuarially justified, structural cross-state subsidization has not occurred. In a market that is structurally cross-state subsidized, one or more states would experience inadequate rates while other state(s) would experience excessive rates.

The above definition and Task Force charge focus on explaining how homeowners' insurance rates are regulated across states, with particular attention to questions regarding potential cross-state subsidization of catastrophic losses.

Because cross-state subsidization is central to the Task Force's charge, only scenarios involving subsidization are evaluated. Scenarios involving high rates in one or multiple states that do not involve inadequate rates in another state fall outside the definition of cross-state subsidization. If rates are excessive in one state but actuarially sound in another, the result is more appropriately characterized as excess profitability rather than cross-state subsidization. Cross-state subsidization requires a transfer effect in which policyholders in one state pay rates above their own expected costs to offset rates that are inadequate to cover expected costs in another state. Policyholders paying actuarially sound rates are not subsidized by policyholders in another state merely because an insurer earns higher profits elsewhere. Accordingly, scenarios in which policyholders are charged actuarially sound rates, even if an insurer earns higher profits in another state, are not considered cross-state subsidization under the framework contemplated by the Task Force's charge.

Actuarial work inherently involves professional actuarial judgment, ranges of reasonable outcomes, evolving claims experience, and uncertainty. As discussed in Section III, Part B, Item 6 below, risk or experience in one state may, for legitimate actuarial reasons, affect the expected cost of providing insurance in another state without constituting structural cross-state subsidization. Whether such impacts are appropriate depends on their consistency with applicable actuarial standards and state law. Sometimes, actuarially justified scenarios may lead to the incorrect perception of cross-state subsidization.

B. Mischaracterizations of Cross-State Subsidization

There are numerous scenarios commonly mischaracterized as cross-state subsidization, including the following:

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1. Differences in Actuarial Assumptions and Methodologies from One State to Another State

Actuarially justified rates may reasonably differ state by state based on assumptions, credibility treatments, catastrophe loadings, trend selections, development methodologies, expense allocations, reinsurance strategies, or differing views of emerging risk conditions.

Rates in one state may reflect more conservative assumptions or greater provision for uncertainty than rates in another state, while both remain actuarially justified. Actuarial standards do not require uniform assumptions or outcomes across jurisdictions. Reasonable actuarial judgment may support materially different assumptions and levels of conservatism based on each state's unique risk profile, data characteristics, regulatory environment, and market conditions. Consequently, significant differences in indicated or approved rates between states do not, by themselves, imply that one state's rates are more actuarially appropriate than another's. Rather, the relevant consideration is whether the assumptions and methodologies used for each state are reasonable, adequately supported, and appropriate for that state's risks and circumstances.

2. Rate Filing Timing Differences and Non-Mandatory Rate Filings

In many jurisdictions, insurers are not required to submit a rate filing unless they are voluntarily revising rates. A company may choose to absorb year-to-year cost fluctuations rather than regularly adjusting rates. Similarly, a company may delay or sequence filings due to operational considerations, such as competing priorities and limited resources, or regulatory considerations, such as the anticipated time needed for review and approval. These timing differences may create temporary differences between indicated and implemented rate levels across states without the systematic transfer of costs from one state's policyholders to another's and, therefore, do not constitute structural cross-state subsidization.

3. Mix of Business Considerations

Differences in rate change decisions across states may also reflect varying growth dynamics within an insurer's portfolio, rather than structural cross-state subsidization.

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When a book of business is experiencing rapid growth, insurers may elect to use more conservative pricing assumptions to account for uncertainty associated with changes in policyholder composition. Historical experience may also be less predictive for a rapidly growing book of business, as the risks being insured today may differ materially from those reflected in prior years' experience.

Conversely, a shrinking or more stable book of business may support less-conservative assumptions where the insurer believes the underlying risk profile is better understood or more predictable.

As new business enters or existing policyholders exit, the distribution of risks, geographic concentrations, coverage selections, or underwriting characteristics may shift in ways that reduce the predictive value of historical experience.

4. Regulator Disapproval of Rate Filings

Regulatory actuaries are tasked with reviewing a rate indication based on information in the rate filing to determine whether it complies with actuarial, legal, and regulatory standards.

