

Does State Private Passenger Automobile Price Regulation Benefit Consumers?

The Myths and Facts

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Executive Summary

Given the recent trouble in the U.S. financial markets, ongoing bailouts and unprecedented storm damage, there has been increasing interest in the establishment of a national insurance regulator that would operate concurrently with, or in lieu of, the current 50-state regulatory system that exists today.

There are a number of reasons averred for the current regulation of private passenger automobile insurance services – namely the need for:

1. Solvency protection;
2. Full disclosure requirements; and
3. Consumer protections, to include price controls.

The economic rationale for price regulation has, thus far, remained unclear. For private passenger automobile insurance services, 25 states either set consumer insurance rates or require that insurance companies receive commission approval of rates. On the other end of the spectrum, 9 states require no significant price regulation, with 17 other states and the District of Columbia being somewhere in between. Until recently, Massachusetts set industry rates, where as Illinois has required only an informational filing from insurance companies. The vast differences in the form of price regulation raise legitimate questions as to the exact problem that price regulation presumes to fix. It is unclear whether, and to what extent, price regulation, or the lack of it, benefits consumers. Moreover, if national regulation of insurance is to be established, what form would be most appropriate, desirable and beneficial for consumers?

The economic literature provides no empirical basis for price regulation, nor provides any support that price regulation is necessary to correct some perceived market failure. Without any clearly identified market failures to point to, price regulation appears to exist primarily as a result of historical precedence or, possibly, regulatory overreach. In reviewing the public record, there is a short list of potential reasons that profess to justify price regulation – specifically, that unregulated markets:

- Are not competitive;
- Lead to price gouging (pricing too high);
- Risk ruinous competition (pricing too low); and
- Result in excessive industry profits.

This study addresses these justifications and it uses statistical analyses to test whether the degree of price competition affects industry performance and consumer welfare. The following are key findings to this study:

- By standard measures of industry concentration, the private passenger automobile insurance service market is highly competitive. There is no evidence of market failure from industry structure that would warrant price regulation.

- An analysis of historical automobile premium data show that higher degrees of price regulation leads to more volatile consumer prices. Therefore, for the benefit of consumers, the market does a better job at setting prices than regulators do.
- Higher degrees of regulation positively coincides with higher consumer insurance prices and industry costs, even after controlling for typical explanatory variables, such as density, coastal exposure and automobile-related crime.
- Price regulation has no significant effect on industry profits for private passenger automobile insurance services.

In short, the common justifications for price regulation are unfounded and are not supported by the empirical evidence. On the other hand, there is evidence that consumers are not helped, and likely harmed, by price regulation of the private passenger automobile insurance market. Therefore, if public interest is the goal, states that impose price regulation should rethink these rules, since they appear to impose more costs than they do benefits. This point applies to all lines of insurance, such as homeowners insurance, and not just private automobile insurance.

As to establishing a national insurance regulator, this study's analysis suggests that price regulation should be avoided since they impose higher industry costs and result in higher consumer premiums. Instead, a better framework would be one that encourages competition, ensures solvency, and provides better consumer information – all measures that would reduce consumer prices and spur service innovation.

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Purpose

The recent financial collapse and major storms have increased calls for reforming the current 50-state regulatory system. While advocates for the state regulatory system see it as being better focused on the nuances of local insurance needs, those calling for reform cite a balkanized multi-state system that would benefit from reforms, including national oversight, uniform rules, common consumer protections and consistent solvency protection. An increasing number of policymakers and experts believe that a national regulator would be instrumental in bringing change for the benefit of consumers where the current regulatory system has failed. A national regulator would permit federally-chartered insurance companies to compete for the first time.

Regulation, whether federal or state, is designed to serve the same purpose – to benefit the public. Yet, the current system breeds a lack of uniformity among the states. For instance, some states have no price regulation of private passenger automobile insurance and other states have substantial price regulation. The differences in price regulation produce very different outcomes for consumers and provide substantial concern as to whether these additional regulations benefit consumers, and if they do, how much regulation is needed. After all, how can consumers living in different states be equally benefitted when such disparities in state price regulation exist? In this regard, the divergence in regulations among the states supports the case for regulatory reform and a national framework for insurance which would provide a common solution of consumer protection, solvency and oversight. As such, this paper seeks to compare the differences in price regulation and industry market performance for the purpose of providing insight into what forms of state price regulation work for consumers and, if federal insurance regulation is established, what form of federal regulation would work best for consumers?

