# BEHAVIORAL ANTITRUST: A NEW APPROACH TO THE RULE OF REASON AFTER *LEEGIN*

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*The Supreme Court's recent decision in* Leegin Creative Leather Products, Inc. v. PSKS, Inc.*, which replaced the longstanding per se rule against resale price maintenance (RPM) with a rule of reason approach, has resurrected the debate over RPM. Legal and economic proponents of this practice again point to its potential procompetitive benefits, while RPM detractors emphasize its possible anticompetitive consequences. Despite their disagreements, scholars, the Court, and the limited extant empirical data appear near-unanimous in agreeing that such arrangements can either increase or decrease efficiency. Consequently, the RPM debate predominantly revolves around theoretical assertions regarding the likely frequency and significance of RPM's pro- versus anticompetitive manifestations.*

*Importantly, however, both camps in the RPM debate assume that manufacturers are strictly rational actors, who employ only profit-maximizing arrangements. In contrast, our behavioral analysis reveals that real-world, boundedly rational manufacturers are prone to use RPM even in circumstances in which it is neither rationally procompetitive nor rationally anticompetitive. The available evidence further shows this excessive reliance on RPM diminishes over time, as biased manufacturers either learn of their mistake or are disciplined by the market. The slow demise of this practice, however, may entail efficiency losses over many years and sometimes generate competitive*

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*harm as well. Yet because RPM will sometimes be used procompetitively,* Leegin*'s rejection of its per se condemnation is still justified. The present analysis therefore not only offers a novel account of RPM, but also shows how boundedly rational RPM challenges the various post-*Leegin *approaches developed by courts, enforcement agencies, and scholars on both sides of the RPM debate. We close by outlining our alternative, behaviorally informed, structured rule of reason inquiry for this restraint.*

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## INTRODUCTION

The Supreme Court's recent decision in *Leegin Creative Leather Products, Inc. v. PSKS, Inc.*[1] replaced the longstanding per se rule against minimum resale price maintenance (RPM)[2] with a rule of reason (ROR) approach and resurrected the debate over this vertical restraint that forbids dealers from selling the products they have purchased from a manufacturer below a prescribed price.[3] Proponents of this practice again point to its potential procompetitive benefits, while RPM detractors emphasize its possible anticompetitive consequences.[4]

Despite their disagreements, however, the Court, legal and economic scholars, and the limited available empirical data appear near-unanimous in agreeing that such arrangements can either increase or decrease efficiency.[5] Consequently, the RPM debate predominantly revolves around theoretical assertions regarding the likely frequency and significance of RPM's pro- versus anticompetitive manifestations.[6] Importantly, however, all of these theories also assume—like traditional antitrust scholarship more generally—that manufacturers are strictly rational actors who employ only profitable RPM arrangements.[7]

1. 551 U.S. 877 (2007).

2. Maximum RPM, which is not examined in this Article, was made subject to ROR analysis instead of per se condemnation already in *State Oil Co. v. Khan*, 522 U.S. 3 (1997). Our references to RPM, thus, only concern minimum RPM.

3. *See generally* Ashley Doty, Leegin v. PSKS*: New Standard, New Challenges*, 23 BERKELEY TECH. L.J. 655 (2008); Warren S. Grimes, *The Path Forward After* Leegin*: Seeking Consensus Reform of the Antitrust Law of Vertical Restraints*, 75 ANTITRUST L.J. 467 (2008); Thomas A. Lambert, *A Decision-Theoretic Rule of Reason for Minimum Resale Price Maintenance*, 55 ANTITRUST BULL. 167 (2010) [hereinafter Lambert, *A Decision-Theoretic Rule*]; Thomas A. Lambert, Dr. Miles *is Dead. Now What?: Structuring a Rule of Reason for Evaluating Minimum Resale Price Maintenance*, 50 WM. & MARY L. REV. 1937 (2009) [hereinafter Lambert, *Now What?*]; Lance McMillian, *The Proper Role of Courts: The Mistakes of the Supreme Court in* Leegin, 2008 WIS. L. REV. 405; Barak Y. Orbach, *Antitrust Vertical Myopia: The Allure of High Prices*, 50 ARIZ. L. REV. 261 (2008); Scott Looper, Note, *Reading Roberts: A Critical Framework for Analyzing The Supreme Court's Decision in* Leegin Creative Leather Products, Inc. v. PSKS, Inc., 46 HOUS. L. REV. 177 (2009).

4. *See infra* notes 38–61 and accompanying text.

5. *See infra* notes 62–82 and accompanying text.

6. For a helpful overview of theoretical justifications for RPM agreements, see Ittai Paldor, *The Vertical Restraints Paradox: Justifying the Different Legal Treatment of Price and Non-Price Vertical Restraints*, 58 U. TORONTO L.J. 317, 326–51 (2008).

7. Avishalom Tor, *The Fable of Entry: Bounded Rationality, Market Discipline, and Legal Policy*, 101 MICH. L. REV. 482, 488 (2002) [hereinafter Tor, *Entry*]; Avishalom Tor, *Illustrating a Behaviorally Informed Approach to Antitrust Law: The Case of Predatory Pricing*, 18 ANTITRUST 52, 52–53 (2003) [hereinafter Tor, *Illustrating*]; *see also* Russell B. Korobkin & Thomas S. Ulen, *Law and Behavioral Science: Removing the Rationality Assumption from Law and Economics*, 88 CALIF. L. REV. 1051, 1053 (2000) (discussing the growth of behavioral economics as a critique of rational choice models); Christopher R. Leslie, *Rationality Analysis in Antitrust*, 158 U. PA. L. REV. 261 (2010) (critiquing the prevalence of rationality assumptions embedded in antitrust doctrine); Maurice E. Stucke, *Beha-*

In contrast, a behavioral analysis of RPM reveals that real-world, boundedly rational manufacturers[8] are prone to overestimating the dangers of retail price-cutting, are excessively averse to such practices, and exhibit a systematic bias in favor of RPM over alternative distribution arrangements.[9] Hence, manufacturers who are free to employ RPM will overuse it, often harming both themselves and their retailers.[10]

Both the historical evidence and relevant empirical findings further suggest the excessive reliance on RPM diminishes over time, as biased manufacturers either learn when the practice is inefficient or are disciplined by the market.[11] However, the slow demise of RPM entails significant efficiency losses and sometimes even consumer harm over many years. At the same time, because RPM can also be efficiency enhancing, *Leegin*'s rejection of its per se condemnation in favor of a ROR analysis may well be justified.[12]

The present analysis therefore offers a novel account of RPM which, in turn, provides a new foundation for developing an effectively structured ROR analysis of this vertical restraint. To this end, Part I briefly reviews the history, theory, and evidence on RPM, as well as the central role of the assumption of manufacturer rationality in the debate over this practice. Part II then shows how behavioral evidence reveals that real-world manufacturers tend excessively to use RPM to combat retail price-cutting. Part III explains that firms and markets may correct the overuse of RPM, albeit slowly and in limited circumstances. Part IV completes the analysis, first reevaluating *Leegin*'s guidance and finding it relevant, if lacking in important respects, then showing how the findings presented here challenge both extreme pro-defendant and extreme pro-plaintiff approaches to RPM's new rule of reason, and finally outlining the contours of our suggested blueprint for a behaviorally informed, structured rule of reason after *Leegin*.

## I. THE RESALE PRICE MAINTENANCE DEBATE

### *A. A Brief History*

In the 1911 case *Dr. Miles Medical Co. v. John D. Park & Sons Co.*,[13] the Supreme Court proclaimed the per se illegality of RPM.[14] Dr.

*vioral Economists at the Gate: Antitrust in the Twenty-First Century*, 38 LOY. U. CHI. L.J. 513 (2007). *See generally infra* notes 83–89 and accompanying text.

8. *See* Avishalom Tor, *The Methodology of the Behavioral Analysis of Law*, 4 HAIFA L. REV. 237, 242–44 & n.16 (2008) (discussing the evolution of the concept of bounded rationality and explaining the present, broader usage); *see also* Herbert A. Simon, *A Behavioral Model of Rational Choice*, 69 Q.J. ECON. 99 (1955); Herbert A. Simon, *Rational Choice and the Structure of the Environment*, 63 PSYCHOL. REV. 129 (1956) (developing the original concept of bounded rationality).

9. *See infra* Part II.D.

10. *See infra* Part III.B–C.

11. *See infra* Part III.A–C.

12. *See infra* Part IV.

13. 220 U.S. 373 (1911).

Miles, a manufacturer of nonprescription, trademarked drugs, entered into contracts specifying the "minimum prices at which sales shall be made by its vendees and by all subsequent purchasers who traffic in its remedies."[15] The defendant dealer, Park, refused to enter into such a contract and continued selling Dr. Miles's drugs to discounting retailers who then sold them at prices below those specified in the restraining contracts.[16] The Supreme Court, however, found the contracts invalid under section 1 of the Sherman Act.[17]

Although the per se rule of *Dr. Miles* was affirmed continually in the following decades,[18] its impact was curtailed for almost forty years by the passage of the Miller-Tydings Act of 1937 and the McGuire Act of 1955.[19] These Acts amended the Sherman Act to allow RPM where permitted by state "fair-trade" laws.[20]

Many states enacted fair-trade laws, explicitly permitting manufacturers to employ RPM in their distribution systems.[21] Notably, many of the products for which prices were fixed were common over-the-counter products that involve minimal retail service.[22] Yet despite the initial popularity of RPM, its usage slowly declined over time.[23] Competition from states that did not enact fair trade laws or from new entry into the market, evasion by discounting retailers, and other factors made RPM less attractive to manufacturers than it originally seemed.[24] Ultimately,

14. For a detailed discussion of the decision and its reading, see 8 PHILLIP E. AREEDA & HERBERT HOVENKAMP, ANTITRUST LAW: AN ANALYSIS OF ANTITRUST PRINCIPLES AND THEIR APPLICATION ¶¶ 1620a–1620c, at 222–33 (3d ed. 2010).

