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MODEL-BASED PRICING IN HURRICANE INSURANCE: A CASE STUDY FOR JUDICIAL REFORM OF THE MCCARRAN-FERGUSON ACT

Benjamin Holland Able*

The McCarran-Ferguson Act (MFA) exempts various aspects of state insurance operations from federal antitrust enforcement. This exemption is a source of long-standing controversy, due in part to its potentially harmful effect on consumers in product pricing. In hurricane insurance, there is a burgeoning debate concerning insurers' use of predictive computer models rather than shared loss data to set premiums for the industry. By using these models in hurricane-prone states, insurers have increased the price of hurricane insurance dramatically.

Where these new prediction methods are used, MFA exemption may facilitate supracompetitive pricing in ways its architects could not have foreseen. This Note analyzes MFA's economic effects on model-based pricing in hurricane insurance to argue for judicial revision of the Act. Through an effects test, it proposes conditioning eligibility for antitrust exemption on the economic benefits of a challenged activity exceeding its costs.

INTRODUCTION

The McCarran-Ferguson Act's1 (MFA) exemption of various aspects of state insurance operations from antitrust enforcement is a source of long-standing controversy. This is due in part to the Act's potentially harmful effect on consumers in key areas such as product pricing.2 Since the 1980s, there have been perennial legislative efforts to repeal the Act or narrow its reach—all without success.3 While scholars debate whether MFA should be revised or repealed

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3. See infra notes 175–76 and accompanying text.
altogether to more closely align with modern legal and market conditions,4 nearly all favor reform in some manner.5 Scholars note that industry-specific exemption from antitrust law is generally disfavored and requires a compelling justification likely no longer present in insurance.6

MFA exemption has expanded as insurance markets and antitrust doctrine have evolved. Insurance, once a fledgling state-based industry highly susceptible to panic and insolvency, has become a stable and competitive international enterprise.7 Antitrust laws, once interpreted through rigid categories and bright lines, now involve flexible and sophisticated analyses of economic costs and benefits.8 Because new technologies and practices rapidly emerge in the market and courts can more precisely determine their competitive costs, activities that would otherwise constitute antitrust violations are increasingly immunized under MFA’s ambit.

In hurricane insurance, there is an exceptionally high level of uncertainty in pricing risk due to the extreme volatility and damage associated with the erratic behavior of modern hurricanes.9 A burgeoning debate concerns insurers’ use of complex prospective computer models, rather than shared loss data, to set premiums for the industry.10 The methodologies of these models are divorced from loss experience-based premium calculations and have increased prices dramatically in hurricane-prone states. Where these new prediction methods are used, MFA exemption may facilitate

5. Contra Achampong, supra note 2, at 169 (arguing existing doctrine should be preserved).
supracompetitive pricing in ways its architects could not have foreseen. As such, hurricane insurance offers fertile ground for discussions about how the MFA can be revised to improve economic outcomes for consumers and society.

This Note argues for judicial revision of the MFA through a case study of the Act's economic effects on model-based pricing in the hurricane insurance market. Part I provides an overview of current regulation of rate-setting activities by insurers. Part II conducts a cost-benefit analysis of MFA exemption on model-based pricing in the hurricane insurance market. Weighing these considerations, Part III proposes incorporating an effects test into judicial interpretation of MFA that would condition eligibility for exemption on economic benefits exceeding costs. Part IV discusses repercussions and criticisms of this proposal and alternatives.

I. EXISTING REGULATION OF INSURER PRICE-SETTING ACTIVITY

This Part discusses the existing regulation of price setting by insurers. Because MFA protects insurer price setting from antitrust enforcement, analysis will focus on the Act itself rather than the antitrust laws whose applicability it bars. This Part also analyzes existing price regulation by state insurance departments and hurricane-specific regulatory developments.

A. Antitrust Exemption: History and Legislative Development

This Section discusses MFA's legislative history, text, and the judicial interpretation of its provisions as applied to price setting. In 1869, the Supreme Court held that insurance transactions were not interstate commerce.11 The power to regulate and tax insurers was thus left exclusively to the states. In 1944, however, the Court reversed its position and, in United States v. South-Eastern Underwriters Association,12 held that Congress did have the authority to regulate insurance.13 This holding sent shockwaves through the industry and

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13. Id. at 553.
alarmed legislators and regulators.\textsuperscript{14} Congress was particularly concerned that existing state taxes and regulations might be unconstitutional or, worse, vulnerable to federal takeover.\textsuperscript{15}

Congressional fears about the impact of the decision were combined with concerns of destructive price competition in insurance. Those concerns dated back to the crisis in the fire insurance industry during the late nineteenth century, when large fires and rate wars among rival insurers led to "crippling losses" and widespread insolvency.\textsuperscript{16} The ultimate architects and proponents of MFA viewed joint rate making as an antidote to destructive price competition.\textsuperscript{17} Antitrust enforcement to promote price competition was, by contrast, viewed as exacerbating the problem.\textsuperscript{18}

Congress’s first response to \textit{South-Eastern Underwriters} was conceived within three weeks of the opinion: that proposal created an unqualified antitrust exemption for the "business of insurance," but failed to generate sufficient support.\textsuperscript{19} The National Association of Insurance Commissioners (NAIC) next put forth a proposal that focused less on antitrust exemption than on cementing state regulatory authority over insurance.\textsuperscript{20} The NAIC proposal, which limited exemption to a list of enumerated activities, was "seen as ‘an entirely new bill’"\textsuperscript{21} and represented "compromise among all interested parties."\textsuperscript{22}

On December 19, 1944, Senators McCarran and Ferguson introduced an amended version of the NAIC bill providing that federal antitrust laws would preempt state insurance laws in cases of conflict.\textsuperscript{23} The House rejected this amendment, asserting that state laws should prevail.\textsuperscript{24} Conferees added a proviso, section 2(b), reflecting a compromise between the two versions.\textsuperscript{25} The amended bill was
passed by the Senate and House on March 9, 1945, and provides, in pertinent part:

Section 2(b). No Act of Congress shall be construed to invalidate, impair, or supersede any law enacted by any State for the purpose of regulating the business of insurance, or which imposes a fee or tax upon such business, unless such Act specifically relates to the business of insurance: Provided, That after June 30, 1948, the... [antitrust laws] shall be applicable to the business of insurance to the extent that such business is not regulated by State law.\textsuperscript{26}

Through section 2(b)'s proviso, MFA creates a partial exemption from federal antitrust laws for insurers if their activity falls within the scope of the "business of insurance" and only "to the extent" that the activity "is not regulated by State law."\textsuperscript{27} The Act provides that state insurance regulations preempt non-insurance federal laws that would "invalidate, impair, or supersede" them.\textsuperscript{28} Whether the "supersede" clause qualifies or operates independently of the proviso exempting insurance activity from antitrust enforcement, however, is textually ambiguous given the proviso's placement after the clause.\textsuperscript{29}

In 1979, the Supreme Court held in \textit{Group Life & Health Insurance Co. v. Royal Drug Co.} that "the fixing of rates is the 'business of insurance.'"\textsuperscript{30} Federal Courts of Appeals and District Courts have adopted this bright-line rule.\textsuperscript{31} In its ruling, the Supreme Court emphasized Congress's intent, in enacting MFA, to preserve joint price

\textsuperscript{27} Id.
\textsuperscript{28} Id.
\textsuperscript{29} Weller, \textit{supra} note 15, at 604-05 (arguing that the "supersede" clause is not an exceptions clause under traditional canons of interpretation).
\textsuperscript{30} 440 U.S. 205, 224 n.32 (1979).
setting by competing insurers. This reflects the Court's and Congress's view that insurers sharing loss information was necessary to prevent widespread insolvency in the industry.

B. Judicial Interpretation of "To the extent . . . not regulated by State law"

There are two dominant views regarding the extent of regulation required to trigger antitrust exemption under MFA: the "general authorization" view, which defines "regulated by State law" as anything generally authorized by the state, and the "effective regulation" view, which requires active oversight of insurance operations by the state, rather than simply its statutory possibility. The latter is articulated in Judge Godbold's dissent in Crawford v. American Title Insurance Co., where he argued that antitrust laws should be enforceable absent state enactment of "adequate" regulation. The Act's legislative history supports requiring such a minimal level of state regulation to justify antitrust exemption. Anthony Alt, citing this history, argues that "Congressional intent . . . was that federal antitrust laws would apply where states were not adequately regulating an activity."

In general, however, federal court decisions at all levels support the "general authorization" interpretation and find activities to be sufficiently "regulated" for the purposes of MFA through "superficial indicators of supervision" and without regard to the intensity or extent of state regulation. Minimal regulation, even on an issue

32. Royal Drug Co., 440 U.S. at 223 (citing 91 Cong. Rec. 1444, 1485 (1945) (remarks of Sen. O'Mahoney)) (noting Congress's "concern that cooperative ratemaking would be protected from the antitrust laws").