In terms of analyzing differences in price regulation among the states, this paper looks at the effects of regulation on: 1) industry profits; 2) the ability of states to set prices better than markets can; 3) industry costs; and 4) consumer premiums. This paper makes public policy recommendations as to which form of auto insurance regulation works best for consumers.

Different States and Different Price Regulations

To varying degrees, state insurance departments regulate private passenger automobile insurance rates. This results in separate departments for the 50 states, the District of Columbia and U.S. territories. Each state has different prices, insurance forms, coverage, regulations and compliance rules. For the industry, this creates the need for regulatory and compliance staff for each state. For consumers, military personnel and small business owners who move, are reassigned or buy property out of state, this means finding a new insurance provider, broker and obtaining different levels of policy coverage, depending on state regulatory requirements.

¹ This paper is authored by Stephen Pociask, president of the American Consumer Institute, Center for Citizen Research. The author wishes to acknowledge Professor Joseph Fuhr for his helpful comments on this paper.

To understand the extent to which states have such vastly different rate filing requirements and the effects that these regulatory differences may have on the market, this paper organizes state rate policies into classes, including commonly termed groups such as *prior approval*, *file and use* and *use and file* for private passenger automobile insurance. While small variations between state policies can somewhat confound direct state-to-state comparisons, grouping states into classifications can smooth out much of this variation and provide a better understanding of the “collective effects” of regulation on consumers and on the market.

Until recently, the most stringent form of private passenger automobile insurance price regulation could be found in Massachusetts, where automobile insurance rates were set by a commission (a form of price regulation referred to herein as *state-made*).² In 23 other states, insurance companies must receive rate approval from states before they can sell automobile insurance policies (referred to as *prior approval*).

Somewhat less stringent regulation can be found in 14 states and the District of Columbia, where insurance companies must file their rates before they can sell (referred to as *file and use*). Three other states permit some rate flexibility within rate bands (referred to as *flex rating*). While these states appear to have less regulation, in some cases, the process often provides state regulators the opportunity to intervene in rate setting and require rate approval as a condition of use.

Substantially less regulation is evident in 9 states, 8 of which allow insurance companies to set rates first and then file with the state commission (referred to as *use and file*). For example, Illinois, which requires only an informational filing, is included among these 8 states. The ninth state, Wyoming, has no filing requirement for private personal automobile insurance (referred to as *no file*).

The remaining portion of this study will use these rate policy classifications to analyze how price regulations influence industry profits, industry costs and consumer prices. To understand whether price regulation of private passenger automobile insurance is necessary and which form of regulation works best for consumers, this paper will address the following common justifications averred by regulators:

1. The lack of competition requires price regulation;
2. Regulators can set insurance prices better than the market;
3. Price regulations lower consumer prices; and
4. Price regulations lower industry profits.