15. *Dr. Miles*, 220 U.S. at 394.

16. *Id.* at 381–82.

17. *Id.* at 400, 408–09. Justice Holmes dissented. *Id.* at 409 (Holmes, J., dissenting). Section 1 of the Sherman Act is codified as amended at 15 U.S.C. § 1 (2006).

18. *See, e.g.*, Albrecht v. Herald Co., 390 U.S. 145, 149 (1968); United States v. Arnold, Schwinn & Co., 388 U.S. 365, 379–80 (1967); United States v. Parke, Davis & Co., 362 U.S. 29, 45–47 (1960). For more recent opinions, see, for example, Bus. Elecs. Corp. v. Sharp Elecs. Corp., 485 U.S. 717, 735–36 (1988), and Rebel Oil Co., Inc., v. Atl. Richfield Co., 51 F.3d 1421, 1444 (9th Cir. 1995).

19. McGuire Act, ch. 745, sec. 2, § 5(a)(2)–(5), 66 Stat. 631, 632 (1955), *repealed by* Consumer Goods Pricing Act of 1975, Pub. L. No. 94-145, § 3, 89 Stat. 801, 801; Miller-Tydings Act, ch. 690, tit. 8, sec. 1, § 1, 50 Stat. 693, 693–94 (1937), *repealed by* Consumer Goods Pricing Act of 1975 § 2, 89 Stat. at 801.

20. McGuire Act, sec. 2, § 5(a)(2)–(5), 66 Stat. at 632; Miller-Tydings Act, sec. 1, § 1, 50 Stat. at 693 ("[Permits] agreements prescribing minimum prices for the resale of a commodity which . . . is in free and open competition with commodities . . . produced or distributed by others."). These state laws allowed manufacturers to fix retail prices, further bolstered by Congress's passage of the McGuire Act that allowed states to enact non-signer provisions, where minimum prices specified in one dealer's agreement would bind all others. McGuire Act, sec. 2, § 5(a)(2)–(5), 66 Stat. at 632; Richard Squire, *Antitrust and the Supremacy Clause*, 59 STAN. L. REV. 77, 84 n.30 (2006) (describing these provisions). For detailed descriptions, see generally 8 AREEDA & HOVENKAMP, *supra* note 14, ¶ 1629, at 336–43; S.C. Hollander, *United States of America*, *in* RESALE PRICE MAINTENANCE 65 (B.S. Yamey ed., 1966).

21. *See generally* Note, *Fair Trade Laws and Discount Selling*, 64 HARV. L. REV. 1327 (1951) (providing an overview and analysis of state fair trade laws).

22. Robert Pitofsky, *Are Retailers Who Offer Discounts Really "Knaves"?: The Coming Challenge to the* Dr. Miles *Rule*, ANTITRUST, Spring 2007, at 61, 63.

23. *See infra* text accompanying notes 220–26.

24. Hollander, *supra* note 20, at 81.

Congress repealed both the Miller-Tydings and McGuire Acts in 1975, reinstating the per se rule of *Dr. Miles*.[25]

While the reinstatement of the per se rule significantly constrained manufacturers wishing to employ RPM, it did not prevent them from influencing retail prices altogether, due to the *Colgate* doctrine.[26] *Colgate*, handed down less than a decade after *Dr. Miles* and subsequently confirmed and refined by later opinions, permitted manufacturers unilaterally to establish and enforce resale pricing (and other distribution) policies.[27] Because of the legal uncertainty concerning *Colgate*'s boundaries, however, manufacturers employing RPM under this doctrine risked liability under *Dr. Miles* if a court was to find that their interaction with retailers amounted to an "agreement."[28]

The Supreme Court in *Leegin* explicitly overruled *Dr. Miles* and adopted a rule of reason for evaluating RPM.[29] The case arose when PSKS discounted Leegin's "Brighton" line of leather belts despite Leegin's announced policy of only selling to non-discounting dealers.[30] Leegin ceased selling to PSKS when the latter refused to halt its discounting, and the retailer sued, alleging Leegin violated section 1 of the Sherman Act.[31] The district court excluded Leegin's offered evidence of the alleged procompetitive effects of its policy under the per se rule against

25. *See* Consumer Goods Pricing Act of 1975, Pub. L. No. 94-145, §§ 2–3, 89 Stat. 801, 801. House and Senate reports suggested the undesirability of RPM as an arrangement that inhibits price competition and facilitates cartels that raise consumer prices. S. REP. NO. 94-466, at 2–3 (1975), *reprinted in* 1975 U.S.C.C.A.N. 1569, 1570–72; H.R. REP. NO. 94-341, at 1–5 (1975).

26. *See* United States v. Colgate & Co., 250 U.S. 300 (1919); *see also* 8 PHILLIP E. AREEDA & HERBERT HOVENKAMP, ANTITRUST LAW: AN ANALYSIS OF ANTITRUST PRINCIPLES AND THEIR APPLICATION ¶ 1623g, at 244–45 (2d ed. 2004) (explaining that, prior to *Leegin*, "[t]hrough . . . indirect methods . . . a manufacturer can, even without resale price maintenance contracts, shape the manner in which its product is distributed and influence its price—though obviously to a lesser extent than if *Dr. Miles* were overruled. *Because the manufacturer's lawful leeway in maintaining desired resale prices does not approach the effectiveness of vertical price-fixing agreements, its practical effect is not to make the* Dr. Miles *rule futile*." (emphasis added)).

27. *E.g.*, Monsanto Co. v. Spray-Rite Serv. Corp., 465 U.S. 752 (1984); *see also* 7 PHILLIP E. AREEDA & HERBERT HOVENKAMP, ANTITRUST LAW: AN ANALYSIS OF ANTITRUST PRINCIPLES AND THEIR APPLICATION ¶ 1446, at 75–85 (3d ed. 2010) (discussing the requisites for finding an agreement after *Monsanto*).

28. *See* 15 U.S.C. § 1 (2006); 8 AREEDA & HOVENKAMP, *supra* note 14, ¶ 1623d, at 273 ("The courts, however, have vacillated in finding announced conditions and their implementation to be or to reflect agreements."). Intriguingly, the courts may have struck a practical balance between the positions of the two camps on RPM through the combination of the *Dr. Miles* and *Colgate* doctrines, leaving vertical-price control an attractive alternative mainly for those manufacturers who believed that they stood to benefit from its unilateral imposition enough to justify the risk that their policies might be found to be an illegal "agreement." Of course, regardless of its merits and demerits, the potential benefits of this adaptive approach are irrelevant in the post-*Leegin* era.

29. Leegin Creative Leather Prods., Inc. v. PSKS, Inc., 551 U.S. 877, 907 (2007). *Leegin* followed a series of decisions chipping away at per se restrictions on vertical arrangements over a few decades. *E.g.*, State Oil Co. v. Khan, 522 U.S. 3, 21–22 (1997); *Monsanto Co.*, 465 U.S. at 768; Cont'l T.V., Inc. v. GTE Sylvania Inc., 433 U.S. 36, 59 (1977).

30. *Leegin*, 551 U.S. at 883. Leegin specifically sought dealers who would "support the Brighton product." *Id.* at 883.

31. *Id.* at 884.

RPM.[32] PSKS won an award of $1,200,000, trebled to a total of $4,000,000, including fees,[33] and the Fifth Circuit upheld the decision.[34]

The Supreme Court, divided five to four, overturned the lower court, deciding that the ROR should apply to RPM and stating that "[t]he reasons upon which *Dr. Miles* relied do not justify a *per se* rule."[35] Reexamining the 1911 precedent and surveying economics literature "replete with procompetitive justifications for a manufacturer's use of resale price maintenance," the Court found sufficient justification to apply the ROR.[36] The opinion then explicitly left lower courts the task of developing RPM's ROR analysis, providing them only with "certain factors" relevant to the inquiry.[37]

### *B. Theory*

#### *1. Anticompetitive Accounts*

Scholars have proffered several explanations of the likely causes and effects of RPM. Critics argue that such arrangements facilitate manufacturing or retail-level cartels,[38] which are inherently unstable and subject to secret defection by members undercutting the cartel's prices.[39] At the manufacturing level, cartel members may have lower incentives or fewer opportunities to cheat if retail prices are fixed and defections easier to monitor.[40] RPM can also facilitate retail-level cartels, allowing a

32. *Id.*

33. *Id.* at 884–85. Note that the trial court rejected Leegin's argument that its program was a unilateral pricing policy, rather than an "agreement," and therefore lawful under *Colgate*. *See* PSKS, Inc. v. Leegin Creative Leather Prods., Inc., No. Civ.A. 2:03-CV-107, 2004 WL 5254322, at *2 (E.D. Tex. Aug. 17, 2004). Leegin did not pursue this argument on appeal.

34. PSKS, Inc. v. Leegin Creative Leather Prods., Inc., 171 F. App'x 464, 470 (5th Cir. 2006).

35. *Leegin*, 551 U.S. at 880, 889, 907–08.

36. *Id.* at 889. In dissent, Justice Breyer noted a bright-line rule provided greater certainty and pointed to stare decisis considerations. *Id.* at 917, 923–29 (Breyer, J., dissenting).

