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Property-Liability Insurance Price Deregulation: The Last Bastion?

Over the past two decades, the United States has successfully deregulated prices and entry and exit restrictions, in whole or in part, for most industries that were once regulated: airlines, trucking, railroads, telecommunications, and banking.¹ Only a few industries stand as exceptions to this pattern, the largest being the property-liability insurance industry. It is perhaps not coincidental that this is the only such industry (of those mentioned here) still regulated at the state level for solvency, pricing, and entry and exit purposes, because deregulating at the state level requires action by all currently regulating jurisdictions rather than one decision at the national level.

In 1999 banking and insurance were allowed to combine as the result of sweeping financial modernization legislation (the Gramm-Leach-Bliley Act) passed in the United States. This change, as well as the 1994 deregulation of insurance prices and market entry in the European Union, makes it timely to examine the theoretical and empirical bases for continued regulation of rates and forms in the U.S. property-liability insurance market. Accordingly, the American Enterprise Institute–Brookings Institution Joint Center for Regulatory Studies sponsored a conference on insurance

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1. The discussion of deregulation in this chapter applies primarily to pricing and entry-exit regulation. In the financial sector, both banks and insurers continue to be regulated for solvency as well as for other aspects of industry conduct and operations.

regulation in January 2001. This chapter synthesizes the principal findings of the papers presented at the conference and provides an analysis by the author of insurance price regulation, regulatory theory, and the welfare effects of regulation.

Potential Benefits from Deregulation: Overview

Insurance pricing is an important economic issue. Insurance plays a crucial role in enhancing economic welfare by permitting consumers and businesses to diversify risk. The property-liability insurance industry has annual premium revenues of about \$300 billion, and insurance premiums account for a significant proportion of consumer expenditures, especially in states with high automobile accident costs. Consequently, even relatively small improvements in insurance market efficiency have the potential to substantially improve economic welfare.

Deregulation in other industries generally has had a favorable impact on consumer welfare, often reducing costs and prices, improving the quality and variety of services available to consumers, and providing incentives for firms to adopt new technologies and improve productivity.² Regulation has been shown to create inefficiencies, such as cross-subsidies among groups of consumers, that are reduced or eliminated under deregulation.

Because the insurance industry is competitive, deregulation is expected to bring benefits to insurance consumers similar to those realized in other deregulated industries. In addition, the better alignment of prices with costs that accompanies deregulation is expected to provide stronger incentives for safe driving, resulting in lower accident rates and reductions in insurance loss costs. Moreover, by suppressing prices below competitive levels, regulation leads to restricted availability of insurance coverage; such restrictions are significantly reduced in a competitive market. The remainder of this volume explores these and other regulatory distortions in more detail and analyzes the potential benefits from deregulation so that policymakers will have the information they need to redesign the insurance regulatory system.

Focus of the Conference

Insurance prices are substantially deregulated (*de facto*) for many commercial property-liability insurance markets, with the exception of

2. Winston (1993), Joskow and Noll (1994).

workers' compensation insurance where prices are still regulated by most states. However, workers' compensation markets and regulation are unique in many ways and have recently been analyzed.³ Consequently, the present conference focused on the most important personal line of property-liability coverage—private passenger automobile insurance.⁴ With annual premiums of about \$120 billion that account for more than 40 percent of total industry revenues, private passenger automobile insurance is the most important business line for the property-liability insurance industry.

Automobile insurance prices are currently regulated in forty-nine states. In thirty-one states the regulation is of the *prior approval* variety, meaning that insurers must file rates with the state insurance commissioner and have them approved before they can be used in the market. In the other states, insurers can change prices without prior approval, usually with the proviso that they file the rates with the insurance commissioner, who can subsequently disapprove the rates. Only Illinois does not allow disapproval.

The conference centered around five state case studies. Academic experts analyzed the three most heavily regulated states—California, Massachusetts, and New Jersey—as well as Illinois, which has been deregulated for about 30 years, and South Carolina, which began to deregulate in 1997.⁵ In addition, Scott Harrington conducted an econometric analysis based on all fifty states for the period 1974–98 to gauge the impact of regulation on insurance price levels, price volatility, and the proportion of automobiles insured in residual markets.⁶ Georges Dionne analyzed insurance regulation in other industrialized countries. Because the primary regulatory constraint in the (non-workers'-compensation) commercial lines involves regulation

3. Danzon and Harrington (1997).

4. Homeowners' insurance is also price regulated in most states but was not discussed in detail at the conference in order to provide an in-depth analysis of automobile insurance. Most of the issues involving homeowners' insurance regulation parallel those in automobile insurance except that the former is more heavily affected by catastrophic risk in states with significant catastrophic exposure. Thus pressures for regulatory intervention in those states tend to be driven more by catastrophic risk exposure than by general inflation, as is the case with automobile and homeowners' insurance in states with limited exposure to catastrophic risk.

5. The California case study was conducted by Dwight Jaffee and Thomas Russell; the Massachusetts case study by Sharon Tennyson, Mary Weiss, and Lauren Regan; the New Jersey case study by John Worrall; the Illinois case study by Stephen D'Arcy; and the South Carolina case study by Martin Grace, Robert Klein, and Richard Phillips.

6. All states have laws stipulating that drivers who cannot obtain coverage from insurers on a voluntary basis can obtain insurance in the "residual market." The most common arrangement is the "assigned risk plan," where drivers entering the residual market are assigned to companies doing business in the state in proportion to their premiums written in the state.

of contract forms, Richard Butler analyzed the effects of form regulation on innovation and economic welfare in commercial lines markets.