35. 518 F.2d 217 (1975).

36. Id. at 222 (Godbold, J., dissenting).

37. Senator Barkley inquires "whether, where States attempt to occupy the field—but do it inadequately— . . . it is the Senator's interpretation . . . [that] these acts still would apply?" McCarran responds, "That is my interpretation." 91 Cong. Rec. 1444 (1945) (remarks of Sen. Barkley).


unrelated to the suit, is sufficient to confer exemption.\textsuperscript{40} Although petitioners have repeatedly argued that "regulation" implies a minimal level of effectiveness or enforcement,\textsuperscript{41} the Supreme Court has rejected this argument. Instead, the Court has interpreted "regulated by State law" to require no more than the establishment of generalized codes of conduct. In \textit{Federal Trade Commission v. National Casualty Co.},\textsuperscript{42} the Court rejected FTC arguments that "a general prohibition . . . is too 'inchoate' to be 'regulation'" compared to regulations "crystallized into an 'administrative elaboration of . . . standards.'"\textsuperscript{43} The Court's ruling that "nothing in the language of that Act or its legislative history supports [that] distinction[ ]" still stands.\textsuperscript{44}

Subsequent case law has accordingly required very little of state regulation to preclude antitrust applicability under MFA. The District Court in \textit{California League of Independent Insurance Producers v. Aetna Casualty & Surety Co.},\textsuperscript{45} ruled that California's antitrust statute and insurance code were sufficient to confer exemption,\textsuperscript{46} claiming that "regulated" is satisfied "if a State has \textit{generally authorized or permitted} certain standards of conduct."\textsuperscript{47} The Sixth Circuit used the same standard\textsuperscript{48} in finding that an Ohio rate review statute conferred exemption despite its nonenforcement.\textsuperscript{49} The Eighth Circuit held that satisfaction of "regulated by State law" in section 2(b) "does not depend on the zeal and efficiency" of enforcement, but on whether the regulation is "capable of being enforced."\textsuperscript{50}

Existing precedent, however, does not foreclose an interpretation of "regulated by State law" under MFA that would require more active state oversight to find federal antitrust enforcement precluded. Scholars label \textit{National Casualty} an "offhanded treatment" of section 2(b),\textsuperscript{51} and some attribute the decision to misleading evidence presented by Federal Trade Commission attorneys litigating the case.\textsuperscript{52} William Rands, in contrast, believes

\begin{itemize}
\item \textsuperscript{40} Id.
\item \textsuperscript{41} Kintner et al., supra note 33, at 476.
\item \textsuperscript{42} 357 U.S. 560 (1958).
\item \textsuperscript{43} Id. at 563.
\item \textsuperscript{44} Id. But see Escrow Disbursement Ins. Agency, Inc. v. Am. Title & Ins. Co., Inc., 550 F. Supp. 1192, 1199 (S.D. Fla. 1982) ("[I]t is essential to conduct some sort of inquiry into the adequacy and effectiveness of state legislation asserted to preempt the antitrust laws.").
\item \textsuperscript{45} 175 F. Supp. 857 (N.D. Cal. 1959).
\item \textsuperscript{46} Id. at 860.
\item \textsuperscript{47} Id. (emphasis added).
\item \textsuperscript{48} Ohio AFL-CIO v. Ins. Rating Bd., 451 F.2d 1178, 1181 (6th Cir. 1971).
\item \textsuperscript{49} Id. at 1184.
\item \textsuperscript{50} Lawyers Title Co. v. St. Paul Title Ins. Co., 526 F.2d 795, 797 (8th Cir. 1975).
\item \textsuperscript{51} See, e.g., Hamric, supra note 16, at 1284.
\item \textsuperscript{52} See Hiebert, supra note 34, at 241-42.
\end{itemize}
objections to National Casualty are the product of policy disagreements rather than strict constructionist interpretations of the Act.\footnote{53} In any event, according to Professor Keeton, while current decisions do not do so, "[c]ertainly it is open to the Supreme Court to . . . consider" the "practical effectiveness" of state regulations in determining whether they are sufficient to confer exemption under the MFA.\footnote{54}

\section{C. Insurance Regulation}

This section provides an overview of state regulation of insurance. It begins with a history of the development of rating bureaus and rate regulation. It then discusses current models of rate regulation and the special challenges that hurricane insurance raises.

\subsection{1. History of Rate Regulation}

Self-regulation of rates by insurers began in response to the "rate wars" of the nineteenth century and the resulting insolvencies.\footnote{55} In 1806, insurers began to informally agree on rates and, in 1819, coalesced into local boards that fixed prices.\footnote{56} States responded by enacting "anti-compact" laws that prohibited joint price setting.\footnote{57} Boards evaded these laws by promulgating "advisory rates" that insurers could voluntarily adopt,\footnote{58} prompting states to exert greater control over price setting.

In 1909, Kansas became the first state to adopt a rate regulation statute, which set a model for subsequent statutes.\footnote{59} Kansas's statute authorized the state's insurance commissioner to review rates and ensure that they were not "excessive, inadequate, or unfairly discriminatory."\footnote{60} In the following decades, all but three states adopted rate regulation in some form.\footnote{61} After Congress enacted MFA, state insurance commissioners lobbied state legislatures for

\begin{itemize}
  \item \footnote{53}{See William J. Rands, Comment, State Regulation Under the McCarran Act, 47 Tul. L. Rev. 1069, 1073 (1973).}
  \item \footnote{54}{See Weller, supra note 15, at 606 n.96 (citing ROBERT E. KEETON, INSURANCE LAW 541 (1971) (footnote omitted)).}
  \item \footnote{55}{Spencer L. Kimball & Ronald N. Boyce, The Adequacy of State Insurance Rate Regulation: The McCarran-Ferguson Act in Historical Perspective, 56 Mich. L. Rev. 545, 551 (1958).}
  \item \footnote{56}{Id.}
  \item \footnote{57}{Id. at 549.}
  \item \footnote{58}{Id.}
  \item \footnote{59}{Id. at 551, 557.}
  \item \footnote{60}{Id. at 556.}
  \item \footnote{61}{Id. at 551.}
\end{itemize}
“All-Industry” bills which uniformly regulated rate setting for all types of insurance; such bills were adopted in virtually every state with little variation. These regulations mandate that rates be “ascertained on the basis of statistical experience” and filed with the state insurance department. Under the model statutes, the insurance commissioner retains the power to disapprove rates found to be “excessive, inadequate, or unfairly discriminatory.”

2. Current Models of Rate Regulation and Their Effects in the Market

The expansion of the insurance market to cover more risks, rely on a wider array of financing tools, and coordinate and extend beyond state boundaries has complicated rate regulation considerably since the enactment of the 1909 statute. Professor Klein attributes the development of modern insurance rate regulation to: (1) the “dramatic growth and increasing diversity of insurance products and the types of risks that insurers have assumed,” (2) the “increased competition among insurers and alternative risk-financing mechanisms,” (3) the demand pressures of the 1980s that resulted in “a significant increase in insurer failures and guaranty funds costs,” and (4) “the geographic extension of insurance markets nationally and internationally, which has increased the interdependence among regulatory jurisdictions.” These rapid market developments have exerted considerable pressure on state insurance regulators attempting to keep pace with increasingly sophisticated and opaque pricing practices.

Current state regulation of insurance prices generally requires that rates be “reasonable” and not “excessive” or “unfair” according to prevailing actuarial standards. This affords state insurance commissioners inherent discretion in approving or disapproving rates. Actuarial-licensing and state rate-filing requirements necessitate that insurance prices submitted to commissioners be justified based

62. Id. at 555.
63. Id. at 556.
64. Id.
65. Klein, supra note 7, at 173.
on cost estimates of future losses, or "loss costs." Some states offer a judicial avenue for insurers and private citizens to challenge the rates approved by insurance departments through a public hearing before an administrative law judge.

The majority of modern rate regulation comes in the form of "prior approval" or "file and use" regulations. "Prior approval" regulations require insurers to submit rate proposals to the department of insurance, which must approve them before the rates can be adopted. "File and use" regulations, by contrast, allow rate increases to become effective immediately upon filing with the state, though they may be later disapproved.

The regulatory process of setting "adequate" floors and "excessive" ceilings for rates, common to both "prior approval" and "file and use" jurisdictions, has its disadvantages. Commissioners must assess market conditions and determine appropriate rate maxima and minima with imperfect or nonexistent information. Identifying errors or mistakes is difficult because data on claims affecting the premium are unavailable until the subsequent year. Additionally, insurance departments are often inadequately staffed to perform their regulatory functions and face significant resource demands, limited economies of scale, high costs for information and databases, as well as administrative duplication.