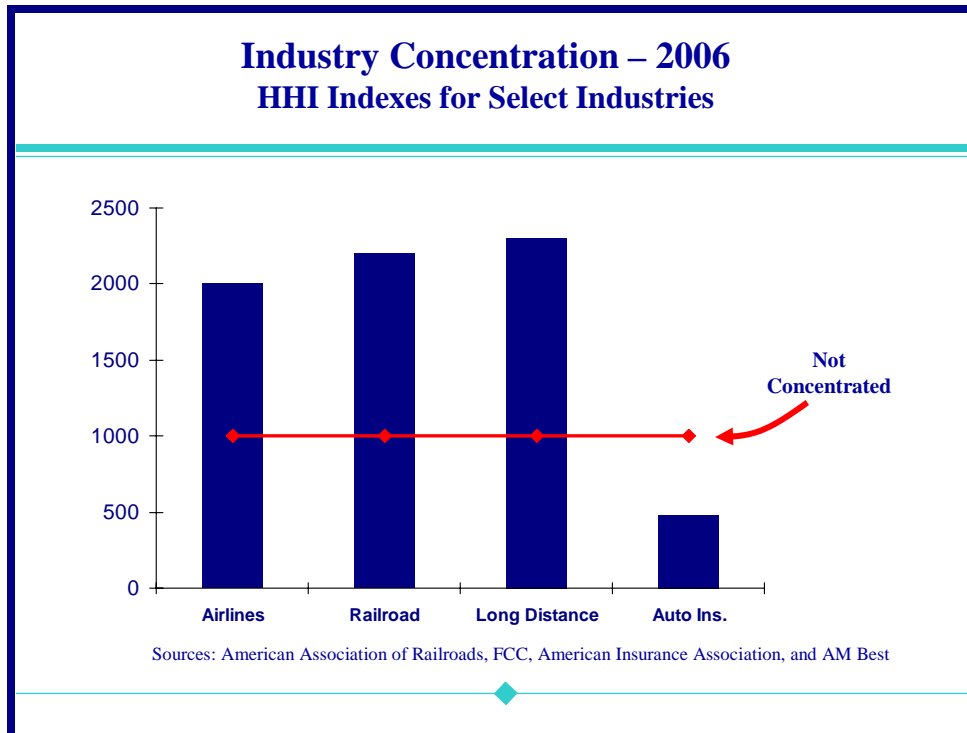
The proper means to evaluate these justifications is to recognize from the outset that price-regulated markets must outperform unregulated markets; or, said differently, price regulations must provide consumers with greater net benefits than the market would provide. If this is not the case, then there is no sound economic (or consumer welfare enhancing) justification for price regulation in the first place.

² Massachusetts has instituted major reforms and no longer fits into this category. However, because the statistical analysis of this paper relies on historical data, the categories described will be as of 2007.

By addressing these common justifications, this paper seeks to understand the extent to which price regulations provide value, if any, to the consumers it purports to help, and, if national regulation is established, which form of regulation would work best for consumers. Simply put, if price regulated markets do not outperform unregulated markets, these regulations do not promote the public's interest.

1 – Myth or Fact – The Lack of Competition Requires Price Regulation

While current economic thought is less interested in market structure as an indication of market failure and is more concerned about market conduct and performance, concentration is nonetheless commonly used to evaluate the potential for market power. However, empirical evidence shows that the insurance industry is not at all concentrated, particularly when compared to the deregulated industries noted in the below chart. Using the Federal government's standard concentration measurement called *Herfindahl-Hirschman Indexes*,³ where an index value of 10,000 denotes a pure monopoly and where a concentrated industry has an index value above 1,000, industry concentration indexes are estimated to be approximately 500 for the private passenger automobile insurance market. By these measures and compared to industries that have since been deregulated, it can be concluded that this segment of the insurance industry is highly competitive.⁴ If concentration is not a concern for these deregulated industries, it certainly must not be for the insurance industry. Therefore, by traditional standards, the insurance industry is not at all structurally concentrated and, as for the potential exercise of market power, poses no risks to consumers.



³ Calculated as the sum of the squared percent shares. For more information, see “Horizontal Merger Guidelines,” U.S. Department of Justice and the Federal Trade Commission, April 18, 1997, <http://www.usdoj.gov/atr/public/guidelines/hmg.htm>.

⁴ Stephen Pociask, Joseph Fuhr and Larry Darby, “Insurance Regulation: Market or Government Failure?” The American Consumer Institute, March 20, 2007.

Given the high number of competitors (there were 350 firms providing private passenger automobile insurance in the U.S. in 2006), there is no support for the case that the market has failed based on industry concentration, and there is no evidence that the market is incapable of setting prices efficiently. Therefore, it is a myth that price regulation exists to correct some market failure caused by industry structure. Instead, the empirical evidence suggests that the market structure of the automobile insurance market is, if left to its own accord, indicative of a highly competitive market. In competitive markets, if a company sets prices too high, competitors with lower prices will win market share. For competitive markets, price regulation is not needed.

2– Myth or Fact – Regulators Set Insurance Prices Better than the Market Can

To understand whether price regulations are beneficial to consumers, it is helpful to understand why private passenger automobile insurance prices are regulated in the first place. In the last century, price regulations were established to prevent insurance prices from being set too high and too low. If the market were too competitive, regulators believed that low prices would lead to predatory pricing, negative profits and a decrease in the number of insurance companies.⁵ In this way, price regulations were seen as a means to assure industry solvency.⁶ However, there are ways other than price regulation that can assure solvency.