Synopsis of Findings

This section provides a synopsis of the findings, which are explored in more detail in subsequent sections of this chapter. The findings can be summarized as follows: The market for private passenger automobile insurance is intensely competitive. If undisturbed by regulation, competitive market equilibrium will generate auto insurance prices that reflect an unbiased estimate of the expected costs of motor vehicle accidents as well as an appropriate profit for insurers, reflecting the risk they bear. There is no evidence that prices or profits in states that rely on markets to set rates are excessive or that insurers behave collusively.⁷

Automobile insurance price regulation tends to be imposed in response to rising premiums, which reflect rising claims costs. Because dissatisfaction with rising premiums is highest among drivers paying the highest premiums, regulation usually results in cross-subsidies flowing from low-cost drivers to high-cost drivers, increasing the premiums of the former and decreasing the premiums of the latter. Regulation also often results in rate suppression, where the total amount of premiums collected in a state is less than would be collected under competition.⁸

The amount of cross-subsidies and the degree of rate suppression vary by state and over time. Scott Harrington's findings (chapter 7), which confirm and extend those of a number of prior studies, indicate that on average prior approval regulation had little or no effect on rate levels over time. These results plus evidence presented in the state case studies suggest that periods of rate suppression in regulated states are followed by periods when insurers are able to earn higher than competitive profits, due to low inflation or declining loss costs. Insurers are often reluctant to reduce prices

7. See Cummins and Tennyson (1992). There is some evidence of cost inefficiency in the industry, paralleling similar findings in other industries such as banking. See Cummins and Weiss (1993) and Cummins, Weiss, and Zi (1999). Cost inefficiencies often develop in regulated industries because regulation blunts incentives to minimize costs and shelters inefficient insurers from competition. Thus deregulation of insurance prices can be expected to improve cost efficiency. Regulation sometimes may be appropriate to help ameliorate informational asymmetries between policyholders and insurers that can lead to cost inefficiencies. Regulators can do this by making prices and complaint statistics available to consumers over the Internet as is now done by states such as California and New York.

8. See Harrington (1992).

under these conditions for fear that they will be unable to raise premiums promptly and sufficiently if cost inflation accelerates.⁹

Cross-subsidization and rate suppression create additional economic inefficiencies. As Tennyson, Weiss, and Regan point out in chapter 2, subsidized rates reduce incentives for high-cost drivers to drive carefully, resulting in an increase in accident rates and insurance loss costs.¹⁰ Harrington shows that regulation also results in reduced coverage availability in the voluntary insurance market, generally increasing the size of the residual market in regulated states. In addition, regulation leads to more premium volatility because price changes are less frequent and larger in regulated states than in competitive states (see chapters 2 and 6).

Thus, in the long run, rate regulation does not significantly reduce prices for consumers. However, it generally reduces availability of coverage, increases price volatility, and reduces the quality and variety of services available to consumers. The system also subsidizes high-cost drivers, sending adverse incentive signals and increasing accident costs. Regulation also increases cash flow volatility for insurers, raising the cost of capital. In essence, regulation creates material economic inefficiencies in order to provide cross-subsidies to the drivers who impose the highest costs on state automobile insurance systems.

Richard Butler's analysis of commercial lines policy forms regulation (chapter 8) shows that median times to market for new policies are about twice as high in prior approval states than in states that do not require forms approval. He also argues that forms approval is not needed in commercial lines markets because information asymmetries between buyers and sellers are minimal. Removal of commercial lines forms regulation would reduce insurance prices and increase market efficiency. Finally, in chapter 9 Georges Dionne argues that deregulation would enable the United States to keep pace with other industrialized nations in terms of

9. Recent increases in auto insurance costs in New York have prompted demands for more stringent rate regulation. Commenting on the crisis, New York's acting insurance commissioner said that many companies made mistakes in the late 1990s, underpricing their policies to gain bigger shares of the market. He also said that his department "*would not grant rate increases to bail out businesses that made poor decisions.*" (emphasis added). James C. McKinley Jr., "Facing Big Rise in Car Insurance, Albany Scrambles for a Solution," *New York Times*, May 3, 2001, pp. A1 and B2.

10. However, Jaffee and Russell's analysis of California price regulation suggests that this adverse incentive effect can be at least partially offset by safe driver insurance plans and other effective experience-rating programs. Subsidization also may reduce the number of uninsured drivers in a state, but it is doubtful that interfering with the competitive pricing process is the best way to provide premium relief to high-cost drivers.

enhancing competition in insurance markets and providing U.S. consumers with the full benefits of international financial services competition. However, he also points out that the deregulation of insurance markets must take into account the different information problems in these markets, including adverse selection and moral hazard.

Insurance Price Regulation and Regulatory Theory

The rationale for industrial regulation has received considerable attention in the economics literature. As with other industries, the earliest arguments for insurance price regulation were based on the view that regulation is needed to correct market failures. This *public interest* or *normative economic theory* rationale for regulation of insurance prices focused on two primary market failures: first, the tendency of insurers to engage in price wars that lead to widespread insurance insolvencies, and second, collusion among insurers that results in excessive prices and profits.¹¹ Prevention of price wars is a rationale that dates from the nineteenth century, when there were sporadic incidences of irresponsible price-cutting, primarily by fire insurance companies, followed by insurer insolvencies. Based on several recent decades of experience in states with competitive rating laws, there is no evidence that automobile insurers in competitive markets engage in destructive price wars. Rather, there is considerable evidence that prices in competitive insurance markets reflect expected claim costs and fair profits for insurers.