"Adequate" and "excessive" standards also distort efficiency-maximizing decisions that would otherwise be made by insurers and consumers. For instance, rate ceilings suppress average premiums


69. See ABRAHAM, supra note 66, at 137. If the department fails to disapprove a rate within the statutory period (usually ninety days or less), the filed rate becomes effective. This system is disfavored by economists because of the uncertainty and lag time imposed on insurers. See Tennyson, supra note 66, at 13 & n.12.

70. Id.

71. See Klein, supra note 7, at 182.

72. See ABRAHAM, supra note 66, at 137.

73. See Klein, supra note 7, at 183.

74. See id. at 182–83.

75. There is inherent discretion in a state insurance department's decision to approve or disapprove rates. See ABRAHAM, supra note 66, at 142–43.

76. See Tennyson, supra note 66, at 12–20.
below competitive levels,77 "potentially threaten[ing] insurers' solvency if exit is restricted."78 Low insurance prices may also create incentives for consumers to engage in high-risk behaviors through moral hazard (such as locating property in hurricane-prone areas) or not take reasonable precautions (such as failing to retrofit homes).79 This can ultimately "produce upward pressure on . . . losses" and "lead to higher insurance premiums."80

A benefit of state rate regulation is that it internalizes a substantial transaction cost—measuring the risk of insolvency—that consumers would otherwise bear.81 Experts note that "it is both costly and arduous to 'assess an insurer's financial strength in relation to its prices and quality of service.'"82 Assessment requires intricate mathematical calculations based on "complex and privileged information."83 Without a regulatory agency to determine whether an insurer's price is sufficient to cover insolvency risk, consumers would be poorly situated to make this assessment on their own.

3. Hurricane Insurance Regulation

The limitations of traditional methods of pricing hurricane risks have created opportunities for new pricing behaviors that may harm consumers. Rating bureaus and actuarial methods underestimate risk because sample size is too small and available data do not correlate with the size of future hurricanes or resulting damage.84 Accordingly, the industry has shifted from past claims analysis to prospective computer models to set prices.85 Loss costs generated

77. Id. at 12.
78. Klein, supra note 7, at 197.
80. Id. at 15.
82. Id. at 115 (internal citation omitted).
83. Id.
85. See Tran, supra note 84, at 90–91.
Models consist of computer codes and programs that simulate future natural disasters. For given input parameters, a model produces the most likely pattern of natural disasters and calculates the resulting damage to property in a given area. For an insurer, the final amount a model generates reflects the total loss costs for the insured property. The models, however, are proprietary, exclusively owned by the modelers that produce them for insurers: how exactly a specific model works, therefore, is not public information.

In hurricane insurance, models present "difficulty [for regulators] assessing the validity of the new catastrophe rate analyses and the assumptions that drive their results." Accepting the higher rates produced by computer models remains controversial and politically charged. In a 2006 Massachusetts case, for instance, the state's Attorney General sued the state's Insurance Commissioner for approving a model-based rate increase.

Florida has led the way in regulating computer model pricing by establishing its own "public" hurricane model to which it can compare private model estimates and approve or disapprove rates accordingly. This template has informed regulation in other states that are confronting the challenge of pricing hurricane risks. For example, Louisiana's rate review procedure uses the results of Florida's model to determine whether model-based premium increases should be approved. After Florida's model was established, nine states enacted rate regulation specific to hurricane insurance. There is debate among states as to whether imposing "file and use"

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86. Kuzak & Larsen, supra note 66, at 100.
87. These refer to amounts added to the premium to cover the insurer's administrative expenses (expense loading) and to account for the risk of catastrophic loss (risk loading).
88. Mahdyiar & Porter, supra note 84, at 46.
90. Kuzak & Larsen, supra note 66, at 98.
91. Id. at 106-07.
92. Klein, supra note 7, at 197.
93. Id. at 197-98.
94. See Tran, supra note 84, at 91-100. In Florida, the insurance commissioner challenged a model estimate approved by the State's "public model." Klein, supra note 7, at 198.
96. Id.
97. Id. The commissioner for Louisiana determined, however, that long-term average ocean temperature data should not be incorporated into rate increase decisions. Id.
98. Klein, supra note 7, at 197-98.
or "prior approval" regulations is preferable in the absence of a Florida-style model.99 In any case, existing regulations create a great deal of uncertainty, lack of uniformity, and inefficiency in the process of evaluating and approving insurers' rates.

II. Effects of MFA Exemption for Model-Based Pricing in the Market for Hurricane Insurance

In hurricane insurance, widespread adoption of the latest computer modeling technology in predicting future losses has allowed insurers to increase prices for consumers.100 Because MFA exempts all price-setting activities from federal antitrust enforcement,101 there is no mechanism to protect consumers from the negative consequences (higher prices and under-insurance, for example) if a pricing practice restricts competition in the market. Were antitrust enforcement permitted, regulators and courts would analyze whether the negative effects of model-based pricing outweigh the positive effects. If costs exceeded benefits, the activity could be prohibited in its current form under antitrust law and the industry would adopt a new model. This Part analyzes the competitive costs and benefits of model-based pricing to, in turn, determine the costs and benefits of MFA's antitrust exemption in the hurricane insurance market.

A. Hurricane Andrew and the Development of Model-Based Pricing

The unprecedented amount of insured loss resulting from Hurricane Andrew represented a departure from the predictability of previous disasters. In 1992, there were roughly $15.5 billion in insured losses in Florida due to Hurricane Andrew alone.102 The storm caused forty deaths, left more than 250,000 people homeless, destroyed or damaged 82,000 businesses, and led to the exodus of more than 100,000 people from Dade County, Florida.103 The premiums charged by insurers, determined using bureau calculations,
toted $80 million.\textsuperscript{104} At this rate, insurers would have needed well over one hundred years of premium payments to compensate for losses due to Hurricane Andrew alone.\textsuperscript{105} As a result, twelve hurricane insurers in Florida became insolvent, leaving consumers without coverage.\textsuperscript{106} Experts note that the bureau’s “rate setting process grossly understated the actual risk, shocking the insurance and reinsurance industry with losses far greater than they ever imagined.”\textsuperscript{107} The loss costs to insurers were ultimately transferred to consumers and the state in the form of unpaid claims and reliance on guaranty funds.\textsuperscript{108}

In response to Hurricane Andrew, modelers in the 1990s began to construct the first computer models to price insurance based on theoretical, long-term average weather conditions.\textsuperscript{109} Improvements with this prediction technology enabled the top ten hurricane insurers to earn $59.9 billion in profits in 2006\textsuperscript{110} despite liability for $45 billion in claims from Hurricane Katrina.\textsuperscript{111}

Shortly after Hurricane Katrina, a major modeler released a new generation of forward-looking models that was physically-based.\textsuperscript{112} Compared to pre-Katrina models, physically-based models purport to more accurately predict future losses because output is not based on weather patterns or historical data. Instead, physically-based models consider the physics behind hurricanes, the inherent uncertainty of hurricanes themselves, theoretical outcomes from probability distributions,\textsuperscript{113} and exogenous changes (for example, climate change, El Niño cycles) that influence how hurricanes grow, develop, and inflict damage.\textsuperscript{114} Implementing physically-based models has resulted in a 40 percent increase in premiums

\begin{thebibliography}{99}
\bibitem{105} Id. at 79-80.
\bibitem{106} Kleindorfer & Klein, \textit{supra} note 84, at 13.
\bibitem{107} Grossi & Windeler, \textit{supra} note 104, at 80.
\bibitem{108} See Grossi & Kunreuther, \textit{supra} note 9, at 9, 18.
\bibitem{109} See Tran, \textit{supra} note 84, at 85–87.
\bibitem{110} Hunter, \textit{supra} note 100, at 19 (Addendum B: Profits, Losses, Surplus for Top 10 Property/Casualty Insurers).
\bibitem{111} Tran, \textit{supra} note 84, at 88.
\bibitem{112} This model was released in June 2006 by Risk Management Solutions. For a general description of physically based models, see Clark, \textit{supra} note 10, at 189.
\bibitem{113} Mahdyiar & Porter, \textit{supra} note 84, at 47.
\bibitem{114} For a description of the uncertainties and risks associated with models, see generally Tran, \textit{supra} note 84, at 90 ("The model takes into account . . . [how] climate change [has] markedly heated oceanic temperatures . . . ."). \textit{See also} Grossi & Windeler, \textit{supra} note 104, at 70–74; Kleindorfer & Klein, \textit{supra} note 84, at 13.
\end{thebibliography}
across the Gulf Coast and Florida. Some Florida businesses received tenfold rate increases in 2006 following the introduction of the new models. A number of experts have suggested that insurers and rating bureaus are encouraging modelers to design models that increase cost estimates so as to boost industry profits irrespective of their accuracy.