37. *Id.* at 897 (majority opinion); *see also infra* Part IV (evaluating the factors enumerated by the Court in light of the analysis in this Article). Note that, on remand, the district court granted Leegin's motion to dismiss, which the Fifth Circuit subsequently affirmed, because PSKS did not adequately define the relevant product market, and its new horizontal price-fixing claim did not properly allege an agreement among retailers. PSKS, Inc. v. Leegin Creative Leather Prods., Inc., No. CV 2:03 CV 107(TJW), 2009 WL 938561, at *1, *5, *8 (E.D. Tex. Apr. 6, 2009), *aff'd*, 615 F.3d 412 (5th Cir. 2010).

38. *See generally* William S. Comanor, *Vertical Price-Fixing, Vertical Market Restrictions, and the New Antitrust Policy*, 98 HARV. L. REV. 983 (1985); Warren S. Grimes, *Brand Marketing, Intrabrand Competition, and the Multibrand Retailer: The Antitrust Law of Vertical Restraints*, 64 ANTITRUST L.J. 83 (1995).

39. *See* Frank H. Easterbrook, *Vertical Arrangements and the Rule of Reason*, 53 ANTITRUST L.J. 135, 141–42 (1984).

40. *See* Herbert Hovenkamp, *Vertical Restrictions and Monopoly Power*, 64 B.U. L. REV. 521, 534 (1984); Lester G. Telser, *Why Should Manufacturers Want Fair Trade?*, 3 J.L. & ECON. 86, 99–104 (1960) (describing manufacturer cartelization in the light bulb industry); Oliver E. Williamson, *Assessing Vertical Market Restrictions: Antitrust Ramifications of the Transaction Cost Approach*, 127 U. PA. L. REV. 953, 967 (1979). Note also that RPM can only be employed by manufacturers possessing at least some market power who are able to earn supra-competitive profits that can be shared with retailers through RPM. *See, e.g.*, Nancy T. Gallini & Ralph A. Winter, *On Vertical Control in Monopolistic Competition*, 1 INT'L. J. INDUS. ORG. 275, 285 (1983) (showing that vertical restraints can be "profita-

single manufacturer or "upstream" firm to impose uniform price conditions on retail cartel members, making it easy for retailers to detect each other's cheating or defection.[41]

More importantly, even in the absence of express cartelization at either the upstream or downstream levels, a widespread use of RPM in an industry can "soften" competition in concentrated markets.[42] When there is a limited number of manufacturers or retailers, this practice makes easier supra-competitive, oligopolistic pricing that causes significant consumer harm yet is not illegal due to its high enforcement and error costs.[43]

Finally, manufacturers may introduce RPM as a quid pro quo for dealers' agreement to other vertical restraints, such as tying or exclusive dealing, that may foreclose competing manufacturers. In the absence of the increased profits provided by RPM, dealers may be unwilling to commit to accept the latter, costly arrangements.[44]

### *2. Procompetitive Effects*

Many economic theorists nevertheless have put forth reasons why RPM might prove welfare enhancing, mostly relying on the argument that retailers can provide services that enhance demand and total sales of manufacturers' products.[45]

For example, Bowman and Tesler famously argued that product-specific services, such as product demonstrations, can stimulate demand, but free riding may prevent their provision when retailers compete over price.[46] Discounting retailers, who do not incur the cost of providing services, can reduce product prices, benefiting from or free riding on their

bly imposed by a manufacturer or wholesaler who has some market power and whose product is sold in a monopolistically competitive downstream market" under specified circumstances).

41. *See* HERBERT HOVENKAMP, ECONOMICS AND FEDERAL ANTITRUST LAW § 4.1, at 87–89 (1985).

42. *See* James C. Cooper et al., *A Comparative Study of United States and European Union Approaches to Vertical Policy*, 13 GEO. MASON L. REV. 289, 293 (2005); Patrick Rey & Joseph Stiglitz, *The Role of Exclusive Territories in Producers' Competition*, 26 RAND J. ECON. 431, 432 (1995).

43. *See* ANDREU MAS-COLELL ET AL., MICROECONOMIC THEORY 383, 387 (1995). *But see* Richard A. Posner, *Oligopoly and the Antitrust Laws: A Suggested Approach*, 21 STAN. L. REV. 1562, 1563 (1969) (suggesting that oligopolistic coordination should be illegal). *See generally* Herbert Hovenkamp, *The Rationalization of Antitrust*, 116 HARV. L. REV. 917, 936 (2003) (reviewing RICHARD A. POSNER, ANTITRUST LAW (2d ed. 2001)) (discussing Phillip E. Areeda's Antitrust Law treatise's position on oligopoly behavior).

44. *See* Alan J. Meese, *Raising Rivals' Costs: Can the Agencies Do More Good than Harm?*, 12 GEO. MASON L. REV. 241, 264–65 (2003).

45. Note that all the services-related accounts of RPM assume that retailers' demand-increasing activities are always efficient and beneficial. If, however, retailers divert demand from competing products based on their private benefits from larger margins, increased demand for a given product may not be efficient. Moreover, although outside the present scope, most procompetitive accounts of RPM depend on a questionable assumption of consumer rationality in choosing among products and services.

46. *See* Ward S. Bowman, Jr., *The Prerequisites and Effects of Resale Price Maintenance*, 22 U. CHI. L. REV. 825, 835–36 (1955); Telser, *supra* note 40, at 89–96.

competitors' investment.[47] RPM can overcome free riding by removing the possibility of price-cutting, encouraging retailers to compete over service provision. The resulting increased demand and consumer perception of value may offset the higher prices caused by RPM.[48]

One frequent concern raised by manufacturers involves the retailer practice of "loss leading"—that is, the discounting of certain products to draw in consumers who will be more likely to buy additional products or services that more than compensate for the discount sale.[49] These manufacturers favor minimum resale price agreements as an effort to prevent loss-leading discounts that could harm a brand's image and reduce a product's value. Despite the long-standing concern of manufacturers over loss leading,[50] this justification for RPM has not gained substantial traction among scholars.[51]

Closely related, others suggest that RPM can promote consumer welfare through brand promotion and improved goodwill.[52] Though manufacturers can control their brand through advertising, retailer or dealer services can heighten a brand's image. Brand imaging often is essential to wide distribution and high-volume, low-cost production of goods, because new products under the same brand will have higher demand than new products of unknown brands.[53]

Marvel and McCafferty similarly argue that dealers or retailers act as agents for consumers by choosing which products to sell and thereby endorsing these brands or products.[54] If consumers recognize that retail-

47. *See* Leegin Creative Leather Prods., Inc. v. PSKS, Inc., 551 U.S. 877, 890 (2007) ("[D]iscounting retailers can free ride on retailers who furnish services and then capture some of the increased demand those services generate."); Cont'l T.V., Inc. v. GTE Sylvania Inc., 433 U.S. 36, 55 (1977); Telser, *supra* note 40, at 91.

48. *See* Easterbrook, *supra* note 39, at 169–72; Benjamin Klein & Andres V. Lerner, *The Expanded Economics of Free-Riding: How Exclusive Dealing Prevents Free-Riding and Creates Undivided Loyalty*, 74 ANTITRUST L.J. 473, 484–90 (2007); Paldor, *supra* note 6, at 333; Richard A. Posner, *The Next Step in the Antitrust Treatment of Restricted Distribution: Per Se Legality*, 48 U. CHI. L. REV. 6, 6 (1981); s*ee also* Ralph A. Winter, *Vertical Control and Price Versus Nonprice Competition*, 108 Q.J. ECON. 61 (1993) (arguing that RPM prevents retailers from focusing on infra-marginal consumers).

49. *E.g.*, Howard P. Marvel & Stephen McCafferty, *The Welfare Effects of Resale Price Maintenance*, 28 J.L. & ECON. 363, 375 (1985).

50. *See, e.g.*, AM. FAIR TRADE COUNCIL INC., RESALE PRICE MAINTENANCE BY MEANS OF FAIR TRADE LAWS IN FORCE APRIL 1, 1942, at 3 (1942); *see also Leegin*, 551 U.S. at 883 (noting that one of the reasons Leegin stated for adopting its RPM policy was the "concern that discounting harmed Brighton's brand image and reputation").

51. *Cf.* Howard P. Marvel, *The Resale Price Maintenance Controversy: Beyond the Conventional Wisdom*, 63 ANTITRUST L.J. 59, 73–77 (1994) (detailing the theory of price cutting and loss leading). *But see* Orbach, *supra* note 3, at 277–82 (arguing that consumers sometimes value high prices in and of themselves).

52. *See generally* Robert L. Steiner, *Judging the Welfare Performance of Manufacturers' Advertising*, 10 J. ADVERTISING, no. 3, 1981, at 3, 12–13 (detailing procompetitive theories of product branding through vertical restraints).

53. *See* Nicholas S. Economides, *The Economics of Trademarks*, 78 TRADEMARK REP. 523, 525–27 (1988); Steiner, *supra* note 52, at 12–13.

54. *See generally* Howard P. Marvel & Stephen McCafferty, *Resale Price Maintenance and Quality Certification*, 15 RAND J. ECON. 346 (1984).

ers choose a narrow range of products to sell from among multiple brands, such information is a valuable quality endorsement of the brands selected.

Some scholars have suggested that RPM may be needed to provide smaller, higher-cost retailers with margins sufficient for their survival, without which product availability may be diminished.[55] A critical evaluation of this account reveals, however, that the benefits of this increased availability must, first, outweigh the lost sales due to higher prices throughout the distribution system and, second, be unattainable simply through the willingness of some customers to pay higher prices for such "convenience goods," both of which conditions are likely to be met in very limited circumstances.[56]

RPM also may be a superior enforcement mechanism in contracts for the provision of services at the time of sale or post-sale, such as parking space, installation, warranty, or repair services that are not subject to free riding, as shown by Bolton and Bonanno and others.[57] Murphy and Klein similarly argue that specific contract provisions requiring point-of-sale services are infeasible and inefficient given the high cost of monitoring whether retailers comply with them.[58] On the other hand, by preventing markdowns and allowing dealers to share the manufacturer's rents, RPM creates strong incentives for retailers to provide such services.[59]

Seeking further to extend the service-encouragement account of RPM, Klein and others argued recently that retailers lack sufficient incentives to effectively promote a manufacturer's products even absent

55. BASIL S. YAMEY, THE ECONOMICS OF RESALE PRICE MAINTENANCE 49–53 (1954) (suggesting the outlets hypothesis as one account of RPM); J.R. Gould & L.E. Preston, *Resale Price Maintenance and Retail Outlets*, 32 ECONOMICA 302, 308–11 (1965) (offering a model where RPM increases the number of outlets and overall output).

