MILLIMAN REPORT

Impact of rate regulation on the personal auto insurance market for Illinois vs. other states

Report for National Association of Mutual Insurance Companies

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Executive Summary

Economic conditions, environmental trends, and social events in recent years have had a significant impact on property and casualty (P&C) insurance, leading the industry into a new era of risk. The COVID-19 pandemic disrupted supply chains, extending the time needed to complete repairs or replace damaged property, and accelerated inflation, rapidly increasing costs for the goods and services needed to pay claims. Increased frequency and severity in significant weather-related events have exacerbated these effects, creating unexpected expenses for policyholders and insurers and ultimately driving up the cost of insurance. Increased focus on discussions about racial justice in the United States have given rise to renewed scrutiny over the potential for unfair discrimination in insurance rating plans.

These dynamics have contributed to a recent proposal in Illinois to impose new rate regulations, known as the Motor Vehicle Insurance Fairness Act. This proposed regulation has several features in common with the system created by California's Proposition 103, such as:

- Requiring insurers to obtain prior approval of insurance rates.
- Requiring rate hearings at the request of consumer "intervenors," or if a proposed rate increase exceeds 7% for personal lines or 15% for commercial lines insurance.
- Prohibiting the use of underwriting and rating on factors such as gender, marital status, age, and credit-based insurance scores.

Ensuring access to affordably priced personal auto insurance is an important consideration given how heavily the United States depends on cars for transportation. The purpose of this report, which was prepared by Milliman, Inc. (Milliman) on behalf of the National Association of Mutual Insurance Companies (NAMIC), is to help policymakers and the public understand from an actuarial perspective 1) how the Illinois personal auto insurance market has been performing relative to other states, and 2) how various forms of rate regulation have impacted the availability, affordability, and reliability of personal auto insurance markets in other states.[1]

Part 1 of this report explores ratemaking and insurance market fundamentals. This is a primer for the basics on actuarial ratemaking principles and standards, various state approaches to rate regulation, and the three pillars of sustainable insurance markets.

- There are three pillars of a sustainable insurance market: availability, affordability, and reliability. In markets where all three traits are in balance, the market can be relied upon to meet the vast majority of needs for its customer base over a long-term horizon.
- Personal auto ratemaking is subject to a comprehensive set of actuarial guidelines, standards, and procedures, which detail the longstanding principles of actuarially fair and sound ratemaking.

[1] The National Association of Mutual Insurance Companies consists of nearly 1,500 member companies, including seven of the top 10 property/casualty insurers in the United States. The association supports local and regional mutual insurance companies on main streets across America as well as many of the country's largest national insurers. NAMIC member companies write $391 billion in annual premiums and represent 68 percent of homeowners, 56 percent of automobile, and 31 percent of the business insurance markets. Through its advocacy programs NAMIC promotes public policy solutions that benefit member companies and the policyholders they serve and fosters greater understanding and recognition of the unique alignment of interests between management and policyholders of mutual companies.

- Insurance is regulated at the state level, and there are significant differences in regulatory environments among different states. Regulation focuses on both company solvency (ensuring reliability) and market conduct (ensuring fairness, availability, affordability, and the opportunity to earn a fair and reasonable profit in a competitive market).
- Rate regulatory interventions most commonly take three forms: 1) prior approval procedures, which often require insurers to submit extensive actuarial analyses to support proposed rate changes, 2) controls on rate level (the overall premium an insurance company charges for its portfolio of risks), or 3) controls on rate classification (how the insurance company distributes the premiums to individual policyholders).

Part 2 provides a comparison of the Illinois personal auto market to those of other states using the criteria of availability, affordability, and reliability.

- Since the 1970s, the insurance regulatory system in Illinois has not included regulatory approval of insurance rates.
- In most states (including Illinois), the personal auto residual and nonadmitted markets are relatively small, indicating that, across the country, personal auto insurance availability has not been an issue for many years.
- Personal auto liability insurance premiums in Illinois were 20% lower than the countrywide average in 2020, and the 23rd lowest in the country. The average premium increased 5% from 2016 to 2020 in Illinois, compared to a 10% increase countrywide.
- The ratio of the average liability premium to the median income in Illinois was 0.63% in 2020, which was 32% lower than the countrywide average.
- The estimated percentage of the population uninsured in Illinois is similar to the national average.
- Rate changes in Illinois from 2018 through 2019 tracked with the national averages. In 2020, when the COVID-19 pandemic disrupted consumer driving patterns, personal auto rates in Illinois decreased by 4.4%, more than any other state. In 2021 and 2022, rate changes for the top 10 personal auto insurers in Illinois have resulted in rates increasing by 36.4%. Other states have experienced similarly high rate increases due to inflationary trends.
- The degree of competition in a state can be an indicator of the reliability of the market. On several measures, the Illinois personal auto market demonstrates better-than-average competitiveness.
- The 10-year total average personal auto loss ratio for Illinois was close to the median state loss ratio; historical loss ratios in Illinois do not suggest that the insurance industry is earning significantly lower or higher profits in Illinois compared to other states.

Part 3 contains further discussion on various forms of rate regulation that have been used to control rates, including prior approval, rate level controls, and rate classification controls, with some examples of how availability, affordability, and reliability were impacted in states that changed their rate regulation approaches in the past.

- There is wide variation in the time to approval among prior approval states. In many states, the approval times are under 90 days, while in California personal auto rate filings often take more than six months to approve.
- In general, prior approval states do not have lower average premiums or better affordability than other states.

- Due to approval delays and pressure to implement smaller rate increases, there has historically been more variability in loss ratios in California compared to Illinois.
- In the short term, rate level controls can keep premiums lower than they would be under open competition, but in the long term insurers may be inclined to not decrease rates in periods of declining losses. Rate filing data from the past six years supports this theory.
- A high degree of rate level control can result in residual market growth, most likely resulting from insurer cessation of writing new business, reductions in existing books of business, or complete withdrawal from the insurance line within a state.
- "Not unfairly discriminatory" means that rates must be based upon the cost and expense differences between risks. In addition, states have a general prohibition on intentional discrimination based on protected class status. Nevertheless, some states have modified their laws to prohibit rating variables that do reflect differences in risk for reasons of perceived social unfairness.
- Prohibiting the use of some rating variables has the effect of worse risks paying too little premium and better risks paying too much premium. This creates risk of adverse selection and moral hazard, potentially leading to unfair subsidization and a disincentive for loss avoidance or mitigation.
- Prohibiting the use of some rating variables can create availability issues for the underpriced risks, unless "take-all-comers" laws or other underwriting restrictions are put into effect. However, these laws can introduce challenges to the reliability of the insurance market.
- Legislatures should carefully evaluate and study the potential impacts of such restrictions on affordability, availability, and reliability of the insurance market.

Introduction

In 1945, following a U.S. Supreme Court decision on interstate commerce, the U.S. Congress passed the McCarran Ferguson Act to return to individual states the power to regulate their own insurance markets.[2] This gave states the responsibility to oversee the conduct and practices of insurers operating in their states, including licensure, claims, policy forms, and actuarial ratemaking.

Ever since, states have had the opportunity to implement a variety of approaches to how they regulate insurance, as well as the degree to which they exercise their authority over insurers. In this regard, the states lie across a spectrum. Some states impose strict regulations on insurers in pursuit of consumer protections, and other states pursue consumer benefits via competition. States still generally require that rates not be inadequate, excessive, or unfairly discriminatory.

In states across the country, especially in Illinois, the degree to which state regulatory authority should be imposed on personal auto rates is a subject of renewed debate. Efforts to regulate rates generally contain one or more of the following three types of provisions:

- Creation of a prior approval rate application process, where implementation of new rates by insurers must await approval by state regulatory agencies;
- Limitations on insurer rate levels or on insurer rate level changes, also known as "flex rating"; and/or
- Disallowing certain rating variables or rating factor differentials that are used to segment different risk groups.

The purpose of this report is to provide stakeholders involved in the Illinois insurance industry with an actuarial perspective on these types of ratemaking restrictions. It is divided into three parts:

- Part 1 begins with a brief discussion of actuarial ratemaking and the associated state regulatory approaches. It is intended for readers who do not have a background in actuarial topics.
- Part 2 provides an analysis of the Illinois personal auto market using the criteria of availability, affordability, and reliability.
- Part 3 contains an overview of the impacts of different forms of rate regulation, including examples from other states that have adopted and removed various ratemaking restrictions.

Although there is a specific bill in the state legislature as of this writing, IL HB2203,[3] this report is not intended to address any particular legislation or policy proposal. Instead, it is intended to provide a broad appraisal of regulations of this type from the perspective of actuarial ratemaking.

[2] United States v. South-Eastern Underwriters Association and the McCarran-Ferguson Act are discussed in more detail in Part 1: Insurance fundamentals – Insurance Regulation (page 11) of this report.
[3] The full text of Illinois House Bill 2203, introduced February 7, 2023, is available at https://legiscan.com/IL/bill/HB2203/2023 (accessed November 27, 2023).

Part 1: Insurance fundamentals

The goal of this report is to assess the relationship between three complex topics: the health of insurance markets, actuarial ratemaking, and the effects of state ratemaking regulations. This section provides background and key definitions in support of this discussion.

Pillars of sustainable insurance markets

Three pillars support sustainable insurance markets and allow them to continue to serve individuals and society. *Availability* means that policyholders can obtain insurance coverage, and it depends on insurers being able to manage the associated risk and being willing to accept the risk transfer. *Affordability* means that policyholders are willing and able to pay the premium corresponding to the coverage offered by insurers. *Reliability* means that insurers will remain solvent and be able to pay claims and that the system is stable over the long term.

All three traits are desirable, but there are trade-offs among them, so that overemphasizing one trait may threaten the others. For example, if affordability is overemphasized as a standalone goal, then insurers may be unable to earn a reasonable profit long term. This could threaten their willingness to remain in the market (availability) or their ability to remain in business (reliability). As a result, state legislators and regulators aim to foster a critical balance of the three traits. There have been challenges to each of these pillars in various insurance markets over the years, but when they are in balance the resulting competitive market can be relied upon to meet the vast majority of needs for its customer base over a long-term horizon.

Availability

Availability refers to the ability of consumers to obtain the insurance they need. To obtain insurance coverage, some other entity needs to be willing to accept the risk transfer. For most personal auto insurance, this is handled through the admitted insurance market. Every state requires insurance companies to either have a license to operate (admitted) or to qualify for a statutory exception (nonadmitted). Admitted insurers are licensed separately in each state where they operate.

In some limited cases, the admitted market is unable to provide certain types of insurance coverage sought by individuals or businesses, usually due to an inability to match the price to the risk or to assuming too great an exposure to risk. The lack of available coverage may be a persistent problem for a given type of risk. For example, drivers with non-U.S. driving experience have historically faced availability challenges. Other risks may be relatively unique, such as custom-built, antique, or high-value vehicles, and insurers may determine that they do not have the expertise to properly underwrite and rate those risks.

In addition to characteristics of the risk, there are many other availability determinants. There is a wide range of regulatory schemes across the states, some of which are more challenging for insurance company operations. Rate of return expectations can vary by state and by line of business; insurers may consider exiting a market where they cannot earn a reasonable return. The flow of capital into and out of the reinsurance market, the rate of inflation in the general economy, and the level of equity and debt market investment returns can all influence an insurer's appetite and ability to offer coverage.[4]

[4] Newman, James W. Jr. (2010). White paper: Insurance Residual Markets: Historical and Public Policy Perspectives. The Florida Catastrophe Storm Risk Management Center.

One solution to combat a lack of availability in the admitted market is the surplus lines market (or nonadmitted market). Surplus lines insurers are subject to less regulation than admitted insurers. This added flexibility can explain why the nonadmitted market sometimes provides coverage that the admitted market will not. However, there are several drawbacks to the surplus lines market that these insurers and their policyholders face. Surplus lines policyholders receive no protection from state guaranty funds. Insurance placement is much easier with admitted insurers, as only specially licensed agents and brokers can place coverage with surplus lines carriers. These brokers must report information about each policy placed with a surplus lines insurer to the state, they must first make a diligent effort to place coverage within the admitted market, and they are responsible for collecting and paying taxes.[5]

Sometimes even the nonadmitted market does not meet the demand of all insurance consumers. A residual market is an insurance arrangement required by the government whose purpose is to make insurance coverage available to those who cannot find coverage in the admitted market. These residual market solutions can be thought of along a spectrum of increasing government control. On one end are residual market entities formed by private companies at the direction of state legislatures. At the other end are freestanding insurance entities operated under significant government oversight.[6]

Affordability

Affordability is determined by whether customers are willing and able to buy insurance at the price offered. Affordability challenges can arise from the price of the insurance, the income of the buyer, and the customer's willingness to pay based on their perception of their own risk.

Just as with many other life necessities (shelter, food, health care), low-income households may struggle to afford insurance coverage. For others, insurance may be unaffordable due to excessively high risk resulting in relatively high premiums. If insurance is considered unaffordable, individuals may go without it or buy inadequate coverage, leaving them with uninsured or underinsured exposures.

Reliability

Policyholders rely on insurance companies to honor their end of the insurance contract — to pay covered claims. This promise is what underlies the entire insurance mechanism. If insurers are unable to pay claims, then there is a significant cost that can extend even beyond the burden on their policyholders.

One of the chief methods used by regulators to reduce the likelihood of insurance company insolvencies is minimum capital requirements. The National Association of Insurance Commissioners (NAIC) developed risk-based capital (RBC) requirements in the 1990s, including the requirement that every insurer must file an annual report documenting its financial strength. The rules do not provide a fixed amount of capital that is required for a category of insurer; instead, the rules evaluate an insurer's stated capital to determine whether it is able to withstand possible events. P&C RBC rules consider asset risk, credit risk, underwriting risk, and other forms of off-balance-sheet risk such as excessive growth.[7]

Another important component of solvency regulation is the evaluation of insurers' reserves. Reserves are required to be maintained in the form of qualifying assets such that insurers can meet their contractual obligations. Loss reserves are established for future claim payments for which the insurer is already liable.

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[5] Ibid.

[6] Ibid.

[7] Guenter, R. A., & Ditomassi, E. (2017). *Fundamentals of Insurance Regulation: The Rules and the Rationale*. ABA Book Publishing.

Unearned premium reserves are for the portion of the premium that has been collected but not yet earned; a policy may be canceled midterm by either the insured or the insurer, and any prepaid premium for the remaining policy term would need to be refunded.

Instability and uncertainty regarding regulation and legislation, the legal and judicial environment, catastrophic events, and the impact of the residual market on the admitted market can also threaten reliability.

Another aspect to consider when assessing the reliability of markets is their competitive structure. If a market is highly concentrated, with a small number of carriers holding a large percentage of the total market share, then the market may be sensitive to the successes, failures, and underwriting decisions that those carriers make. If, on the other hand, the market is highly contested, with a large number of insurers competing for market share, then the health of the overall market is much less likely to be disrupted by the actions of a single insurer.

Principles of personal lines ratemaking

Ratemaking refers to the process used by pricing actuaries and insurers to determine insurance rates.

As described in *Basic Ratemaking*, the basic economic relationship for the price of any product is Price = Cost + Profit.[8] The "price" of an insurance product is called the "premium," and the "cost" of an insurance product includes the losses paid to claimants, expenses incurred in the process of settling claims, and other expenses incurred in the development, distribution, acquisition, and servicing of policies. Because the ultimate cost of a policy is not known at the time of sale, the insurer is assuming risk that the premium may not be sufficient to pay claims and expenses. The company must support this risk by maintaining capital, and to do so it must earn a reasonable expected return (profit) on that capital.

The goals of ratemaking are to

1. Set base rates, which determine the overall rate level.
2. Separate insureds into risk classes and set rate relativities, which determine the premium differentials between them.
3. Define the rating algorithm, which is a mathematical formula that dictates how the base rates and rating factors should be used to calculate the individual rate for each policy.

Insurers calculate premiums using the base rates and rate relativities that adjust the base rates for differences in risk across various risk characteristics.

Actuarial principles and standards

The actuarial profession promulgates professional principles and standards that outline appropriate practices and provide guidance for actuaries performing actuarial services, including ratemaking. Actuaries rendering services in the United States are held to these standards, which do not change based on the state regulatory environment where they operate. However, there are situations where applicable law (statutes, regulations, and other legally binding authority) may require the actuary to deviate from the guidance of an Actuarial Standard of Practice (ASOP). Where requirements of law conflict with the guidance of an ASOP, the requirements of law shall govern. For P&C actuaries, the *Statement of Principles*

[8] Werner, G., & Modlin, C. (2016). *Basic Ratemaking*. Casualty Actuarial Society.