B. Criticisms of Physically Based Modeling

Insurers cannot explicitly set prices based on collusive industry agreement without supporting cost evidence. To collude without violating rate-filing and actuarial-licensure requirements, insurers would need a third party to generate consistently high loss cost estimates that all insurers could use to set prices. In hurricane insurance, modelers are allowed to act as these third parties. Absent antitrust enforcement, a modeler has every incentive to generate the highest loss costs possible for its clients so long as it can muster sufficient scientific evidence to pacify regulators. Modelers' unexamined—and, in many instances, unregulated—models project loss cost estimates that insurers across the industry can use to set supracompetitive prices. This is possible because the model itself communicates its ability to produce a higher loss cost estimate than is otherwise available through the use of historic data. The model also guarantees that competing insurers may receive a comparable estimate by employing the same model.

There is considerable disagreement among actuaries regarding the accuracy of physically-based models. Karen Clark, who invented the first model, suggests that insurers are overly reliant on these models, noting that they instill a "false sense of security by all the scientific jargon," when "in reality . . . the science underlying

115. See Hunter, supra note 100, at 10; Tran, supra note 84, at 91.
116. Hunter, supra note 100, at 10.
117. This includes J. Robert Hunter and Karen M. Clark. See supra note 10.
118. See The McCarran-Ferguson Act: Implications of Repealing the Insurers' Antitrust Exemption: Hearings Before the Sen. Committee on the Judiciary, 109th Cong. 88 (2007) (statement of J. Robert Hunter, Director of Insurance, Consumer Federation of America) ("Insurers often try to position supposedly objective and independent third parties as public decision-makers when it is insurers themselves who want to increase rates . . . .").
119. Id.
120. For a discussion of the distinction between early probabilistic and current physically-based models, see generally Clark, supra note 10, at 189.
the models is highly uncertain."122 She recommends that insurers incorporate models as tools rather than determinative price-setters: "[Insurers] need to be skeptical of the numbers . . . . And they should not even use [them]" if costs increase by 100 percent or more, as with hurricane insurance.123 Critics also point to the way models use unverifiable scientific assumptions to calculate losses and resulting price increases disproportionate to any conceivable pattern of hurricane damage.124 Rather than stabilized pricing resulting from models' ability to more accurately account for ebbs and flows in hurricane activity, model-based pricing reflects constant increases unlikely to correspond to actual hurricane behavior.125

C. Cost-Benefit Analysis of Model-Based Pricing

This section analyzes the costs and benefits of model-based pricing in hurricane insurance to determine the respective costs and benefits of antitrust exemption for this activity.

1. Costs of Model-Based Pricing

In the hurricane insurance market, demand constraints require that prices reflect the insured's estimate of expected loss such that buying insurance will maximize total expected utility relative to other options (for example, mitigation, relocation, self-insurance).126 Supply constraints require that premiums be sufficiently high for investors to expect a favorable return on capital invested "given the risk characteristics of the insurer."127 Prices must be high enough, through risk loading,128 to account for the risk of a worst-

122. Id.
123. Id.
124. See Hunter, supra note 100, at 9–11.
126. Kuzak & Larsen, supra note 66, at 97.
127. Id.
128. See supra note 87.
case hurricane and maintain the insurer’s solvency and credit rating.129

In a competitive market, insurers never know if a competitor’s rates differ from their own because of that competitor’s inaccurate cost estimates or because of its desire to drive rivals out of business. This lack of information creates incentives for insurers to price as close as possible to the competitive equilibrium in order to avoid being out-priced by competitors, maximizing social efficiency. Models provide a reliable mechanism for projecting higher costs, which enable insurers to justify requests for higher rate increases. Insurers know that competitors using a given model will price similarly and that everyone’s profits will increase.

In a model-based exempted market, insurers will flock to models generating the highest loss costs. This market signal not only encourages inflated pricing by insurers using the model, but also eliminates insurers’ incentive to price more accurately. An insurer combining models with loss experience-based calculations (for example, trend or loss development) to reach more accurate prices would increase the chances of underpricing and forego the profits available with high-cost models.

If antitrust enforcement removed the informational shortcuts of models, namely the need to determine a competitive rate, insurers would develop their own technologies and methods with different treatment and management of risk. Rather than implicitly coordinating with competitor insurers to increase profits, insurers would have an incentive to find the most accurate cost projection to minimize the risk of being outpriced by competitors. This would yield a more accurate price level and improve efficiency in the market.

The social costs of collusive price setting are significant. Collusion moves the equilibrium leftward along the demand curve, reducing the total number of plans purchased and inflating prices. This results in under-insurance in the market. Under-insurance generates significant social costs because, as buyers are priced out of the competitive market, the risks that they would have efficiently managed, insured against, or both, go unmanaged and uninsured. The costs of unmanaged risk will ultimately be transferred to other entities in society in the form of higher taxes, higher insurance prices, or both.

If insurers implicitly agree to set a supracompetitive price, they price out potential clients who were willing to pay at or above the competitive equilibrium but below the realized price. A deadweight loss is thus created, reflecting the gains in trade that would have

129. Kuzak & Larsen, supra note 66, at 97.
been realized absent collusion. In addition, because a collusive market price shifts the market equilibrium price upward, a portion of consumer surplus is removed and consumers’ welfare is reduced while producer surplus increases. Collusion and its harmful effects are viable for insurers in the exempted market so long as some insurers do not “cheat” and lower their prices by using pre-Katrina models. However, in an exempted market, it is cheaper for insurers to take advantage of current models to set prices at a supracompetitive industry standard than to invest in more accurate cost projections. As such, the only technologies likely to be developed under exemption are profit-enhancing, not accuracy-improving, ones.

2. Evidence Needed to Determine if Collusion is Taking Place

There is no clear reference point to which models’ methods and loss costs can be compared because actual hurricanes and costs are in the future and are yet to be observed or measured. Because physically-based models are new and untested on a pattern of major post-Katrina hurricanes, there is little basis on which to prove price coordination in the market.130

Over the next decade, experts could look to a number of indicators to determine whether model-based pricing is used to price more accurately or instead simply to increase industry profits. This will help determine whether weaknesses of current policy are manifested in actual supracompetitive pricing or in opportunities to do so. Both, of course, carry social costs in differing amounts.131

If modelers and insurers are pursuing accuracy, loss cost estimates will fluctuate with the anticipated damage from hurricanes, increasing in certain periods to compensate for high-damage years and decreasing in others to account for reduced cost in low-damage years. This indicates pricing based on the risk of hurricane damage—a social benefit. If, on the other hand, modelers and insurers are pursuing higher profits via collusion, loss cost estimates will fluctuate with the number of insurers in the market, increasing in years when the total number of insurers decreases and decreasing

130. See Grossi et al., supra note 89, at 34–35.
131. For example, the social cost of actual collusion in the market would be higher than the potential for collusion, which would only include the risk premium of the market failure occurring.
in years when the total number of insurers increases.\textsuperscript{132} This indicates pricing based on ability to collude—a social cost.

Data on cost estimates, anticipated damage, and number of insurers in the market under pre- and post-Katrina models may be corroborated with evidence of increases in industry profits associated with post-Katrina modeling and pricing.\textsuperscript{133} Given that the justifications for models rest on generating rates closer to actual cost, there should not be continuous growth in insurers' profits as compared to the pre-Katrina model-based pricing system.

3. Benefits of Model-Based Pricing

A social benefit of the exempted market is that insurers are less likely to underprice. The costs of the pre-1992 system are well documented. The availability of insurance was significantly reduced for consumers in the wake of Hurricane Andrew as insurers reduced the amount of property they insured along coastal regions.\textsuperscript{134} Today, insurers are not underpricing to the same degree they were in the 1990s and have indeed increased prices with physically-based models.\textsuperscript{135} However, with insufficient data, it is difficult to evaluate the extent to which physically-based models improve accuracy.

The second benefit relates to mitigation and relocation. Higher insurance rates encourage consumers to consider alternatives to insurance, such as retrofitting their homes to mitigate the risk of hurricane damage. In hurricane-prone areas, consumers may have an incentive to relocate to areas less susceptible to hurricanes rather than purchase insurance. Relocation may not only maximize expected utility for the consumer but also social welfare, while low-cost hurricane insurance may encourage policy-holders to ignore or discount the riskiness of a location through moral hazard. Therefore, it may be more efficient for individuals to reside in less risky areas than to insure against hurricanes whose probability of occurrence and anticipated damage are difficult to estimate. This effect, however, depends on whether models' prices are in fact too "low"—a fact far from certain and perhaps dubious under physically-based models.