56. *See* Robert H. Bork, *A Reply to Professors Gould and Yamey*, 76 YALE L.J. 731, 733–34 (1967) (detailing the various assumptions required for the outlet hypothesis to hold); Gould & Preston, *supra* note 55, at 311 (noting the limitations of their own model). *See generally* 8 AREEDA & HOVENKAMP, *supra* note 14, ¶ 1615d, at 192–95 (providing a detailed analysis of the outlets account and its severe limitations). Notably, however, at least one case of RPM appears to fit the outlets hypothesis better than alternative RPM accounts. *See In re* Corning Glass Works, 85 F.T.C. 1061 (1975), *modifying* 82 F.T.C. 1675 (1973), *aff'd sub nom.* Corning Glass Works v. FTC, 509 F.2d 293 (7th Cir. 1975); Pauline M. Ippolito & Thomas R. Overstreet, Jr., *Resale Price Maintenance: An Economic Assessment of the Federal Trade Commission's Case Against the Corning Glass Works*, 39 J.L. & ECON. 285 (1996) (examining the details of *In re Corning Glass Works* and its fit with the various accounts of RPM).

57. *See* Patrick Bolton & Giacomo Bonanno, *Vertical Restraints in a Model of Vertical Differentiation*, 103 Q.J. ECON. 555, 555 (1988) (showing that RPM, inter alia, is superior to simple linear price contracts in inducing pre- and post-sale services, although it does not restore vertical efficiency); Thomas A. Piraino, Jr., *The Case for Presuming the Legality of Quality Motivated Restrictions on Distribution*, 63 NOTRE DAME L. REV. 1, 30–31 (1988); *see also* Cont'l T.V., Inc. v. GTE Sylvania, Inc., 433 U.S. 36, 55 (1977) (describing "service and repair facilities necessary to the efficient marketing" of a manufacturer's products as justification for vertical restraints). *But see* Grimes, *supra* note 38, at 102 ("Dealers also have a built-in incentive to provide many presale amenities because they translate directly into increased sales.").

58. *See generally* Benjamin Klein & Kevin M. Murphy, *Vertical Restraints as Contract Enforcement Mechanisms*, 31 J.L. & ECON. 265 (1988).

59. *Id.* at 285, 295.

free riding.[60] Due to the incompatible interests of manufacturers, who have much to gain from the voluntary provision of services, and retailers, who have little, there exists "a profitable opportunity for manufacturers to design distribution arrangements whereby retailers are compensated for supplying increased manufacturer-specific promotional efforts."[61]

### *C. Evidence*

The case for RPM is premised on its welfare-enhancing consequences.[62] Yet the several extant case studies that provide evidence of free riding in products such as automobiles, wallcovering, and personal computers, do not show that free riding creates detrimental economic consequences.[63]

At the same time, empirical studies also suggest that RPM can facilitate express manufacturer cartels.[64] The evidence regarding the overall effects of RPM includes both studies that compare sales and profits of manufacturers when RPM is permitted and when it is banned, and case studies of specific industries, goods, or manufacturers. The first group shows consistently that the abolition of RPM tends to lower retail profit margins and prices, sometimes also increasing output,[65] in line with the boundedly rational account we develop below.[66] Foreign country studies of RPM in jurisdictions that permit or previously permitted the practice further support the critics' view of anticompetitive effects.[67] Case studies conducted in the United States and abroad provide similar results for specific goods.[68] Notably, if RPM only raises prices without increasing

60. Benjamin Klein, *Competitive Resale Price Maintenance in the Absence of Free Riding*, 76 ANTITRUST L.J. 431, 443 (2009).

61. *Id.* at 449; *accord* Benjamin Klein & Joshua D. Wright, *The Economics of Slotting Contracts*, 50 J.L. & ECON. 421 (2007); Winter, *supra* note 48.

62. *See* Leegin Creative Leather Prods., Inc. v. PSKS, Inc., 551 U.S. 877, 889–92 (2007).

63. *E.g.*, Kenneth Kelly, *The Role of the Free Rider in Resale Price Maintenance: The Loch Ness Monster of Antitrust Captured*, 10 GEO. MASON L. REV. 327, 329–30 & nn.6–8 (1988).

64. *See, e.g.*, C-O-Two Fire Equip. Co. v. United States, 197 F.2d 489, 492 (9th Cir. 1952).

65. S. REP. NO. 94-466, at 2–3 (1975), *reprinted in* 1975 U.S.C.C.A.N. 1569, 1570–72; H.R. REP. NO. 94-341, at 1–5 (1975). These reports found that prices ranged from sixteen to nineteen percent higher in fair-trade states than in non-fair-trade states, and they estimated that the elimination of fair-trade laws would save anywhere from $2.1 to $6.5 billion. S. REP. NO. 94-466, at 2–3, *reprinted in* 1975 U.S.C.C.A.N. 1569, 1570–72; H.R. REP. NO. 94-341, at 3–4; *see also* Stanley I. Ornstein & Dominique M. Hanssens, *Resale Price Maintenance: Output Increasing or Restricting? The Case of Distilled Spirits in the United States*, 36 J. INDUS. ECON. 1 (1987); Lawrence Shepard, *The Economic Effects of Repealing Fair Trade Laws*, 12 J. CONSUMER AFF. 220 (1978) (detailing the inefficiencies of the fair trade laws and the consumer welfare gains resulting from their repeal).

66. *See infra* note 284 and accompanying text.

67. *See, e.g.*, David Flath, *Vertical Restraints in Japan*, 1 JAPAN & WORLD ECON. 187 (1989); L.A. Skeoch, *Canada*, *in* RESALE PRICE MAINTENANCE, *supra* note 20, at 23; *infra* notes 210–17 and accompanying text.

68. *See, e.g.*, William A. McEachern & Anthony A. Romeo, *Vertical Restraints in the Audio Components Industry: An Economic Analysis of FTC Intervention*, *in* IMPACT EVALUATIONS OF FEDERAL TRADE COMMISSION VERTICAL RESTRAINTS CASES 201, 232–33 (Ronald N. Lafferty et al. eds., 1984) [hereinafter IMPACT EVALUATIONS]; Sharon Oster, *The FTC v. Levi Strauss: An Analysis of the Economic Issues*, *in* IMPACT EVALUATIONS, *supra*, at 68, 73–77 (finding that, after RPM was

output, it is likely inefficient, while higher prices accompanied by increased output would indicate consumers value the added services potentially provided under RPM.[69]

Studies on price changes before and after the repeal of the fair trade laws[70] provide a glimpse into the effects of RPM agreements. For example, one study of bread prices in Washington concluded that after RPM was enjoined, retail prices dropped while output did not—suggesting that the agreement did not serve an efficient purpose.[71]

Yet RPM also has some demonstrated beneficial effects. Empirical studies summarized by the Federal Trade Commission (FTC) suggest that, though the impact of RPM varies considerably, the practice is procompetitive in some cases.[72] For example, the FTC concluded from a study of Coors beer before and after the decision to adopt RPM that the practice resulted in improved dealer services and enhanced consumer perceptions of quality.[73] In a more ambiguous case, a shoe manufacturer, Florsheim, used RPM arrangements that protected its company stores from free riding, though it may not have been revenue maximizing for the company.[74]

Ippolito's thorough empirical study of 203 litigated RPM cases between 1975 and 1982 also suggests that most uses of the practice in the sample were procompetitive,[75] concluding that "[b]ased on an analysis of the products and the types of dealers in the cases, service- and sales-enhancing theories, taken together, appear to have greater potential to explain the practices."[76] The author's own careful analysis, however, reveals that the cases likely concerned mostly procompetitive uses of RPM (insofar as they concerned minimum RPM at all) due to strong selection effects,[77] thus shedding little light on the overall prevalence of pro- versus anticompetitive RPM.[78]

abandoned as a result of the FTC's suit, consumers benefitted from lower retail prices and the company enjoyed higher profits).

69. Subject to the caveat discussed *supra* note 45.

70. For further discussion of these studies, see *infra* Part IV.A.

71. *See* THOMAS R. OVERSTREET, JR., BUREAU ECON., RESALE PRICE MAINTENANCE: ECONOMIC THEORIES AND EMPIRICAL EVIDENCE 22 n.2 (Nov. 1983), http://www.ftc.gov/be/econrpt/233105.pdf (describing the results of Andrew James McLaughlin, An Economic Analysis of Resale Price Maintenance (1979) (unpublished Ph.D. dissertation, University of California, Los Angeles) (on file with Southern Regional Library Facility, University of California)).

72. *See id.* at 160–63; *see also* Lambert, *Now What?*, *supra* note 3, at 1989 (reexamining the FTC's findings and arguing that "they cannot support the view that RPM is, more often than not, anticompetitive").

73. OVERSTREET, *supra* note 71, at 125–26.

74. *Id.* at 122–23.

75. *See* Pauline M. Ippolito, *Resale Price Maintenance: Empirical Evidence from Litigation*, 34 J.L. & ECON. 263, 266–67 (1991).

76. *Id.* at 291–92.