At one time concern over collusion in the insurance industry was well founded. As Stephen D'Arcy points out in chapter 6, the primary incidence of collusion in U.S. property-liability insurance occurred during the 1930s, when insurers operated as a cartel. This led to the *Southeastern Underwriters* case in 1944, where the U.S. Supreme Court ruled that insurers were subject to federal antitrust laws.¹² In 1945 Congress passed

11. As Georges Dionne and Jaffee and Russell point out, regulation also is sometimes used to modify the premium structure to provide incentives for safe driving. Regulation is occasionally motivated by the objective of controlling fraud and other dissipative expenses. However, *price* regulation is not the best way to address the fraud problem. Instead, creation of an industry-wide fraud bureau, such as the Massachusetts Insurance Fraud Bureau (see subsequent discussion), or other types of law enforcement mechanisms would attack fraud directly and more efficiently.

12. From 1869 until the *Southeastern Underwriters* case, federal law did not apply to the insurance industry, based on the U.S. Supreme Court ruling in the case of *Paul vs. Virginia*. The Court overturned this ruling in its *Southeastern Underwriters* decision.

the McCarran-Ferguson Act, allowing states to continue regulating and taxing insurers provided that they effectively administered antitrust laws to prevent collusive behavior. After passage of McCarran-Ferguson, most states adopted prior approval rate regulatory laws, many of which remain in effect to this day.

The concern that insurers will collude to fix prices at unreasonable levels is no longer well founded. The cartels of the 1930s are long gone, and rating bureaus, which formerly filed for rate changes representing hundreds of insurers, no longer engage in that practice.¹³ Advances in computing and databases allow all but the smallest insurers to analyze data and conduct actuarial calculations with a speed and sophistication unheard of in the past, reducing the need to rely on rating bureaus with their potential for stifling competition.

Moreover, prior economic analyses, as well papers presented at the conference, support the conclusion that unregulated insurance markets are competitive and do not lead to excessive prices or profits.¹⁴ Thus the collusion-antitrust rationale for price regulation is no longer credible.

If a compelling public interest rationale for insurance price regulation does not exist, how can the persistence of this type of regulation be explained? Economic theory offers some assistance in understanding this phenomenon. The predominant positive (non-normative) explanation for the existence and form of regulation is the *interest group* or *Chicago theory* of regulation.¹⁵ Stated briefly, the interest group theory is based on the argument that regulation provides a mechanism through which organized interest groups can influence the distribution of economic rents in an industry. In this theory a utility-maximizing politician or regulator allocates “benefits across consumer and producer groups so that total political utility is maximized.”¹⁶ Whether regulation exists, the type of regulation adopted, and the distribution of rents at any given time are hypothesized

13. Rating bureaus now act primarily as statistical agents, pooling data so that insurers, especially smaller ones, can attain statistical credibility. The concept is that insurers use the pooled data to estimate expected loss costs and then add their own underwriting cost and profit charges. Controversy still arises over loss trending, that is, whether rating bureaus should be allowed to include estimates of future loss inflation in their statistical data or whether that step should be left to the individual insurers. An exception to the general rule about bureaus is the Automobile Insurer's Bureau of Massachusetts, which makes full price recommendations for all private passenger automobile insurers in the state, under the terms of its current laws and regulations.

14. See Joskow and McLaughlin (1991); Cummins and Weiss (1992); Harrington (2000).

15. See Stigler (1971); Peltzman (1976).

16. Peltzman (1989, p. 10).

to depend upon the relative costs and benefits of political influence activities among the existing interest groups. The groups receiving the largest economic rents are viewed as “winning” in the competition to influence the regulator. Two important predictions of the interest group theory seem particularly applicable to insurance price regulation: First, regulation will tend to create systematic cross-subsidization, creating price-to-marginal-cost ratios that differ across groups of consumers. Second, regulation will tend to offset to some degree the effects of competition on the division of rents between producers and consumers.

Several interest groups compete for economic rent distribution in the automobile insurance industry, including insurers (producers), classes of consumers with different underwriting characteristics, and insurance agents.¹⁷ Producers fall into two primary categories whose interests do not necessarily coincide:

- bureau insurers*, who traditionally set prices jointly through rating bureaus and tend to utilize the relatively high-cost independent agency system of product distribution, and
- independent insurers*, who set prices more or less independently and tend to utilize relatively low-cost product distribution channels such as direct marketing, employee sales agents, or exclusive agents.¹⁸

Interest group theory helps explain why prior approval price regulation was adopted in most states after the breakup of the cartel and the passage of the McCarren-Ferguson Act in 1945. At the time the industry was heavily influenced by insurers that were members of rating bureaus, many of whom had been involved in the cartel. The adoption of prior approval

17. See Cummins, Phillips, and Tennyson (2001). As explained in Richard Derrig’s commentary on chapter 2, the lawyers, chiropractors, and physicians who constitute the legal liability industry also are important interest groups that can affect the type of regulation that exists in a state, as well as the type of auto accident compensation system—tort versus no-fault. Because these groups benefit from payment of automobile liability claims, through contingent fees in the case of lawyers and fees for services in the case of doctors and chiropractors, they have a strong interest in maintaining the status quo. These groups also tend to favor cross-subsidization because it maximizes the number of drivers who purchase insurance by making liability insurance more affordable to high-cost drivers.

18. These categories oversimplify the structure of the market and are used here primarily for expositional convenience. The reader is cautioned that some companies do not naturally fit into either group and that there is considerable heterogeneity within the bureau and independent segments of the industry.

regulation can be viewed as favoring the interests of bureau insurers because they were allowed to file rates on behalf of all member companies, which at that time constituted the vast majority of the industry. The argument was that regulatory scrutiny of rate filings would prevent monopoly pricing. However, bureau rates tended to be set to facilitate survival of the least efficient bureau insurers, thus discouraging price competition. More efficient companies could compete by filing *deviations* from bureau rates or by paying dividends, but deviations could be costly for smaller firms and were discouraged by laws and regulations in some states. Thus for the most part price competition was very limited, and prices tended to be set above competitive levels.