\textsuperscript{132} Because the transaction costs of collusion are greater as the number of firms increases, profits will be lower as the pool of insurers widens.
\textsuperscript{133} See, e.g., Hunter, supra note 100, at 18–20 (Addenda A & B: Profits, Losses, Surplus for All Property/Casualty Insurers and Top 10 Property/Casualty Insurers).
\textsuperscript{134} Grossi & Kunreuther, supra note 9, at 18.
\textsuperscript{135} See, e.g., Tran, supra note 84, at 92 (noting a 5.9 percent increase in 2006 for some territories in the case of Massachusetts).
4. Comparison of Costs and Benefits

There are distinct costs and benefits to maintaining MFA exemption in hurricane insurance. Although MFA allows for potential coordination among insurers in setting prices via modeler intermediaries, exemption may also generate social savings due to less underpricing, reduced insolvency risk, and improved incentives for consumers to relocate and mitigate risk. Under traditional antitrust analysis, behaviors that facilitate collusion among firms require a substantial efficiency-enhancing benefit to persist in the market.\(^{136}\) Models' inherent methodological uncertainties, ability to generate increasingly higher costs without evidence of correlation to anticipated damage, and proprietary and unregulated nature make them suitable candidates for antitrust scrutiny.

D. How Would Model-Based Pricing be Treated Under Antitrust Law Absent MFA?

For MFA reform to remedy the competitive costs of hurricane insurance pricing, there must be a viable antitrust case against model-based pricing if exemption is removed. Under § 1 of the Sherman Act, there are two avenues through which to challenge this pricing practice: as an implicit agreement among insurers to fix prices or as an anticompetitive information exchange under the rule of reason. Both vehicles could be used by the Department of Justice (DOJ) or Federal Trade Commission (FTC) to challenge model-based pricing.

The first approach is based on the theory that insurers are horizontally colluding to inflate premium prices by collectively using inflated cost calculations generated by modelers. The key element necessary to prove this claim under the Sherman Act is an agreement among insurers to fix prices.\(^{137}\) The Supreme Court has held that agreements can be either explicit or implicit—the latter of which can be inferred through circumstantial evidence of a firm’s business behavior.\(^{138}\) An implicit agreement, however, must amount to more than merely consciously parallel behavior and must contain factors “tending to exclude the possibility of independent

\(^{136}\) See, e.g., In re Ins. Brokerage Antitrust Litig., 618 F.3d 300, 345–48 (3d Cir. 2010).


action."¹³⁹ Such "plus factors" include: (1) interfirm communications, (2) actions against a firm's economic self-interest, (3) expert testimony that price in the relevant market is higher than it would be absent collusion, and (4) the presence of information exchange.¹⁴⁰

In hurricane insurance, there is consciously parallel behavior when all insurers flock to high-cost models to raise premiums. A number of "plus factors" could also likely be identified. Comparing pre- and post-Katrina premiums, profits, and losses could show higher prices in the relevant market and actions taken against insurers' self-interest. Given that insurers were earning substantial profits with the early models during Hurricane Katrina, collective adoption of a new model with higher cost projections seems unlikely absent an agreement to collude. This is because individual insurers could easily increase profits by charging pre-Katrina prices in the inflated market. Insurer-insurer communication about prices is also likely given the historical practice of sharing information through rating bureaus and the implicit information that model-based competitor prices reveal. Lastly, the exchange of cost information to modelers is itself a "facilitating practice that can help support an inference of a price-fixing agreement."¹⁴¹

The second approach is based on the theory that insurers are supplying a common agent—a single modeler or group of modelers—with collective information about costs in the industry that no individual insurer would possess. This exchange of information itself enables the modeler, who interprets and aggregates the data, to fix prices for the industry at a supracompetitive level and to generate cost estimates corresponding to those fixed prices.

The Supreme Court has held that information exchange can violate the Sherman Act despite the fact that "no specific agreement [explicit or implicit] to restrict trade or fix prices is proved."¹⁴² Such an exchange is nonetheless subjected to rule of reason analysis.¹⁴³ Under the rule of reason, judges balance pro- and

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¹⁴⁰ See Blomkest Fertilizer, Inc. v. Potash Corp. of Saskatchewan, Inc., 203 F.3d 1028, 1033 (8th Cir. 2000) (discussing interfirm communications, actions against economic self-interest, and expert testimony on resulting higher prices); Todd v. Exxon, 275 F.3d 191, 198 (2d Cir. 2001) (discussing information exchange).
¹⁴¹ Todd, 275 F.3d at 198.
¹⁴³ Todd, 275 F.3d at 198 ("There is a closely related but analytically distinct type of claim . . . where the violation lies in the information exchange itself . . . . This exchange of information . . . can be found unlawful under a rule of reason analysis.").
anticompetitive effects in the market to determine whether a violation occurred. The Second Circuit has identified a number of “plus factors” guiding this analysis that relate to the structure of the market and nature of the information exchanged. These include: (1) market concentration, (2) fungibility of the product, (3) inelasticity of demand, (4) the time frame of data, (5) the specificity of data, (6) public disclosure, and (7) the presence and frequency of meetings between firms.

In hurricane insurance, a number of these “plus factors” could likely be satisfied. For instance, the cost information given to modelers and the assumptions of the models themselves are not public information. Also, most of the information given to and used by modelers relates to future costs and not present or past costs, making it more susceptible to anticompetitive uses. Data given to modelers is specific enough to characterize the entire portfolio of property covered by each insurer. Experts have noted the increasing market concentration in hurricane insurance and the need to purchase insurance despite price increases, suggesting that demand is inelastic.

Under either theory of antitrust liability, both the economic effects of model-based pricing in the market and the incentives these models create for market participants are analyzed. Therefore, the effect of MFA depends ultimately on whether model-based pricing is, in itself, beneficial or harmful to the exempted market. If it is net anticompetitive, then exemption insulates an activity that is restricting competition and reducing economic welfare—a social cost. If the behavior is net procompetitive, then exemption protects a beneficial activity in the market and therefore improves efficiency—a social benefit. If antitrust enforcement were implemented and regulators determined case-by-case whether particular instances of model-based pricing were net anticompetitive, insurers would have an incentive to hedge against the risks of litigation and their pricing practices being held illegal. Consequently, they would conduct

144. Id. at 198, 208–14.
145. A highly concentrated market consists of fewer firms with larger shares of the market.
146. Fungible goods are homogenous and interchangeable.
147. Inelastic demand is not highly sensitive to price changes.
149. See Kuzak & Larsen, supra note 66, at 107.
150. See Grossi et al., supra note 89, at 26–27.
151. See id.
their own cost-benefit analysis based on existing enforcement and legal developments and adapt their use of models accordingly.

III. A PATH TO JUDICIAL REFORM: CREATING AN EFFECTS TEST FOR "REGULATED BY STATE LAW" WITHIN SECTION 2(B) OF MFA

There are multiple dimensions to ineffective rate regulation and an overbroad interpretation of "regulated by State law" within MFA. The path to determining their social costs (for example, under-insurance, higher premiums) is clear. The path to a remedy, however, is not.

The primary decisions regarding the best structure of reform include whether competition and regulation are substitutes or complements for one another and whether legislative or judicial reform is preferable. The exact nature of reform and how it relates to consumers, insurers, and regulators are also crucial to evaluating its behavioral effects and likelihood of success. Ultimately, a judicial effects test reform to MFA is the most appropriate remedy.

A. Theoretical Considerations

Scholars debate the competing virtues of competition and regulation models for setting rates in various markets. According to Professor Susan Beth Farmer, "[a]ntitrust and economic commentators have largely concluded that market competition tends to produce better economic and social outcomes than regulation by any level of government." Others argue that "[t]here is little reason to suppose that a state can do a better job than the market at setting rates," citing market distortions, shortages, and higher administrative costs that accompany state regulation. Supporting a

153. These costs have also been observed in the property-casualty insurance market. See Jay Angoff, Insurance Against Competition: How the McCarran-Ferguson Act Raises Prices and Profits in the Property-Casualty Insurance Industry, 5 Yale J. on Reg. 397, 402 (1988) (discussing price inflation due to collusion in medical malpractice and general liability insurance).

154. See, e.g., Howard A. Shelanski, The Case for Rebalancing Antitrust and Regulation, 109 Mich. L. Rev. 683, 729 (2011) ("As conditions in the market become more competitive, regulation may become inefficient . . . . Antitrust enforcement might offer a less costly way to meet those risks . . . .").

155. Farmer, supra note 8, at 925.

market mechanism for setting prices, scholars assert that “[t]here is no evidence . . . that if suitable antitrust protections were in place, the industry would not set rates at efficient levels.”