77. Ippolito's own account shows that the cases studied mostly concerned vertical practices other than actual minimum RPM or involved the subset of cases where RPM is likely to be particularly efficient. To wit, the data included a significant proportion of maximum RPM cases, which are irrelevant for the present analysis, as well as other cases without any allegations of actual minimum RPM (only

More recently, Peter Carstensen revisited the empirical evidence behind several canonical antitrust cases involving vertical restraints, including RPM, and found that in a number of cases the restraints served anticompetitive or strategic behavior.[79] The RPM agreements pushed by manufacturers in *United States v. Parke, Davis & Co.*,[80] for example, likely helped facilitate inefficient retail cartels.[81]

All in all, the empirical evidence shows RPM results in higher margins for retailers and higher prices for consumers. There are indications that the practice might either restrict or expand output. The empirical data also suggests that RPM has facilitated both illicit and inefficient horizontal behavior. The data does not establish clearly which outcomes—negative or positive—are more likely to occur,[82] but only indicate that a widespread use of RPM in an industry is likely to have harmful effects.

### *D. The Assumption of Manufacturer Rationality*

RPM scholarship and evidence indicate that this practice can either increase or decrease efficiency but disagree on the likely frequency and significance of its pro- versus anticompetitive manifestations. Importantly, however, following traditional economic analysis of law generally[83]

142 of 203 cases involved actual allegations of minimum RPM). *Id.* at 269 tbl.2. Moreover, because of the dynamics of case selection in litigation under the per se rule, cases with strong RPM evidence tended to settle, meaning the litigation sample represented disproportionately weak cases. This theoretical conclusion was confirmed by Ippolito's own analysis, which examined the subsample of private cases that resulted in detailed published judgments based on standard antitrust grounds and found only 11 of these 91 cases concerned minimum RPM allegations that were not objectively weak to begin with. *Id.* at 274–76 & tbl.5. Finally, and importantly for the present purposes, the study involved RPM litigation under the stringent per se approach that ruled in the years immediately following the final repeal of the fair trade laws. This legal regime exposed manufacturers employing RPM to quick condemnation and treble damages (in private actions). *Id.* at 265. Consequently, one would expect only those few, unrepresentative manufacturers who find RPM exceptionally beneficial to take the extreme risk involved in its continued illegal use. In a sample involving only non-settled and thus predominantly weak cases, however, we should not be surprised to find a significant proportion of potentially procompetitive RPM cases. *Cf.* Lester G. Telser, *Resale Price Maintenance*, *in* 3 THE NEW PALGRAVE DICTIONARY OF ECONOMICS AND THE LAW 323, 326 (Peter Newman ed., 2002) (acknowledging some of the selection effects in Ippolito's study).

78. Note that this observation does not detract from Ippolito's findings regarding the marginal effects of the per se condemnation of all RPM and related practices as applied during the period of 1975–1982. *See* Ippolito, *supra* note 75, at 279.

79. *See* Peter C. Carstensen, *The Competitive Dynamics of Distribution Restraints: The Efficiency Hypothesis Versus the Rent-Seeking, Strategic Alternatives*, 69 ANTITRUST L.J. 569, 594–606 (2001).

80. 362 U.S. 29 (1960).

81. Carstensen, *supra* note 79, at 595–96.

82. *See* OVERSTREET, *supra* note 71, at 160–64 (noting the ambiguous and varying empirical results of studies on RPM); HOWARD P. MARVEL, THE BENEFITS OF RESALE PRICE MAINTENANCE 25 (2009), http://www.ftc.gov/opp/workshops/rpm/docs/hmarvelppt0217.pdf (explaining, after summarizing empirical evidence, that prices may rise as a result of RPM, but such effects do not provide a basis for distinguishing between efficiency-enhancing and anticompetitive uses of RPM).

83. *See, e.g.*, RICHARD A. POSNER, ECONOMIC ANALYSIS OF LAW 3 (6th ed. 2003) ("The task of economics . . . is to explore the implications of assuming that man is a rational maximizer of his ends . . . ." (footnotes omitted)); STEVEN SHAVELL, FOUNDATIONS OF ECONOMIC ANALYSIS OF LAW 1–2 (2004) (discussing the role of the rationality assumption in descriptive analysis and noting that "the view taken will generally be that actors are 'rational'" and "maximize their expected utility"); Chris-

and antitrust law and economics specifically,[84] extant theories of RPM uniformly assume manufacturers are strictly rational actors, who employ only profit-maximizing RPM arrangements.[85]

For instance, RPM detractors argue that it facilitates rational, anticompetitive coordination among manufacturers or retailers.[86] Therefore, they interpret the empirical evidence showing that such arrangements sometimes increase retail prices without increasing output as indicative of such rational anticompetitive strategies.[87]

Similarly, supporters of RPM argue that manufacturers would never use this practice unless its costs were justified by the profitable retail services it encourages.[88] Otherwise, they assert, rational manufacturers would not adopt such a practice but instead would maximize profits by allowing retail-level competition to drive down prices and increase their output.[89]

Yet a substantial body of empirical evidence demonstrates that there are systematic deviations from strictly rational behavior, both at the individual level and in aggregate market outcomes.[90] In fact, Part II reveals how some of these findings make real-world manufacturers prone inefficiently and excessively to employ boundedly rational RPM, which differs from both rationally anticompetitive and rationally procompetitive manifestations of this practice.

tine Jolls et al., *A Behavioral Approach to Law and Economics*, 50 STAN. L. REV. 1471, 1481–85 (1998); Tor, *supra* note 8, at 239–41 (briefly reviewing rational actor models in law and economics).

84. *E.g.*, 1 PHILLIP E. AREEDA & HERBERT HOVENKAMP, ANTITRUST LAW: AN ANALYSIS OF ANTITRUST PRINCIPLES AND THEIR APPLICATION ¶ 113, at 140 (3d ed. 2006) ("As a general proposition business firms are (or must be assumed to be) profit maximizers . . . ."); POSNER, *supra* note 43, at ix ("[T]he issue in evaluating the antitrust significance of a particular business practice should be whether it is a means by which a rational profit maximizer can increase its profits at the expense of efficiency . . . ."); Stucke, *supra* note 7, at 514; *see also* Tor, *Entry*, *supra* note 7, at 488 (discussing the role of the rationality assumption in law and economics and providing further references).

85. In markets, rational managers and firms are assumed to maximize profits. *See* DENNIS W. CARLTON & JEFFREY M. PERLOFF, MODERN INDUSTRIAL ORGANIZATION 12–13 (4th ed. 2005) ("The standard assumption in most economic models is that the primary objective of a manager of a firm is to maximize the firm's profits."); A. MITCHELL POLINSKY, AN INTRODUCTION TO LAW AND ECONOMICS 10 (2d ed. 1989); JEAN TIROLE, THE THEORY OF INDUSTRIAL ORGANIZATION 34–35 (1988); Korobkin & Ulen, *supra* note 7, at 1053; Stucke, *supra* note 7, at 532–36.

86. *See supra* notes 39–41 and accompanying text.

87. *See supra* notes 39–41 and accompanying text.

88. *See supra* notes 46–48 and accompanying text.

89. *See* 1 AREEDA & HOVENKAMP, *supra* note 84, ¶ 113, at 140–43; POSNER, *supra* note 43, at ix; MARVEL, *supra* note 82, at 4 ("No manufacturer will *ever* wish unilaterally to keep its margins high unless it sells *more* in consequence of those higher margins.").

90. *See, e.g.*, Colin Camerer, *Individual Decision Making*, *in* THE HANDBOOK OF EXPERIMENTAL ECONOMICS 587 (John H. Kagel & Alvin E. Roth eds., 1995).

## II. BOUNDEDLY RESALE PRICE MAINTENANCE

### *A. Real Manufacturers*

Despite its centrality in RPM discourse, there is reason to believe that the rationality assumption overstates the reality of manufacturers' judgment and decision behavior. Specifically, for RPM always to be profit maximizing, manufacturers must successfully accomplish a series of challenging judgment and decision tasks under uncertainty. First, before making any decisions, rational manufacturers must judge the expected outcomes of retail price cutting in their distribution system.[91] These are an aggregate function of the various benefits and costs of every potential consequence of price cutting to the manufacturer, multiplied by its probability.[92] To reach this determination, a manufacturer must obtain and analyze a large quantity of information about its retailers, their distribution practices, and the interactions between these practices and the operations of its own business. This information, however, is only partly available to the manufacturer or even to its retailers.[93]

Second, after determining the overall expected outcomes of price cutting, manufacturers must also decide whether and how to address it.[94] This choice should be based on the relative benefits and costs of alternative distribution arrangements because the dangers posed by price cutting can often be addressed by various means beyond RPM, such as territorial allocation, incentive contracts, and others.[95] Ultimately, the rational manufacturer employs RPM always and only when it is profit maximizing.[96]

Importantly, however, there is evidence that real manufacturers—like other decision makers—are not perfectly rational.[97] Instead, they possess limited cognitive resources and are affected by motivation and

91. All judgments are essentially probabilistic. *See* Tor, *supra* note 8, at 244–46; *see also* Robyn M. Dawes, *Behavioral Decision Making and Judgment*, *in* 1 THE HANDBOOK OF SOCIAL PSYCHOLOGY 497 (Daniel T. Gilbert et al. eds., 4th ed. 1998).

92. Rational action requires maximization of subjective expected utility and, in the case of decision making in markets, typically expected monetary outcomes. *See* MARK BLAUG, THE METHODOLOGY OF ECONOMICS: OR HOW ECONOMISTS EXPLAIN 229–30 (2d ed. 1992); JOHN VON NEUMANN & OSKAR MORGENSTERN, THEORY OF GAMES AND ECONOMIC BEHAVIOR 617–28 (2d ed. 1947) (providing a technical appendix of expected utility theory); *see also* sources cited *supra* notes 72–82.