The auto insurance market began to change dramatically in the 1950s when independent insurers such as State Farm and Allstate began more aggressive price competition.¹⁹ These companies typically had lower expense ratios and used more refined risk classification systems than the bureau firms, enabling them to “skim the cream” by capturing drivers with the most desirable underwriting characteristics, who were overpriced at bureau rates. The result was a gradual decline in the auto insurance market share of the bureau companies and an accompanying decline in the economic rents generated for these firms through regulation.

Interest group theory predicts that changing market conditions, resulting in a shift in the balance of political influence among competing groups and a reduction in the economic rents of the incumbent interest group(s), should lead to regulatory change. In fact, pressure for deregulation and adoption of competitive rating began in a significant number of states by the early 1970s, and the National Association of Insurance Commissioners (NAIC) published a landmark study advocating competitive rating in 1974.²⁰

Early movement toward price deregulation in automobile insurance also coincided with an upsurge in auto insurance loss costs in the late 1960s and early 1970s. The declining importance of bureau insurers, the market share gains of the generally more efficient independent insurers, and escalating inflation in loss costs and premiums shifted the balance of political influence in the insurance industry. The new power centers were the growing independent insurers and consumer interest groups. The for-

19. These firms also tended to utilize exclusive agents or company employees to distribute their products, giving them a lower cost structure than most bureau-affiliated firms, which tended to use independent agents for distribution.

20. NAIC (1974).

mer group favored deregulation because prior approval rate regulation impeded price competition and hence prevented efficient insurers from fully recognizing the benefits of their lower costs via price competition.²¹ The interests of this segment of the industry coincided with the economic theory ideal of permitting competition to drive prices to the lowest possible level consistent with existing technology.

Emergence of consumers as an important interest group is less easy to explain using the interest group theory of regulation, which posits that *well-organized* interest groups tend to be most influential because their costs of organizing and exercising influence are lower than those of less well organized entities. Instead, this phenomenon is probably better explained by the *political entrepreneurship theory* of regulation.²² According to this theory, regulatory change under some circumstances can be engineered by political entrepreneurs such as candidates for public office or consumer advocates. It is hypothesized that political entrepreneurs can tap into public dissatisfaction about market outcomes in specific industries and motivate consumers to express their policy preferences through the political process. For example, auto insurance prices have been a potent political issue in legislative and gubernatorial elections for decades in states such as New Jersey and Massachusetts. California's Proposition 103 referendum in 1988 can also be viewed as the outcome of opportunistic behavior by electoral candidates and consumer advocates, although the Proposition 103 battle had a grass-roots component as well. The objective of consumer interest groups generally has been to obtain lower prices, especially for high-cost drivers who are paying the highest premiums. Thus consumer movements have sought to reduce rates in general and to achieve cross-subsidies benefiting high-cost drivers.

In the early days of the deregulation movement in the 1970s, pro-competition insurers and consumer interest groups were sometimes on the same side of the deregulation issue. In these instances both groups argued for deregulation as a mechanism to limit the power of the bureau companies and bring rates down to competitive levels. However, during the past twenty-five years, these two groups usually have been at odds in their attempts to influence regulators, with the insurer group arguing for competitive rating and consumers arguing for regulation.

21. The bureau insurers continued to lose private passenger auto market share to the independent insurers during the 1970s and 1980s, with an attendant drop in their stake in the regulatory outcome. However, it was not until the mid-1980s that bureaus stopped filing rates on behalf of their members.

22. Joskow and Noll (1994).

Most of the chapters in this book show that in many states the consumer groups have been more influential than the pro-competition insurers (see especially chapters 2, 3, and 4). Thus one of the principal conclusions of this book is that the most common underlying reason for the current existence of property-liability insurance price regulation is consumer political pressure to reduce premiums and enforce cross-subsidies. Dwight Jaffee and Thomas Russell present an interesting example in California, where rising insurance premiums led to the passage of Proposition 103 in 1988, mandating a 20 percent rollback in insurance premiums and introducing prior approval rate regulation in a state where competitive pricing had been in effect for the previous 40 years (see chapter 5). Proposition 103 essentially pitted drivers in urban areas, where prices were highest, against drivers in suburban and rural areas, where prices were lower, and it passed by the narrowest of margins. Political pressures due to high premiums also have prompted stringent regulation in Massachusetts and New Jersey, again leading to cross-subsidies flowing from low-cost drivers to high-cost drivers.

Pressures for cross-subsidies and price control also tend to drive regulation in most other regulated states, although usually to a lesser degree than in California, Massachusetts, and New Jersey. The experiences described by Sharon Tennyson, Mary Weiss, and Lauren Regan (chapter 2), Jack Worral (chapter 3), and Martin Grace, Robert Klein, and Richard Philips (chapter 4) suggest that the intensity of regulation tends to be directly proportional to the magnitude of the premiums charged in a state and to the variability of premiums among geographical areas and classes of drivers.

Regulating insurance prices is not a rational response to rising insurance premiums. Insurance premiums in a competitive market are driven by expected loss costs. Loss costs are determined by accident rates, the costs of auto repairs and medical care, and legal liability rules, none of which are under the direct control of insurers. Interest rates, another factor exogenous to the insurance industry, are also important because premiums reflect the present discounted value of loss cash flows.

At the present time, pro-competition insurers continue to press for deregulation to allow price-setting according to economics rather than politics. Whether deregulation will succeed depends upon convincing consumer interests and the regulators and politicians who depend upon their support that deregulation will have a net benefit to consumers as well as insurers. The chapters in this book are intended to provide information that can advance the debate over automobile insurance price deregulation.