MFA drafters entrusted states with significant power to regulate insurance rates in hopes that this would displace the need for antitrust enforcement against rate setting altogether. The drafters seemed to view competition and regulation as mutually exclusive entities, with the former generating disastrous consequences for insurers, consumers, and society. The drafters’ decision to substitute regulation for competition and their vision of robust state oversight of rates are supported in the Act’s legislative history.

Though the decision to displace competition with regulation may be clear, the extent of regulation required to trigger antitrust exemption is not. In numerous instances, legislators debating MFA at the time of its passage delineated the extent to which insurance had to be “regulated by State law” in order to be exempt from antitrust enforcement. Subscribers of the “effective regulation” view interpret these legislative exchanges to mean that MFA requires that state regulation be sufficiently adequate to trigger antitrust exemption. Regardless of whether one accepts this interpretation, it is clear that the drafters did not intend insurance rate setting to exist in zones of “anti-competition” devoid of both meaningful regulation and competition.

157. Macey & Miller, supra note 156, at 85. To the contrary, the authors cite evidence from Illinois that auto and homeowners’ insurance rates decreased with the introduction of open market rate setting. Id.

158. See, e.g., 91 Cong. Rec. 1481 (1945) (remarks of Sen. Ferguson) (“We believe that . . . [state] legislatures . . . should exercise their judgment and regulate insurance . . . .”); id. (remarks of Sen. Murdock) (“Congress would still retain the power . . . by an act specifically relating to insurance, to invalidate an objectionable [state] regulation . . . .”).

159. See, e.g., id. (remarks of Sen. Ferguson) (“[W]e cannot have open competition in fixing rates on insurance. If we do, we shall have chaos. There will be failures, and failures always follow losses.”).

160. See supra notes 37–38; 91 Cong. Rec. 1482 (1945) (remarks of Sen. Murdock) (“[W]hy not be willing to have confidence that the States will do a good job when they step into [regulating insurance]?”). But see 91 Cong. Rec. 1444 (1945) (remarks of Sen. White) (“[Federal antitrust laws] shall be applicable to whatever extent the State law fails to occupy the ground and engage in regulation . . . .”).

161. See supra Part I.B.

162. 15 U.S.C. §§ 1011–1015 (2006); see also supra note 160; infra note 164.


164. See, e.g., 91 Cong. Rec. 1444 (1945) (remarks of Sen. White) (“If, however, the State goes only to the point indicated, then these Federal statutes apply throughout the whole field beyond the scope of the State’s activity.”) (emphasis added); id. (remarks of Sen. McCarran) (agreeing with Sen. White’s quoted remarks).
MFA drafters envisioned rate regulation in the context of loss experience-based pricing through rating bureaus. Under this vision, state-regulated bureaus and rate review laws would constrain insurers' ability to price supracompetitively and prevent "naked agreements fixing price or reducing coverage." This constraint, however, was removed with physically-based modeling, which divorces rates from loss experience and leaves insurance commissioners without a transparent methodology with which to assess the reasonableness of proposed rates.

Though MFA drafters viewed MFA and rate review laws as substitutes for each other, there is no reason they cannot function as complements. Most rate regulation merely sets price ceilings and floors, below and above which price competition exists among insurers. These ceilings and floors supplement antitrust enforcement and are consistent with preventing anticompetitive pricing and maximizing consumer welfare. Scholars have noted that the two do not have conflicting purposes and that they would enhance market efficiency operating in tandem. These scholars argue that rate regulation eliminates a substantial transaction cost to consumers and that both it and antitrust enforcement "bring different but complementary skill sets to the table." Antitrust law is process oriented. It focuses on preventing interferences with the competitive process. This, in turn, ensures that the most accurate price signals of the value of insurance are transmitted in the market. Though antitrust experts may not know the exact risks or extent of agreements to restrain trade, there is little dispute that these agreements preclude efficient market outcomes and are, as such, socially undesirable. Rate regulation, by contrast, is outcome oriented and focuses on the technical precision of rate

165. See supra note 17.
166. IA ARÉEZA & HÖVENKAMP, supra note 39, ¶ 219d, at 31.
167. See Mahdyiar & Porter, supra note 84, at 47, 66.
169. See Klein, supra note 7, at 179.
170. See Bush, supra note 168, at 806 ("If the regulation promotes competition, the regulation is likely compatible with the antitrust laws."); Leibowitz, supra note 81, at 116.
171. See Bush, supra note 168, at 806 ("[T]he existence of a regulatory structure by itself does not necessarily mean a conflict between state or federal legislation and the Sherman Act.").
172. Id.
173. Leibowitz, supra note 81, at 116.
setting rather than incentives to price inaccurately (and anticompetitively). Having both tools available maximizes the chances of discovering and preventing inaccurate pricing in insurance.

B. Practical Considerations

Assuming that the application of antitrust laws to insurance price setting alongside rate regulation is socially beneficial, the question of how to institute antitrust applicability remains. There are two basic options: seek legislative change through Congress or pursue judicial reform through the courts. Because of the high costs and low chances of success associated with a legislative strategy, judicial reform is preferable.

1. A Legislative Approach

Although efforts at legislative reform could attract more attention than desired and mobilize industry opposition, a broad coalition with significant resources might succeed. Advocates could partner with state regulators, MFA critics, and professional groups (for example, American Bar Association, American Academy of Actuaries) to lobby influential legislators to support a narrow repeal.

Since 1988, there have been numerous legislative attempts to repeal MFA in some form.175 Recently, the Insurance Industry Competition Act of 2009 was introduced in both houses and received bipartisan support from prominent legislators.176 Strikingly, neither it nor any other MFA reform has been passed by Congress.177 This is likely due to the significant influence of insurance


177. See Sagers, supra note 6, at 330, 333. See also id. at 325 (“This law . . . has more or less always been controversial, and efforts to repeal it date back more than thirty years.”).
lobbies. Removing MFA exemption will increase insurers' compliance costs, reduce profits, create uncertainty as to the legality of established practices, and potentially compromise the effectiveness of new modeling technology. As such, insurers will vigorously oppose any legislation that affects their price-setting exemption.

2. A Judicial Approach

Barriers to legislative modification suggest that a judicial forum is the more viable setting for MFA reform. M.F. Brinig has concluded, based on empirical evidence, that interest groups attempting to reform MFA are most likely to seek judicial rather than legislative relief. In his words, "[b]ecause the challenge to the [insurance] industry comes . . . from rather diffuse groups that might be dissuaded by the high costs of obtaining legislative relief," the most likely avenues to reform "are coming in the federal courts."

Judicial reform has a number of advantages. For one, it requires less coalition building, lobbying, financing, and media attention than a legislative strategy. Litigants would instead draw on existing materials, history, and judicial opinions to advocate for a revised reading of MFA's section 2(b). They could argue that overbroad interpretation of "regulated by State law," combined with demonstrable changes in market conditions and antitrust analysis, justifies a re-examination of the proviso. Litigants can craft arguments based on scholarly commentary discussing the breadth and unintended consequences of existing judicial interpretations of section 2(b) of MFA and the inaccuracy of courts' interpretation of MFA legislative history. Minority views by district courts favoring an "effective regulation" interpretation of "regulated by State law" in section 2(b) should also be consulted. Criticism from industry experts, consumer advocates, and regulators about the dangers associated with antitrust exemption, inadequate state oversight of rate setting, and model-based pricing would also be helpful.

178. M.F. Brinig, Politics, Economics and the McCarran-Ferguson Act, 73 PUBL. CHOICE 371, 374 (1992) (noting that opposition stakeholders are "stymied at the . . . federal level by a [then] $1.8 million dollar (reported) lobby").
179. Id. at 381.
180. Id.
181. See, e.g., Kintner et al., supra note 33, at 476; Weller, supra note 15; IA AREEDA & HOVENKAMP, supra note 39, ¶ 219d, at 31.
182. See supra note 44.
183. See supra Part II.B.
Based on the foregoing, the most desirable reform to the current system would: (1) pursue change through the judicial system, given the obstacles to legislative modification and the failure of past attempts, (2) leave intact both MFA and state rate regulation to serve the dual and complementary aims of price competition and efficient rate setting, and (3) concentrate specifically on potentially anticompetitive pricing behaviors in the market while leaving intact those that enhance efficiency.

I propose that courts directly incorporate analysis of market conditions into the test for “regulated by State law” under MFA’s section 2(b). This would take the form of an effects test whereby the determination of whether an activity is “regulated” by state law is made through examining the activity’s potential economic effect in the relevant regulated market. Ultimately, the decision would turn on whether or not the state is, in the words of MFA legislators, “occupy[ing] the field” of regulating insurer price setting.184

The effects test would not incorporate a full balancing of pro- and anticompetitive effects into section 2(b): that would obviate the need for rule of reason analysis later on. Instead, the effects test would place the burden on the party challenging MFA to produce empirical evidence of potential anticompetitive effects of the pricing behavior in the relevant market under existing regulatory constraints. Evidence of anticompetitive effects could include econometric models and data, the opinions of actuarial and industry experts, and basic economic theory about market participant behavior.