Rate regulation is prospective and evaluates whether the proposed rates are adequately supported under the applicable statutory framework and reasonably reflect the underlying risk.

Importantly, regulatory disagreement does not necessarily indicate that an insurer's proposed rates represent a significant departure from accepted actuarial practice. Reasonable actuarial and regulatory differences may arise even when all parties are operating within accepted actuarial and legal frameworks. Different actuaries may reasonably select different assumptions related to trend, credibility, expense provisions, catastrophe and reinsurance provisions, profit provisions, or other relevant assumptions. Additionally, regulatory actuaries are highly familiar with the statutory requirements, market considerations, public policy objectives, approved actuarial methodologies, and other constraints unique to their jurisdiction.

In many cases, a regulator's concern may relate to the sufficiency of supporting data, the reasonableness of selected assumptions, the applicability of a methodology, or

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compliance with a statutory or procedural requirement unique to the jurisdiction. A filing disapproval may also reflect a determination that additional actuarial support or alternative actuarial treatment is necessary before the proposed rates can be approved.

Examples of situations that could result in filing disapproval without establishing that the proposed rates are not actuarially sound include circumstances in which sufficient support was not provided, deadlines for submitting additional information were not met, or statutory and procedural requirements were not satisfied.

Insurance markets perform differently across jurisdictions. A rate that is actuarially sound in one state is often not actuarially sound in another state due to differences in laws, regulations, litigation environments, catastrophe exposure, consumer profiles, risk characteristics, and other market conditions.

The existence of a regulatory disagreement or filing disapproval should not be interpreted as evidence of cross-state subsidization. Rather, actuarial review is intended to help ensure that rates remain related to risk within the applicable jurisdictional and regulatory framework.

5. Credibility and Use of Non-State Data as the Complement of Credibility

A common challenge in ratemaking is determining the extent to which an insurer should rely on its own experience versus broader company, industry, or other supplemental data sources. Actuaries use credibility procedures to determine the appropriate weight to assign to a particular set of insurance data when developing rates. For example, a large insurer with many years of experience in a given state may have high credibility for its own statewide data, while a smaller insurer or a more niche program may rely more heavily on countrywide data or other benchmarks relevant to the product.

ASOP No. 25,[14], titled “Credibility Procedures,” provides definitions for terms such as credibility, credibility procedure, full credibility, and relevant experience, among other concepts important to actuarial credibility analysis.

Credibility procedures are intended to balance responsiveness to actual experience with the statistical reliability that supports stable predictive rate indications. These procedures

[14] https://www.actuarialstandardsboard.org/asops/credibility-procedures/, Effective Date: May 1, 2014.



help reduce volatility and lessen the likelihood that isolated or short-term fluctuations disproportionately affect indicated rates.

When not considered fully credible under actuarial credibility procedures, the insurer's statewide experience may be weighted together with a complement of credibility, often referred to simply as the "complement". ASOP No. 25 discusses the importance of the complement reflecting relevant experience, including risk characteristics that are reasonably similar to the product being analyzed.

The complement of credibility may include experience from a broader geographic area or from an industry data source, when the insurer's own experience is not considered sufficiently credible. However, the purpose of a credibility-weighted complement is not to transfer costs from one state to another, but rather to improve the statistical reliability and predictive value of the rate indication. The actuarial appropriateness of a complement depends on whether the underlying data is considered relevant to the risks being evaluated, consistent with the principles described in ASOP No. 25.

Actuarial literature can be consulted for additional guidance regarding credibility procedures and selection of the appropriate complement.

Because professional judgment is required in determining the appropriate credibility treatment and selection of complement, insurer practices may reasonably differ depending on the circumstances and underlying data. Overreliance on broad averages may obscure meaningful emerging trends, while overreliance on limited experience may produce indications that are less predictive of future costs. Actuaries are expected to apply credibility procedures in a manner consistent with applicable actuarial standards and guidance, including the principles in ASOP No. 25 regarding the use of relevant experience and selection of an appropriate complement. Differences among insurers in the application of credibility procedures or selection of complements do not imply that either insurer's rates are not actuarially sound, nor do such differences, by themselves, establish the existence of cross-state subsidization.