93. *See* Hovenkamp, *supra* note 40, at 534.

94. *See* Arnold C. Cooper et al., *Entrepreneurs' Perceived Chances of Success*, 3 J. BUS. VENTURING 97, 99–100, 106 (1988); Tor, *supra* note 8, at 257–72; *see also* Dawes, *supra* note 91, at 497–99.

95. *See infra* note 174 and accompanying text (briefly discussing alternatives to RPM and citing some further references).

96. *Cf.* 8 AREEDA & HOVENKAMP, *supra* note 14, ¶ 1633d, at 381–85 (describing the issues a court seeking to determine whether a given instance of RPM serves a legitimate function must ascertain).

97. For a discussion of the possible advantages of manufacturing managers, who operate within firms, in market settings, over individual decision makers, see *infra* Part III.B–D.

emotion—that is, they are "boundedly rational."[98] To function in a complex world, manufacturers use mental and emotional heuristics when making judgments under uncertainty and rely on situational cues to guide their choices.[99] While highly adaptive and often useful,[100] however, heuristic judgment and cue-dependent choice also lead decision makers systematically and predictably to deviate from strictly rational behavior.[101]

More specifically, the empirical evidence amassed by behavioral decision researchers suggests that a confluence of psychological processes biases manufacturers toward unduly negative judgments of the expected harms of, and an aversion to, retail price cutting on the one hand and an excessive preference for RPM as the means for addressing price-cutting on the other.[102] The following sections examine these judgment and decision processes, showing how they converge to lead some manufacturers to employ RPM excessively and inefficiently.

98. *See supra* note 8.

99. *See, e.g.*, Tor, *supra* note 8, at 242.

100. *See, e.g.*, BOUNDED RATIONALITY: THE ADAPTIVE TOOLBOX (Gerd Gigerenzer & Reinhard Selten eds., 2001); JOHN W. PAYNE ET AL., THE ADAPTIVE DECISION MAKER 2 (1993) (developing the thesis that the use of heuristics and varying decision strategies "is an adaptive response of a limited-capacity information processor to the demands of complex decision tasks").

101. *See generally* Jon D. Hanson & Douglas A. Kysar, *Taking Behavioralism Seriously: Some Evidence of Market Manipulation*, 112 HARV. L. REV. 1420 (1999) (presenting case studies of consumer and firm behavior that systematically produce market outcomes that deviate from rational choice model predictions); Jolls et al., *supra* note 83, at 1481–85 (identifying testable predictions stemming from behavioral economic theory in which economic factors may display systematic deviations from rational behavior); Korobkin & Ulen, *supra* note 7, at 1126–38 (discussing deviations from profit-maximizing behavior, based on social norms, fairness concerns, and collective action).

102. *See infra* Part II.D.

TABLE 1
BOUNDEDLY RATIONAL RPM—THE BASIC PROCESSES

| JUDGMENT OR DECISION PROCESS | BEHAVIORAL EFFECT | APPLICATION | CONSEQUENCE |
|---|---|---|---|
| *Anchoring* | Insufficient adjustment from biased anchor | Insufficiently adjusting judgments of the incidence and harm of price-cutting from biased information | OVER-ESTIMATING THE EXPECTED HARM FROM PRICE-CUTTING |
| *Judgment by Availability* | Events that are easier to recall appear more common | Overestimating the frequency of harmful price-cutting based on a few vivid events | |
| | Dramatic turns-of-events are easier to imagine and thus appear more likely | Making inflated predictions of harmful price-cutting | |
| *Judgment by Representativeness* | Neglect of prior probabilities (base rates) | Too much weight given to anecdotal evidence of specific discounting events | |
| | Insensitivity to sample size | Judging as typical the characteristics of a small sample of discounting anecdotes | |
| | Insensitivity to predictability (reliability) | Overweighting unreliable information | |
| *Loss Aversion* | Losses vis-à-vis the status quo are more painful than comparable gains are pleasurable | Expending resources that are greater than the expected harm from price-cutting to prevent potential losses | PRICE-CUTTING AVERSION |
| *Fairness Concerns* | Willingness to sacrifice financial value to prevent unfair outcomes | Engaging in costly prevention efforts of retailers' free-riding behaviors that are subjectively viewed as unfair | |

*Continued on next page*

TABLE 1—*Continued*

| JUDGMENT OR DECISION PROCESS | BEHAVIORAL EFFECT | APPLICATION | CONSEQUENCE |
|---|---|---|---|
| *Reason-Based Choice* | Seeking an alternative that dominates other alternatives with respect to a single, most important, attribute | Overweighting the elimination or price-cutting per se (as opposed to addressing its potential consequences) | A PRO-RPM PREFERENCE |
| *Compatibility Effect* | Preference for solutions that are more directly compatible with a problem | | |
| *Certainty Effect* | Elimination of risk valued more highly than its reduction by a comparable magnitude | Overestimating the benefits of RPM | |
| *Ambiguity Aversion* | Preference for well-defined risks (or costs) over ambiguous ones | | |
| *Managerial Risk Attitudes* | Excessive effort to control business risks | | |
| | Egocentric overestimation of managerial ability and skill | | |

### *B. Overestimating the Expected Harm from Price-Cutting*

#### *1. Anchoring on Biased Information*

To determine the expected harm of price-cutting, manufacturers must collect data on both its prevalence and its consequences in their distribution system.[103] Yet manufacturers may find retail-level conduct, such as price-cutting, difficult to identify; they can engage in costly policing efforts, but still obtain only partial evidence. After identifying instances of price-cutting, moreover, the manufacturer must determine their effects, which vary depending on the practice and its specific circumstances. Price cuts are used both in the potentially harmful free-riding (and maybe loss-leading) cases and in common, output-expanding, short-term discounts of various kinds, clearance sales, and other beneficial forms of price competition. Indications of the negative nature of a given practice are occasionally available,[104] yet frequently are inconclu-

103. Note that even obtaining full information on a representative sample of cases from which manufacturers might extrapolate overall effects may prove very difficult.

104. For instance, a prolonged practice could be a negative indication; and so would be its recurrence. Similarly, when a practice involves only the product or products of a specific manufacturer, loss leading might be indicated (though not necessarily), while a practice that involves similar products of competing manufacturers is more compatible with free riding (or other occasions of general discounts). Where a manufacturer can verify that certain pre-sale services are not provided free riding is

sive.[105] Consequently, the manufacturer may have to rely, at least in part, on dealers' complaints, local advertising or media reports—to the extent available—not just to identify price-cutting events but also to determine their purpose and effect.[106]

Dealers' complaints and public information, however, are likely to be biased, overstating both the frequency of price-cutting and its severity. Complaining dealers clearly have an incentive to dramatize price-cutting, which harms their profits regardless of its possible procompetitive benefits. Other manufacturers and trade organizations are also likely to exaggerate the occurrence and negative impact of loss leading and free riding to legitimate distribution restraints that tend to soften competition.[107] Similarly, media reports of price-cutting occasions may dramatize their magnitude and effect. After all, discounting retailers, who are trying to attract customers, try to publicize their price-cutting, while those complaining competitors seek to highlight the damage these practices cause to distribution.[108]

Of course, manufacturers may well be aware of the potential biases in their information sources. Studies show, however, that public risk perceptions reflect media biases, even though the media's tendency to dramatize and emphasize are rare, extreme occurrences are well known.[109] Moreover, even a manufacturer who is fully aware of the bias in the data is unlikely to sufficiently discount his information due to *anchoring*.

Anchoring occurs when people make estimates by starting from an initial value, based on information provided by the environment or a par-

indicated, but monitoring services are difficult and costly. *See supra* notes 46–48 and accompanying text.

105. Such as the intentions of the retailer, the latter's profit margins on the manufacturer's products and on other products, and the extent to which he provides relevant services. *Cf.* 8 AREEDA & HOVENKAMP, *supra* note 14, ¶ 1633d1, at 382 ("Unfortunately, there is no practical way to quantify the actual . . . detriments or benefits of resale price maintenance in a particular case in order to measure whether the net balance is plus or minus.").

106. *See, e.g.*, Monsanto Co. v. Spray-Rite Serv. Corp., 465 U.S. 752, 765–66 (1984) (discussing the viability of dealer complaints versus publicly available market evidence); *see also* Bus. Elecs. Corp. v. Sharp Elecs. Corp., 485 U.S. 717 (1988); Morrison v. Murray Biscuit Co., 797 F.2d 1430, 1440 (7th Cir. 1986) ("As long as the supplier's motive is . . . only to maintain his system of lawful nonprice restrictions, he can terminate noncomplying dealers without fear of antitrust liability even if he learns about the violation from dealers whose principal or perhaps only concern is with protecting their prices."); 7 AREEDA & HOVENKAMP, *supra* note 27, ¶¶ 1454–1456, at 137–53.

107. *See* Cooper et al., *supra* note 42, at 293; Rey & Stiglitz, *supra* note 42, at 432. Moreover, the interaction between manufacturers who, for the reasons explored below, independently overestimate the problems of price-cutting reinforces this bias.

108. *See, e.g.*, *Walmart Expands Low-Cost Prescription Drug Program*, BUS. J. (Aug. 18, 2009, 10:03 AM), http://www.bizjournals.com/milwaukee/stories/2009/08/17/daily25.html (discussing Walmart's well-advertised prescription drug program and its affect on competitors now choosing to offer similar services); *see also* Joel E. Urbany & Peter R. Dickson, *Competitive Price-Cutting Momentum and Pricing Reactions*, 2 MKTG. LETTERS 393 (1991) (investigating the phenomenon of "price-cutting momentum" of competitive reactions to initial price-cutting decisions by examining retail grocery pricing recommendations).