Regarding Property and Casualty Insurance Ratemaking[9] provides the foundation for actuarial procedures and standards of practice that protect the insurance system's financial soundness and promote equity and availability for insurance consumers.

The Statement of Principles defines four principles of ratemaking:

1. A rate is an estimate of the expected value of future costs.
2. A rate provides for all costs associated with the transfer of risk.
3. A rate provides for all costs associated with an individual risk transfer.
4. A rate is reasonable and not excessive, inadequate, or unfairly discriminatory if it is an actuarially sound estimate of the expected value of all future costs.

The essence of the first principle is that ratemaking is a *prospective* exercise. That is, while historical data is useful in constructing the rate, the rate is inherently a forward-looking measure because rates must be developed prior to the transfer of risk. Insurers do not increase rates to recoup past losses, and adjustments must be made to historical data (for example, to account for inflation) to estimate future costs.

The second principle is that the rate must capture all costs associated with policy issuance. In addition to expected losses, this includes operating, acquisition, and claim settlement expenses, as well as a provision for the insurer's profit, which represents the insurer's *cost of capital* associated with holding surplus sufficient to pay potential claims. Without consideration of this cost, there would be no incentive to investors that provide the capital to use their funds to support the insurance market compared to another investment opportunity.

The third principle extends the second one to the individual policy level. Not only must all costs be accounted for in the portfolio rates, but a similar match of price to cost should be pursued on *each policy.* In other words, insureds with similar risk, exposure, and expenses should be charged the same rate; insureds with different risk, exposure, or expenses should be charged different rates. The consequence of not doing so is that competitors whose rates more accurately reflect the cost of individual risk transfer will appear more attractive to the lower-cost policies, causing insurers that do not pursue this principle to take on a larger share of high-cost policies, deteriorating their competitiveness and profitability.

Finally, the fourth principle states that, if the first three principles are met, then rates are not "excessive, inadequate, or unfairly discriminatory."

Actuaries are also guided by a set of ASOPs, which provide guidelines for different practice areas. Four ASOPs most relevant to ratemaking are:

ASOP 12: Risk Classification:[10] Describes the purpose of establishing rate differentials and outlines best practices in doing so. Actuarial and other considerations are detailed, including statistical credibility (that

[9] Casualty Actuarial Society. *Statement of Principles Regarding Property and Casualty Insurance Ratemaking*. Originally published in 1988, rescinded in 2020, and reinstated in 2021. Retrieved January 24, 2024, from https://www.casact.org/statement-principles-regarding-property-and-casualty-insurance-ratemaking. Please note that the full text of each principle is not provided here. We have only provided the first sentence of each principle, which summarizes it.

[10] Actuarial Standards Board (2011). *Actuarial Standard of Practice No. 12: Risk Classification (for All Practice Areas)* (updated May 1, 2011).

sufficient data must exist to reliably differentiate classes), objectivity, and practicality (there must not be ambiguity in which class a risk should be placed, and determination of a classification should not cause an undue burden to the insurer or customer). Another objective of classification is avoidance of adverse selection, a situation where inadequate class differentials cause risky customers to select insurers and are contrary to the best interests of the insurer and the other risks in the insurer's portfolio.

ASOP 29: Expenses:[11] Details different types of expenses that may be included in the cost of risk transfer, including operational costs, taxes and assessments by residual markets or guaranty funds, and loss adjustment expenses. It describes adjustments to expense provisions that may be necessary to reflect risk transfer costs, such as trending for past or future inflation, or "flattening," a procedure that is used to adjust risk-based class differentials to account for fixed expenses that do not vary across policies.

ASOP 30: Profit:[12] Outlines best practices for profit loads in insurance rates, including consideration of capital costs (the prevailing rate at which risk capital is expected to provide returns to investors) and investment income (the proceeds an insurer earns by investing operating funds and surplus). It distinguishes between various types of profit, such as underwriting profit (the difference between premiums collected and payouts for loss and expense) and total return (which considers additional sources of income, such as investment income).

ASOP 56: Modeling:[13] Dictates best practices for multivariate statistical modeling, which is the modern process used to set rate relativities. Because various rating attributes are typically correlated, multivariate techniques should be used to ensure that rates do not "double count" the effect of any particular attribute by ignoring its correlation with another variable. Further guidance considers:

- How to properly measure the effects of one variable or attribute relative to another;
- The desirability of "orthogonal" variables which are uncorrelated with others, and correlated with risk, and thus provide unique predictive power not captured by other variables; and
- The instruction to avoid "overfitting", where models are fit to data that lack sufficient volume, and thus spurious signals are taken as statistically credible, and "underfitting", where the data does contain sufficient credibility, but risk differences are not recognized in the model.

Taken together, these ASOPs detail the specific criteria and procedures to ensure that the criteria of the Statement of Principles are met. In relation to the subject of this report, these ASOPs contain valuable guidance for ratemaking actuaries and regulators to consider.

Insurance regulation

In the United States, all forms of insurance are generally regulated by the states. This was the accepted historical practice until 1944, when the U.S. Supreme Court decided that insurance was interstate commerce and should fall under the U.S. Constitution's commerce clause, in United States v. South-Eastern Underwriters Association.[14] Instead of establishing a federal regulatory framework, Congress granted the authority to regulate insurance back to the states through the McCarran-Ferguson Act. In this law,

[11] Actuarial Standards Board (2011). *Actuarial Standard of Practice No. 29: Expense Provisions in Property/Casualty Ratemaking* (updated May 1, 2011).
[12] Actuarial Standards Board (2011). *Actuarial Standard of Practice No. 30: Treatment of Profit and Contingency Provisions and the Cost of Capital in Property/Casualty Insurance Ratemaking* (updated May 1, 2011).
[13] Actuarial Standards Board (2019). *Actuarial Standard of Practice No. 56: Modeling.*
[14] Guenter & Ditomassi, 2017, op cit.

Congress stated that the federal government maintained the right to regulate insurance but would not do so if it were regulated by the states. There are some exceptions to state regulation authority, such as the Gramm-Leach-Bliley Act and the Affordable Care Act.[15] Under the McCarran-Ferguson Act, "no Act of Congress shall be construed to invalidate, impair or supersede any law enacted by any State for the purpose of regulating the business of insurance."[16]

Each state regulates insurance through its three branches of government. The legislative branch enacts laws governing the insurance business, including the formation of domestic (in-state domiciled) insurers, the licensing of foreign (out-of-state domiciled) insurers, standards of solvency, and licensing of insurance agents. State courts issue rulings on insurance disputes, such as the interpretation of policy terms. The executive branch houses the commissioner of insurance (sometimes called superintendent), a position usually filled by governor appointment, but filled through popular election in 12 states and territories.[17] In some states, the commissioner also supervises the banking and securities operations of the state.[18]

There are two main areas of insurance regulation: solvency and market conduct. Rate regulation addresses both aspects in that rates are not to be inadequate, excessive, or unfairly discriminatory.

Solvency regulation

Solvency regulation is focused on preventing insurer insolvency and the resulting policyholder impacts. If an insurer goes insolvent, it cannot pay policyholder claims, resulting in a significant breach of trust and causing potential financial hardship for consumers. Regulators seek to prevent insolvencies through the licensing process, reporting requirements, and financial analysis, capital requirements, company examinations, and regulation of companies' reserves and investments.[19] Regulators attempt to rehabilitate financially threatened companies, liquidate insolvent companies, and compensate policyholders and claimants through state insolvency funds.

Insurance companies must produce financial statements in accordance with state regulations, and these statements differ in their accounting from other businesses in certain important ways. The accounting used by insurers in their financial statement development is referred to as statutory accounting principles (SAP). They are different from generally accepted accounting principles, which are typically used by noninsurance businesses in their financial statements.[20] The major differences are: 1) SAP has stricter inclusion requirements for assets on the balance sheet; 2) SAP has a different valuation standard for certain assets on the balance sheet; and 3) there is a different methodology for matching expenses and revenues.[21]

Policyholder's surplus is a key concept within SAP, and it simply is the excess value of assets over liabilities. Policyholder's surplus provides a cushion for insurers to be able to meet policyholder obligations in the case of unexpected liabilities, such as a significant catastrophic loss, and serves as a foundation for

[15] Ibid.
[16] NAIC (December 21, 2023). McCarran-Ferguson Act. Retrieved January 24, 2024, from https://content.naic.org/cipr-topics/mccarran-ferguson-act.
[17] Vaughan, E.J., & Vaughan, T. (2008). *Fundamentals of Risk and Insurance* (10th ed.). John Wiley & Sons, Inc.
[18] Guenter & Ditomassi, 2017, op cit.
[19] Vaughan & Vaughan, 2008, op cit.
[20] NAIC (May 31, 2023). Statutory Accounting Principles. Retrieved January 24, 2024, from https://content.naic.org/cipr-topics/statutory-accounting-principles.
[21] Vaughan & Vaughan, 2008, op cit.

projected future business. Reserves represent an insurer's debts to policyholders, which are an insurer's major liabilities. A significant focus of solvency regulation involves ensuring insurance companies maintain adequate policyholder's surplus and reserves.

Market regulation

Market regulation is first concerned with addressing areas where there are gaps in knowledge and/or bargaining power between an insurer and its policyholders. Regulators ensure truth in advertising, clear policy language, coverage standards, and fair claim settlement procedures. For example, policy forms contain specialized language that few consumers have the time, education, or inclination to understand.

Rate regulation

Market regulation is also focused on ensuring the availability and affordability of necessary insurance coverage, which are both affected by the rates charged by insurers. Rates must not be inadequate, excessive, or unfairly discriminatory, consistent with the actuarial Statement of Principles. Rate regulation is perhaps the area with the most significant variation among different state regulatory frameworks and varies among different lines of business within the same state. The key disagreement that drives these differences is whether market forces are appropriate for ensuring that rates are not excessive, inadequate, or unfairly discriminatory. Less restrictive, market-oriented frameworks rely on competition to ensure that insurance rates are in line with underlying costs. More restrictive frameworks inherently assume that regulators must intervene to ensure reasonable and appropriate rates.

There are four general approaches to rate regulation: prior approval, no filing, file-and-use, and informational. [22]

1. Prior approval entails the most scrutiny, in which insurers must justify their proposed rates, often requiring significant support. The insurance commissioner must approve the rates before they are used and retains the right to review and call for a new filing, even after rates have become effective.
2. A no-filing approach does not require commissioner approval of rates. Under this approach, open competition of the market is deemed to be the most appropriate governor of rates.
3. A file-and-use or use-and-file system enables a review under the "inadequate, excessive, or unfairly discriminatory" standard but does not require prior approval. Although there is much variation, this approach generally allows rates to be used unless disapproved by the commissioner, requiring a new filing. Filings are required, sometimes before rates are used and sometimes within a certain amount of time from when rates are effective. Ultimately, the commissioner reserves authority to disapprove rates.
4. Informational regulation is very similar to no filing in that the commissioner does not approve rates. However, they are still filed with the commissioner on an informational basis.

There is a wide degree of variation within these general approaches. On one end of the prior approval spectrum are state-prescribed rates or a "bureau" rating system, where a state insurance regulator or state rating bureau prescribes rates and rate classifications, which insurers may deviate from with the regulator's approval. In contrast, some prior approval states impose "deemer provisions" on regulators, which outline time limits when an insurer's filed rates are presumed to be approved. And within this group, some states with deemer provisions routinely require insurers to waive this limitation, while others do

[22] Ibid.

not. Some states use file-and-use for rate changes within a prescribed range but prior approval for rate increases above a certain threshold (also known as "flex rating"). There is variation among states using file-and-use systems as well, as some file-and-use states have processes, templates, and/or procedures that in practice resemble prior approval.

The degree of rate regulation in personal auto has varied significantly over time but has consistently trended toward open competition during the past 50 years. Prior approval laws were established in most states after the passage of the McCarran-Ferguson Act, which exempted the activities within the "business of insurance" from federal antitrust laws when the activity is regulated by state law. This permitted insurers to pool historical loss information to better project future losses. However, during this era there were concerns about lack of price competition due to the dominance of rating bureaus.[23] By the 1970s, many states adopted "open competition" rating laws, which relied more on price competition to regulate rates rather than direct intervention, if markets were found to have "effective" competition.[24] By 1985, only 25 states retained prior approval rate regulation for personal auto.[25] Some states went back to prior approval during a period of surging auto insurance claim costs in the late 1980s, but most states subsequently returned to less restrictive rate regulation.[26] Even more states transitioned from prior approval to competitive systems in the 2000s, and today 14 states require prior approval for personal auto rates.[27,28] Five of these states previously had competitive rating (California, Connecticut, Georgia, Michigan, and Nevada[29]) but the others have had prior approval in place since the 1940s.[30]

There are several mechanisms for which states can exert control over insurance pricing.

- **Prior approval.** As described above, insurers must justify their proposed rates, often requiring significant support. The extent of support required depends on the state and the nature of the filing. The filings can take weeks to prepare, and particularly complex filings can require months of preparation. The insurance commissioner may request additional information, must approve the rates before they are used, and retains the right to disapprove rates even after they have become effective. In addition, some states mandate rate hearings for certain rate filings, and these hearings can often be triggered when a rate increase above a certain level is proposed. California has a unique "intervenor" process, where consumer groups may demand rate hearings for filings to be adjudicated and get paid by the insurer for substantial contribution to the review of the

[23] Williams, C. A., & Whitman, A. F. (1973). Open Competition Rating Laws and Price Competition. *Journal of Risk and Insurance*.
[24] Ibid.
[25] Cummins, J.D. (ed.) (2002). *Deregulating Property-Liability Insurance: Restoring Competition and Increasing Market Efficiency*. Brookings Institution Press. Retrieved November 28, 2023, from http://www.jstor.org/stable/10.7864/j.ctv893jwc (login required).
[26] Ibid.
[27] Property Casualty Insurers of America (2010). White paper: Analysis of Property/Casualty Insurance Rate Regulatory Laws.
[28] According to the NAIC 2023 Auto Insurance Database Report, states currently with prior approval for personal auto are Alabama, California, Connecticut, Georgia, Hawaii, Louisiana, Michigan, Mississippi, Nevada, New Jersey, North Carolina (bureau), Pennsylvania, Washington, and West Virginia.
[29] Michigan enacted prior approval for personal auto rates effective July 1, 2020.
[30] Cummins, 2002, op cit.

filing. The intervenor process in California has added significant delay to the review process in comparison to states without intervenors or with competitive rating.

- **Rate level control**. While regulators are also concerned with inadequate rates when considering an insurer's rate level, in practice the primary focus is preventing excessive rates. Rate filings can be summarized by their overall change. For example, if a filing's overall effect is that rates are increasing by 7%, it implies that the total premium collected under the new rates will be 7% higher than under the current rates, for the same group of policies.
- **Rate classification control**. When considering rate classification, regulators are concerned with preventing unfairly discriminatory rates. Generally, this means that differences in rates should reflect differences in expected loss and expense among the classes of risks being insured. Some variables are prohibited for being unfair for other reasons. For example, no state allows rates to be based on race, ethnicity, national origin, religion, or income. While it is unclear whether these variables would help predict insurance losses, prohibiting them is presumed to be in the best interests of society.

There is some unavoidable conflict between rate regulation and the goals of ensuring availability, affordability, and reliability. In Part 3, we discuss in greater detail the relationship between rate regulation and these traits.

Part 2: Illinois market experience

Like many other states, Illinois enacted a prior approval rating law for personal auto in 1947. In 1969, the state Legislature enacted an open competition law to replace the prior approval law, as did many states at the time. However, the legislation included a sunset clause that caused the law to expire in August 1971. As the temporary law was slated to expire, the Legislature was deadlocked, and the result was that no rate regulation law was enacted. Illinois became the only state in the country without a rate regulation law and has operated in this way for more than 50 years.[31]

This means that Illinois is considered an "informational" state with respect to rate regulation. Insurers are required to file rates, but the insurance commissioner does not have disapproval authority; rates are set in a completely open competition environment for most lines of business, including personal auto.

In this section, we compare the Illinois personal auto market to other states on various measures of availability, affordability, and reliability to understand whether the Illinois personal auto market has experienced any negative consequences from the informational rate regulatory framework that would provide an impetus to regulatory intervention in personal auto rating.

Availability

As described in Part 1, availability refers to the willingness of insurers to offer coverage, and the ability of customers to easily obtain the coverage they need. Availability is generally conditioned on insurers' ability to manage and measure the risk and charge premiums that reflect their perceived cost of risk transfer. Beyond simply meaning that each consumer has the opportunity to buy a personal auto policy, a market with a high degree of availability would exhibit many traits. First, consumers generally would have several different options both in terms of the insurers they can choose, as well as the coverage options available. Consumers would be able to shop for insurance through a variety of channels, and products would exist that are tailored to the specific needs of different types of consumers. In a market with reduced availability, there will be few choices and, in extreme cases, some who cannot obtain insurance.