6. Market-Wide Changes in Future Cost Estimates

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Changes in rates may also result from evolving assessments of future risk and expected costs rather than cross-state subsidization. Rate indications are routinely updated to reflect new information, including changes in catastrophe models, reinsurance costs, loss trends, rebuilding costs, litigation patterns, and other factors that affect expected future losses and expenses.

These changes are prospective in nature and intended to estimate the future cost of providing coverage. Although such updates may result in higher indicated rates in one or more states, they do not represent a transfer of costs from policyholders in one state to those in another. Rather, they reflect revised assessments of the expected costs associated with insuring risks in the applicable jurisdiction.

A common mischaracterization of cross-state subsidization arises when a significant catastrophe in one state contributes to rapidly evolving market conditions that affect insurers' assessments of future risk across multiple states. Large catastrophe events may influence catastrophe model outputs, reinsurance costs, capital requirements, rebuilding cost assumptions, and other prospective ratemaking inputs. As a result, indicated rates may increase in jurisdictions that did not experience the loss event. Such changes generally reflect updated expectations regarding future costs and risks rather than a transfer of costs from policyholders in one state to policyholders in another.

IV. What State-Based Ratemaking Means for Consumers and Markets—Is there Cross-State Subsidization?

Section II explained how homeowners rates are developed and reviewed: as prospective estimates of expected loss, expense, catastrophe exposure, reinsurance cost, and other elements associated with the risk being insured. This section applies that ratemaking framework to a recurring question in public discussion: whether catastrophe losses in one state are being shifted into rates charged to policyholders in another. The answer requires distinguishing direct loss shifting from broader market effects. State-based ratemaking does not support the direct allocation of one state’s catastrophe losses to another state’s policyholders. However, catastrophe events may still affect broader inputs such as rebuilding costs, reinsurance pricing, capital costs, and catastrophe model assumptions.

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A. Catastrophe Losses and State-Based Ratemaking

A recurring theme in academic research, media coverage, and consumer advocacy is the concern that homeowners insurance policyholders in relatively low-risk states may be financially subsidizing policyholders in states with high catastrophe exposure. These sources suggest that insurers spread catastrophic losses across their entire book of business, causing premiums in less disaster-prone states to rise to offset losses sustained in states like California, Florida, or Louisiana.

Several academic studies have examined insurer pricing behavior and rate-change patterns across states following major catastrophe events. Media investigations—particularly following the 2017–2018 California wildfire seasons, Hurricane Ian in 2022, and repeated hurricane seasons in Florida—have amplified these concerns, with reporting suggesting that consumers in other states are bearing costs attributable to losses in coastal or wildfire areas. Consumer advocacy organizations have similarly raised concerns that insurers are insufficiently transparent about cost allocations and that policyholders lack the information necessary to evaluate whether their premiums reflect local risk or a national pooling of catastrophic exposure.

These concerns deserve serious engagement. However, several important methodological limitations and industry structural features are frequently overlooked in both academic and media treatments of this issue, and understanding them is essential to fairly evaluating the subsidization hypothesis.

B. How Insurers Deploy Capital and Reinsurance

While catastrophe pricing is state-specific, as discussed in Section II, insurers deploy capital and reinsurance on an enterprise-wide basis to ensure claims-paying ability regardless of where a catastrophe occurs. A national insurer writing policies in all 50 states maintains a single pool of surplus capital that supports its obligations everywhere and for every line of business it writes. When a hurricane causes billions in losses in Florida, the same surplus that backs policies in Ohio is drawn upon—if necessary—to pay those claims.

Additionally, capital supports the entire company and not just its homeowners' line of business. Most insurers do not write only homeowners' insurance policies, and those few that do rely very heavily on reinsurance because of the extreme risk associated with a monoline portfolio. As carriers manage the risk they have assumed from policyholders by diversifying their geographic



exposure, they also mitigate their risk by writing other types of insurance. Most homeowners' carriers will also sell a wide variety of property/casualty (P/C) coverages including personal auto and personal umbrella policies. Furthermore, these same carriers may sell a wide portfolio of commercial insurance products, including commercial auto and property, as well as commercial liability and workers' compensation policies. A carrier's surplus built up by underwriting and investment income associated with all these products is then available to them in the unlikely event of a catastrophic loss.