109. *See, e.g.*, Paul Slovic et al., *Facts Versus Fears: Understanding Perceived Risk*, *in* JUDGMENT UNDER UNCERTAINTY: HEURISTICS AND BIASES 463, 467–68 (Daniel Kahneman et al. eds., 1982) [hereinafter JUDGMENT UNDER UNCERTAINTY].

tial computation, and then adjust that estimate to reach a final answer.[110] In general, this intuitive, often unconscious, strategy reflects a logical use of the available data, although the quality of the approximation depends on the validity of the anchor. More problematically, however, research shows that adjustments typically are insufficient, so that different starting points lead to different estimates that are biased toward the initial value.[111] More importantly, insufficient adjustment occurs even for anchors that are obviously irrelevant, patently wrong, biased, or extreme.[112]

For anchoring to occur, decision makers must note the anchor but need not be aware they are anchoring on it.[113] In fact, recent studies have shown anchoring operates even for clearly incidental anchors, with the numbers on athletes' clothing biasing estimates of their performance; a product's model number influencing estimates of the proportion of sales in the domestic market; and even whether a restaurant was named "Studio 17" or "Studio 97" biasing estimates of how much participants would dine there.[114]

Significantly, anchoring also affects professional decision makers, such as accountants, finance executives, and real-estate brokers in their domain of expertise.[115] All in all, manufacturing managers are likely to anchor their estimates on the available information, with insufficient adjustment to account for the limitations and biases inherent in their sources and a resulting overestimation of the frequency of price-cutting as well as its negative consequences.[116]

110. Nicholas Epley & Thomas Gilovich, *When Effortful Thinking Influences Judgmental Anchoring: Differential Effects of Forewarning and Incentives on Self-Generated and Externally Provided Anchors*, 18 J. BEHAV. DECISION MAKING 199, 209 (2005); Amos Tversky & Daniel Kahneman, *Judgment Under Uncertainty: Heuristics and Biases*, *in* JUDGMENT UNDER UNCERTAINTY, *supra* note 109, at 3, 14–18.

111. *See, e.g.*, Paul Slovic & Sarah Lichtenstein, *Comparison of Bayesian and Regression Approaches to the Study of Information Processing in Judgment*, 6 ORGANIZATIONAL BEHAV. & HUM. PERFORMANCE 649 (1971); Tversky & Kahneman, *supra* note 110, at 14–18.

112. Tversky & Kahneman, *supra* note 110, at 14.

113. For one review of anchoring conditions, see Gretchen B. Chapman & Eric J. Johnson, *Incorporating the Irrelevant: Anchors in Judgments of Belief and Value*, *in* HEURISTICS AND BIASES: THE PSYCHOLOGY OF INTUITIVE JUDGMENT 120, 123–26 (Thomas Gilovich et al. eds., 2002) [hereinafter HEURISTICS AND BIASES]. *See also* Nicholas Epley & Thomas Gilovich, *Putting Adjustment Back in Anchoring and Adjustment Heuristic: Differential Processing of Self-Generated and Experimenter-Provided Anchors*, 12 PSYCHOL. SCI. 391, 391–92 (2001).

114. Clayton R. Critcher & Thomas Gilovich, *Incidental Environmental Anchors*, 21 J. BEHAV. DECISION MAKING 241 (2008).

115. *See, e.g.*, Edward J. Joyce & Gary C. Biddle, *Anchoring-and-Adjustment in Probabilistic Inference in Auditing*, 19 J. ACCOUNTING RES. 120 (1981) (accountants); Gregory B. Northcraft & Margaret A. Neale, *Experts, Amateurs, and Real Estate: An Anchoring and Adjustment Perspective on Property Pricing Decisions*, 39 ORGANIZATIONAL BEHAV. & HUM. DECISION PROCESSES 84 (1987) (real estate brokers); Zur Shapira & Itzhak Venezia, *Patterns of Behavior of Professionally Managed and Independent Investors*, 25 J. BANKING & FIN. 1573 (2001) (finding an anchoring-related disposition effect in stock trading for both individual investors and, although to a lesser degree, investment firms); *see also* Critcher & Gilovich, *supra* note 114, at 243–45 (finding in Study 1 that anchoring effects were not qualified by participants' expertise in the relevant domain).

116. *See also infra* note 139 and accompanying text (discussing the limited effect of disclosure of advisors' conflicts of interest on advisees' judgments of the advice given by the former).

### 2. *Availability Biases in Recall and Construction*

The effects of biased anchors and insufficient adjustment are exacerbated by the availability heuristic, which is often used to assess the frequency of a class or the probability of events.[117] Judgment by availability relies on people's better and faster recall of instances of large classes than of less common classes; on their finding it easier to imagine likely occurrences than unlikely ones; and on the reinforcement of associative mental connections when two events frequently co-occur.[118]

Availability-based judgments are rapid and effortless; decision makers are therefore usually unaware of the processes they use to reach these judgments.[119] Judgments by availability also generate predictable errors, for example, because some variables impact availability but not probability and frequency. Thus, factors that make instances easier to retrieve without changing their true probability lead to the overestimation of such instances in availability-driven judgments.[120] To illustrate, people hold reasonable estimates of the relative lethality of various potential causes of death (e.g., motor vehicle accidents, cancer). At the same time, they systematically misestimate the frequency of those death causes that tend to be under- or overpublicized.[121]

The relevance of availability-based judgments for manufacturers' estimates is apparent: insofar as their information provides a biased sample of price-cutting events and their vivid and salient negative effects,[122]

117. Tversky & Kahneman, *supra* note 110, at 11–14; *see also* Sefa Hayibor & David M. Wasieleski, *Effects of the Use of the Availability Heuristic on Ethical Decision-Making in Organizations*, 84 J. BUS. ETHICS 151 (2009); Amos Tversky & Daniel Kahneman, *Availability: A Heuristic for Judging Frequency and Probability*, *in* JUDGMENT UNDER UNCERTAINTY, *supra* note 109, at 163 [hereinafter Tversky & Kahneman, *Availability*] (exploring different types of judgments by availability).

118. Loren J. Chapman & Jean P. Chapman, *Illusory Correlation as an Obstacle to the Use of Valid Psychodiagnostic Signs*, 74 J. ABNORMAL PSYCHOL. 271 (1969); Tversky & Kahneman, *supra* note 110, at 13. When judging by availability, therefore, individuals substitute the ease of mental retrieval, construction, or association for a direct estimation of the actual numerosity of a class, the likelihood of an event, or frequency at which events co-occur. Tversky & Kahneman, *supra* note 110, at 13–14; *see also* Norbert Schwarz & Leigh Ann Vaughn, *The Availability Heuristic Revisited: Ease of Recall and Content of Recall as Distinct Sources of Information*, *in* HEURISTICS AND BIASES, *supra* note 113, at 103, 118 (disentangling two potential mechanisms underlying the effects of availability and concluding that ease of recall is the mechanism of more general relevance).

119. *See* Baruch Fischhoff et al., *Evolving Judgments of Terror Risks: Foresight, Hindsight, and Emotion*, 11 J. EXPERIMENTAL PSYCHOL.: APPLIED 124, 126, 135 (2005).

120. *E.g.*, Tversky & Kahneman, *Availability*, *supra* note 117, at 164.

121. Paul Slovic et al., *Rating the Risks*, *in* THE PERCEPTION OF RISK 104, 107, 111–19 (Paul Slovic ed., 2000). Accidents are overestimated, being judged to cause as many fatalities as diseases, while the latter in fact cause about sixteen times more deaths. *Id.* Similarly, the risk of homicide is dramatically overestimated, while the risk of death by stroke is underestimated. *Id.* In general, overestimated causes of death tend to be more dramatic and sensational, and thus both heavily publicized by the media and easier to recall. Underestimated risks, on the other hand, tend to be unspectacular events, which claim one victim at a time, are common also in non-fatal form, and do not receive much publicity. Slovic et al., *supra* note 109, at 465–72.

122. The natural salience of harmful price-cutting in manufacturers' minds is further reinforced by individuals' preoccupation "with highly desirable outcomes . . . or with highly undesirable outcomes. . . . Consequently, availability provides a mechanism by which occurrences of extreme utility

manufacturers are likely to excessively recall these events and thus overestimate both the probability of price-cutting and the frequency of its harmful manifestations.

Moreover, following recall of specific events, manufacturers may also rely on availability for mental construction, especially when attempting to predict the overall likelihood of price-cutting and its effects.[123] People commonly make an effort to recall relevant instances of an occasion (e.g., how many times did it snow last March?) then supplement the recollection by constructing a scenario. In this scenario they try to account for whatever aspects of the case at hand they consider important if those are unique or simply not "covered" by the information retrieved from memory (e.g., what is the likelihood it will snow this March, given that the winter has been especially mild?).[124] In the present case, therefore, manufacturers may evaluate the overall effect of price-cutting by developing different scenarios of its potential consequences.

When engaging in mental construction, however, people tend to rely on a *simulation heuristic*, a variant of availability.[125] The simulation can either start from existing conditions (e.g., how well will Ann and Joe, who never met before, get along together?) or account for hypothetical ones that might arise under a certain contingency (e.g., if Ann and Joe get along together well, what is likely to happen?) then proceed to produce different potential outcomes.[126]

Importantly, however, the ease with which the simulation reaches a particular result is used to judge the propensity of the real-life situation under consideration to produce that state.[127] Consequently, the simulation heuristic leads to a bias in favor of scenarios in which dramatic events mark causal transitions.[128] This finding is not surprising when considering how much more imaginable dramatic turns-of-events are than those which involve minor, incremental changes. It implies, however, that dramatic scenarios in which loss leading would lead to significant

(or disutility) may appear more likely than they actually are." Tversky & Kahneman, *Availability*, *supra* note 117, at 178.