Judges would consider this evidence alongside countervailing arguments about the State’s regulatory practice and its impact on the market. This could include information about the rate review process, the basis for the State’s decision to approve or disapprove rates, and how nontraditional pricing mechanisms are treated under the regulatory scheme. It could also include data on the economic effects that such action or inaction would have on pricing behavior in the relevant market.

This new standard would equip judges with the tools needed to exercise informed, case-by-case discretion as to whether specific activities are effectively “regulated” in the market or, at the other end of the spectrum, if they exist in zones of “anti-competition.” Because only practices with at least questionable social benefit are likely to be challenged, this has the advantage of focusing scrutiny

on pricing activities and types of insurance with the greatest potential social cost. For instance, given the highly unpredictable nature of hurricane risks, enforcing antitrust laws against pricing in hurricane insurance makes more sense than doing so in life or automobile sectors, where risks are more predictable. An effects test allows for the flexibility to make these distinctions.

Creating an effects-based exception to MFA provides the best antidote to uncertain pricing decisions based on unpredictable risks, such as damage caused by hurricanes. By equipping agencies and courts with information about the antitrust consequences of various prediction technologies and the robustness of underlying data, such an exception provides an additional safeguard against inaccurate pricing and inefficient market decisions. An effects test also has the benefit of keeping the basic structure of MFA intact.

When agency investigation proceeds to the question of whether the Sherman Act was violated, the DOJ or FTC could review evidence of the plus factors discussed in Part II.D. They could also review evidence on model prices, anticipated hurricane damage, and the number of insurers in the market to adduce the relationship between loss cost and insurer pricing. Antitrust enforcers may also consider any correspondence between insurers and modelers that supports the hypothesis that insurers pressured modelers to generate higher loss costs. Information on how the models work—their assumptions, modules, inputs, and codes—would also be available to experts, who could evaluate methodological or scientific flaws.

IV: DISCUSSION OF ALTERNATIVES TO MFA REFORM AND IMPLICATIONS AND CRITICISMS OF PROPOSED REFORM

A. Implications and Criticism of an Effects Test

This section discusses the implications of an effects test as well as criticism of this approach. Specifically, it considers its overlap with the standard for state action immunity under antitrust law outlined in California Retail Liquor Dealers Ass'n. v. Midcal Aluminum, Inc.,185 potential congressional and agency responses, and criticisms based on litigation costs, the legislative intent behind MFA, and judicial efficiency.

1. Implications of an Effects Test

In *Parker v. Brown*, the Supreme Court established the doctrine of antitrust immunity for state actors according to criteria defined in its *Midcal Aluminum* decision. In order to be immune from antitrust enforcement, *Midcal* requires that an activity be "actively supervised" by the state and that such supervision be "clearly articulated and affirmatively expressed as state policy." The *Parker* doctrine exists as an additional means of avoiding federal antitrust enforcement absent MFA exemption and, as a result, there will be downstream implications if an effects test under section 2(b) is adopted into MFA analysis. Depending on the activity and the market, insurers and regulators may seek immunity through the *Parker* standard of "active supervision" to avoid application of the proposed effects test. States may re-arrange their regulatory structures to fit the *Parker* test and avoid complications with MFA. If *Parker* provides a more favorable test, the behavioral incentives created by a section 2(b) effects test on insurers and state legislators could dampen the impact of reform altogether.

A shift to the *Parker* doctrine caused by imposing an effects test is nonetheless an improvement to the status quo. Because *Midcal Aluminum* incorporates the "active supervision" and "clearly articulated" prongs, it is less likely to shield anticompetitive activities from antitrust laws than is the current application of MFA. Thus, even if insurers attempt to invoke state action immunity, the net result is nonetheless greater scrutiny of insurer price setting than currently exists.

An effects test keeps both the *Parker* doctrine and MFA intact, as each would independently be more rigorous than current section 2(b) interpretation. Additionally, downstream effects would occur with virtually any reform to MFA except one that merges the test for "regulated by State law" with *Midcal*’s "active supervision" test. No matter which reform is adopted, the *Parker* doctrine will be available as a substitute for MFA exemption so long as the legal standards for the two immunities are not identical. Consolidating the standards for the two, however, is undesirable for other reasons. It effectively obviates the need for and purpose behind the MFA in the first place. As a result, consolidation would eliminate an additional legal

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188. Id.
189. Id.
avenue, the MFA statute, through which to encourage procompetitive pricing behaviors. Also, because "active supervision" focuses on qualitative characteristics of state regulation rather than economic costs of unregulated activities, the costliest activities may persist unregulated in the market if section 2(b)'s standard merged with Parker requirements.

Other potential repercussions include congressional action to overturn or minimize the effects of judicial reform. Congress could revise MFA to indicate that it should apply whenever a state has generally authorized insurance regulations. However, given Congress's recent interest in repealing components of MFA, this hardly seems likely.\(^1\) In fact, Congress might use the opportunity to toughen the standard for antitrust exemption, include more term definitions for "regulated" or "business of insurance," or explicitly list exempted activities.

It is also possible that the DOJ or FTC will not elect to actively challenge or prosecute cases where an MFA defense is raised if the proposed reform is adopted. They could take the position that rate setting is categorically exempt from antitrust enforcement, although this seems unlikely given recent statements concerning price fixing and MFA repeal.\(^2\) Adoption of this policy is still possible, however, given that enforcement priorities and strategies often vary by Administration.\(^3\)

2. Criticism of Effects Test

Critics of this proposal will likely argue that implementation of this new standard will be unduly costly to litigants and create unnecessary uncertainty in the already-complicated sphere of insurance pricing. Professor Spillane notes that applying antitrust laws would "drive [insurers] away from other matters of corporate policy-making . . . [and cause them to spend] millions in the aggregate on

\(^1\) See supra notes 175–76.

\(^2\) See Prohibiting Price Fixing and Other Anticompetitive Conduct in the Health Insurance Industry: Hearing Before the Sen. Comm. on the Judiciary, 111th Cong. 3–5 (2009) (statement of Christine A. Varney, Assistant Att’y Gen., Antitrust Div., U.S. Dep’t of Justice) ("[A]ntitrust exemption is very expansive . . . . [It includes] 'the most egregiously anticompetitive claims . . . .'").

legal fees . . . [which] would be placed on the shoulders of insureds through higher premiums." This critique, however, ignores the fact that the current standard has the potential to work even greater economic hardship on market participants through lax state regulation and broad antitrust exemption.

The social costs of insurer price coordination far exceed the cost of litigation. A glance at the profit levels and concentration in hurricane insurance indicates that an absolute bar on antitrust enforcement would be very costly in the long term. Consumers would ultimately shoulder this burden in higher premiums, underinsurance, and lost surplus. Courts can and should consider current market conditions—of which MFA drafters were certainly mindful—to determine whether activities are "regulated" under MFA, and thus exempt from antitrust enforcement. Devising loose standards based on perceptions about whether a state is actually regulating is unlikely to achieve the outcome sought by MFA architects: healthy insurance markets where prices are set at actuarially fair rates. If one looks at the current market, in concert with longitudinal data on the behavior of insurers using models, the need to reconsider existing interpretation should be clear.

Scholars may argue that focusing on market analysis rather than state action or inaction circumvents the plain meaning of the word "regulated." The validity of this claim, however, depends on whether one subscribes to the "effective regulation" or "general authorization" interpretation of the term. One could argue that an effects test analysis for "regulated by State law" is more closely aligned with legislators' intent, given their repeated concerns that regulation be sufficient and adequate to prevent insolvency and


194. See HUNTER, supra note 100, at 18 (Addenda A & B: Profits, Losses, Surplus for All Property/Casualty Insurers and Top 10 Property/Casualty Insurers); Tran, supra note 84, at 87–88.

195. IA AREEDA & HOVENKAMP, supra note 39, ¶ 219c, at 25 ("[T]he presence of even minimal state regulation, even on an issue unrelated to the antitrust suit, is generally sufficient to preserve the immunity.").

196. 91 CONG. REC. 1481 (1945) (remarks of Sen. Ferguson) ("If the company is not sound and solvent at the time the claim is made, there is no insurance at all. That is what we have tried to avoid.").
That said, judges sympathetic to the "general authorization" view may still think that this analysis is unsupported by the Act's language and legislative history.\textsuperscript{198}

Finally, it may seem premature from a judicial economy perspective to engage in economic analysis and balancing so early in the litigation—well before any attempt is made to determine whether there is an antitrust violation. However, it has been the general trend to incorporate more economic data and analysis into antitrust investigation and litigation—particularly at the DOJ.\textsuperscript{199} These agencies also have significant economic and expert resources at their disposal. As such, it is unlikely that the agencies challenging an MFA defense would be unable or unwilling to provide the necessary information at either the investigatory or discovery phases of litigation.