This enterprise-level capital deployment, however, is not equivalent to Ohio policyholders subsidizing Florida policyholders. The surplus is the insurer's own capital, contributed by shareholders and accumulated from retained earnings. It is the mechanism by which the insurer guarantees its financial promises; it is not a transfer of premium dollars from one state's policyholders to another's.

The reinsurance program layered above the insurer's retained risk functions similarly: Reinsurance is purchased at the enterprise level, but its cost is allocated back to individual states based on the catastrophe exposure each state contributes to the reinsurance need. A state with low catastrophe exposure contributes less to the reinsurance cost allocation and, therefore, should have a smaller reinsurance load in its rates.

Different layers of reinsurance protection serve different purposes. Per-risk or per-occurrence excess-of-loss treaties respond to large single-event losses. Aggregate covers respond to the accumulation of smaller losses over a policy period. Catastrophe bonds and other capital market instruments provide additional protection against tail events. The cost of each layer is reflected in state-level rates in proportion to the catastrophe exposure that creates the demand for that layer of protection.

C. What Pooling Does (and Does Not) Mean

Insurance is, by design, a pooling mechanism. A homeowners insurer pools the risks of many policyholders so that the losses of the few are spread across the premiums of the many. This within-state pooling is the core economic function of insurance and is what makes coverage affordable for individual policyholders who could not self-insure against a catastrophic loss.

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Cross-state pooling within a national insurer operates on a different principle. The insurer is not pooling the catastrophe losses of State A and State B policyholders together and averaging the cost across both groups. Rather, the insurer is pooling the uncertainty about whether State A losses will be higher or lower than expected, against the uncertainty about whether State B losses will be higher or lower than expected. The insurer benefits from the fact that these two sources of uncertainty are not perfectly correlated. The economic benefit of this diversification accrues primarily to the insurer's shareholders in the form of reduced capital requirements and to policyholders in the form of improved insurer financial stability; it does not translate into State B policyholders paying for State A losses.

D. Indirect Effects: How Catastrophe Losses May Affect Rates Elsewhere

While direct cross-state premium subsidization does not occur through normal ratemaking, there are legitimate indirect pathways through which a catastrophe in one state can affect premium levels in other states, and these indirect effects are important to acknowledge.

The most significant indirect effect operates through supply chain economics. Following a major catastrophic event, such as a hurricane, wildfire, or flood, the demand for building materials, skilled labor, and construction equipment surges in the affected region. Lumber prices, roofing material costs, drywall, and structural components all experience sharp price increases, driven by both genuine supply constraints and demand concentration in the affected area. These elevated material costs are not confined to any one region. A homeowner in Indiana filing a non-catastrophic claim, such as a burst pipe, a fallen tree, or a kitchen fire, may find that the cost of repairs has risen meaningfully because the same lumber being used to rebuild Gulf Coast homes is now more expensive everywhere. Insurers writing homeowners policies across the country may experience increased claim severity in all states following a major catastrophe, and this elevated severity can feed into the loss experience used to support future rate changes nationwide. This is a real, quantifiable, and economically rational indirect linkage between catastrophe losses in one state and premium levels in others, and it deserves recognition in the research literature as a legitimate channel distinct from, and not confused with, direct subsidization.

Catastrophic events can also affect reinsurance pricing globally. A particularly severe hurricane season or a large wildfire loss may increase reinsurance costs for the subsequent policy year, and those increased costs are reflected in rate filings across all states that purchase catastrophe



reinsurance — even states that were not directly affected by the event. This is not to compensate reinsurance carriers for losses sustained in a prior event; rather, the severe event serves as an additional data point that could cause reinsurers to adjust their predictions of future loss.

As with the rebuilding-cost effects discussed above, this is a market-driven indirect effect, not a regulatory or actuarial mechanism for cross-state subsidization.

Finally, catastrophes provide the opportunity to update models based on what is learned about resiliency. Insurers and third-party modelers may calibrate rating values associated with certain types of construction, roof materials, mitigation efforts, etc., and use the revised discounts and factors throughout the country.