Distortions from Insurance Price Regulation

As the foregoing discussion suggests, one adverse effect of regulation is to weaken the link between expected loss costs and premiums, creating cross-subsidies among classes of drivers. The Automobile Insurers Bureau of Massachusetts estimates that drivers in some Massachusetts rating classes and geographical territories receive cross-subsidies as high as 60 percent of the premium they would have paid if prices were strictly based on expected loss costs (reported in chapter 2). Drivers in other rating class or territory combinations had their premiums increase up to 11 percent in order to subsidize higher-cost drivers. On average, non-Boston territories pay a subsidy of 2 percent of premiums to support a 20 percent average premium reduction for drivers in Boston, and experienced drivers pay an average subsidy of 1.6 percent to support a premium reduction of 9 percent for inexperienced drivers. Cross-subsidies in most price-regulated states are not as high as in Massachusetts, which has a long history of rate “tempering”; but subsidies tend to be the rule rather than the exception when prices are regulated. In addition to cross-subsidies among classes of drivers in the voluntary market, in most regulated states drivers in the voluntary market subsidize drivers in the residual market.

As the authors of chapter 2 point out, cross-subsidization of insurance rates has a number of adverse consequences. Drivers decide how much and how safely they drive based on the marginal costs and benefits of driving. If high-cost drivers do not pay the full marginal costs they impose on the system, they will have an incentive to drive more and take less care; and if low-cost drivers pay more than their marginal costs, they will drive less than under competitive rating.²³ The net effect is likely to be an increase in accident rates and insurance loss costs, adding to the inflationary pressures on insurance premiums. Thus ill-advised attempts to lower premiums for some drivers through cross-subsidies have the effect of adding fuel to the inflationary fire.

Papers presented at the conference also provide evidence that regulation leads to rate suppression, defined as the situation where total insurance premiums collected in a state are not adequate to pay losses and provide a fair profit to insurers. For example, strong evidence presented chapters 2

23. See also Harrington and Doeringhaus (1993). In their chapter on California rate regulation, Jaffee and Russell argue that the adoption of a more rigorous safe driver insurance plan under regulation tended to offset the adverse incentive effects of regulation on accident rates. Thus countervailing policy instruments may mitigate some of regulation's adverse effects.

through 4 suggests that rates were significantly suppressed in Massachusetts, New Jersey, and South Carolina. Tellingly, insurer losses due to rate suppression disappeared in South Carolina following deregulation.

The intensity of cross-subsidization and rate suppression varies by state and over time. From 1974 to 1998, on average across all jurisdictions, regulation had only a small, weakly significant downward effect on price (see chapter 7). This finding and evidence presented in chapters 2 and 4 suggest that periods of rate suppression in regulated states tend to be followed by periods when insurers are able to “catch up” to competitive rate levels, usually because inflation is low or costs are declining. This is partly because insurers are reluctant to reduce prices in regulated states, even when premiums are high relative to expected costs, out of concern that they will not be able to raise premiums again if cost inflation accelerates. There is evidence that premiums in California, for example, would have fallen significantly during the 1990s had California retained competitive rating rather than adopting prior approval.²⁴ As further demonstrated in chapter 7, such price stickiness in regulated states increases the volatility of average expenditures on automobile insurance, reducing the consumer welfare benefits of insurance coverage by partially offsetting the risk-reducing effects of insurance.

Insurers may or may not be able to recover the investment income deficiency caused by rate suppression during catch-up periods in regulated states, depending on the magnitude and timing of the rate suppression and catch-up period cash flows. However, this regulatory uncertainty increases the volatility of insurers’ premium cash flows, leading to higher costs of capital in the industry. Higher costs of capital eventually translate into higher premiums, other things being equal.²⁵ Thus prices in regulated states are likely to include a charge for regulatory risk that is not present in competitive markets.

It is also clear that regulation generally increases the proportion of drivers who cannot obtain coverage in the voluntary market and instead must insure their vehicles in what is called the *residual market*. Generally speaking, most states assign policyholders in the residual market to insurers based on their market shares in the primary market. In some instances rate

24. See the discussant comments by David Appel in this volume.

25. Cummins and Sommer (1996) show that higher risk may induce insurers to hold more capital, which in a regulated financial institution is costly due to agency and regulatory expenses, corporate income taxes, and other dissipative expenses. Such costs must ultimately be borne by policyholders in order to retain capital in the industry. Thus higher risk is likely to translate into higher insurance prices.

suppression and subsidization can become so severe that the voluntary market fails, resulting in more than half the drivers being insured in the residual market and the exit of numerous insurers from the state. For example, the proportion of drivers insured through the residual market in Massachusetts hovered between 40 and 50 percent for most of the 1980s and reached a high of 72 percent in 1989. Even in states where cross-subsidies and rate suppression are less severe, regulation has a statistically and economically significant impact on the size of the residual market (chapter 7). The effect, of course, depends upon the stringency of regulation and the level of loss costs and inflation in a state. Post-Proposition 103 regulation in California did not significantly increase the size of the assigned risk plan in that state (see chapter 5). However, it is likely that the effects of California regulation were blunted by declining insurance loss costs during the 1990s.

A mild degree of rate suppression for a limited period of time does not lead significant numbers of insurers to withdraw from a state. This is primarily because regulated states usually impose exit restrictions, which do not allow insurers to withdraw from the automobile insurance market unless they surrender their licenses to write all other types of property-liability insurance in the state. The loss of potentially profitable commercial lines and homeowners' business thus often discourages insurers from exiting the auto insurance market. However, insurers tend to reduce product quality and take other steps in response to rate suppression as a way to cut their losses in regulated states. For example, insurers may stop writing new business or tighten underwriting standards to narrow the range of acceptable applicants. In addition, they are likely to scale back or abandon investments in new products or other innovations that would otherwise benefit consumers.