On the other hand, regulators were also concerned that prices were being set too high, which would lead to price-gouging, the lack of affordable rates and consumers unable or unwilling to buy insurance, and, as a result of high prices and excessive industry profits. However, as was established earlier in this paper, the market appears to be quite competitive, which would keep firms from charging high prices.

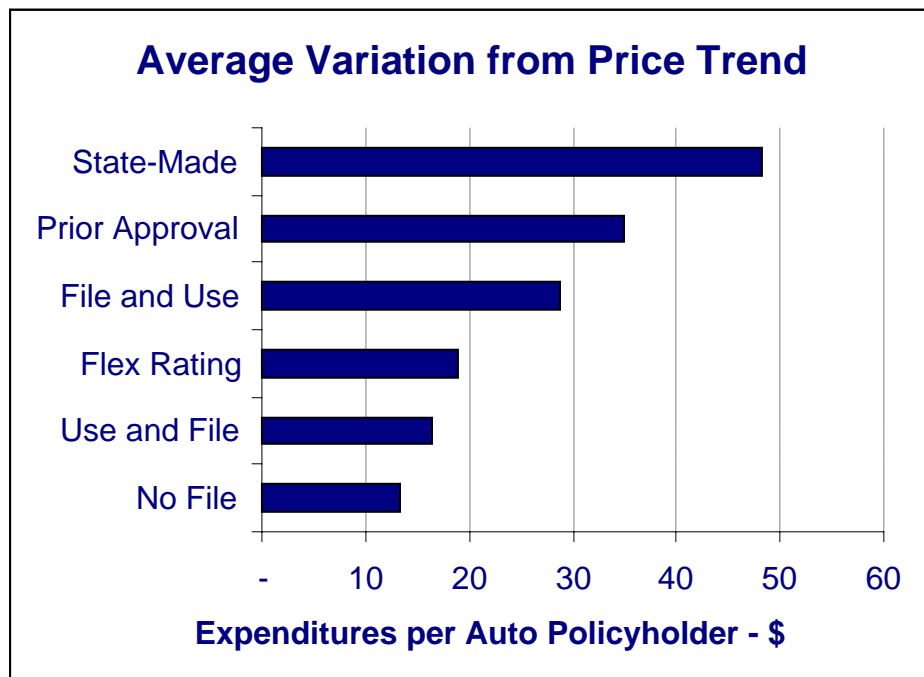
Even if we ignore (temporarily) vast economic consensus, theory and literature that competitive markets work, and we assume that the markets will price too high or too low, then the use of price regulations to remedy this problem would mean that only regulators would know best what the market price (sic) should be. This would mean that regulators would better understand the precise point where demand and supply would maximize social welfare – not too high to gouge consumers and not too low to cause insolvency. If regulators, in fact, do know better than markets, then unregulated market prices would be more volatile than regulated prices.

As an alternative to this hypothesis, the vast consensus of economists concludes that competitive markets are always better at setting prices than regulators. Based on this, we should see unregulated markets able to adjust prices more agilely, fine-tune them and offer these prices with little delay. If markets do set prices better than regulators do, then regulated markets would exhibit jerky price changes, regulatory delays, and prices that overestimate or under-compensate efficient prices. Under this alternative hypothesis, price regulated firms would be apprehensive about making small price decreases in fear that rates would be sticky downward, which would cause regulators to eventually react by forcibly changing rates and create wildly upward and downward swings in price. Therefore, under this alternative hypothesis, price regulations add variability to consumer prices, making them a worse predictor of market prices. In other words, regulators do a poor job of setting prices, making justification #2 a myth. Let's test this second hypothesis.

⁵ The term “ruinous competition” was used.

⁶ Just to clarify, solvency regulation is not a justification for price regulation. Solvency regulation can be adequately controlled by capital requirements and financial disclosure.