When vehicle owners cannot find or afford insurance through admitted carriers, they must seek coverage through the nonadmitted market (insurance companies that are unlicensed in the state where they are writing business, where business can only be placed by agents if licensed insurers decline to accept the policy) or the residual market (entities that are created, underwritten, or managed by government agencies or boards). These residual insurers may include *assigned risk plans, joint underwriting associations (JUAs),* or *reinsurance facilities*. The long-term trend has been away from reinsurance facilities and toward the adoption of assigned risk plans.[32] According to the Auto Insurance Plans Service Office (AIPSO), three states (Florida, Hawaii, and Michigan) have JUAs, two (New Hampshire and North Carolina) have reinsurance facilities, Maryland has a state fund, and the rest of the states use assigned risk plans.

The structure and governance of these insurers vary, with risks being pooled or assigned to private insurers, losses being paid by the private market or taxpayers, and the residual market insurer being governed under the authority of the insurance commissioner, the insurance industry, or some combination of both. These structural and design factors also impact the size of the residual market. They include:

[31] Ibid.

[32] Gardner, L. A. & Marlett, D. C. (2007). The State of Personal Auto Insurance Rate Regulation. *Journal of Insurance Regulation*, 26(2), 39-69.

- Low premiums relative to voluntary market: The intent of the residual market is to act as an "insurer of last resort," and some states even mandate that premiums should exceed that of private carriers. However, due to efforts to protect affordability, some residual market premiums could be lower than actuarially indicated or lower than voluntary market carriers. If this happens, consumers could seek out residual market carriers as their preferred option instead of private carriers, and the insurer of last resort no longer functions as intended, creating market dislocation and deficits.
- Easy entry to residual market: Rules vary by state in terms of how consumers become eligible for the residual market. Some states allow anyone to apply, whereas others are more strict. If barriers are low, this could cause more consumers than necessary to enter the residual market, potentially adding to market dysfunction.
- Assessments and risk to insurers: States vary in terms of the degree of residual market risk that is levied on insurers. Because this risk is often shared in proportion to the insurer's admitted market share, insurers may choose not to pursue market share growth in states with large or undercapitalized residual market carriers, which could worsen availability. In extreme cases, residual market growth could threaten the solvency of the remaining carriers in the admitted market, becoming a reliability issue.

Attitudes of insurance companies about the type and amount of insurance coverage they are willing to provide at a particular time in a particular state are affected by the state's judicial, legislative, and regulatory environments.[33] But they are not the sole influences on availability, which is also impacted by economic, financial, and other factors not under the control of insurers, legislatures, and regulators. For example, risks can change in ways that make them more difficult to underwrite and rate. An example of changing risk dynamics in property insurance is the impact of climate change and increased catastrophic losses, which makes the historical data a less reliable predictor of future losses; for personal auto, changes in vehicle technologies such as electric vehicles, automated driving assistance systems, and "autonomous" driving software are changing personal auto risk.

To measure the availability of personal auto insurance, we obtained data to assess the size of the residual market in each state. The table in Figure 1 below provides data from AIPSO, a not-for-profit organization that serves this portion of the insurance market by promulgating best practices, compiling statistics, and more. AIPSO compiles statistics so that state residual markets can be compared. The four-year history shown in Figure 1 reveals that the residual markets in most states, including Illinois, are of minimal size and less than 1.0% of the total personal auto market. This marks a drastic improvement over the course of the past several decades. In 1994, the residual market insured roughly 4% of all drivers in the United States.[34] In 2007, the residual market accounted for less than 1.6% of all drivers, with more than 75% of the reduction attributed to changes in a handful of states.[35] Gardner attributes the downsizing of the residual market to the growth of the nonstandard auto insurance market and rate regulation reforms in Massachusetts and South Carolina that resulted in significant depopulation of their residual markets.

One state, North Carolina, has the largest residual market by far, accounting for almost 14% of the total personal auto premium. This is likely impacted by the fact that North Carolina has remained a bureau

[33] Newman, 2010, op cit., p. 2.
[34] Cummins, 2002, op cit.
[35] Gardner & Marlett, 2007, op cit., p. 63.

rating state, with rules that restrict the amount insurers can charge for individual insureds and operates a reinsurance facility that does not restrict eligibility for the residual market. If the bureau rate is higher than the insurer's estimate of cost for the policy, then the insurer will accept it; but if the opposite is true, they will reject the risk and cede it to the reinsurance facility. Therefore, the proportion of premium in the residual market reflects the degree of inadequacy or mismatch between expected risk and rate in the bureau rates.

As shown in the table in Figure 2 below, we also found that the nonadmitted personal auto market is a relatively small proportion of the total premiums written. Three states have nonadmitted premium greater than 0.01% of the total: California (0.28%), Maryland (0.98%), and Texas (1.89%).

Based on the size of the residual and nonadmitted markets by state, we do not see any evidence that the availability of personal auto insurance in Illinois has varied significantly from other states.

Figure 1: Residual Market Premium as Percentage of Total Market, 2018 to 2021[36]

State	Residual Market Written Premium (Dollars in Thousands)				Total Market Written Premium (Dollars in Thousands)				Residual Market WP as % of Total Market			
	2018	2019	2020	2021	2018	2019	2020	2021	2018	2019	2020	2021
Alabama	$8	$3	$3	$3	$3,561,518	$3,692,135	$3,730,557	$3,912,050	0.00	0.00	0.00	0.00
Alaska	11	3	10	8	486,051	508,470	503,905	519,093	0.00	0.00	0.00	0.00
Arizona	2	0	0	0	5,284,272	5,553,910	5,594,688	5,957,663	0.00	0.00	0.00	0.00
Arkansas	0	11	0	3	2,072,329	2,106,860	2,148,756	2,244,664	0.00	0.00	0.00	0.00
California	1,295	1,384	885	592	29,888,750	31,122,151	30,320,113	31,715,580	0.00	0.00	0.00	0.00
Colorado	7	2	2	2	5,035,847	5,321,908	5,377,131	5,604,882	0.00	0.00	0.00	0.00
Connecticut	334	227	117	67	3,083,012	3,146,959	3,020,111	3,192,828	0.01	0.01	0.00	0.00
Delaware	5	29	4	2	913,402	936,782	926,642	965,899	0.00	0.00	0.00	0.00
Dist. of Col.	493	522	286	132	371,402	379,686	378,878	387,191	0.13	0.14	0.08	0.03
Florida	1,357	632	397	370	20,450,403	20,668,273	20,766,304	22,594,297	0.01	0.00	0.00	0.00
Georgia	0	0	0	0	9,399,082	9,922,006	10,079,257	10,543,720	0.00	0.00	0.00	0.00
Hawaii	2,119	1,950	1,514	1,325	781,351	800,147	773,565	806,148	0.27	0.24	0.20	0.16
Idaho	2	0	0	5	1,045,265	1,107,981	1,148,607	1,256,380	0.00	0.00	0.00	0.00
Illinois	**310**	**261**	**120**	**90**	**7,650,560**	**7,798,502**	**7,625,282**	**7,877,173**	**0.00**	**0.00**	**0.00**	**0.00**
Indiana	17	2	4	10	3,935,324	4,018,753	4,007,822	4,154,964	0.00	0.00	0.00	0.00
Iowa	8	16	21	18	1,835,803	1,876,273	1,885,995	1,973,506	0.00	0.00	0.00	0.00
Kansas	1,167	1,018	662	536	1,950,317	2,003,896	1,962,521	2,057,829	0.06	0.05	0.03	0.03
Kentucky	866	113	128	50	3,187,777	3,238,944	3,170,569	3,240,962	0.03	0.00	0.00	0.00
Louisiana	57	91	25	8	4,822,695	4,887,096	4,748,431	4,834,130	0.00	0.00	0.00	0.00
Maine	18	4	8	4	764,614	785,584	782,381	829,464	0.00	0.00	0.00	0.00
Maryland	82,868	76,008	57,667	44,856	5,279,044	5,431,179	5,313,330	5,397,931	1.57	1.40	1.09	0.83
Massachusetts	104,078	89,435	63,973	44,699	5,401,680	5,570,167	5,418,490	5,610,088	1.93	1.61	1.18	0.80
Michigan	7,391	4,723	1,592	355	9,514,102	9,931,542	9,300,096	9,113,148	0.08	0.05	0.02	0.00
Minnesota	15	23	27	9	3,795,741	3,911,682	3,858,345	3,992,311	0.00	0.00	0.00	0.00
Mississippi	0	0	0	0	1,973,308	2,007,069	2,035,848	2,173,864	0.00	0.00	0.00	0.00
Missouri	40	33	7	7	4,129,433	4,265,648	4,221,791	4,434,998	0.00	0.00	0.00	0.00
Montana	2	13	14	-1	775,027	798,249	814,295	875,373	0.00	0.00	0.00	0.00
Nebraska	33	9	8	22	1,313,137	1,347,991	1,337,517	1,407,405	0.00	0.00	0.00	0.00
Nevada	-4	2	11	0	2,719,767	2,859,346	2,812,075	2,971,154	0.00	0.00	0.00	0.00
New Hampshire	110	106	79	93	880,901	912,452	890,016	926,250	0.01	0.01	0.01	0.01
New Jersey	57,016	54,322	44,146	38,049	7,988,307	8,138,058	7,729,155	8,076,877	0.71	0.67	0.57	0.47
New Mexico	3	7	0	11	1,487,594	1,550,184	1,530,491	1,577,415	0.00	0.00	0.00	0.00
New York	104,064	88,944	55,777	59,087	13,982,578	14,230,127	14,006,259	14,937,654	0.74	0.63	0.40	0.40
North Carolina	975,346	953,281	964,630	986,767	6,364,228	6,589,045	6,715,171	7,087,596	15.33	14.47	14.36	13.92
North Dakota	0	7	0	11	492,890	510,770	507,340	516,684	0.00	0.00	0.00	0.00
Ohio	11	19	5	1	6,937,524	7,036,396	6,858,519	6,956,020	0.00	0.00	0.00	0.00
Oklahoma	14	29	9	4	2,768,450	2,814,272	2,813,656	2,927,603	0.00	0.00	0.00	0.00
Oregon	33	24	9	6	3,075,770	3,132,953	3,054,069	3,150,827	0.00	0.00	0.00	0.00
Pennsylvania	3,675	3,192	2,590	2,057	9,127,706	9,223,112	9,048,443	9,267,954	0.04	0.03	0.03	0.02
Rhode Island	23,656	22,459	14,414	11,766	965,656	980,717	981,451	1,006,632	2.45	2.29	1.47	1.17
South Carolina	14	8	8	5	4,358,829	4,526,099	4,600,111	4,921,443	0.00	0.00	0.00	0.00
South Dakota	9	9	6	4	569,419	595,734	599,887	642,457	0.00	0.00	0.00	0.00
Tennessee	13	10	10	-1	4,329,070	4,463,039	4,523,190	4,779,210	0.00	0.00	0.00	0.00
Texas	2,342	1,785	1,263	1,000	22,676,486	23,243,234	22,566,433	23,636,772	0.01	0.01	0.01	0.00
Utah	4	2	3	0	2,118,936	2,239,029	2,284,474	2,449,499	0.00	0.00	0.00	0.00
Vermont	32	33	23	22	387,841	395,461	384,542	396,897	0.01	0.01	0.01	0.01
Virginia	629	497	194	164	5,752,167	5,894,279	5,810,827	6,046,674	0.01	0.01	0.00	0.00
Washington	32	18	13	1	5,507,828	5,756,389	5,599,295	5,831,734	0.00	0.00	0.00	0.00
West Virginia	25	24	10	18	1,273,771	1,285,818	1,259,917	1,287,198	0.00	0.00	0.00	0.00
Wisconsin	42	34	10	10	3,249,568	3,338,067	3,258,539	3,386,176	0.00	0.00	0.00	0.00
Wyoming	1	4	0	-1	413,225	428,167	435,409	458,498	0.00	0.00	0.00	0.00

[36] Residual market premium obtained from AIPSO Residual Market *Liability and Physical Damage Written Premium by State.* Industry direct written premium (DWP) data obtained from S&P Global CapitalIQ platform.

Figure 2: Nonadmitted Market Premium as Percentage of Total Market, 2022[37]

State	2022 Direct Written Premium (Dollars in Thousands)			Percent Nonadmitted
	Admitted	Nonadmitted	Total	
Alabama	$4,051,184	-	$4,051,184	0.00%
Alaska	542,320	-	542,320	0.00%
Arizona	6,488,092	(0)	6,488,092	0.00%
Arkansas	2,341,230	-	2,341,230	0.00%
California	32,610,432	91,015	32,701,447	0.28%
Colorado	6,062,528	(3)	6,062,525	0.00%
Connecticut	3,265,874	(3)	3,265,871	0.00%
Delaware	394,450	-	394,450	0.00%
Dist. Of Col.	996,041	-	996,041	0.00%
Florida	25,361,476	(1,598)	25,359,878	-0.01%
Georgia	11,251,527	(0)	11,251,527	0.00%
Hawaii	836,992	-	836,992	0.00%
Idaho	1,342,618	-	1,342,618	0.00%
Illinois	8,479,098	131	8,479,229	0.00%
Indiana	4,415,010	(0)	4,415,010	0.00%
Iowa	2,103,604	-	2,103,604	0.00%
Kansas	2,197,470	-	2,197,470	0.00%
Kentucky	3,348,260	(0)	3,348,260	0.00%
Louisiana	4,963,909	54	4,963,963	0.00%
Maine	880,195	-	880,195	0.00%
Maryland	5,656,864	56,038	5,712,902	0.98%
Massachusetts	5,701,536	(0)	5,701,536	0.00%
Michigan	9,227,407	624	9,228,030	0.01%
Minnesota	4,308,626	429	4,309,055	0.01%
Mississippi	2,248,838	(0)	2,248,838	0.00%
Missouri	4,737,739	(0)	4,737,739	0.00%
Montana	940,653	-	940,653	0.00%
Nebraska	1,507,979	-	1,507,979	0.00%
Nevada	3,113,421	-	3,113,421	0.00%
New Hampshire	979,413	-	979,413	0.00%
New Jersey	8,440,731	(0)	8,440,731	0.00%
New Mexico	1,683,769	(0)	1,683,769	0.00%
New York	15,275,521	61	15,275,581	0.00%
North Carolina	7,613,283	-	7,613,283	0.00%
North Dakota	548,378	-	548,378	0.00%
Ohio	7,331,552	944	7,332,496	0.01%
Oklahoma	3,145,522	-	3,145,522	0.00%
Oregon	3,371,635	(0)	3,371,634	0.00%
Pennsylvania	9,607,728	(2)	9,607,726	0.00%
Rhode Island	1,034,110	-	1,034,110	0.00%
South Carolina	5,204,953	-	5,204,953	0.00%
South Dakota	694,716	-	694,716	0.00%
Tennessee	5,140,703	(0)	5,140,703	0.00%
Texas	26,009,448	501,951	26,511,399	1.89%
Utah	2,714,366	(96)	2,714,270	0.00%
Vermont	404,902	-	404,902	0.00%
Virginia	6,588,472	0	6,588,472	0.00%
Washington	5,970,243	(1)	5,970,242	0.00%
West Virginia	1,325,816	-	1,325,816	0.00%
Wisconsin	3,627,047	(0)	3,627,047	0.00%
Wyoming	488,981	-	488,981	0.00%

[37] Industry DWP data obtained from S&P Global CapitalIQ platform.

Affordability

In this section we focus on affordability, which refers to the ability of consumers to pay for insurance at the price it is made available. Even if availability is present, affordability issues can create stresses for households, which could cause them to underinsure (by buying policies with high deductibles, insufficient limits, or inadequate coverage provisions) or, in the worst cases, fail to secure coverage at all. Thus, affordability is important to examine alongside availability in assessing the difficulties that U.S. households face in connection with personal auto insurance. While a lack of affordability is clearly undesirable, it is important not to confuse rates that are unaffordable with rates that are excessive. Part of the affordability challenges may relate to unemployment or falling wages, which are not under insurers' control. Further, as described in the previous section, availability issues can sometimes be attributed to regulatory efforts to improve affordability. When these efforts to keep prices low result in rates that are unprofitable to insurers, insurers tend to withdraw from markets.