If rate suppression is severe or lasts for a considerable period of time, however, insurers do begin to exit the auto insurance market. This reduces the number of insurers providing auto insurance in the state, limiting consumer choice. For example, from 1990 through 1996, an average of 59 insurers were operating in South Carolina's regulated automobile insurance market, compared to an average of 197 insurers writing automobile insurance in the other southeastern states. After South Carolina deregulated, the number of companies nearly doubled within a year.²⁶

26. Jaffee and Russell find that significant market exit did not occur in California after introduction of price regulation. Again, this is likely because rate suppression in California has been relatively mild and because regulation was implemented during a period when loss costs were generally declining.

A common pattern of market exit is the withdrawal of national insurers from a state, so that a higher proportion of the market is serviced by single-state insurers. These are either independent firms or single-state subsidiaries of national firms, formed to limit the exposure of the parent firm to automobile insurance losses in the regulated market. In Massachusetts, for example, the top ten auto insurers in 1982 were all national writers, while only three of the top ten were national writers in 1998 (see chapter 2). A similar pattern occurred in New Jersey (chapter 3).

To the extent that exiting insurers also withdraw from other lines of insurance, rate suppression in the automobile insurance market can adversely affect markets for other types of property-liability insurance. To the extent that economies of scale exist in the industry, the replacement of larger, national firms with smaller regional and single-state firms drives up the average costs of providing insurance. Financial quality also is reduced because smaller insurers tend to have higher insolvency probabilities than larger firms.²⁷

Thus, on average, price regulation does not significantly reduce the long-term cost of automobile insurance to consumers. However, it does reduce the availability of coverage and increase price volatility. The system subsidizes high-cost drivers, reducing incentives for careful driving and increasing accident costs. Regulation also raises the cost of capital in the industry by increasing cash flow volatility. Finally, regulation can cause insurers to exit a state's insurance market, reducing consumer welfare by limiting choice and increasing insurer default probabilities. In essence, regulation generally creates material economic inefficiencies, such as consumer welfare losses due to limited choice, insurance availability problems, reduced product quality, and higher expected insolvency rates, in order to provide cross-subsidies to the drivers who impose the highest costs on the state automobile insurance systems.

Implications of Deregulation for Efficiency and Productivity

By limiting price competition, regulation protects inefficient operators and blunts incentives for insurers to minimize costs. The level of cost efficiency in the U.S. property-liability insurance industry is about 68 percent, implying that on average firms in the industry could reduce their

27. Cummins, Grace, and Phillips (1999).

operating expenses by about 32 percent by becoming fully efficient.²⁸ The deregulation of insurance prices would result in a shift of business to efficient insurers and provide a strong incentive for inefficient firms to improve operating efficiency or exit the industry. Closing the efficiency gap would reduce industry operating costs and lead to lower prices for insurance consumers. Inefficiency in the industry is a pure deadweight cost that could be reduced by removing restrictions on price competition.

Moreover, studies of other industries have shown that deregulation often results in unexpected dynamic productivity benefits.²⁹ Regulation reduces incentives for firms to improve productivity and innovate in services and service technologies. For example, the development of hub-and-spoke systems in the airline industry is credited with significant reductions in industry operating costs, which have been largely passed on to consumers through lower prices.³⁰ This development was unforeseen at the time airline fares were deregulated. In the banking industry, deregulation is at least partially responsible for the adoption of technologies that reduce both bank and customer transaction costs as well as for the introduction of a wider range of financial services and products. Deregulation could have similar effects on the insurance industry via innovations in marketing, underwriting, policyholder services, and claims settlement that could reduce prices and increase product quality.

Commercial Lines Policy Form Regulation

In the (non-workers'-compensation) commercial lines of property-liability insurance, prices are de facto unregulated. Business firms and insurers are free to negotiate prices without significant regulatory interference, either directly or through insurance brokers, who shop the market for their clients' coverage. The result is a highly competitive market that is often considered commoditized because most business customers buy insurance based primarily on price, conditional on the insurer's having an adequate financial rating (usually an A.M. Best's rating of A or above).

Even though prices are not regulated, thirty-six states still have prior approval regulation for contract forms. This means that insurers must

28. Cummins, Weiss, and Zi (1999).

29. Winston (1993).

30. Joskow and Noll (1994).

file new contract forms with state insurance commissioners and wait for approval before using them. The time to bring a new contract to market varies widely among the states and is significantly higher on average in prior approval states than in those that do not require form approval (see chapter 8). The time to market ranges from 22 days in Michigan, which does not require prior approval of commercial lines policy forms, to 223 days in Louisiana, which requires prior approval. The median time to market in regulated states is 72 days versus 43 days in unregulated states.

The primary normative economic rationale for policy form regulation is buyer protection. This rationale is most likely to be valid when there are significant informational asymmetries between buyers and sellers. When sellers are well informed about the meaning and importance of insurance policy provisions and buyers are less well informed or uninformed, there is potential for consumer abuse and fraud. In such markets policy form regulation is likely to increase demand for insurance coverage if it reduces the possibility of insurer fraud and provides a type of “warranty” of the contract language. In chapter 8 Richard Butler presents empirical evidence that when such information asymmetries exist, there is a net benefit to consumers when auto and homeowners policy forms are regulated.