With NAIC state-level data from 1987 to 2005 and using ordinary least squares estimates, we calculated for each state the trend in average private passenger automobile insurance expenditures and calculated the variance of expenditures from the trend.⁷ As the chart below shows, states with greater price variance tend to have greater levels of price regulation. For instance, state-made regulation and prior-approval price regulation experienced large swings in consumer automobile insurance expenditures in the range of \$35 to \$48 per year, collectively for these rate filing classes. In contrast, states with use and file, or with no filing requirement, resulted in consumer automobile insurance expenditure swings in the range of \$13 to \$16 per year, collectively. In short, price regulation was positively correlated with increased variation in consumer insurance costs, consistent with microeconomic theory.



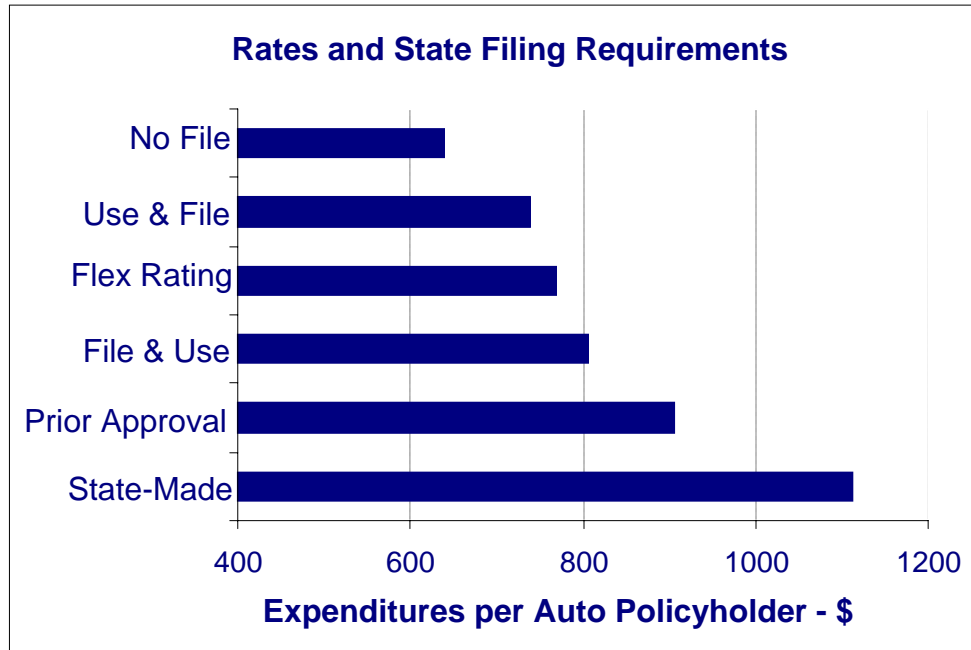
Therefore, price regulations add volatility to consumer premiums. This indicates that price regulators are inferior at setting prices and offer no apparent benefit to consumers. In fact, if prices are set too high in one year, consumers suffer by being gouged, not by insurers, but by regulators and their sluggish price controls; and if prices are set arbitrarily low in one-year, some insurance carriers may exit the market, which would reduce price competition and provide consumers with less choice. Ironically, the data suggests that price regulation is more likely to gouge consumers on one hand and threaten insolvency on the other hand by setting prices divergent from market forces. In other words, consumers lose from the increased volatility associated with price regulation. Regulators do a poor job in setting private passenger automobile insurance prices, thus creating market instability that costs consumers and adds no measurable benefit. Therefore, this justification for price regulation is a myth.

3 – Myth or Fact – Price Regulations Lower Industry Price

The last section showed that price regulation may harm consumers by adding volatility to consumer premiums. However, is it possible that this harm is more than offset by lower

⁷ Expenditures represent insurance premiums paid by consumers.

consumer prices? To test this hypothesis, private passenger automobile insurance premiums were collected for 2006, weighted by consumer expenditures and summarized for each major category of price regulation. The graph (below) shows a consistent and dramatic positive relationship between the level of price regulation and insurance expenditures. The chart shows the differences to be substantial, consistent between the categories, and shows that price regulation harms consumers. This evidence refutes the belief by some that increased price regulation provides some consumer benefits or that such regulation is in the public's interest.