E. Could Companies Hide Cross-State Subsidization?

A more sophisticated version of the cross-state subsidization hypothesis asserts that even if rate filings are state-specific, insurers might use the flexibility in ratemaking to shift value between states in ways that regulators find difficult to detect. For example, an insurer might inflate the profit provision in low-catastrophe states to build a surplus that effectively offsets losses in high-catastrophe states. Or an insurer might systematically understate the catastrophe load in a high-exposure state by using older, less sensitive catastrophe models, while compensating with higher expense loads in other states.

The Center for Insurance Policy and Research (CIPR) conducted a qualitative analysis of rate filings to explore the hypothesis that carriers are subsidizing catastrophic losses incurred in one state by charging higher rates in another state. If the hypothesis were true, the expectation is rate filings would either: 1) directly include out-of-state catastrophe losses in the development of the indicated rate need or 2) indirectly increase the indication by changing methodology (e.g., using more conservatism) after catastrophic loss in another state. The analysis, while qualitative and limited in scope, did not support the hypothesis that carriers are raising rates in one state to offset losses in another state.

Minnesota Hail Event: Found No Effect on Iowa Rates

For example, in 2017 there was a hail event (part of a June derecho) in Minnesota. Iowa rate filings were examined for some companies writing insurance in both Minnesota and Iowa. No

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Minnesota loss data (or any other out-of-state losses) were reflected in five Iowa rate filings prior to the derecho and six after the derecho. Rate provisions and methodologies were also reviewed to test for any indirect cross-state subsidization through the selection of more conservative factors or changes in methodology intended to yield a higher indication in the post-event filings.

The methodologies and provisions reviewed were: 1) indication methodology, including the number of years of experience used and how those years were weighted; 2) loss development and trend selection; 3) catastrophe provision development, including which catastrophe models were used; 4) reflection of reinsurance; 5) development of the underwriting profit and contingencies provision; 6) development of other expenses; 7) indicated vs. proposed rates; 8) credibility methodology and the selected complement of credibility; 9) premium trend; and 10) other factors, such as large loss procedures that may be affected by out-of-state losses.

No methodology changes were observed that would indicate an indirect allocation of losses from the catastrophe events into Iowa rate indications. "Indirect effects" such as reinsurance costs, countrywide expenses, or profit provision selection did not appear to be affected by the experience of out-of-state losses. When indications were higher in the post period, the driver was an increase in in-state losses or loss trends. Changes observed were due to companies having more internal experience to rely on, updates to catastrophe models, updated factors such as profit provisions, or other methodology changes that adhere to standard actuarial principles.

With changes to profit provisions, carriers maintained a consistent methodology for developing their profit provisions, but some updated inputs, such as the rate of return, resulted in small changes in underwriting profit. In some cases, the underwriting profit provision increased from pre- to post-event filings. One carrier increased its profit provision from 6% to 7%. In some cases, the underwriting profit provision decreased: One carrier decreased its profit provision from 7.2% to 5.4% and another from 7% to 5%.

Regarding methodology changes, one company changed its credibility procedure, resulting in a small increase in the credibility attributed to its own statewide data; the complement of credibility was applied to a trended permissible loss ratio (not to loss experience from other states).

Hurricanes Harvey and Irma and 2018 California Wildfires: Found No Effect on Virginia Rates

Using the same methodology, four Virginia rate filings were studied before and four after Hurricanes Harvey and Irma in 2017, and eight filings before and eight after the 2018 California



wildfires (July 23 to Aug. 30, 2018). Findings in the Virginia rate filings were consistent with those from the review of Iowa rate filings: There were no out-of-state losses included in any of the rate filings in Virginia. There were no methodology changes or rate provision selections that would indicate an indirect allocation of loss experience from the catastrophes to Virginia.

While these are only two limited scope case studies, CIPR has not found support for the subsidization hypothesis. Analyses of profit provisions, expense ratios, and loss ratios across states have not revealed the systematic patterns expected if insurers were deliberately routing value from low-catastrophe to high-catastrophe states. This does not preclude the possibility that individual insurers in specific circumstances might engage in such behavior. The available evidence from the CIPR study does not support cross-state subsidization as a widespread or systematic phenomenon.