To continue to participate in insurance markets and remain solvent, insurers must charge rates that are commensurate with the underlying cost of the risk transferred. Thus, in their efforts to improve affordability, it is important that policymakers and regulators focus on initiatives that reduce the underlying costs. These costs include providing funding and incentives to improve driver and vehicle safety and lowering the underlying costs that drive premiums, as well as offering a basic insurance option that provides a low-cost alternative to standard insurance coverage. Less helpful are initiatives that simply target short-term rate suppression, such as exercising regulatory authority to deny insurers' requests to charge actuarially indicated rates or by mandating cross-subsidies between consumers by limiting the actuarially indicated differentials that insurers are allowed to charge across risk classes. In fact, it is considered illegal in many states for insurers to vary prices based on the ability to pay for similar risks.

Average premiums

The price of insurance clearly relates to affordability. The table in Figure 3 shows average personal auto liability insurance premiums and median income by state for the period between 2016 and 2020, as compiled and reported by the NAIC. To avoid a bias that could be introduced by looking at "optional" coverages, such as comprehensive or collision, only the mandatory "liability" coverages are considered. However, because insurance laws vary by state, it is necessary to include the mandatory "no-fault" coverages to make the states as comparable as possible.[38] It should be noted that the degree to which the states are comparable is inherently limited, as a multitude of variations exist due to differences in underlying risk resulting from different levels of required minimum limits, traffic density, miles driven, mix of vehicle types, and liability laws.

Personal auto liability insurance premiums in Illinois are not the lowest in the country but are relatively lower than many states. In 2020, the average liability premium in Illinois was $501, the 23rd lowest average premium in the United States and 20% lower than the countrywide average of $631. From 2016 to 2020, average liability premiums increased 5% in Illinois compared to 10% countrywide.

[38] The coverages included as "liability" by the NAIC report include Bodily Injury, Uninsured or Underinsured Motorist Bodily Injury and Property Damage, Medical Payments, Property Damage Liability, Statutory Uninsured Motorist (N.Y.), Medical Expense (Va.), Property Protection (Mich.), No-Fault Personal Injury Protection, and a variety of the mentioned coverages under optional and mandatory cover and split and combined limits coverage.

Figure 3: Average Liability Premium and Median Income by State, 2016-2020[39]

	Average Liability Premium					Median Income				
State	**2016**	**2017**	**2018**	**2019**	**2020**	**2016**	**2017**	**2018**	**2019**	**2020**
Alabama	$436	$479	$513	$523	$517	$50,870	$49,940	$56,200	$54,690	$56,930
Alaska	557	562	576	585	565	77,990	68,730	78,390	74,750	81,130
Arizona	561	610	648	664	647	59,700	62,280	70,670	67,090	70,820
Arkansas	419	459	487	485	468	49,750	49,780	54,540	50,780	50,780
California	521	567	617	628	618	70,040	70,490	78,110	77,650	81,580
Colorado	575	641	688	707	695	74,980	73,030	72,500	83,780	84,950
Connecticut	697	744	785	801	791	74,300	72,810	87,290	79,430	80,960
Delaware	811	846	900	897	863	64,960	65,010	74,190	70,020	68,690
Dist. of Col.	682	746	809	821	794	81,280	85,750	93,110	88,220	90,640
Florida	905	962	1010	997	974	53,090	54,640	58,370	57,760	59,730
Georgia	638	740	802	834	829	57,990	55,820	56,630	59,270	61,500
Hawaii	461	469	479	479	452	73,600	80,110	88,010	80,830	82,200
Idaho	378	404	426	435	421	59,500	58,730	65,990	66,730	76,920
Illinois	**477**	**509**	**517**	**522**	**501**	**65,970**	**70,150**	**74,400**	**74,330**	79,250
Indiana	407	434	445	448	435	58,770	59,890	66,690	66,810	70,190
Iowa	319	339	349	351	342	63,470	68,720	66,050	68,820	72,430
Kansas	368	401	423	427	409	56,900	63,940	73,150	73,080	75,980
Kentucky	550	596	621	618	593	49,670	54,560	55,660	56,760	55,630
Louisiana	850	941	1018	1026	979	43,570	49,970	51,710	51,190	57,210
Maine	363	371	375	376	372	53,320	58,660	66,550	63,690	71,140
Maryland	651	701	738	750	726	82,090	86,220	95,570	94,790	97,330
Massachusetts	623	643	658	665	649	76,240	86,350	87,710	87,810	86,570
Michigan	831	876	937	981	901	56,410	60,450	64,120	64,390	64,490
Minnesota	469	484	500	502	487	69,980	71,820	81,430	78,750	80,440
Mississippi	483	513	540	546	540	43,280	42,780	44,790	45,130	46,640
Missouri	454	494	522	530	509	56,530	61,730	60,600	62,180	63,590
Montana	401	423	436	439	431	57,410	57,680	60,200	56,740	65,000
Nebraska	389	418	430	432	418	59,580	67,580	73,070	72,250	78,110
Nevada	739	800	902	926	899	58,040	61,860	70,910	61,160	64,340
New Hampshire	413	426	437	443	430	75,630	81,350	86,900	88,890	88,840
New Jersey	901	933	950	953	903	71,240	74,180	87,730	85,550	88,560
New Mexico	519	549	577	584	561	45,600	48,280	53,110	50,910	53,460
New York	840	869	920	932	923	61,540	67,270	71,860	68,660	72,920
North Carolina	358	370	394	395	396	49,550	53,370	61,160	60,430	62,890
North Dakota	298	304	309	312	304	60,170	66,510	70,030	64,120	68,880
Ohio	417	442	453	453	433	60,690	61,630	64,660	60,380	62,690
Oklahoma	479	504	511	507	488	51,880	54,430	59,400	52,470	60,100
Oregon	631	678	690	686	655	62,500	69,170	74,410	76,860	81,860
Pennsylvania	515	542	557	551	528	61,290	64,520	70,580	70,790	72,630
Rhode Island	817	870	898	920	913	65,400	62,270	70,150	80,180	74,980
South Carolina	578	648	705	719	715	54,540	57,440	62,030	60,340	62,540
South Dakota	315	329	334	337	325	56,910	59,460	64,260	70,190	73,890
Tennessee	434	458	478	482	471	55,310	56,060	56,630	54,980	62,170
Texas	575	631	660	650	612	60,090	59,790	67,440	68,400	67,400
Utah	528	569	602	615	605	69,790	77,070	84,520	83,990	87,650
Vermont	365	375	377	375	367	63,680	70,070	74,310	67,260	76,080
Virginia	446	470	494	494	481	70,810	77,150	81,310	82,210	80,270
Washington	627	667	689	707	681	71,540	79,730	82,450	81,360	87,650
West Virginia	509	514	522	517	495	46,960	50,570	53,710	51,970	46,840
Wisconsin	393	413	422	421	407	63,480	62,630	67,360	67,410	69,940
Wyoming	346	355	356	356	343	59,540	62,540	65,130	65,450	71,050
U.S. Average	**572**	**614**	**646**	**651**	**631**	**59,040**	**61,140**	**63,810**	**68,700**	68,010

Among states with similar proportions of metro population (a proxy for average traffic density), miles driven, and liability laws, Illinois personal auto liability premiums are still among the lowest.

Figure 4: Average Liability Premium for Selected States, 2016-2020[40]

	Average Liability Premium								
State	2016	2017	2018	2019	2020	Liability Law	Minimum Financial Responsibility Limits	% Metro Population	Average Miles per Vehicle
Arizona	$561	$610	$648	$664	$647	Tort	15/30	81%	12,071
California	521	567	617	628	618	Tort	15/30	92%	11,197
Connecticut	697	744	785	801	791	Tort	25/50	92%	11,315
Illinois	**477**	**509**	**517**	**522**	**501**	Tort	25/50	88%	10,362
Ohio	417	442	453	453	433	Tort	25/50	80%	10,929
Pennsylvania	515	542	557	551	528	Tort	15/30	83%	9,859
Rhode Island	817	870	898	920	913	Tort	25/50	99%	8,974
Virginia	446	470	494	494	481	Tort	25/50	81%	11,461

Another common and intuitive measure is the ratio of premium to household income. Consumers have limited budgets and, while insurance is important, it is often not a top priority for households, as claims are rare. Therefore, insurance premiums that take a higher fraction of household income are likely to place greater financial stresses on households, resulting in the underinsurance issues mentioned above. To create the table in Figure 5 below, we calculated average liability premium as a percentage of median income and ranked this measure to provide a sense of which states require consumers to spend more or less of their income on personal auto insurance. Based on this measure, Illinois performs even better, with the average liability premium representing 0.63% of the state median income, 32% more affordable than the national average. Illinois's affordability rank improved slightly during the five years evaluated, moving from the 19th most affordable to 17th in the period between 2016 and 2020.

Uninsured population

If consumers face issues with affordability in the voluntary and residual markets, they may forgo insurance altogether. Therefore, another possible indicator of unaffordable insurance is a substantial uninsured population.

[39] Average premium from NAIC report: 2021 Auto Insurance Database Average Premium Supplement (September 2023). Median Income from U.S. Census Bureau, Real Median Household Income in each state (for example, table MEHOINUSALA672N for Alabama), retrieved from FRED, Federal Reserve Bank of St. Louis.

[40] NAIC (September 2023). 2021 Auto Insurance Database Average Premium Supplement.

The estimated proportion of uninsured drivers in each state is quantified by the Insurance Research Council (IRC), and the resulting statistics are published by the Insurance Information Institute (III).[41] To create these estimates, the IRC relies on the frequency of bodily injury (BI) claims that appear on uninsured motorist coverages, relative to the claim frequency under BI coverage.[42] To provide a historical view of the uninsured population, we obtained several years of these statistics from the III archive and compiled them into the table in Figure 6. The estimated uninsured population in Illinois is around the national average, ranging from 15% in 2007 to 12% in 2019.

[41] Data from Insurance Information Institute. *Facts + Statistics: Uninsured Motorists* (available at https://www.iii.org/table-archive/20641), based on study by Insurance Research Council. Uninsured population estimated based on the ratio of frequency under UM coverages to BI coverages.

[42] This ratio is intended as a proxy calculation, using an observation about the likelihood that any driver causing an accident involving bodily injuries was insured, to make an estimate about the likelihood that all drivers (whether they caused accidents or not) are insured. Additionally, the likelihood that these coverages will be triggered in the event of a given incident can vary by state due to tort thresholds, no-fault versus third-party types, minimum limits, and more. Because of these potential distortions, we caution that the uninsured estimates, while helpful, serve as an imperfect proxy.

Figure 5: Auto Liability Insurance as Percentage of Income and Affordability Rank by State, 2016-2020[43]

	Liability Premium Percent of Income					Affordability Rank (Lowest is Best)				
State	**2016**	**2017**	**2018**	**2019**	**2020**	**2016**	**2017**	**2018**	**2019**	**2020**
Alabama	0.86	0.96	0.91	0.96	0.91	31	33	33	34	34
Alaska	0.71	0.82	0.73	0.78	0.70	18	26	21	23	21
Arizona	0.94	0.98	0.92	0.99	0.91	35	34	34	36	35
Arkansas	0.84	0.92	0.89	0.96	0.92	30	31	31	33	36
California	0.74	0.80	0.79	0.81	0.76	21	23	25	25	25
Colorado	0.77	0.88	0.95	0.84	0.82	23	30	36	26	31
Connecticut	0.94	1.02	0.90	1.01	0.98	34	37	32	38	37
Delaware	1.25	1.30	1.21	1.28	1.26	44	46	44	45	45
Dist. of Col.	0.84	0.87	0.87	0.93	0.88	28	29	30	31	32
Florida	1.70	1.76	1.73	1.73	1.63	50	50	50	50	50
Georgia	1.10	1.33	1.42	1.41	1.35	40	47	48	47	47
Hawaii	0.63	0.59	0.54	0.59	0.55	8	7	6	9	11
Idaho	0.64	0.69	0.65	0.65	0.55	10	14	15	14	10
Illinois	**0.72**	**0.73**	**0.70**	**0.70**	**0.63**	**19**	**18**	**17**	**17**	**17**
Indiana	0.69	0.72	0.67	0.67	0.62	16	17	16	16	15
Iowa	0.50	0.49	0.53	0.51	0.47	2	2	5	4	3
Kansas	0.65	0.63	0.58	0.58	0.54	11	10	9	7	9
Kentucky	1.11	1.09	1.12	1.09	1.07	41	39	41	39	41
Louisiana	1.95	1.88	1.97	2.00	1.71	51	51	51	51	51
Maine	0.68	0.63	0.56	0.59	0.52	14	11	8	8	7
Maryland	0.79	0.81	0.77	0.79	0.75	25	24	23	24	23
Massachusetts	0.82	0.74	0.75	0.76	0.75	27	21	22	20	24
Michigan	1.47	1.45	1.46	1.52	1.40	49	49	49	49	48
Minnesota	0.67	0.67	0.61	0.64	0.61	13	13	12	13	14
Mississippi	1.12	1.20	1.21	1.21	1.16	42	42	43	44	43
Missouri	0.80	0.80	0.86	0.85	0.80	26	22	29	27	29
Montana	0.70	0.73	0.72	0.77	0.66	17	19	20	21	18
Nebraska	0.65	0.62	0.59	0.60	0.54	12	9	10	10	8
Nevada	1.27	1.29	1.27	1.51	1.40	47	45	45	48	49
New Hampshire	0.55	0.52	0.50	0.50	0.48	3	3	2	3	6
New Jersey	1.27	1.26	1.08	1.11	1.02	46	43	39	40	38
New Mexico	1.14	1.14	1.09	1.15	1.05	43	41	40	42	39
New York	1.37	1.29	1.28	1.36	1.27	48	44	47	46	46
North Carolina	0.72	0.69	0.64	0.65	0.63	20	15	14	15	16
North Dakota	0.49	0.46	0.44	0.49	0.44	1	1	1	2	2
Ohio	0.69	0.72	0.70	0.75	0.69	15	16	18	19	19
Oklahoma	0.92	0.93	0.86	0.97	0.81	33	32	28	35	30
Oregon	1.01	0.98	0.93	0.89	0.80	37	35	35	30	28
Pennsylvania	0.84	0.84	0.79	0.78	0.73	29	28	24	22	22
Rhode Island	1.25	1.40	1.28	1.15	1.22	45	48	46	41	44
South Carolina	1.06	1.13	1.14	1.19	1.14	38	40	42	43	42
South Dakota	0.55	0.55	0.52	0.48	0.44	4	5	4	1	1
Tennessee	0.78	0.82	0.84	0.88	0.76	24	25	27	29	26
Texas	0.96	1.06	0.98	0.95	0.91	36	38	38	32	33
Utah	0.76	0.74	0.71	0.73	0.69	22	20	19	18	20
Vermont	0.57	0.54	0.51	0.56	0.48	5	4	3	6	4
Virginia	0.63	0.61	0.61	0.60	0.60	9	8	11	11	13
Washington	0.88	0.84	0.84	0.87	0.78	32	27	26	28	27
West Virginia	1.08	1.02	0.97	1.00	1.06	39	36	37	37	40
Wisconsin	0.62	0.66	0.63	0.63	0.58	7	12	13	12	12
Wyoming	0.58	0.57	0.55	0.54	0.48	6	6	7	5	5
U.S. Average	**0.97**	**1.00**	**1.01**	**0.95**	**0.93**					

[43] Ratio of income to average premium from table in Figure 4 and ranking of this ratio.