However, it is worth noting that other factors influence the private passenger automobile insurance prices, including crime, density and storm damage. In March 2008, the American Consumer Institute analyzed the effects of regulation on auto and homeowners insurance and, while controlling for income, natural disasters and crime, found that higher levels of regulation lead to higher consumer premiums.⁸ The statistical analysis found that the average household pays about \$300 more for property and casualty insurance in heavily regulated states, compared to those in less regulated states. Using an index of regulatory burden constructed by the Heartland Institute and the Competitive Enterprise Institute,⁹ the overall effect of excessive regulations was estimated to raise consumer property and casualty insurance premiums by approximately \$13.7 billion per year. This statistical analysis confirms the factors contributing to higher insurance prices and that price regulation is one significant explanatory variable for the increase in state insurance prices. In summary, more price regulation means higher consumer expenditures for private passenger automobile insurance.

⁸ "The Biggest Losers and the Cost of Insurance Regulation," *ConsumerGram*, American Consumer Institute, March 27, 2008.

⁹ "2008 Property & Casualty Insurance Report," Heartland Institute and Competitive Enterprise Institute, first report, 2008.

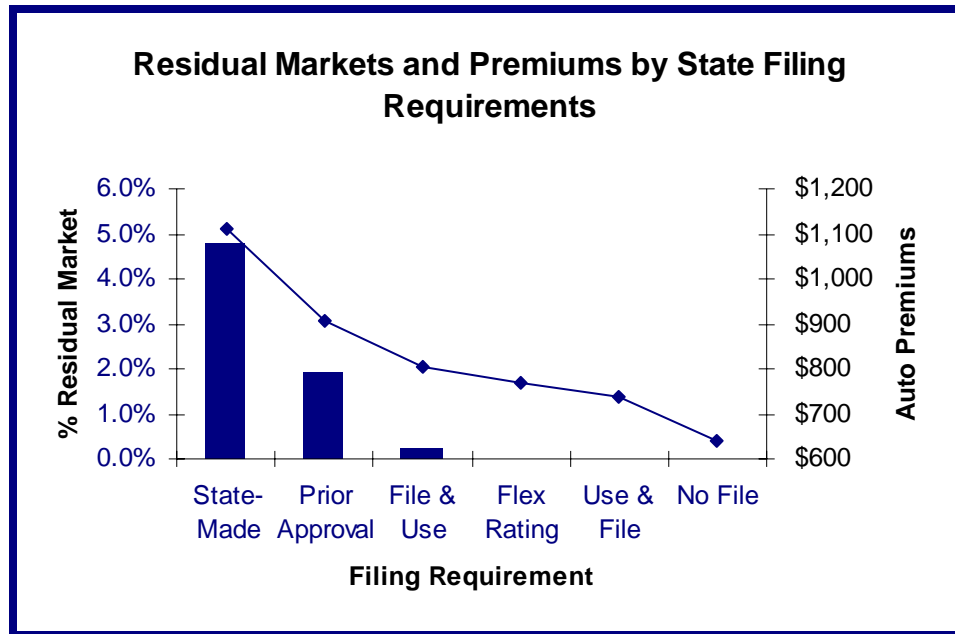
Despite this evidence, there may be a question about the proper causality represented in this analysis – namely, did price regulation lead to higher prices or did higher prices lead to price regulation? The statistical model, as discussed above, does address this concern in that it shows that the divergence in prices cannot be explained solely by variables that contribute to higher premiums, thereby leaving price regulations as a prime explanatory variable for the divergence in premiums. However, more needs to be said about how higher regulations produce higher prices.

One simple explanation is that onerous price regulations create higher industry costs that are offset with higher consumer prices. These regulatory costs may result from a number of problems, including: 1) cross-subsidization of market segments that lead to allocative inefficiencies; 2) regulatory surveillance and compliance; 3) restrictions on market entry and competition, affecting the number of firms in the market and reducing the potential level for price competition; 4) added costs from the spreading of risk over smaller (and more costly) state-level pools rather than larger interstate-level pools; and 5) lack of uniformity among the states, which requires carriers to deal with 50+ state regulators, forms and pricing regimes. The lack of uniformity can be expensive, according to many industry experts. For example, a CSC and ACLI study found that uniformity of life insurance regulation would save consumers \$11 billion over the next 10 years.¹⁰ The establishment of a national regulator could be one way to reduce these costs.