F. How Evolving Catastrophe Models Affect the Debate

One final dimension that is essential to understanding the cross-state subsidization debate is the evolution of catastrophe modeling. Insurers and their actuaries rely on probabilistic catastrophe models to estimate the expected losses from hurricanes, wildfires, earthquakes, and other catastrophic perils. These models, developed and maintained by specialized vendors and insurers, translate meteorological, geophysical, and engineering science into probabilistic loss distributions for any portfolio of insured properties.

Catastrophe models have changed significantly over time, and transitions between model generations can lead to large changes in rate levels. When a major vendor releases a new version of a hurricane model that substantially increases estimated loss costs for Gulf Coast exposures, insurers using that model will file for rate increases in the affected states. The timing and magnitude of those increases may differ across insurers depending on when they transition to the new model, how much credibility they give to the model versus their own historical data, and how their reinsurance programs respond to the updated loss estimates. A researcher observing this pattern without knowledge of the model transition might incorrectly attribute the rate increases to a redistribution of costs rather than to an improved scientific understanding of the underlying peril.

The practical implication for the subsidization debate is that large, sudden shifts in catastrophe-state rate levels, particularly following a major loss event or a model update, do not indicate that other states subsidized prior rates in those states. They indicate that the industry's understanding



of the catastrophe risk has changed, and that rates are being updated to reflect that improved understanding. The absence of prior rate increases does not mean policyholders elsewhere were overpaying; it may mean that the risk was systematically underestimated by the best available models at the time.

G. Important Methodological Considerations for Researchers and Media

It is worth flagging several recurring misconceptions that appear in research and reporting on this topic, because they can significantly distort conclusions about cross-state subsidization.

1. Rate Filings Are Not "Exact Rate Needs."

A rate filing reflects an indicated rate need and the proposed rates. Actuarial rate indications involve projecting future (unknown prospective) losses and expenses from historical data using loss development factors, trend factors, catastrophe load adjustments, and other factors—all of which carry significant uncertainty. The "indicated rate change" in a filing is meant to be a single point estimate within a range of reasonable estimates. No actuary, regulator, or researcher knows with certainty how many claims will occur in a future policy period, or what those claims will cost. After-the-fact comparisons of predicted losses to actual losses do not establish that charged rates were excessive or inadequate. The nature of catastrophes alone renders such comparisons moot; a pricing environment that would react each year to the catastrophes that did or did not occur in the prior year would lead to enormous rate swings that would be not only actuarially unsound but also harmful to consumers.

2. Claim Count Definitions Vary Across Insurers and Datasets.

Comparisons of claim frequencies across companies or states often encounter the problem that insurers define and count claims differently. Some insurers record a claim for each person injured, each site damaged, each coverage affected, etc. Zero-payment claims (opened and closed without indemnity, such as claims below the policyholder deductible or not caused by a covered peril) may or may not be included in reported counts. Researchers using industry databases or statutory filings should account for these definitional differences, as unadjusted comparisons can produce false or misleading conclusions about relative loss frequency and severity, or average claim amounts.

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3. The Indicated Rate vs. Rate Received: A Critical Assumption.

Much of the academic literature on cross-state subsidization implicitly or explicitly assumes that the indicated rate needed in a filing represents the true economic cost of risk in that state, and that any gap between the indication and the filed and/or approved rate must be recovered elsewhere, including (potentially) from policyholders in other states. This assumption does not withstand careful examination. First, as previously described, the rate indication in a filing is but one point estimate among a range of reasonable estimates. The range is likely to include the proposed rate level when it differs from the filed point estimate indicated rate level. Second, even very large insurers write only a small fraction of the policies in any given state. An insurer whose indicated rates fall outside the range of its competitors has to consider whether its estimates are off the mark. State insurance regulators should be skeptical as well. The impacts of going to market at rates that are too competitive or not competitive enough can be catastrophic. An insurer that charges uncompetitive rates could trigger an adverse selection spiral that ultimately results in the product's failure and withdrawal from the market. Needing to account for adverse selection risk in one state but not another does not mean one state's policyholders are subsidizing the other's.