Figure 6: Estimated Percentage of Uninsured Drivers by State, 2007 to 2019

	Percent Drivers Uninsured					Rank (Lowest is Best)				
State	**2007**	**2009**	**2012**	**2015**	**2019**	**2007**	**2009**	**2012**	**2015**	**2019**
Alabama	26	22	20	18	20	49	46	45	46	45
Alaska	13	13	13	15	16	28	26	31	41	38
Arizona	18	12	11	12	12	44	24	23	27	27
Arkansas	15	16	16	17	19	32	40	41	43	44
California	18	15	15	15	17	44	35	39	39	42
Colorado	15	15	16	13	16	32	36	43	33	39
Connecticut	9	10	8	9	6	12	11	11	15	8
D.C.	15	11	12	11	9	32	16	25	24	13
Delaware	10	15	12	16	19	17	37	28	42	43
Florida	23	24	24	27	20	47	47	50	51	46
Georgia	12	16	12	12	12	21	38	26	27	29
Hawaii	12	11	9	11	9	21	20	15	22	17
Idaho	9	8	7	8	13	12	7	7	12	32
Illinois	**15**	**15**	**13**	**14**	**12**	**32**	**32**	**32**	**34**	**27**
Indiana	14	16	14	17	16	29	42	38	44	37
Iowa	12	12	10	9	11	21	23	20	14	25
Kansas	10	10	9	7	11	17	12	19	8	23
Kentucky	16	18	16	12	14	40	44	40	25	35
Louisiana	12	13	14	13	12	21	25	36	32	26
Maine	4	5	5	5	5	2	1	2	1	4
Maryland	12	15	12	12	14	21	32	29	29	36
Massachusetts	1	5	4	6	4	1	1	1	3	2
Michigan	17	20	21	20	26	43	45	47	48	50
Minnesota	12	13	11	12	10	21	26	24	25	19
Mississippi	28	28	23	24	29	50	51	49	50	51
Missouri	14	14	14	14	16	29	30	34	35	40
Montana	15	11	14	10	9	32	22	37	17	13
Nebraska	8	8	7	7	9	8	6	7	5	17
Nevada	15	13	12	11	10	32	28	29	22	20
New Hampshire	11	11	9	10	6	19	19	18	17	7
New Jersey	8	11	10	15	3	8	20	22	38	1
New Mexico	29	26	22	21	22	51	50	48	49	48
New York	5	5	5	6	4	3	3	3	2	3
North Carolina	12	14	9	7	7	21	29	17	4	10
North Dakota	5	9	6	7	13	3	10	5	5	30
Ohio	16	16	14	12	13	40	38	34	29	30
Oklahoma	24	24	26	11	13	48	48	51	21	34
Oregon	11	10	9	13	11	19	14	16	31	22
Pennsylvania	7	7	7	8	6	6	4	6	9	6
Rhode Island	14	18	17	15	17	29	43	44	39	41
South Carolina	9	11	8	9	11	12	15	9	15	23
South Dakota	7	9	8	8	7	6	9	10	10	10
Tennessee	20	24	20	20	24	46	48	46	47	49
Texas	15	15	13	14	8	32	32	32	36	12
Utah	8	8	6	8	7	8	8	4	12	9
Vermont	6	7	9	7	9	5	5	13	5	15
Virginia	9	11	10	10	11	12	16	21	17	21
Washington	16	16	16	17	22	40	41	42	45	47
West Virginia	8	11	8	10	9	8	16	12	20	16
Wisconsin	15	15	12	14	13	32	31	26	37	33
Wyoming	9	10	9	8	6	12	13	14	11	5
U.S. Average	**13**	**13**	**12**	**12**	**12**					

Recent rate activity

The prior section provided a snapshot of affordability over a five-year period ending in 2020. Since that time, there have been additional rate changes impacting personal auto premium levels. To compare the rate activity by state, we relied on data from ratefilings.com, a commercial provider of competitive information related to insurer rate filings. The annual rate activity by state is estimated based on filed and approved rate changes for the top 10 insurers in each state and appears in the table in Figure 7.

Over the period of 2018 to 2019, the rates of the top 10 insurers in Illinois increased +2.6%, similar to the median change countrywide (+2.2%). In 2020, when the COVID-19 pandemic disrupted consumer driving patterns, the average personal auto rate change for these carriers in Illinois was -4.4%, the largest decrease in any state.

In 2021, the average rate change in Illinois was +1.9%, versus +1.8% countrywide. However, rates increased +11.2% and +11.3% countrywide in 2022 and 2023, respectively. We now know that BI liability severity rose 44% from 2018 to 2023 and property damage liability severity rose 60% over the same period.[44] Multiple factors have driven these increases, such as:

- Increases in risky driving behaviors such as distracted driving, speeding, and driving under the influence of alcohol or drugs. Countrywide, fatality rates per mile have increased 20% compared to pre-pandemic levels.[45]
- Increased vehicle repair costs due to growing adoption of electric vehicles and advanced driving assistance systems and increases in labor rates. According to U.S. Bureau of Labor Statistics data, repair costs increased by 39.9% from June 2019 to June 2023 and by nearly 19.8% from June 2022 to June 2023.[46]
- Increased costs to replace totaled or stolen vehicles due to increased prices for used vehicles. The value of cars aged eight years or less nearly doubled between January 2020 and December 2021.[47]

In 2022 and 2023, Illinois rate increases were higher than the national average, but not the highest in the country. In 2022, Illinois rates rose by +17.9% and have increased another +15.7% so far in 2023, resulting in a +36.4% increase. Similar cumulative increases have impacted Arizona (+36.2%), Georgia (+30.3%), Maryland (+29.5%), Nevada (+34.6%), Ohio (+36.7%), Tennessee (+34.3%), Texas (+37.8%), Utah (+32.5%), and Virginia (+31.4%).

[44] Baribeau, A.G. (November 8, 2023). Unexpected Developments in Personal Auto. Actuarial Review CAS. Retrieved January 24, 2024, from https://ar.casact.org/unexpected-developments-in-personal-auto/?utm_campaign=Alan+Demers&utm_medium=email&utm_source=Alan_Demers_218.
[45] U.S. Department of Transportation (September 2023). Early Estimate of Motor Vehicle Traffic Fatalities for the First Half (January-June) of 2023. Traffic Safety Facts. Retrieved January 24, 2024, from https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/813514.
[46] Thompson, M. (September 11, 2023). EV adoption and increased technology driving rise in repair costs, CCC says. Repairer Driven News. Retrieved January 24, 2024, from https://www.repairerdrivennews.com/2023/09/11/growth-in-evs-adas-is-costing-shops-money-ccc-says/.
[47] Baribeau, A.G., op cit.

Figure 7: Estimated Rate Change by State, 2018-2023[48]

State	2018	2019	2020	2021	2022	2023
Alabama	0.6%	0.2%	-2.6%	1.2%	8.5%	10.3%
Alaska	3.6%	1.0%	-2.8%	1.0%	5.2%	7.1%
Arizona	3.0%	0.5%	-1.3%	3.5%	16.7%	16.7%
Arkansas	1.4%	-0.7%	-4.3%	1.2%	8.4%	14.2%
California	3.5%	2.2%	-0.7%	0.0%	1.3%	11.4%
Colorado	5.5%	3.0%	-0.4%	4.0%	10.8%	2.9%
Connecticut	2.9%	-0.1%	-0.7%	0.3%	8.9%	16.6%
Delaware	3.5%	-0.1%	-2.6%	2.4%	14.0%	11.1%
District of Columbia	2.3%	0.2%	-2.4%	0.3%	12.9%	6.8%
Florida	2.9%	-0.2%	1.4%	5.6%	12.5%	11.0%
Georgia	4.0%	2.4%	-1.8%	1.6%	14.3%	14.0%
Hawaii	-0.3%	-0.2%	-2.9%	-2.9%	0.6%	3.8%
Idaho	3.7%	0.7%	-0.8%	1.4%	9.0%	3.1%
Illinois	**1.2%**	**1.4%**	**-4.4%**	**1.9%**	**17.9%**	**15.7%**
Indiana	-0.8%	-0.3%	-4.3%	1.7%	12.1%	12.6%
Iowa	0.4%	0.4%	-1.3%	3.0%	10.3%	7.6%
Kansas	1.2%	1.0%	-1.4%	1.7%	13.2%	14.3%
Kentucky	0.9%	-1.4%	-3.5%	1.7%	8.5%	15.1%
Louisiana	5.5%	-1.3%	-3.8%	0.7%	9.3%	16.3%
Maine	0.2%	-0.3%	-1.2%	2.1%	14.2%	11.5%
Maryland	3.3%	1.0%	-2.4%	-2.3%	17.4%	10.3%
Massachusetts	3.3%	1.0%	1.1%	0.0%	5.2%	9.7%
Michigan	3.0%	2.8%	-3.8%	0.8%	6.8%	11.5%
Minnesota	1.6%	0.9%	-2.5%	2.9%	13.4%	12.6%
Mississippi	0.1%	-0.3%	-1.5%	1.5%	8.6%	12.7%
Missouri	2.3%	1.0%	-3.6%	3.6%	15.7%	11.0%
Montana	0.9%	-1.4%	-1.6%	1.4%	6.6%	8.7%
Nebraska	1.4%	-0.4%	-1.9%	5.0%	9.2%	13.1%
Nevada	4.6%	2.1%	-2.4%	-0.4%	4.9%	28.3%
New Hampshire	0.6%	-0.4%	-2.3%	-0.6%	15.6%	8.5%
New Jersey	2.6%	1.7%	-0.7%	0.1%	6.0%	10.6%
New Mexico	3.2%	-0.5%	-3.2%	-1.2%	13.7%	9.3%
New York	3.8%	2.4%	1.5%	1.8%	6.3%	15.7%
North Carolina	-0.8%	0.7%	-1.3%	-0.3%	3.7%	4.3%
North Dakota	0.8%	-0.4%	-2.3%	1.6%	10.0%	14.0%
Ohio	0.7%	-1.4%	-4.1%	3.1%	18.9%	15.0%
Oklahoma	-1.7%	-2.0%	-4.3%	2.8%	13.9%	13.0%
Oregon	0.7%	-1.8%	-3.3%	1.2%	15.5%	11.3%
Pennsylvania	0.0%	0.4%	-3.7%	1.7%	15.3%	12.3%
Rhode Island	3.0%	1.0%	0.9%	-0.5%	7.1%	11.3%
South Carolina	2.4%	0.4%	-0.4%	1.6%	13.3%	13.5%
South Dakota	0.5%	0.7%	-1.7%	1.8%	7.5%	12.8%
Tennessee	1.3%	-1.0%	-2.0%	0.8%	17.3%	14.5%
Texas	1.4%	-1.8%	-2.1%	3.3%	23.4%	11.7%
Utah	2.5%	2.9%	-1.3%	3.8%	15.2%	15.0%
Vermont	-0.1%	-0.1%	-2.6%	-0.7%	2.1%	6.0%
Virginia	1.0%	0.2%	-1.2%	3.2%	14.4%	14.9%
Washington	2.0%	1.7%	-2.1%	-0.1%	2.9%	13.6%
West Virginia	-0.7%	-1.6%	-3.5%	1.3%	8.3%	12.6%
Wisconsin	1.3%	0.4%	-2.7%	1.3%	12.6%	14.9%
U.S. Average	**2.3%**	**0.6%**	**-1.5%**	**1.8%**	**11.2%**	**12.3%**

[48] Data from Ratefilings.com RateWatch report, which calculates the industry rate change as the DWP-weighted average rate change for the top 10 carriers in each state. Please note that this data was compiled in October 2023, so 2023 represents a partial year of data.

Reliability

Finally, beyond the pillars of insurance availability and affordability, we turn to reliability as a necessary attribute of healthy and sustainable property insurance markets. Reliability refers to a long-term expectation that an insurance market will function properly, both in terms of insurers meeting their commitments to policyholders and in terms of a stable and predictable system. In this section, we assess the reliability of the personal auto market in Illinois by looking at the degree of competition and the long-term historical loss ratio.

Market competition and concentration

One aspect to consider when assessing the reliability of insurance markets is the competitive structure of the market. If a market is highly concentrated, with a small number of carriers holding a large percentage of the total market share, then the market may be sensitive to the successes, failures, and underwriting decisions that these carriers make. If, on the other hand, the market is highly contested, with many insurers competing for market share, this is a sign that the market is attractive to insurers, and the health of the overall market is much less likely to be threatened by the actions of a single insurer.

The degree of competition or concentration can be measured different ways. We have calculated a few metrics, including the number of insurers in each state above various market share thresholds, the market share of the top carriers, and a popular metric for measuring market concentration, the Hirfindahl-Hirshman Index (HHI), a favored tool among economists and antitrust regulators. The HHI is calculated as the sum of squared market shares.[49] High scores indicate less competitive markets, and low scores indicate more competitive markets. Market competitiveness can be assessed by comparing the HHI value against certain thresholds, like the ones used by the U.S. Department of Justice shown in the table in Figure 8.

Figure 8: Hirfindahl-Hirshman Index: U.S. Agency Thresholds[50]

HHI Range	Interpretation
0 to 1,500	Not Concentrated
1,500 to 2,500	Moderately Concentrated
Greater Than 2,500	Highly Concentrated

The table in Figure 9 provides our calculation of these metrics,[51] and the table in Figure 10 provides ranks of the metrics by state.[52] Using the HHI, most states fall into the "Not Concentrated" category of 1,500 or less. Only Alaska, the District of Columbia, Hawaii, Louisiana, and New York fall into the "Moderately Concentrated" category, and no states meet the threshold to be considered "Highly Concentrated." The HHI of Illinois is slightly higher than the national average and is the 12th highest (most concentrated) in the country.

[49] For example, a market with a single monopoly would have an HHI score of 100^2, or 10,000, whereas a market with 10 competitors, each with a 10% market share would have an HHI of 10 x 10^2, or 1,000.

[50] U.S. Department of Justice, Antitrust Division. Herfindahl-Hirshman Index. Retrieved January 24, 2024, from https://www.justice.gov/atr/herfindahl-hirschman-index.

[51] Based on 2022 DWP data obtained from S&P Global CapitalIQ Platform. HHI calculated as the sum of squared market shares for all carriers.

[52] Ranks of each measure from Figure 8, where a lower rank indicates a higher degree of competition in each state and measure.

In terms of the number of competitors available, we set market share thresholds of 0.1%, 0.5%, and 1.0% and determined how many carriers in each state exceeded these thresholds. Based on these measures, the personal auto insurance market in Illinois is more competitive than most states, with more carriers above 0.1% market share (48) than any other state and an above-average number of carriers above 0.5% market share (22 carriers, ranked 5th) or 1.0% (14 carriers, ranked 19th).

The final metric is the cumulative market share of the top one, four, and eight insurers in each state, which could reveal a problem if a few carriers held unusually large market shares. For Illinois, the top carrier has a relatively large share. However, cumulative market shares of the top four and top eight carriers are around average, again indicating no unusual concentrations or lack of competitiveness in Illinois.

Figure 9: Competition Measures for 2022 Premium by State

			Insurers with Market Share > X%			Market Share, Top N insurers		
State	**DWP ($000)**	**HH Ind.**	**0.10%**	**0.50%**	**1.00%**	**1**	**4**	**8**
Alabama	$4,065,444	1,283	25	19	13	23.6%	64.1%	86.0%
Alaska	542,320	1,850	12	11	8	29.8%	78.3%	97.2%
Arizona	6,488,092	999	48	20	13	16.2%	55.3%	81.1%
Arkansas	2,341,230	1,136	28	18	14	23.8%	56.8%	81.6%
California	32,701,447	802	31	19	15	12.4%	45.1%	73.9%
Colorado	6,062,525	987	34	20	12	19.1%	51.7%	82.1%
Connecticut	3,265,871	855	40	22	17	17.2%	49.4%	74.0%
Delaware	996,041	1,408	24	16	11	26.4%	64.7%	90.5%
Dist. Of Col.	394,450	2,026	17	13	12	38.3%	73.9%	92.6%
Florida	25,359,878	1,440	31	18	13	24.0%	70.6%	85.1%
Georgia	11,263,199	1,164	42	20	14	22.1%	61.9%	81.4%
Hawaii	836,992	1,578	18	13	11	28.9%	69.0%	91.4%
Idaho	1,342,618	926	33	17	12	14.3%	50.3%	82.4%
Illinois	**8,488,385**	**1,298**	**48**	**22**	**14**	**30.0%**	**58.6%**	**77.4%**
Indiana	4,415,010	965	46	23	14	20.8%	53.1%	74.1%
Iowa	2,103,604	1,067	39	22	17	21.7%	54.8%	73.1%
Kansas	2,197,470	912	35	18	13	17.6%	50.3%	74.8%
Kentucky	3,348,260	1,237	32	18	14	22.8%	62.6%	83.9%
Louisiana	4,963,963	1,624	24	15	11	29.1%	73.4%	90.4%
Maine	883,426	913	32	21	17	17.5%	53.6%	73.7%
Maryland	5,712,902	1,348	31	13	11	25.1%	64.5%	88.8%
Massachusetts	5,701,536	1,009	27	17	16	19.4%	53.1%	78.5%
Michigan	9,228,030	1,213	27	16	13	20.5%	63.2%	86.3%
Minnesota	4,309,055	1,193	35	20	14	22.2%	59.3%	77.4%
Mississippi	2,248,838	1,214	24	15	13	24.2%	60.2%	83.8%
Missouri	4,737,739	1,009	33	18	14	21.6%	53.4%	75.6%
Montana	940,653	1,166	26	18	15	21.8%	58.3%	83.5%
Nebraska	1,507,979	991	29	19	17	19.3%	52.8%	76.3%
Nevada	3,113,421	1,082	36	20	13	18.4%	60.2%	81.3%
New Hampshire	979,413	896	32	22	17	16.0%	52.4%	74.0%
New Jersey	8,440,731	1,229	28	13	11	23.6%	61.0%	86.5%
New Mexico	1,683,769	1,187	27	16	14	20.5%	60.6%	85.2%
New York	15,275,581	1,527	30	18	11	29.3%	70.2%	87.3%
North Carolina	7,613,283	1,092	26	18	12	18.2%	57.5%	86.1%
North Dakota	548,378	1,042	31	20	15	23.0%	54.0%	75.7%
Ohio	7,332,426	967	43	18	16	17.5%	55.5%	75.4%
Oklahoma	3,145,522	1,092	35	19	15	22.5%	57.4%	79.7%
Oregon	3,371,634	1,078	31	20	15	19.7%	56.4%	82.6%
Pennsylvania	9,607,726	1,011	42	18	12	18.6%	56.0%	81.3%
Rhode Island	1,034,110	1,379	26	15	13	28.6%	62.9%	84.0%
South Carolina	5,220,562	1,331	26	16	10	23.7%	66.2%	87.9%
South Dakota	694,716	906	32	22	19	18.5%	50.4%	68.2%
Tennessee	5,140,703	1,066	38	16	15	19.9%	57.8%	80.6%
Texas	26,511,399	963	40	18	17	16.1%	55.6%	78.7%
Utah	2,714,270	795	36	23	18	13.8%	47.3%	73.5%
Vermont	404,902	939	32	26	19	20.5%	52.6%	72.1%
Virginia	6,588,473	1,160	37	17	12	20.1%	60.5%	84.8%
Washington	5,970,242	976	27	18	14	16.5%	52.3%	82.2%
West Virginia	1,325,816	1,390	21	15	10	27.2%	61.9%	90.4%
Wisconsin	3,627,047	1,089	44	24	17	21.8%	58.3%	72.6%
Wyoming	488,981	1,238	23	13	12	21.6%	60.8%	89.8%
U.S. Average		**1,158**	**31.6**	**18.2**	**13.8**	**21.7%**	**58.6%**	**81.5%**