Another example illustrates how costs are increased by price regulation. A number of states cross-subsidize consumer segments, effectively raising the premiums of good drivers and offsetting these increases with lower premiums for bad drivers. This type of price regulation has the effect of encouraging risky driving, which leads to increased accidents, claims, property damage, traffic injuries and traffic deaths. The result of these cross-subsidies, referred to as *residual market pricing*, increases the costs of insurance carriers, who pass these costs along to all consumers (good and bad drivers) in the form of higher automobile premiums. In short, this type of price regulation is directly responsible for higher industry costs and higher consumer premiums, consistent with the observed positive correlation between price regulation and consumer insurance expenditures.

The chart below looks at the extent to which these cross-subsidies are prevalent in the private passenger automobile insurance market. Using the same classification of private passenger automobile insurance price regulation, the chart (below) shows that states with stricter forms of price regulation have a higher percentage of risky drivers benefiting from subsidized (labeled in the chart as *residual market*) premiums. This agrees with the causality of the correlation – namely, that more regulation leads to higher consumer prices, and provides an example of how states with high regulations confound efficient pricing and pose adverse consequences on consumers. In essence, the ability of regulators to set prices invites these inefficient pricing schemes, which, in turn, creates more industry costs and higher consumer prices. The causality is clear and it is confirmed through graphical analysis – state price regulation leads to higher automobile insurance premiums.

¹⁰ “Economic Impact of an Optional Federal Charter on the Life Insurance Industry,” ACLI and CSC, August 2005.



To summarize, the analysis provided here shows that the belief that price regulation lowers consumer prices is entirely a myth. Instead, regulations lead to higher insurance prices.

4 – Myth or Fact – Price Regulations Lower Industry Profits

One final justification of price regulation of the private passenger automobile insurance market is that insurance carriers, if left unchecked, would reap unreasonably high profits. Because the previous section provided evidence that price regulation tends to increase industry costs and, consequently, consumer prices, it is unclear how consumers would actually benefit from price regulation and whether such regulations have any appreciable effect on industry profits.

Studies have found that consumers pay dearly for insurance price regulation and do not get much, if anything, in return for it. Studies by Litan, O'Connor, Cummings, Grace, Klein, Phillips and others found that price regulations do not decrease prices or profits and may, in fact, increase them.¹¹

The contention that price regulation lowers industry profits is a testable hypothesis. Industry profits for private passenger automobile insurance are commonly measured three ways – loss ratio, underwriting profit and return on net worth. For each of these standard measures of industry profitability, data from 1987 to 2006 were averaged into 51 observations, representing the 50 states and the District of Columbia.¹² Because simple graphical representations did not provide an obvious and consistent depiction as to the effects of price regulations on industry profitability, statistical analyses were performed.

To do this, the rate filing groups were consolidated into three larger groups – high regulation, moderate regulation and no price regulation. The “high regulation” group simply