Conversely, in markets where both buyers and sellers are knowledgeable about contract language, regulation tends to increase the price of insurance and reduce the demand for coverage. When a new and innovative policy is introduced, the “first-mover” is likely to earn higher than competitive profits. Prices and profits will be reduced as competitors enter the market with comparable policy forms, and eventually a competitive equilibrium is reached where prices cover expected costs and a fair profit for insurers. By slowing down the introduction of competitors’ policies, policy form regulation increases the amount of time between the introduction of a new policy and the entry of sufficient competitors into the market to drive prices to competitive levels. Thus in regulated states innovations will spread more slowly, and prices will tend to be higher than in states that do not regulate policy forms.

Considering the potential benefits of commercial lines form deregulation, it is curious that this type of regulation has survived over such a long period of time. Consistent with the interest group theory of regulation, the primary reason for the survival of form regulation seems to be the opposition of insurance agents to form liberalization. Thus form regulation serves a producer protection function for well-organized groups of agents who believe that freer competition in contractual language will weaken the link

between agents and insurance buyers and ultimately reduce their profits. Therefore deregulation of policy forms will have to overcome the opposition of this and possibly other interest groups.

Aside from the welfare losses to buyers that result from commercial lines form regulation, policy form regulation also is problematic because of the emergence and rapid growth of the alternative risk transfer (ART) market. The ART market provides business firms with alternatives to traditional commercial lines insurance. Among the important ART mechanisms are self-insurance, captive insurance subsidiaries, and securitized financial instruments issued directly in the capital markets. The insurance brokers, reinsurers, and investment banks that serve as the supply side of the ART market have a significant competitive advantage over traditional commercial lines insurance companies: their contractual agreements are not subject to state prior approval regulation. Consequently, the time to market for new contracts in the ART market is comparable to the 22 days required in unregulated Michigan rather than the median 72 days in prior approval states.

By deregulating policy form approval, states can provide a “level playing field” for commercial insurers as they compete with the ART suppliers. This is important for reasons that go beyond mere “fairness.” Specifically, if insurers and the ART suppliers are able to compete freely without regulatory restrictions, the insurance-ART market will provide the most efficient risk transfer at the minimum price to the business firms who are buying the protection. The reduced cost of risk transfer will at least partly be passed along to consumers in the prices of products they buy.

Thus, based on Butler’s theoretical and empirical results, deregulation of commercial contract forms would be beneficial. However, personal lines form regulation seems to perform a significant consumer protection function and hence appears to be justified. Even in the personal lines market, however, insurance prices will be lower and demand for insurance higher if the time lag between form filing and form approval can be reduced.

Insurance Regulation in Other Industrialized Nations

As Georges Dionne points out in chapter 9, there is a worldwide trend toward less restrictive regulation of the financial services sector. In the United States, the passage of the Gramm-Leach-Bliley Act in 1999 significantly reduced restrictions on the variety of products and services that can be offered by financial services firms—for example, it is now per-

missible for financial holding companies to own both banks and insurers as well as other types of financial services firms. The Third Generation Directives of the European Union (EU), introduced in 1994, were designed to eliminate most types of regulation (including price regulation) in insurance markets and removed most restrictions on European insurers operating across national boundaries. The EU's objective is the creation of a single European market for insurance and other financial services. Japan also has initiated regulatory reform that eventually is expected to include deregulation of insurance prices. If U.S. consumers are to receive the full benefits of increasing worldwide financial services competition, it is important for the United States to join the trend toward insurance price deregulation.

However, the deregulation of insurance markets must take into account the different information problems in these markets: adverse selection, ex ante moral hazard and its effect on accidents rates, and ex post moral hazard, which is often associated with insurance fraud. This is consistent with the experience described below regarding the deregulation of savings and loans and airlines. That is, other policy changes may be needed to counteract any emerging problems triggered by the increase in competition following deregulation.

Does Regulation Have a Role in Competitive Insurance Markets?

The theme of the conference and of most recent economic research on insurance has been that deregulation generally will enhance insurance market efficiency. This raises the question of whether regulation has any role in competitive insurance markets. The answer is a qualified "yes," but generally only in situations where serious market imperfections exist.

One example where regulation is appropriate was discussed earlier: approval of personal lines policy forms. Regulation can also play a positive role by helping to increase the availability of information on market prices and quality. For example, several states, including California and New York, provide access to insurance price and consumer complaint data on their websites. This is helpful because it reduces search costs for consumers and enables them to make better decisions when shopping for insurance. Regulation of prices in the residual market also would seem to make sense because this market is inherently noncompetitive. However, any such reg-

ulation should allow rates to reflect expected costs and fair profits to avoid distorting the voluntary market due to cross-subsidization. If the residual market begins to grow after adoption of residual market rates in a competitively rated state, it is strong evidence that residual market prices have been set too low.

Solvency regulation also appears to provide a net benefit to insurance buyers and is another instance of an appropriate informational and bonding role for regulators. By providing information on insurer financial quality, regulators allow buyers to choose an insurer with low insolvency risk. Furthermore, by effectively monitoring insurers that experience deteriorating financial conditions, the regulator can help minimize the number of policyholders having claims settled by guaranty funds rather than by solvent insurers.³¹ It has been argued that private monitoring firms can substitute for state regulators in the role of solvency monitors, but this would be more appropriate for business firms and those sophisticated consumers who know where to find and how to interpret private monitoring data. Moreover, such firms have no authority to intervene to minimize losses to policyholders and guaranty funds when an insurer's financial condition is deteriorating.

Government intervention also can play a role where programs that could reduce insurance costs do not arise naturally in competitive markets due to externalities and free-rider problems. One example is fraud prevention. One of the most important reasons for inflation in automobile insurance loss costs is consumer fraud, motivated by the availability of pain and suffering awards for bodily injuries. The quest for pain and suffering awards motivates claimants to fake bodily injuries or, more commonly, to "build up" a minor injury to appear more serious and thus qualify for a higher award.³²

Individual insurers that fight insurance fraud do not receive the full marginal benefits of their expenditures because some of these benefits accrue to competing insurers. Thus insurers with active fraud-prevention programs create externalities that help their competitors, who can free ride

31. The unpaid losses of insolvent insurers are borne by insurance guaranty funds, which operate at the state level and obtain funds by assessing solvent insurers. Settlement of claims through guaranty funds is less desirable to claimants because claim payments are often delayed and are subject to upper limits that can leave some losses uncompensated.