Figure 10: Rank of Competition Measures by State

			Insurers with Market Share > X%			Market Share, Top N insurers		
State	**DWP**	**HH Ind.**	**0.10%**	**0.50%**	**1.00%**	**1**	**4**	**8**
Alabama	24	39	43	18	28	36	42	38
Alaska	48	50	51	51	51	49	51	51
Arizona	13	16	1	11	28	6	18	22
Arkansas	32	28	33	22	19	39	23	26
California	1	2	26	18	13	1	1	7
Colorado	14	14	18	11	36	16	7	27
Connecticut	28	3	8	5	4	8	3	8
Delaware	41	45	44	37	43	43	44	48
Dist. Of Col.	51	51	50	46	36	51	50	50
Florida	3	46	26	22	28	40	48	36
Georgia	5	30	6	11	19	31	37	25
Hawaii	45	48	49	46	43	46	46	49
Idaho	38	8	19	34	36	3	4	29
Illinois	**8**	**40**	**1**	**5**	**19**	**50**	**29**	**16**
Indiana	22	11	3	3	19	25	13	10
Iowa	35	22	10	5	4	28	17	4
Kansas	34	6	15	22	28	11	5	11
Kentucky	27	37	21	22	19	34	39	33
Louisiana	20	49	44	42	43	47	49	47
Maine	44	7	21	10	4	9	15	6
Maryland	16	42	26	46	43	42	43	44
Massachusetts	17	17	35	34	11	18	12	18
Michigan	7	34	35	37	28	23	41	40
Minnesota	23	33	15	11	19	32	30	17
Mississippi	33	35	44	42	28	41	31	32
Missouri	21	18	19	22	19	26	14	13
Montana	43	31	39	22	13	30	27	31
Nebraska	37	15	32	18	4	17	11	15
Nevada	30	24	13	11	28	13	32	23
New Hampshire	42	4	21	5	4	4	9	9
New Jersey	9	36	33	46	43	37	36	41
New Mexico	36	32	35	37	19	22	34	37
New York	4	47	31	22	43	48	47	42
North Carolina	10	27	39	22	36	12	25	39
North Dakota	47	20	26	11	13	35	16	14
Ohio	11	12	5	22	11	10	19	12
Oklahoma	29	26	15	18	13	33	24	20
Oregon	26	23	26	11	13	19	22	30
Pennsylvania	6	19	6	22	36	15	21	24
Rhode Island	40	43	39	42	28	45	40	34
South Carolina	18	41	39	37	49	38	45	43
South Dakota	46	5	21	5	1	14	6	1
Tennessee	19	21	11	37	13	20	26	21
Texas	2	10	8	22	4	5	20	19
Utah	31	1	13	3	3	2	2	5
Vermont	50	9	21	1	1	24	10	2
Virginia	12	29	12	34	36	21	33	35
Washington	15	13	35	22	19	7	8	28
West Virginia	39	44	48	42	49	44	38	46
Wisconsin	25	25	4	2	4	29	28	3
Wyoming	49	38	47	46	36	27	35	45

Lower rank is more competitive.

Historical loss ratios

Insurer profitability is another consideration in the assessment of reliable markets. Loss ratio, calculated as the incurred losses and loss adjustment expenses divided by premium, tells us how much of every premium dollar goes toward paying and adjusting claims. The remainder of the premium is available to cover operating expenses and provide profit to the insurer. Making the simplifying assumption that the proportion of operating expenses is similar from state to state, the loss ratio metric is an approximate indicator for insurer underwriting profits; that is, a state with a higher loss ratio likely has lower profits than a state with a lower loss ratio.[53]

Poor profitability increases the risk of insolvencies and insurers exiting the market, which undermine market reliability. On the other hand, if the market is too concentrated, with insufficient competition to regulate insurer rates, we may expect to see a market with lower loss ratios, suggesting higher insurer profits than those that would be expected from a competitive market.

The pages that follow provide historical loss ratios by state, first for liability and no-fault coverages in the table in Figure 11 and all coverages combined in the table in Figure 12. The 10-year total average loss ratio for Illinois was 64.9%, which is similar to the median state loss ratio (65.6%). Half of the states fall within the range of 63% to 67%. Therefore, the historical loss ratios in Illinois do not suggest that insurers are earning significantly lower or higher long-term profits compared to other states.

[53] The comparison of loss ratios by state indicates relative profitability; a state with a lower loss ratio could still be unprofitable if the losses and operating expenses exceed the premium.

Figure 11: Liability and No-Fault Calendar-Year Loss Ratios by State, 2013 to 2022[54]

State	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10-Year Average
Alabama	65.0	67.2	73.3	77.7	70.6	64.4	63.7	52.6	59.5	70.4	66.4
Alaska	55.2	57.8	65.3	63.4	69.9	67.2	64.5	59.8	61.0	72.0	63.6
Arizona	68.3	66.8	69.5	76.7	72.5	66.9	64.2	55.1	61.8	78.2	68.0
Arkansas	64.0	61.6	67.5	75.8	65.2	58.9	62.3	54.9	62.8	72.8	64.6
California	65.5	64.6	70.7	78.1	73.2	67.9	65.5	53.3	61.7	79.4	68.0
Colorado	75.3	74.7	76.1	79.7	74.2	69.2	68.2	55.3	60.2	69.5	70.2
Connecticut	73.1	71.6	69.5	71.9	71.1	64.0	68.2	58.8	68.5	80.1	69.7
Delaware	55.5	62.6	68.3	75.2	73.8	63.0	72.4	58.7	64.9	78.4	67.3
Dist. Of Col.	57.6	68.6	79.6	79.1	75.7	70.1	66.6	53.6	68.5	83.0	70.2
Florida	60.6	68.5	71.5	71.9	71.2	68.6	75.3	66.3	74.4	80.5	70.9
Georgia	77.8	77.6	81.8	85.3	76.5	69.2	71.7	62.8	72.3	88.7	76.4
Hawaii	51.6	53.4	62.3	61.7	61.5	55.3	61.8	49.0	52.4	65.5	57.4
Idaho	61.0	58.9	63.9	67.3	64.7	58.8	59.1	54.6	57.1	66.1	61.1
Illinois	62.5	63.4	66.0	69.1	66.5	63.5	63.4	52.1	63.5	77.9	64.8
Indiana	61.4	61.9	66.7	68.6	62.8	59.0	59.3	49.6	59.4	69.0	61.8
Iowa	59.6	59.9	63.1	66.3	58.5	57.2	58.8	49.7	58.8	68.0	60.0
Kansas	60.7	62.9	64.1	68.2	64.6	64.1	62.3	55.4	64.3	76.4	64.3
Kentucky	63.1	64.7	69.5	74.6	70.7	63.5	65.4	58.8	63.5	73.9	66.8
Louisiana	71.7	73.1	76.7	82.0	75.5	70.5	63.2	54.0	63.6	74.6	70.5
Maine	61.3	70.3	60.2	63.4	64.4	59.5	63.1	54.2	60.7	64.9	62.2
Maryland	60.5	68.0	74.9	76.2	73.8	68.2	67.8	52.5	63.5	79.2	68.5
Massachusetts	64.7	65.8	65.1	66.8	65.8	60.3	64.9	51.5	55.9	69.3	63.0
Michigan	141.9	95.8	89.7	103.5	94.3	96.2	55.5	59.0	68.1	88.6	89.3
Minnesota	58.9	58.9	59.3	62.3	62.2	58.3	60.1	50.2	57.7	69.5	59.7
Mississippi	64.9	64.7	68.7	71.6	68.6	65.0	66.3	61.0	64.5	73.9	66.9
Missouri	63.6	65.8	69.6	76.3	67.7	65.8	63.9	61.7	66.4	76.7	67.7
Montana	55.5	55.7	66.6	61.7	58.1	57.1	61.4	55.8	55.9	69.9	59.8
Nebraska	64.5	65.7	68.2	66.6	60.7	56.9	60.6	52.4	63.4	76.1	63.5
Nevada	70.4	68.7	76.3	80.8	77.4	69.4	65.4	57.6	66.7	85.1	71.8
New Hampshire	66.6	66.8	61.5	64.6	63.1	59.0	60.3	47.3	52.7	63.9	60.6
New Jersey	69.0	66.3	68.3	70.6	68.5	65.1	64.2	55.3	62.0	75.5	66.5
New Mexico	67.7	59.6	62.6	68.4	64.9	63.9	60.1	47.9	56.8	67.3	61.9
New York	63.1	65.0	69.3	71.9	73.4	70.1	72.1	62.0	73.2	83.5	70.4
North Carolina	64.8	67.9	73.1	75.8	81.3	72.1	76.7	63.3	70.9	81.9	72.8
North Dakota	60.3	52.3	56.0	59.2	55.7	55.8	59.0	53.0	57.4	66.2	57.5
Ohio	60.7	59.7	62.8	66.3	64.2	57.0	57.2	49.4	58.7	67.5	60.3
Oklahoma	63.3	59.8	62.3	65.0	59.3	57.0	59.0	54.0	62.5	73.7	61.6
Oregon	63.4	60.0	68.9	67.8	61.6	58.9	60.6	51.1	60.4	70.3	62.3
Pennsylvania	61.9	64.9	67.3	66.3	64.5	59.8	63.5	53.5	62.0	72.4	63.6
Rhode Island	73.3	70.1	73.5	74.6	70.0	64.2	66.6	56.2	59.2	68.6	67.6
South Carolina	69.6	72.1	76.4	81.9	73.9	68.0	68.3	62.9	68.9	83.9	72.6
South Dakota	60.9	59.6	58.8	69.4	56.7	53.5	59.6	51.1	61.6	70.3	60.2
Tennessee	61.4	61.5	64.9	70.0	65.8	63.0	61.9	54.2	61.6	75.1	63.9
Texas	65.5	67.8	73.5	75.8	67.7	63.2	65.8	58.6	72.9	87.0	69.8
Utah	67.1	66.3	71.3	73.6	68.9	69.6	68.1	60.1	65.1	72.4	68.2
Vermont	61.1	61.8	61.2	59.7	59.1	55.1	57.2	42.8	51.6	66.6	57.6
Virginia	61.7	64.5	68.2	70.2	69.2	64.5	67.1	53.8	60.9	76.0	65.6
Washington	66.3	67.5	72.5	73.8	69.3	65.9	64.5	53.4	61.5	78.9	67.4
West Virginia	44.7	52.2	57.9	55.3	55.5	57.2	59.4	47.7	53.0	65.6	54.8
Wisconsin	66.9	69.2	64.0	64.4	61.7	57.0	59.7	50.3	56.9	66.9	61.7
Wyoming	53.1	55.9	55.7	58.0	57.7	52.7	63.9	56.6	61.8	67.8	58.3
U.S. Average	67.9	67.4	70.8	74.4	70.7	66.5	66.0	56.9	65.6	78.4	68.5

[54] Data obtained from S&P Global CapitalIQ platform. It is the sum of Liability and No-Fault Incurred Losses by calendar year, divided by the sum of Liability and No-Fault Direct Earned Premiums.

Figure 12: Total Calendar-Year Loss Ratios by State, 2013 to 2022[55]

State	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	10-Year Average
Alabama	64.3	66.0	69.5	71.8	67.0	63.4	61.9	55.9	64.7	72.8	65.7
Alaska	54.3	55.1	61.3	62.2	67.5	65.0	61.1	57.0	61.6	72.6	61.8
Arizona	65.2	64.1	68.2	73.4	68.6	64.6	64.8	55.8	66.2	79.0	67.0
Arkansas	60.9	61.7	67.9	75.9	63.3	59.9	61.0	56.3	65.1	82.8	65.5
California	63.1	63.2	67.6	72.9	70.1	65.7	64.5	52.7	65.5	81.1	66.6
Colorado	71.9	83.1	75.4	85.0	82.2	84.7	69.1	53.3	59.0	68.3	73.2
Connecticut	67.8	66.3	65.5	66.9	66.1	63.4	64.7	56.8	70.0	79.9	66.7
Delaware	58.2	65.6	67.4	72.2	70.2	63.4	70.7	58.4	68.7	82.6	67.7
Dist. Of Col.	54.5	61.7	70.4	73.0	69.1	67.1	65.6	57.0	73.0	87.8	67.9
Florida	61.6	68.2	70.8	71.4	71.3	66.8	70.9	64.1	74.6	89.7	71.0
Georgia	71.5	69.9	74.0	77.7	71.1	65.5	66.8	59.5	71.1	85.6	71.3
Hawaii	53.2	54.4	60.4	61.6	60.1	57.9	61.7	47.6	56.6	67.0	58.1
Idaho	61.0	60.2	64.2	66.9	65.0	62.1	58.5	54.3	59.7	69.2	62.1
Illinois	62.3	63.8	64.2	66.4	64.6	62.7	64.1	54.1	66.9	79.6	64.9
Indiana	63.1	63.5	65.7	66.8	61.9	59.5	60.9	51.5	65.9	74.8	63.3
Iowa	61.5	64.8	61.0	62.4	64.7	61.4	60.9	62.6	63.4	75.8	63.8
Kansas	63.6	60.8	61.3	66.7	63.5	60.4	62.5	53.0	63.5	72.5	62.8
Kentucky	62.4	64.5	69.2	72.4	67.0	62.0	63.2	58.0	67.9	78.3	66.5
Louisiana	71.9	68.1	72.0	92.4	70.3	65.2	61.7	58.8	75.9	75.0	71.1
Maine	59.1	64.7	60.3	59.7	61.1	58.5	61.1	54.3	61.4	70.8	61.1
Maryland	60.7	66.4	71.5	73.2	69.7	66.6	66.1	52.2	65.9	81.2	67.3
Massachusetts	62.4	63.2	65.8	63.6	62.4	60.3	62.2	49.2	59.4	72.4	62.1
Michigan	115.2	88.0	80.8	89.2	82.7	84.6	60.0	58.7	70.5	88.2	81.8
Minnesota	62.7	59.3	59.5	62.1	63.6	60.3	65.0	54.0	62.2	83.3	63.2
Mississippi	79.0	64.3	65.6	68.0	64.2	61.1	63.9	62.9	67.9	74.4	67.1
Missouri	60.8	65.4	67.9	72.7	67.3	62.3	63.7	60.7	66.4	76.7	66.4
Montana	58.2	67.7	66.8	76.0	58.3	57.8	74.5	52.4	59.3	73.4	64.4
Nebraska	69.3	76.6	62.0	66.0	70.2	56.0	68.1	52.4	61.8	84.8	66.7
Nevada	66.4	66.2	73.1	77.3	73.7	66.4	63.6	55.5	68.1	85.2	69.6
New Hampshire	61.7	62.1	59.6	60.4	60.5	59.4	59.0	47.7	57.0	69.3	59.7
New Jersey	64.1	63.7	65.3	66.9	65.0	64.2	63.3	54.5	71.5	77.9	65.6
New Mexico	64.0	60.6	65.9	68.5	67.4	64.0	60.7	47.9	61.7	71.0	63.2
New York	62.7	66.0	68.5	69.0	69.2	67.4	68.8	59.9	74.6	84.3	69.0
North Carolina	61.1	63.7	66.5	70.5	68.5	66.5	68.0	58.0	66.6	76.3	66.6
North Dakota	57.5	54.0	56.7	68.1	56.2	57.2	67.5	44.7	68.6	72.7	60.3
Ohio	60.1	60.3	61.8	63.0	60.7	57.3	59.1	52.1	64.0	75.9	61.4
Oklahoma	73.5	57.5	63.4	61.8	57.4	53.4	57.9	55.8	67.5	70.6	61.9
Oregon	62.8	61.0	67.7	68.3	63.2	59.0	60.8	53.5	65.4	75.9	63.8
Pennsylvania	62.8	69.2	66.8	65.5	63.0	61.7	65.3	55.1	67.8	77.7	65.5
Rhode Island	70.6	68.3	71.8	71.0	67.2	63.6	65.8	54.2	61.4	72.5	66.6
South Carolina	66.3	71.7	73.5	77.5	70.6	64.5	64.7	60.0	68.1	81.4	69.8
South Dakota	78.7	82.5	68.3	65.3	64.9	65.4	62.4	68.7	64.4	77.8	69.9
Tennessee	59.8	60.3	63.7	67.5	65.0	61.7	62.2	56.7	67.6	78.8	64.3
Texas	64.3	65.6	72.1	79.7	76.6	59.0	64.4	55.9	73.5	81.8	69.3
Utah	65.7	64.0	68.7	71.8	67.2	66.2	66.0	58.7	65.2	73.4	66.7
Vermont	59.6	70.8	58.3	56.6	56.5	55.8	56.1	44.3	55.2	70.2	58.3
Virginia	60.6	62.7	65.0	69.5	65.7	63.8	65.3	53.6	63.9	77.4	64.8
Washington	63.2	64.9	69.1	70.7	67.1	63.4	63.0	52.1	64.4	83.3	66.1
West Virginia	49.7	54.3	58.0	60.8	55.3	58.9	60.4	51.5	60.4	72.8	58.2
Wisconsin	65.6	66.8	62.9	64.2	63.1	61.0	61.8	53.3	64.5	78.4	64.2
Wyoming	61.9	63.3	58.2	72.6	65.8	67.7	76.4	63.4	59.0	60.8	64.9
U.S. Average	65.7	66.1	68.3	72.0	68.8	64.5	64.7	56.1	68.0	80.2	67.5