\textbf{B. Alternatives to an Effects Test}

Scholars have proposed numerous reforms to MFA. Professor Areeda has proposed applying the "supersede" clause, currently interpreted to qualify only the portion of section 2(b) above the proviso,\textsuperscript{200} to MFA's antitrust exemption.\textsuperscript{201} Areeda asserts that this interpretation "create[s] a greater immunity than \textit{Parker} creates" and "immunize[s] activities that are clearly 'authorized' by state law even . . . [if] not actively supervised."\textsuperscript{202} Areeda's proposed reform does not displace MFA with state action doctrine but instead raises the threshold for "regulated by State law" while keeping it below \textit{Parker}'s requirements.

Depending on how liberally "impair" in section 2(b) is interpreted under Areeda's proposal, such an interpretation could expose many anticompetitive activities to antitrust scrutiny. For nonantitrust federal laws, MFA interpretation currently "consider[s] the extent of actual conflict between the federal action and

\begin{itemize}
\item \textsuperscript{197} See, e.g., id. at 1444 (remarks of Sens. White & McCarran).
\item \textsuperscript{198} See, e.g., id. at 1487 (remarks of Sen. O'Mahoney) (describing MFA as "an invitation to the States to legislate in good faith" and "an invitation to the insurance industry to operate in good faith in the halls of the various State legislatures").
\item \textsuperscript{199} \textit{Interview with Thomas Barnett, Deputy Assistant Att'y Gen., Antitrust Div., U.S. Dep't of Justice}, 2005 \textit{Antitrust Source} 1, 12 ("Economic analysis is such a fundamental part of what we do that it's hard for me to think of a matter . . . where I have not actively consulted with the economics group.").
\item \textsuperscript{200} For a discussion of the textual structure of section 2(b), see \textit{supra} text accompanying note 26.
\item \textsuperscript{201} \textit{LA AREEDA & HOVENKAMP, supra} note 39, ¶ 219d, at 31.
\item \textsuperscript{202} Id.
\end{itemize}
the state regulatory scheme."\textsuperscript{203} Courts have defined "impair" as that which presents "a direct conflict between the federal and state law or when application of the federal law would frustrate a declared state policy."\textsuperscript{204}

In the sphere of rate regulation, there is no "direct conflict" between establishing rate floors and ceilings and proscribing collusion facilitated by sharing rate information. State statutes, however, might expressly define the goals of rate regulation to conflict with antitrust laws. Individual courts could also determine that information sharing and statistical pooling are illegal under the Sherman Act\textsuperscript{205} and thus find a direct conflict. These problems animate the underlying problem with Areeda's reform—that it uses congruency between antitrust and state insurance laws as a proxy to reduce the social costs of MFA instead of directly targeting those costs.

Rather than employing a case-by-case analysis of the particular effects of a given activity, Areeda's proposal filters out some harmful behavior by exposing more activities, on average, to scrutiny. The decision of whether to exempt a given practice is left to courts' perception of the congruence between rate regulation and antitrust laws. This has little bearing on the problems of anticompetitive practices in the market and provides no guarantee of reducing their impact. Also, unless section 2(b)'s proviso is simultaneously eliminated, such a revision would not change the existing standard for "regulated by State law," which permits exemption in cases of minimal regulation.

Professor Weller has put forth a variation of Professor Areeda's proposal that proceeds in two stages. The first stage is identical to Areeda's: determining whether antitrust laws "impair, invalidate, or supersede" state regulation.\textsuperscript{206} The second stage is "a discriminating analysis of state regulatory authority" that includes discerning whether the state has asserted jurisdiction over the specific activity in question.\textsuperscript{207} This test narrows the scope of section 2(b)'s proviso so that it reaches fewer activities. This is beneficial in cases where the state fails to assert specific authority over the activity in question, but would not include instances where the state purports to assert

\textsuperscript{203} \textit{Id.} ¶ 219c, at 25.
\textsuperscript{204} \textit{Id.}
\textsuperscript{205} \textit{But see} Mark F. Horning, \textit{Antitrust Immunity for the Insurance Industry: Repeal, Safe Harbors, or Status Quo?}, 8 \textit{Antitrust} 14, 15 (1994) ("Generally speaking . . . the reporting of price or cost information relating to past transactions is presumptively reasonable.").
\textsuperscript{206} For Weller's legislative history arguments for applicability of the proviso, see Weller, \textit{supra} note 15, at 603-06.
\textsuperscript{207} \textit{Id.} at 614.
authority but fails to sufficiently regulate the activity. Thus, this reform proposal does not eliminate exemption for all anticompetitive activities.

Legislators behind the Insurance Industry Antitrust Enforcement Act of 2006 advanced this concept further, imputing to "regulated by State law" a standard\(^\text{208}\) equivalent to the *Midcal* standard for "regulated" under *Parker* immunity.\(^\text{209}\) Importing the *Midcal* standard, which requires a "clearly articulated and affirmatively expressed . . . state policy" that is "actively supervised by the State," would reduce the scope of MFA exemption.\(^\text{210}\) It would not, however, directly target activities with the greatest risk of restricting competition in the market (for example, collusive pricing), because it focuses on state action rather than on predictable consequences of state inaction.

Additionally, melding section 2(b)'s "regulated by State law" with the *Parker* doctrine would effectively obviate the existence and purpose of MFA. Professor Areeda discusses this result, noting that "[i]f the insurance statute's regulation requirement were to coalesce with the *Parker* requirements, the scope of the [MFA] would be largely irrelevant as a practical matter."\(^\text{211}\) Such a dramatic modification of insurance and antitrust doctrine is undesirable because it eliminates an avenue through which to encourage procompetitive pricing among insurers.

Some scholars have argued for a wholesale repeal of MFA with specifically delineated safe harbors of activity retaining exemption.\(^\text{212}\) These safe harbors would serve "to deter unwarranted private litigation testing the limits of permissible insurer conduct absent an exemption."\(^\text{213}\) Typical swaths of conduct covered include collecting and disseminating loss data, determining a loss development factor, sharing standardized forms, and participating in voluntary joint underwriting agreements (JUAs).\(^\text{214}\)

Repeal, generally, is a disproportionate response to the challenges posed by price coordination. More tailored approaches that

210. *See id.* at 105.
211. IA AREEDA & HOVENKAMP, *supra* note 39, ¶ 219c, at 27.
212. *See, e.g.,* Horning, *supra* note 205, at 15. *But see* Sagers, *supra* note 6, at 352 (arguing against inclusion of safe harbors because of unintended consequences and "dampening[ing]" of beneficial effects).
214. *Id.* at 3. Many assert these activities would almost certainly be lawful under existing antitrust law. *See supra* note 212.
distinguish between the benefits and costs of exemption are better positioned to correct the deficiencies of current law. Safe harbors, on the other hand, create new categories and terms that must be defined by courts. The enumerated activities in the safe harbor provisions are often widely understood to be legal under existing antitrust laws absent exemption. There is little value in immunizing already-lawful behavior through creating new statutory language to interpret. Furthermore, if ordinarily procompetitive activities are being used in certain cases to restrict competition, categorical safe harbors may be too broad because they would exempt both legal and illegal activity.

CONCLUSION

MFA and its role in modern insurance markets and antitrust law are widely discussed among scholars and practitioners. Though there is general consensus that the Act needs to be reformed, there are differing views about how this should be done. By examining the Act’s costs and benefits in the context of model-based pricing in hurricane insurance, this Note reveals what many already know to be true: changing conditions in the market and legal system render MFA’s blanket exemption for price setting no longer justifiable. Under this categorical interpretation of MFA, the statute has become a relic, too broad and inflexible to serve its original purpose.

The hope is that evidence from this case study will revive a tired debate and renew examination of MFA’s effects in insurance markets. Though there is no single pathway to reform, there should be a growing realization in the legal community that MFA is in need of serious legislative or judicial revision. This Note aims to assist in framing the debate around its most glaring limitations in rapidly evolving markets.

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215. Cf. Bush, supra note 168, at 783 (“[B]ecause of a lack of legislative history and clear record as to the underlying purpose of the immunity, courts have often expanded the scope of the immunity beyond its stated limit.”).

216. See Sagers, supra note 6, at 347–48 (“[I]nformation-sharing of [retrospective] variety is very unlikely to be illegal even without antitrust immunity.”).

217. See id. at 351.