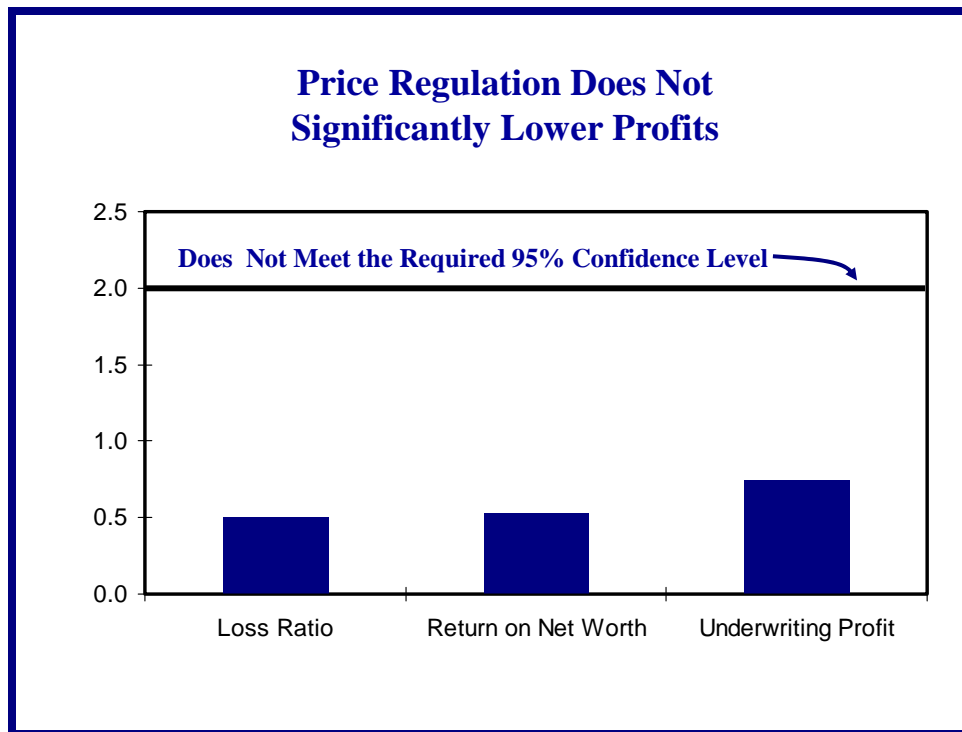
¹¹ These studies are cited in Robert E. Litan and Phil O'Connor, “The Consumer Benefits of an Optional Federal Charter: The Case of Auto Insurance,” presented at “The Future of Insurance Regulation,” AEI, July 9, 2008.

¹² NAIC, Report on Profitability by Line by State, various years.

included the sole state-made regulatory state (Massachusetts) into the group of 23 prior approval states. The “no price regulation” group consisted of the sole no-file state and the 8 use and file states. The “moderate regulation” group fell in the middle of the regulatory spectrum and is made up of the remaining states, all of which are “file and use,” including three with some form of flex rating.

The belief that regulation is necessary to prevent excessive industry profits can be tested using two binary variables concurrently – one testing if highly price regulated states are statistically different from moderately price regulated states; and the other testing if states with no price regulation are statistically different from moderately price regulated states. The hypothesis test can be performed three times, once for each measure of profit. If the results do not show (with statistical significance) that higher regulations lead to lower profits or that lower regulations lead to higher profits, then price regulation does not appreciably affect the industry, and hence benefit consumers. This would mean that there is no need to control and monitor profits. It would also mean that profits are not a sound justification for price regulation, and no reasonable benefit of price regulation can be found.

The table below summarizes the results for the three regressions (loss ratio, return on net worth and underwriting profits) for the high regulation binary variable. For all three regressions, the T-statistic corresponding with the highly regulated states did not meet the critical 95% level of confidence (approximately 2.0), meaning that there is no statistical difference between the profits of moderately regulated states and highly regulated states. In other words, price regulation did not significantly lower industry profits, as claimed by proponents of regulation.



Similarly, the three regression models did not find any evidence that unregulated states were more profitable than moderately regulated states. Specifically, the loss ratio (1.7), return of

net worth (1.7) and underwriting profit (1.4) did not meet the critical T-value (2.0), indicating that there was no statistical difference in profits.

From these statistical results, there is no empirical evidence that price regulation lowers industry profits. Therefore, it is a myth to suggest that there are benefits derived from price regulation that would justify its existence. In light of the fact that price regulations tend to increase consumer prices and industry costs, it is concluded that price regulation has no appreciable effect on profits and ample proof that these regulations have no clear benefit for consumers.

Summary: Less Price Regulation Would Benefit Consumers

This paper has shown that there is no sound justification for the existence of price regulation for private passenger automobile insurance. The facts show that the automobile insurance market appears to be adequately competitive and the market can set prices better (with less volatility) than regulated markets can. In addition, this study shows that less regulated markets tend to charge consumers lower premiums, even after controlling for other explanatory variables. Furthermore, industry profits are no higher or lower whether regulated or not.

Based on these findings, it can be concluded that there is no sound economic basis or supporting empirical evidence for price regulation in the private passenger automobile insurance market. Simply put, price regulation does not work for the benefit of consumers.

Therefore, as policymakers consider the establishment of a federal insurance regulator, they should recognize that less price regulation works better for consumers than more. A better framework would be one that encourages competition, which would reduce consumer prices and spur service innovation.