[55] Data obtained from S&P Global CapitalIQ platform. It is the sum of Physical Damage, Liability, and No-Fault Incurred Losses by calendar year, divided by the sum of Physical Damage, Liability, and No-Fault Direct Earned Premiums.

Part 3: How ratemaking restrictions affect market outcomes

Each state's personal auto insurance market faces unique circumstances. There is variation in the underlying hazards, such as miles driven, traffic density, and theft rates, as well as litigation and fraud environments, which can greatly influence the size of claims and expenses.

Given these circumstances, a chief function of insurance regulators is to ensure healthy, sustainable insurance markets in their states: markets with affordable, available, and reliable insurance coverage. Regulators and other portions of state government are empowered with many levers of control to achieve this goal. Although there is coordination through the NAIC, there is a wide range of regulatory strategies, methods, and results by state.

This section of the report describes different tools and methods that states have employed to regulate rates and their effects on the pillars of availability, affordability, and reliability.

Prior approval

In most states, regulators can review rates and disapprove those they find to be inadequate, excessive, or unfairly discriminatory. In a prior approval system, there is an additional constraint that insurers may not use new rates until they are approved by the regulator or "deemed" approved after a certain number of days. Additional administrative processes, such as rate hearings, can further lengthen the time for approval and add more costs to the review process. In some cases, these processes result in significant delays to the implementation of rate changes and increased costs of compliance. While there is little evidence to suggest that prior approval significantly impacts long-term affordability or availability, there is some evidence of impacts on reliability.

We analyzed the speed-to-market aspect of prior approval filing systems by calculating the average difference between filing submission and disposition dates for each prior approval state over the past 10 years. To construct these metrics, we looked at the top 10 personal auto insurance companies in each state (individual companies, which may be subsidiaries of larger insurance groups) and calculated the average number of filings submitted per year that were not rate-neutral (i.e., a 0.0% overall change). The results appear in the table in Figure 13.

There are notable variations between states. While most states have consistently had average approval times under 90 days, in California, Hawaii, and Washington state the average approval times were typically more than 100 days. California stands out within this group both in terms of the number of days to approval and the trend over time, with the approval of rate filings often taking more than six months. This wait time increased drastically in the 2020-2021 time frame, where rate filings averaged as much as a full year to be approved, and some individual filings took much longer. The last non-neutral personal auto rate filing approved in California before the pandemic was approved on December 20, 2019. In the following two years, two other non-neutral personal auto rate filings were approved.[56] As previously discussed, California also has a unique intervenor process that has been demonstrated to add significant delay to the review process in comparison to states without intervenors and states with competitive rating.

[56] Based on data from S&P Global CapitalIQ platform: CSE Safeguard, +9.9% approved December 20, 2019; Electric Insurance Company, -4.9% approved October 9, 2020; Infinity Insurance Company, +7.0% approved December 21, 2021.

Figure 13: Average Time to Disposition for Prior Approval States[57]

State	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Alabama	25	26	24	33	23	25	20	29	39	53
California	117	130	137	201	242	165	239	305	372	209
Connecticut	96	30	47	34	32	29	50	26	78	98
Georgia	23	21	40	42	82	76	53	91	75	80
Hawaii	144	258	206	142	162	154	113	147	125	66
Louisiana	31	70	61	65	49	59	44	43	44	57
Mississippi	68	45	81	61	62	52	66	51	43	63
Nevada	36	34	46	101	58	51	50	95	53	156
New Jersey	34	36	33	36	35	43	78	51	61	108
Pennsylvania	31	27	33	29	31	40	39	34	46	67
Washington	66	107	67	80	151	104	146	185	97	142
West Virginia	55	54	73	45	42	37	42	38	87	62
Average Prior Approval State	**60**	**70**	**71**	**72**	**81**	**70**	**78**	**91**	**93**	**97**

Impact on reliability

Some prior approval states are among those with relatively poorer measures of competition in terms of HHI, such as Hawaii (48th), Louisiana (49th), and West Virginia (44th). At the same time, other prior approval states have some of the best HHI measures, like California (2nd) and Connecticut (3rd). These patterns suggest that competition may be more closely related to the size of the market than the type of rate regulation.

However, past studies have shown various examples where competition was impacted after the implementation of prior approval. For example, New York transitioned away from prior approval to a less restrictive system in 1995 and then transitioned back to prior approval in 2001. In 1995, the number of private auto insurers jumped 7%, from 215 to 230. This number steadily increased annually, reaching 276 in 2000. Then the number dropped to 270 in 2001 and decreased to 263 by 2004 (per the Property Casualty Insurers Association of America, 2010).

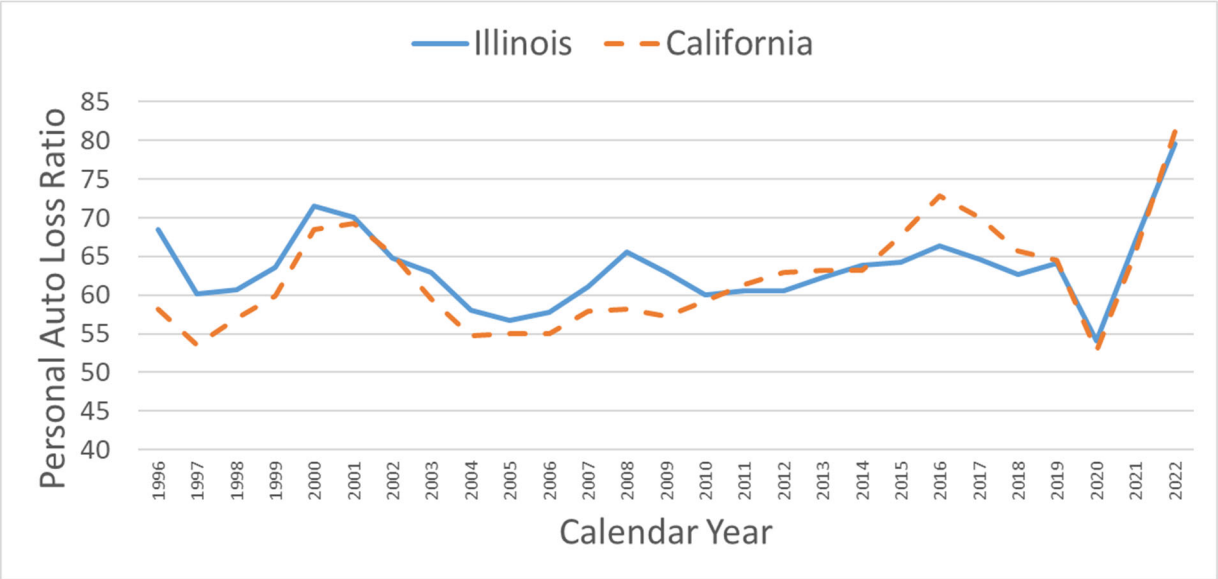
In addition, when it takes longer for rates to be approved, insurers cannot adjust premiums as quickly in periods of declining or increasing costs, resulting in greater volatility in cash flows and underwriting profits. Other things being equal, this translates to higher costs of capital for the industry, which ultimately leads to higher costs and higher premiums than if this regulatory risk was not present.[58]

Figure 14 compares the personal auto calendar-year loss ratios over the last 25 years for California (a state with significant delays in rate approvals) and Illinois (which has no delays in rate changes due to time to approval). While loss ratios have fluctuated in both states, there is greater variability — higher "highs" and lower "lows"— in the California loss ratios.

[57] Based on data from S&P Global CapitalIQ platform. Average number of days between submission date and disposition date for each prior approval state and year of submission. Excludes Michigan, which went to prior approval in 2020, and North Carolina, which is a bureau state.

[58] Cummins, 2002, op cit.

Figure 14: Personal Auto Industry Calendar-Year Loss Ratios, 1996-2022



The impacts of delays in rate changes can be dire for an individual company. For example, Wawanesa General Insurance Company filed for a rate increase in December 2021. AM Best downgraded its ratings in December 2022, citing a downturn in operating performance due to increased loss costs and the inability to secure adequate rates.[59] The rates were approved in March 2023, but the company was sold to the Automobile Club of Southern California in August 2023.[60]

Impact on affordability

As shown in Part 2 of this report above, about half of prior approval states have higher than average personal auto liability insurance premiums. Nor do the prior approval states necessarily fare better on affordability, as measured by the ratio of average premium to median income; personal auto insurance affordability is at or below average in about half of prior approval states. Prior approval states are among the worst in the country in terms of uninsured population, as demonstrated in California (42nd for insurance coverage), Alabama (45th), and Mississippi (51st). On the other hand, there are almost as many prior approval states that have more favorable uninsured populations, as seen in Connecticut (8th) and Pennsylvania (6th).

That said, many factors affect the affordability of insurance, and these results should not be interpreted to mean that prior approval is a primary driver of higher average premiums or lower affordability. Previous

[59] AM Best. (December 16, 2022). AM Best Downgrades Credit Ratings of Wawanesa General Insurance Co (U.S.); Affirms Ratings of Wawanesa Mutual and Wawanesa Life. Press release. Retrieved January 24, 2024, from https://news.ambest.com/PR/PressContent.aspx?altsrc=2&refnum=32905.

[60] Wawanesa Insurance (August 1, 2023). Auto club to acquire the U.S. subsidiary of Wawanesa Mutual. Press release. Retrieved January 24, 2024, from https://www.wawanesa.com/canada/news/auto-club-acquires-wawanesa-general.

multivariate cross-sectional studies[61] and case studies of individual states[62] suggest that, on average, prior approval regulation has had little or no effect on rate levels over time.

However, prior approval does introduce extra operational costs for insurers and review costs for the states, which are ultimately paid by policyholders (and possibly taxpayers, if the costs of rate regulation are funded through state taxes rather than premium taxes or surcharges). These systems often create extra work for insurers because they use special templates, forms, or compliance procedures that require staff and planning. On the state's side, the commissioner must allot a budget to a division of regulators to review rates. In California, intervenors that participate in the rate hearings can recover their costs and fees from insurers, and these added expenses are passed on to policyholders.[63]

Impact on availability.

As seen in Part 2 above, only five states have residual markets that exceed 0.4% of the state's total market written premium. Two of the top five are prior approval states, New Jersey and North Carolina. The residual market is not significant in other prior approval states.

Historically, there have been markets where availability was a major issue in personal auto, such as Massachusetts, New Jersey, and South Carolina. These states had periods with large residual markets and reduced insurance supply due to insurers exiting their markets. While these states were prior approval systems at the time, the availability issues were not caused by the rating law itself but rather the aggressive suppression of rate levels and rate differentials enabled by the prior approval process.[64]

Rate level control

While regulators are technically concerned with inadequate rates when considering an insurer's rate level, in practice the primary focus is preventing excessive rates. It is important to note that affordability is typically not statutorily prescribed and is not synonymous with the statutory "not excessive" standard. However, especially in periods of rising costs, there can be political pressure on regulators and legislators to keep rates lower than the actuarially adequate level. Such rate suppression can take many forms, such as limiting rate increases, imposing inflexible ratemaking methodologies or parameter selections, or incentivizing companies to lower rate increases to avoid approval delays from rate hearings.

Some researchers have suggested that rate suppression causes insurers not to decrease rates in periods of declining losses out of concern that they will not be able to raise premiums again if cost inflation accelerates.[65] In explaining why some insurers had reduced rates after regulations were loosened in 2003, former Louisiana Insurance Commissioner Robert Wooley said, "Insurers aren't as reluctant to reduce

[61] Cummins, 2002, op cit.
[62] Ibid.
[63] California Division of Insurance. Prop 103 Consumer Intervenor Process. Retrieved January 24, 2024, from https://www.insurance.ca.gov/01-consumers/150-other-prog/01-intervenor/.
[64] Cummins, 2002, op cit.
[65] Ibid.

rates when business is good because they know they can also raise rates without incurring a political battle."[66]

To test this hypothesis, we again used the database of rate filings for the top 10 personal auto carriers by state and summarized it in the table in Figure 15. To avoid bias that could be produced by looking at a specific period, we looked at a three-year time frame (2020-2022) and a six-year time frame (2017-2022).

Figure 15: Average Rate Filing Activity by Regulation Type[67]

	Past 3 Years (2020-2022)			Past 6 Years (2017-2022)		
Filing Type	**Avg Increases**	**Avg Decreases**	**Avg Filings**	**Avg Increases**	**Avg Decreases**	**Avg Filings**
Open Competition (OC)	1.07	0.60	1.67	0.98	0.47	1.45
Use and File (UF)	0.91	0.45	1.37	0.80	0.40	1.20
File and Use (FU)	0.92	0.44	1.35	0.94	0.39	1.33
Flex Rating (FR)	0.85	0.33	1.18	0.76	0.30	1.07
Prior Approval (PA)	0.63	0.29	0.92	0.59	0.24	0.83
Bureau Rates (BR)	0.40	0.20	0.60	0.30	0.13	0.43

Here we have summarized the rate filing frequency by rate regulation system from least restrictive to most restrictive. While not all prior approval states engage in rate suppression, we can see that there are more rate filings overall in less restrictive states and a greater proportion of filings for decreases versus increases. For example, insurers in file-and-use or use-and-file states filed 50% more rate decreases during the past three years compared with prior approval states.

To provide a more concrete example and to control for any effects that may be produced by filing activity varying by the *size* of the states, we produced this comparison a second way. This time, instead of averaging across all states by filing type, we selected one state of significant population for each filing type and reproduced the same analysis. The results appear in the table in Figure 16.

Figure 16: Average Rate Filing Activity for Example State of Each Filing Type[68]

	Past 3 Years (2020-2022)			Past 6 Years (2017-2022)		
Filing State (Type)	**Avg Increases**	**Avg Decreases**	**Avg Filings**	**Avg Increases**	**Avg Decreases**	**Avg Filings**
Illinois (OC)	1.07	0.60	1.67	0.98	0.47	1.45
Missouri (UF)	0.93	0.70	1.63	0.90	0.58	1.48
Massachusetts (FU)	0.50	0.27	0.77	0.80	0.30	1.10
New York (FR)	1.57	0.07	1.63	1.32	0.13	1.45
California (PA)	0.37	0.00	0.37	0.48	0.00	0.48
North Carolina (BR)	0.40	0.20	0.60	0.30	0.13	0.43

[66] Property Casualty Insurers of America, 2010, op cit.