4. Catastrophe Pricing Is a State-Level Construct.

A foundational principle of property insurance pricing, and one that is frequently misunderstood in cross-state subsidization discussions, is that catastrophe loss costs are estimated for the state where they are expected to occur. California wildfire claims experience does not enter the rating calculation for a homeowners policy in the Midwest. Each state's rate level is derived from that state's expected loss experience, adjusted for trend and development (among other factors), with catastrophe loads built using catastrophe models calibrated to the geographic exposures within that state. State insurance regulators enforce this principle by requiring that rates be filed and justified on a state-specific basis.

Confusion arises because state insurance rating laws may allow insurers to use both state-specific and other data, such as regional or nationwide data. In practice, an insurer will use state-specific data to the extent it is credible and will supplement it with other



credible, relevant information where needed. To be "relevant," that data must be a reasonable estimate of expected losses and expenses for the policies to be written in the state.

This distinction is especially important for catastrophe risk. Updated catastrophe models may incorporate new scientific understanding, new claims information, changes in exposure, or changes in environmental conditions that affect more than one state. For example, a major hurricane in Florida may reveal that certain types of structures perform more poorly than expected, or that loss amplification effects are more significant than previously understood. Though these findings came from experience in Florida, hurricane catastrophe models used across the entire Atlantic coast will be updated to reflect these new learnings, which could impact rates in all states with hurricane risk. While this may appear at the surface to be cross-state subsidization, there is a distinct difference: this is not insurers using out-of-state losses to increase rates (cross-state subsidization), but rather a best practice of using the latest science—catastrophe events in other states that may teach insurers, modelers, and regulators something new about the risk that is relevant to other states exposed to the same peril.

When it comes to certain parts of the insurer's rating plan, such as determining the rates for customers based on their individual risks, insurers are encouraged to use their most credible data, which may include nationwide or regional information on issues such as how fire damages buildings, what roofing materials perform best when neighborhoods burn, etc. When discussing state cross-subsidization, the most relevant indication by coverage or peril is the overall state-based number. A filing that attempted to recover California wildfire losses through Midwest premiums would be actuarially unsound and unlikely to survive regulatory scrutiny. The regulatory architecture of state-based insurance oversight, therefore, provides a structural barrier to the kind of direct cross-state subsidization that researchers and media often allege, while still allowing insurers and regulators to recognize credible, relevant scientific information that improves the assessment of catastrophe risk within each state.

5. Actuarial Standards Play an Important Role in Insurance Pricing.

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The vast majority of property/casualty (P/C) insurance companies use credentialed actuaries to determine pricing. Those actuaries are bound by professional standards and a Code of Conduct and are subject to discipline if they depart materially from those expectations of professionalism. The standards provide guidance on how actuaries should determine a rate that reflects the expected value of all future costs associated with an individual risk transfer. Precept 8 of the Code of Professional Conduct specifically states that an actuary "shall take reasonable steps to ensure that such services are not used to mislead other parties," which can include regulators. Deliberate implementation of cross-state subsidization while developing rates would be in violation of the ASOPs and actuarial principles which may constitute a violation of the Code of Professional Conduct. Such violations could lead to disciplinary review and/or action by the Actuarial Board for Counseling and Discipline (ABCD).

For homeowners insurance, actuaries are not required to provide an attestation as to the appropriateness of rates. However, the actuarial standards are still used by regulators as the expected standard for ratemaking.

6. Refer to the CIPR Website for Considerations When Using Insurance Data.

This section has distinguished the direct allocation of catastrophe losses from the broader market effects that may influence homeowners rates. That distinction matters because it shows why rate regulation must both recognize genuine cost pressures and require that those costs be reflected through supported, risk-based, and reviewable ratemaking. Section V places that role in the broader architecture of homeowners insurance regulation: a layered system designed to protect consumers, preserve market stability, and maintain actuarial discipline.