32. Weisberg and Derrig (1991); Cummins and Tennyson (1992); Cummins and Tennyson (1996).

on the benefits of fraud prevention.³³ Under these circumstances the amount of fraud prevention actually implemented will be less than if fraud-prevention expenditures were expanded until the marginal costs equaled the marginal benefits marketwide.

An innovative program that attempts to capture the externalities of fraud resistance is the Massachusetts Insurance Fraud Bureau (MIFB). The MIFB was created by an act of the Massachusetts legislature in 1990 and is funded by the insurance industry. The mission of the MIFB is to prevent and investigate fraudulent insurance activity. It maintains a staff of fraud investigators and attorneys to track down and prepare cases for the prosecution of individuals involved in insurance fraud. The bureau has achieved more than 350 convictions to date and has been credited with saving millions of dollars for insurance companies and their policyholders. The MIFB exemplifies the kind of innovative private sector–governmental partnership that has the potential to reduce insurance costs and premiums.³⁴

Georges Dionne points out another way that regulation may play a positive role in insurance markets, based on experience in the insurance markets of France and Quebec. Recent theoretical research suggests that multiperiod contracts need some form of *commitment* from the insurer to provide a way to deal with moral hazard and adverse selection. Yet results presented in his chapter show that this is not necessary for adverse selection in either France or Quebec because private insurers efficiently manage this information problem with risk classification. However, the literature suggests that matters are less simple with moral hazard. Preliminary results indicate that some form of commitment by the insurers (or the industry) on the bonus-malus scheme is effective against this information problem.³⁵ Usually such a commitment is elicited by regulating the bonus-malus scheme, and the argument doing so is similar to that offered for insurance fraud, which is another form of moral hazard.

33. Insurers that vigorously resist fraud generate publicity about fraud convictions and raise the awareness of judges and juries about the fraud problem, thus providing a deterrent effect that benefits both fraud-fighting insurers and their competitors. The marginal benefit to competitors is an externality that tends to result in suboptimal expenditures on fraud prevention.

34. Derrig and Krause (1994)

35. A bonus-malus plan is an experience rating formula that gives drivers rate credits and debits based on accident and conviction records. In most cases the driver's bonus-malus record is transferred to the new insurer if the driver switches companies.

Is There a Downside to Deregulation?

The experience with deregulation over the past thirty years in the United States has been generally beneficial.³⁶ However, there have been instances in other industries where deregulation has been followed by higher costs, reduced service quality, and other serious market problems. In most such cases, however, it was not deregulation per se but rather deregulation coupled with exogenous events and policy failures in other areas that were responsible for the problems. For example, although deregulation preceded the savings and loan (S&L) industry's widely publicized and very costly financial debacle during the 1980s, the S&L crisis was triggered by interest rate volatility and exacerbated by moral hazard stemming from the presence of federal deposit insurance. The resulting costs would have been much lower had prudent bank safety and soundness regulation been practiced rather than the regulatory forbearance that permitted financially vulnerable S&Ls to run up huge deficits before regulatory action was taken. Likewise, the congestion that often plagues the airline industry could have been avoided had policymakers appropriately increased airport and air traffic control capacity in response to the increased demand for air travel brought on by lower prices following deregulation.³⁷

The message from these seeming examples of deregulatory failure is not that deregulation should be avoided but rather that it sometimes needs to be accompanied by other policy adjustments that respond to the changing market conditions brought about by deregulation. It is also worth emphasizing that the United States has conducted a "controlled experiment" in insurance deregulation over the past thirty years, whereby competitive pricing was permitted in some states and regulated pricing required in others. The results of the experiment, as reported in this book, show that price competition is superior to regulation and that unexpected ancillary problems, such as those affecting the S&Ls and airlines, have not arisen in states with competitive insurance pricing.

36. Winston (1993); Joskow and Noll (1994).

37. The problems resulting from electric utility "deregulation" in California have no particular implications for insurance deregulation. The California deregulation imposed a regulatory structure that is not true deregulation and is much more complicated than the straightforward removal of prior approval rate and form regulation and exit restrictions that would constitute price deregulation in insurance. Additionally, unlike electric utility firms, insurers are not saddled with the massive sunk costs of existing generating plants and lengthy build times to add new capacity. Insurance is primarily a variable cost industry that can, in the absence of restrictive regulation, respond quickly and efficiently to supply, demand, and loss shocks.

Conclusions

The time has come to deregulate prices in the personal lines of property-liability insurance. In the long run, price regulation does not result in lower prices for consumers, but it can create serious economic inefficiencies that destabilize insurance markets and ultimately increase the price of insurance. By deregulating insurance prices, the United States can keep pace with other industrialized nations and provide its consumers with the full benefits of international financial services competition. Deregulation of commercial lines policy forms also would correct a market inefficiency and lead to lower prices and enhanced welfare in the commercial lines market.

Although the chapters in this book provide extensive information on the effects of insurance price regulation, the policy debate would also benefit from a more explicit cost-benefit analysis of insurance regulation.³⁸ Such an analysis would provide econometric and other evidence to guide policymakers in reengineering their approach to insurance markets as well as baseline predictions that could be used to gauge the realized effects of deregulatory programs subsequently introduced.

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38. This analysis would be similar to the research discussed in Hahn and Hird (1991).

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