[67] Based on data from S&P Global CapitalIQ platform. Annual number of rate filings with overall rate level change not equal to 0% averaged across top 10 insurance companies in each state, averaged across states.

[68] Based on data from S&P Global CapitalIQ platform. Annual number of rate filings with overall rate level change not equal to 0% averaged across top 10 insurance companies in each state.

As before, there is a general pattern where fewer filings are observed for more restrictive states. One exception is New York, where many increases are filed, possibly due to flex rating, where insurers must file many small increases instead of fewer large increases to remain below flex thresholds for each filing. In California, insurers rarely filed rate decreases.

Impact on affordability

In the short term, rate level controls can artificially keep rates lower than they would be under open competition. However, as discussed above, insurers may be inclined to not decrease rates in periods of declining loss costs, which adversely impacts future affordability.

At the end of the day, the cost of insurance is driven primarily by factors that impact risk, such as miles driven and the cost of auto repairs, medical care, and legal fees. Suppressing rates does not address the root causes of rising costs.[69]

California provides a case study of how reforms that reduce losses can impact rate levels. According to Jaffee and Russell, in the eight years prior to Proposition 103 the annual growth in California's average premium was 11.7%, compared to 8.8% for the remainder of the United States. California voters narrowly passed Proposition 103 in 1988, which mandated a 20% rollback in auto insurance premiums and introduced prior approval rate regulation. For the decade immediately after Proposition 103 (1989-1998), California's average premiums grew 2.9% annually, compared to 6.6% for the rest of the country, without an increase in the size of the residual market or market exits.[70]

Some have attributed the lower premium growth to the prior approval law. However, there were other important changes that occurred simultaneously: 1) a California Supreme Court decision substantially limited the conditions under which insurance companies could be sued, and 2) a significant drop in crashes and fraud. Between 1990 and 1998, crash rates declined 51% in California compared to 15% for the rest of the country. In addition, the ratio of bodily injury to property damage claims, an indicator of fraud and noneconomic damage claims, dropped from a high of almost 70% in 1992 (a level 2.5 times the average of the rest of the country) to 40% by 1998. If insurers had filed rate decreases commensurate with these reductions in losses, rates could have been lower in California during the 1990s. However, the prior approval law introduced increased uncertainty that may have inhibited insurers from filing for rate decreases.[71]

Jaffee and Russell hypothesized that some of the decline in losses could be attributed to financial incentives for safer driving required by Proposition 103, but Appel pointed out that other states also have discounts and surcharges that provide similar incentives. The lesson from California is that the main driver of lower premiums is lower losses, not regulatory oversight. While the outcomes of increased rate regulation have been relatively benign in California personal auto, this may be because the potential adverse outcomes were at least partially mitigated by other efforts to reduce losses and policies to

[69] Grace, M., Leverty, J. T., & Powell, L. (2019). Cost Trends and Affordability of Automobile Insurance in the U.S. *Journal of Insurance Regulation*, 38(7), 1-24.
[70] Ibid.
[71] Ibid.

minimize the size of the residual market. Today, auto affordability in California is average, and the state has one of the highest rates of uninsured motorists.

Impact on availability

While growth in nonstandard auto and reforms of residual markets has made availability less of an issue for personal auto in recent years, states such as Massachusetts, New Jersey, and South Carolina provide historical examples of the effects of rate suppression on availability. These states all experienced periods with large residual markets and reduced insurance supply when the rates were stringently regulated.[72]

- South Carolina embarked on significant reforms to strict regulatory procedures in 1999, including transitioning from a prior approval system to a flex rating system and relaxing restrictions on rate classifications, merit rating, and territorial differentials.[73] These reforms improved availability dramatically in the state, causing the percentage of cars in the residual market to decline from nearly 30% in 1998 to under 5% by the year 2000.[74]
- In New Jersey, reforms in 2004 removed a rule known as take-all-comers, which "prevented insurers from cancelling policies of high-risk drivers while simultaneously capping the rates that these drivers could be charged, creating severe shortages of insurance."[75] In this case, as predicted, "important declines were seen in New Jersey's residual market after the reforms."[76]
- Massachusetts is a file-and-use state, but a legal quirk allowed it to operate more restrictively until 2007. A unique provision in the law allowed the insurance commissioner to hold an annual hearing to determine whether competition is feasible and to impose state-set rates if it is not. In every year from 1978 through 2006, competition was found not to be viable and state-set rates were imposed.[77] This ended in 2007 and, like New Jersey, was followed by a reduction in the residual market, which declined from 4.2% of the market in 2007[78] to 2.7% in 2009 and then to 1.3% by 2017.[79]

Impact on reliability

As profit-seeking enterprises, insurance companies are inclined to provide more coverage in states where they expect to be able to achieve a reasonable rate of return and to provide less coverage in states where they do not expect to be able to achieve a reasonable rate of return.[80] If rates are suppressed below the actuarially indicated levels, insurers are unlikely to earn adequate profits to cover their costs of capital. Therefore, rate suppression or the threat of future suppression can cause insurers to exit a state and/or deter new entrants, resulting in a less competitive, more concentrated market. Historical examples are again Massachusetts, New Jersey, and South Carolina. From 1990 to 1996, an average of 59 insurers were operating in South Carolina's regulated insurance market; after South Carolina deregulated, the number

[72] Tennyson, S. (2012). White paper: The Long-Term Effects of Rate Regulatory Reforms in Automobile Insurance Markets. Insurance Research Council.
[73] Ibid.
[74] Ibid.
[75] Ibid.
[76] Ibid.
[77] Ibid.
[78] Ibid.
[79] Commonwealth of Massachusetts Division of Insurance (2017). 2017 Annual Report. Retrieved January 24, 2024, from https://www.mass.gov/doc/doi-2017-annual-report/download.
[80] Newman, 2010, op cit.

of companies nearly doubled within a year.[81] Prior to reforms in New Jersey, 14 insurers exited the state's personal auto market in the 1990s and at least six others had exited in prior years.[82]

New York provides an additional example. In a 2010 analysis, the Property Casualty Insurers of America[83] examined the effects of changing rate regulation laws in New York. Before the mid-1990s, New York used a prior approval system, then implemented flex rating in 1995, and then reverted to prior approval in 2001. Although it was short-lived, the flex rating period between 1995 and 2001 was marked by a substantial number of insurers entering the marketplace and was accompanied by lower costs for drivers. After prior approval was reimplemented, these improvements were reversed, with more than a dozen market exits between 2000 and 2004 and substantial increases in premiums shortly following the change.

That said, a "mild" degree of rate suppression for a limited period, followed by periods of declining loss costs without rate decreases, may not lead to a significant number of insurers withdrawing from a state.[84] However, like delays in rate changes, periods of inadequate rates result in greater volatility in cash flows and underwriting profits. Other things being equal, this again translates to higher costs of capital for the industry, which ultimately lead to higher costs and higher premiums.[85] Furthermore, inadequate rates can undermine reliability when insurers have difficulty paying claims or face solvency threats, resulting in the need for rapid rate increases, market withdrawal, or the potential collapse of the company. And, similar to prior approval delays, even a temporary rate suppression can create solvency concerns for insurers heavily concentrated in the state.

Rate classification control

When considering rate classification, both actuaries and regulators are concerned with preventing unfairly discriminatory rates. In other words, differences in rates should reflect differences in risk. That said, some variables are prohibited for being unfair for other reasons. For example, no state allows rates to depend on race, ethnicity, national origin, religion, or income. While it is unclear whether these variables would predict insurance losses, prohibiting them is presumed to be in the best interests of society.

From time to time, states have restricted the use of additional variables despite their correlation with risk.[86] Prior to the 2007 reforms, the Massachusetts state-promulgated rates had significant subsidies among geographies and experienced drivers versus inexperienced drivers.[87,88] Several states, including Michigan, New Jersey, and South Carolina, have also capped differentials in territories.[89] Some states have prohibited the use of variables such as gender, education, employment, and credit-based insurance scores

[81] Cummings, 2002, op cit.
[82] Tennyson, 2012, op cit.
[83] Property Casualty Insurers of America, 2010, op cit.
[84] Cummings, 2002, op cit.
[85] Ibid.
[86] Shapo, N. (2020). White paper: Principles of State Insurance Unfair Discrimination Law.
[87] Derrig, R. A. & Tennyson, S. (2008). The Impact of Rate Regulation on Claims Evidence from Massachusetts Automobile Insurance. Casualty Actuarial Society.
[88] Cummins, 2002, op cit.
[89] Ibid.

(CBIS) in personal auto rating.[90,91] These variables have been characterized by critics as "non-driving" factors, not providing incentives for loss control, or proxies for prohibited factors such as race, ethnicity, and income.[92]

The relationship between these variables and personal auto risk has been demonstrated in numerous studies and insurer class plan filings.[93] That said, the relationship of a variable to risk can change over time or with the introduction of new variables. For example, if males, historically, have been charged more than females in part because females drive fewer miles on average, we would expect the gender risk differential to change after controlling for mileage.

In addition, actuarial and regulatory frameworks for defining and evaluating potential unjust discrimination in rating models have been evolving rapidly.[94] Careful study is necessary to ascertain whether a rating characteristic is indeed correlated to a protected class and whether and how to address that correlation. For example, a 2007 Federal Trade Commission study on the use of CBIS found that, while CBIS was distributed differently among race/ethnicity groups, it predicted risk within groups, which is inconsistent with the theory that scores are a statistical proxy for race or ethnicity and means that scores have predictive power in their own right and do not derive their power from their correlation to race or ethnicity.[95] Furthermore, mitigating alleged unfair or unjust discrimination against one protected class could adversely impact individuals within another protected class. For example, the prohibition of CBIS proposed by the Washington State Office of the Insurance Commissioner in 2021 would have increased premiums for older drivers on fixed incomes with good credit scores.[96]

In summary, decisions to limit or prohibit rating variables require careful analysis and judgments about the costs of the social unfairness versus the benefits of actuarially fair rates, as well as the potential impacts on the affordability, availability, and reliability of the insurance market.

Impact on affordability

The immediate effect of restrictions on rating characteristics is that the premiums decrease (and affordability increases) for the higher-risk policyholders, and premiums increase (and affordability

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[90] CBIS has been found in several studies to be one of the strongest predictors of auto insurance losses. CBIS are different from credit scores based on likelihood to default on a loan; they are scores calibrated to predict insurance losses using consumer credit characteristics. All states except California, Hawaii, Massachusetts, and Michigan allow the use of CBIS in personal auto insurance rating.

[91] Gardner & Marlett, 2007, op cit.

[92] Powell, L. (2020). Risk-Based Pricing of Property and Liability Insurance. *Journal of Insurance Regulation*, 39(4), 1-23.

[93] Per ASOP 12, demonstration of correlation to risk is sufficient; it is not necessary to establish a cause-and-effect relationship in order to use a specific risk characteristic.

[94] The American Academy of Actuaries proposed the following definitions in a 2023 Issue Brief:

- Unlawful discrimination: Different treatment that is not allowed by law.
- Unfair discrimination: Different treatment that is not supported by statistical evidence.
- Unjust discrimination: Different treatment that is considered undesirable by society. As laws change, unjust discrimination becomes unlawful discrimination.

[95] Federal Trade Commission. (2007). Credit-Based Insurance Scores: Impacts on Consumers of Automobile Insurance.

[96] La Corte, R. (July 29, 2022). Washington judge overturns insurance rate credit scoring ban. AP News. Retrieved January 24, 2024, from https://apnews.com/article/legal-proceedings-washington-olympia-f5b54526201d94abebca0c0734db4047.

decreases) for the lower-risk policyholders. The lower-risk consumers subsidize the higher-risk consumers, and the higher-risk consumers are not charged a rate commensurate with their level of risk.[97] For example, the Federal Trade Commission study found that prohibiting the use of CBIS creates a subsidy from a majority of insureds to a small group of hazardous drivers.[98]

A second effect, which has been confirmed in multiple studies, is excess growth in overall losses and, in turn, an overall increase in premiums, reducing overall affordability. For example, Derrig and Tennyson found a significant and positive relationship between the size of cross-subsidies built into the Massachusetts rate structure and the relative growth in loss costs, with loss costs up to 50% above the expected level when premiums included explicit cross-subsidies from low-risk drivers to high-risk drivers.[99] Weiss, Tennyson, and Regan examined state-level panel data from 1980 to 1998 and found that cross-subsidies caused by rate regulation increased auto insurance loss frequency and severity. The magnitude of the increases varied by the size of the group subsidized and the size of the subsidies; the larger the discrepancy between the expected loss costs and the premiums charged, the larger the increase in overall losses.[100]

These higher claim costs have been attributed to adverse selection (i.e., higher-risk drivers buying more insurance or choosing lower deductibles) and moral hazard (i.e., drivers having less incentive to mitigate their risk or avoid high-risk behavior).[101] For example, restricting a variable that surcharges insureds with no prior insurance may create a moral hazard or possibly reduce the number of drivers who purchase insurance because this variable encourages insureds to continuously maintain insurance, and thus may offer positive effects beyond simply providing predictive lift in a rating algorithm.

Therefore, while rating subsidies may fulfill social or political goals, the ultimate effect can be an increase in the inflationary pressures on insurance premiums for all drivers, undermining efforts to promote safer behavior.

Impact on availability

Insurers may simply reject the risks that are underpriced, restricting availability for the subsidized rate classifications. Limiting rate relativities inherently makes some classes of insureds undesirable for insurers. For example, limiting rate differences by territory results in higher-than-necessary rates in the low-risk territories and lower-than-necessary rates in the high-risk territories. As a result, insurers may choose to stop accepting business in high-risk territories or reduce their market presence in those territories, and those risks ultimately end up in the residual market. Tennyson, Weiss, and Regan observed this in Massachusetts, where policyholders who received rate subsidies were more likely to be ceded to the residual market.[102]

To address this issue, some states put in place take-all-comers laws, which require insurers to issue policies to all drivers applying for coverage, with minimal exceptions, or put limitations on factors that can be used for underwriting. While this approach promotes availability, it can require insurers to accept risks that are

[97] Powell, 2020, op cit.
[98] Federal Trade Commission, 2007, op cit.
[99] Derrig & Tennyson, 2008, op cit.
[100] Weiss, M. A., Tennyson, S., & Regan, L. (2010). The Effects of Regulation Premium Subsidies on Insurance Costs: An Empirical Analysis of Automobile Insurance. *The Journal of Risk and Insurance*, 77(3), 597-624.
[101] Tennyson, 2012, op cit.
[102] Tennyson, Weiss, & Regan, 2010, op cit.

inconsistent with their business or rating plan, making it more difficult for insurers to manage their books of business and exposure to risk.[103] Limiting underwriting variables requires additional regulatory oversight, such as the filing of underwriting guidelines and market conduct testing to confirm that insurers are following their filed guidelines.

Impact on reliability

Allowing insurers to use more rating variables allows for more ways that carriers can compete and differentiate themselves from one another. Not all insurers view risk identically, and not all want the same mix of risks or price them in the same manner. Thus, allowing the fullest spread possible of rating variables will tend to maximize the different options and price points available to consumers.

Conclusion

The question of whether insurance markets can be improved at all via increased regulatory intervention has been a recurring debate throughout the history of insurance regulation. Economic theory and historical experience suggest that stricter rate regulation may be appropriate in limited circumstances of genuine market failures, such as destructive price wars or collusion resulting in excess profits, and that competitive markets do not lead to excessive prices or profits.[104]

The data presented in this report, as a general matter, both in Illinois and across the country, suggest that competition has ensured that personal auto insurance availability, affordability, and reliability have not been an issue for many years. Historical experience suggests that increased interventions are often accompanied by approval delays and premium suppression, which pose a risk of reduction in insurance availability. While recent rate increases in Illinois have impacted affordability, these trends have also affected other states with other forms of rate regulation. Prior approval rate regulation has been wielded in some states to keep personal auto insurance premiums lower in the short term, but it does not address the underlying causes of increased insurance costs. Lastly, legislative or regulatory prohibitions on the use of specified variables may distort the ability for consumers to receive accurate pricing on the risks they pose and create opportunities for adverse selection and moral hazard, leading to unfair subsidization and higher losses.

In conclusion, our analysis suggests that consumers have not been adversely impacted by issues with availability, affordability, and reliability of auto insurance due to open competition for rating.

[103] National Association of Insurance Commissioners Insurance Availability and Affordability Task Force (1998). NAIC Insurance Availability and Affordability Task Force Final Report. National Association of Insurance Commissioners.
[104] Cummins, 2002, op cit.

Limitations

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The data and exhibits in this report are provided to support the conclusions contained herein, limited to the scope of work specified by NAMIC, and may not be suitable for other purposes. Milliman is available to answer any questions regarding this report or any other aspect of our review.

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