The longstanding statutory standard that insurance rates shall not be excessive, inadequate, or unfairly discriminatory provides a rich foundation for future research in insurance rate regulation, including more in-depth study of cross-subsidization and numerous other topics. Building from this white paper, research could examine catastrophe exposure, model updates, and proper use of the models; reinsurance practices; insurer capital allocation; market competition; company-filed rate changes vs. implemented rate changes; target underwriting profit provisions vs. historical profitability; and more.

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V. Conclusion: Rate Regulation as Layered Consumer Protection

Rate regulation is a calibrated system that supplements the competitive market forces that exist in most states with regulatory oversight proportionate to the degree of market imperfection and the magnitude of consumer vulnerability.

The architecture of state-based regulation described in Sections I through IV—a uniform three-part legal standard for insurance rating, delegation of authority to state insurance commissioners, and diverse rate-filing requirements, and with a complement of market conduct oversight—reflects the accumulated wisdom of more than a century of insurance regulatory experience.

Rate regulation can and should ensure that cost trends are accurately measured, that actuarial justification is genuine, that unfair discrimination is absent, and that insurers are not exploiting information asymmetries or market concentration to extract excessive profits.

Present regulatory needs include attention to the use of sophisticated actuarial staff (as rate-filing models and support continue to become more complex) and effective market monitoring. The engagement of the actuarial profession, through its standards, certifications, and independent professional obligations, is indispensable to the integrity of the rate-regulation process. Actuaries who conduct rate indication analysis in rate filings occupy a position of public trust and professional obligation, and the regulatory system depends on the actuarial community's commitment to honest, rigorous analysis as a foundation for sound ratemaking.

The homeowners insurance market faces significant challenges in the years ahead, from the increasing frequency of catastrophic disasters to rising replacement costs to an evolving legal environment. Rate regulation, when properly designed and effectively administered, will remain an important tool for ensuring these challenges are met in ways that protect consumers, maintain market stability, and preserve the availability of coverage for the most important financial asset most American families will ever own.

The goal of property/casualty (P/C) ratemaking is to predict the rates to be charged for a specific cohort of insurance policies to be written in the future. The application of appropriate actuarial practices and techniques ensures that those rates are adequate, but not excessive or unfairly



discriminatory for covering the expected losses and expenses on those policies, while also allowing for a reasonable return for the risk undertaken. Ratemaking is inherently a prediction of unknown future values. To the untrained eye, a year with few severe storms and catastrophic events might make the rates seem excessive. And a year with many severe storms and catastrophic events might make the rates look inadequate. But the ratemaking process accounts for such random fluctuations and prices to the expected frequency of, and claim values associated with, these events in any given year.

Insurers typically use their own state-specific experience to the extent possible for ratemaking purposes. But that experience often needs to be supplemented with additional information to make credible predictions about future losses and expenses on policies that have not yet been written. This supplemental information can include catastrophe models, other insurers' experience and their rates, experience and statistics made available by advisory and rating organizations, and regional or even countrywide experience and statistics. However, it is important to understand that supplemental information must be adjusted and used only to the extent that it helps predict expected losses and expenses on a specific set of policies in a specific state that will be written in the future. An insurer that would attempt to charge excessive rates in one state to make up for inadequate rates in another would be in violation of state insurance laws and their actuaries would be in violation of actuarial standards of practice. Complaints about the insurer's actuaries (e.g., submitted by state insurance regulators) to the Actuarial Board for Counselling and Discipline (ABCD) could result in professional discipline, up to and including the revocation of their credentials and ability to practice. The insurer's proposed rates would be subject to regulatory scrutiny, and the insurer would likely fail to meet their business objectives.

Property and casualty (P/C) insurance ratemaking is a complex endeavor undertaken by professionals with standards of practice governing their work. Those studying the actuarial soundness of insurance rates, and effectiveness of state-based rate regulation, would produce more accurate and beneficial research by meeting with state insurance regulators to discuss their methodology and findings as part of their research and in advance of publishing any reports.

Finally, the authors recognize that this paper does not conclusively prove that no cross-state subsidization exists among policyholders in any states. That would require significant additional study well beyond the scope of the charge given to the Task Force which produced this paper.

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Instead, this paper describes the plethora of safeguards in place that are designed to prevent cross-state subsidization from occurring.

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