123. Daniel Kahneman & Amos Tversky, *The Simulation Heuristic*, *in* JUDGMENT UNDER UNCERTAINTY, *supra* note 109, at 201, 202–03.

124. *See* Tversky & Kahneman, *Availability*, *supra* note 117, at 166, 175–78.

125. Kahneman & Tversky, *supra* note 123, at 201.

126. *Id.*

127. *Id.*

128. In one study, for instance, participants were presented with the story of a person who had died in a car crash, including a description of the events leading to the man's death. They were then asked to imagine a change in the story that would have avoided the death. All participants responded by creating scenarios that changed one of the major events that led to the accident, such as the man taking his usual route home rather than the unusual one he has taken in the story, rather than introduce a minor—but far more likely—change in the story (such as having the man arrive just a few seconds earlier or later at the intersection where the accident would occur). *Id.* at 203–07. Another process that contributes to this bias is people's tendency to prefer coherent scenarios and overestimate their likelihood, and at the same time to underestimate the aggregate effect of the numerous factors that might prevent the realization of a dramatic, internally coherent scenario. *Id.* at 206–08.

losses to the manufacturer by debasing his brand name, for instance, would seem more probable than they really are.

### *3. The Consequences of Judgment by Representativeness*

Judgments by representativeness are also likely to contribute to manufacturers' overestimation of the expected harm of price-cutting. Representativeness is used to assess the likelihood that an instance or an event belongs to a certain class, or has originated from or caused another event, substituting the degree to which the event resembles the class for the actual likelihood that it belongs to that class.[129] Relying on representativeness, for instance, decision makers may judge the guilt of a criminal defendant or a suspect based on the degree to which he resembles the relevant class of offenders.[130]

As in the case of availability, judgments by similarity or representativeness are both relatively easy and typically sensible, because these variables tend to correlate with the actual probability of judged events. The common reliance on this proxy, however, also leads to systematic errors because various factors affect probability but not similarity, and vice versa.[131] Three of these representativeness-driven errors in particular promote manufacturers' overestimation of the expected harm from price-cutting: the neglect of the base rate (or prior probability) of substantially damaging outcomes; the enhanced impact of a small number of instances on the manufacturers' perception of the overall effects of price-cutting; and the failure fully to account for the unreliability of the evidence of these practices' consequences.

Base rate frequencies affect probability but not similarity and are therefore often neglected when specific evidence is available.[132] This

129. *See* Daniel Kahneman & Amos Tversky, *Subjective Probability: A Judgment of Representativeness*, *in* JUDGMENT UNDER UNCERTAINTY, *supra* note 109, at 32, 38–47 [hereinafter Kahneman & Tversky, *Subjective Probability*]; *see also* Amos Tversky & Daniel Kahneman, *Judgments of and by Representativeness*, *in* JUDGMENT UNDER UNCERTAINTY, *supra* note 109, at 84, 85–90 (elaborating on the representativeness relation).

130. *E.g.*, Russell D. Covey, *Criminal Madness: Cultural Iconography and Insanity*, 61 STAN. L. REV. 1375, 1381 (2009) ("If both judges' and jurors' initial exposure to criminal madness is through popular media, their perceptions about the facts in individual cases are likely to be influenced by those earlier exposures."); *cf.* Chris Guthrie et al., *Inside the Judicial Mind*, 86 CORNELL L. REV. 777, 805 (2001) ("When people make categorical judgments (e.g., assessing the likelihood that a criminal defendant is guilty), they tend to base their judgments on the extent to which the evidence being analyzed (e.g., the defendant's demeanor) is representative of the category.").

131. *See* Maya Bar-Hillel, *Studies of Representativeness*, *in* JUDGMENT UNDER UNCERTAINTY, *supra* note 109, at 69, 69; Maya Bar-Hillel & Efrat Neter, *How Alike Is It? Versus How Likely Is It?: A Disjunction Fallacy in Probability Judgments*, *in* HEURISTICS AND BIASES, *supra* note 113, at 82, 82–84; Kahneman & Tversky, *Subjective Probability*, *supra* note 129, at 47.

132. Kahneman & Tversky, *Subjective Probability*, *supra* note 129 (describing various additional variables that impact probability but not representativeness, including sample size, predictability, and more). To illustrate, where the base-rate frequency of lawyers among one hundred participants in a personality test study is thirty percent, with engineers comprising the other seventy percent, any randomly selected test is more likely to belong to an engineer than to a lawyer. Because similarity is not affected by base rates, however, people judge a brief description of a test-taking individual that more

phenomenon can persist even for worthless or irrelevant evidence, only disappearing when no information is available[133] or when the information is nonspecific, impoverished or incoherent.[134] In real-life situations, however, evidence is rarely unavailable and the relevant evidence is usually vivid, specific,[135] and causally related to the subject of the evaluation.[136] Consequently, the neglect of prior probabilities is common.

This neglect suggests that assessments of the harm caused by the retailers' practices would be excessively based on the anecdotal information manufacturers have, without proper regard to this data's prior probability. This information is vivid, as well as specifically and causally related to the alleged effects on the manufacturers. The potentially low prior probability of harmful price-cutting and the low incidence of those salient occasions that allegedly cause significant harm would not be sufficiently taken into account.

Representativeness also leads to insensitivity to sample size in judgments of posterior probability.[137] Thus, decision makers overweigh the characteristics displayed by the evidence they have, neglecting the statistical implications of sample size (or the amount of evidence)—namely, that large samples are likely to display the actual characteristics of the population, while small samples are more likely to be uncharacteristic. Therefore, after learning of a few cases involving supposedly harmful price-cutting, manufacturers may believe such occurrences are far more typical than they actually are.

Finally, representativeness also causes insensitivity to predictability–that is, to the reliability of the source of the information.[138] Such insensitivity means, however, that manufacturers' estimates may be based on the strength or extremeness of the available evidence of price-cutting, without sufficient regard to its weight or credence. Moreover, recent research has specifically shown that even decision makers who are aware of

closely resembles the stereotype of a lawyer than that of an engineer as highly likely to belong to a lawyer, regardless of the two professions' base rates in the study. Daniel Kahneman & Amos Tversky, *On the Psychology of Prediction*, *in* JUDGMENT UNDER UNCERTAINTY, *supra* note 109, at 48, 53–57 [hereinafter Kahneman & Tversky, *Psychology of Prediction*]; *cf.* Maya Bar-Hillel, *The Base Rate Fallacy Controversy*, *in* DECISION MAKING UNDER UNCERTAINTY 39, 39–43 (Roland W. Scholz ed., 2d ed. 1989).

133. Kahneman & Tversky, *Psychology of Prediction*, *supra* note 132, at 56.

134. Amos Tversky & Daniel Kahneman, *Evidential Impact of Base Rates*, *in* JUDGMENT UNDER UNCERTAINTY, *supra* note 109, at 153, 158.

135. Richard E. Nisbett et al., *Popular Induction: Information Is Not Necessarily Informative*, *in* JUDGMENT UNDER UNCERTAINTY, *supra* note 109, at 101, 111–12.

136. Bar-Hillel, *supra* note 132, at 45–48.

137. That is, the probability that a sample was drawn from a particular population. Tversky & Kahneman, *supra* note 110, at 5–7.

138. *Id.* at 8. Additional factors involved in the creation of this illusion were identified in *id.* at 9.

their advisors' conflicts of interest—as is likely the case with the manufacturers' sources—do not sufficiently discount their advice.[139]

### *C. Price-Cutting Aversion*

Manufacturers' tendency to overestimate the expected harm of price-cutting is reinforced by two decision phenomena—loss aversion and fairness-driven behavior—that make them particularly averse to the negative consequences of price-cutting and thus more likely than rational manufacturers to prevent their occurrence.

#### *1. Loss Aversion*

Rational manufacturers would not have opposed retailers' price-cutting unless its expected harms were to outweigh its expected benefits.[140] Their preferences, moreover, would not depend on their current practices or market position,[141] except insofar as these factors affect expected profits.[142] In contrast, real-world decision makers typically view prospects as either gains or losses, evaluating outcomes vis-à-vis a psychologically neutral reference point such as their current position, a tendency that often creates a status quo bias.[143] They also exhibit loss aversion, finding the pain associated with the negative prospect of a potential loss (e.g., losing $1000) far stronger than the pleasure of the positive prospect of a comparable gain (i.e., $1000).[144]

Loss aversion and the status-quo bias have been documented extensively.[145] In a famous early demonstration, one-half of a group of Cornell students were given Cornell coffee mugs.[146] All participants were then

139. *See* Daylian M. Cain et al., *The Dirt on Coming Clean: Perverse Effects of Disclosing Conflicts of Interest*, 34 J. LEGAL STUD. 1 (2005). Note that this effect may have also been reinforced by anchoring on the initial advice.

140. More precisely, net present value (NPV). *See* Tor, *Entry*, *supra* note 7, at 497–502 (discussing NPV assessments under perfect rationality and bounded rationality).

141. *See* Boyan Jovanovic, *Selection and the Evolution of Industry*, 50 ECONOMETRICA 649 (1982); Tor, *Entry*, *supra* note 7, at 498–99.

142. *See generally* Richard H. Thaler et al., *The Endowment Effect, Loss Aversion, and Status Quo Bias*, *in* THE WINNER'S CURSE: PARADOXES AND ANOMALIES OF ECONOMIC LIFE 63 (Richard H. Thaler ed., 1994) [hereinafter WINNER'S CURSE].

143. *See, e.g.*, Daniel Kahneman et al., *Anomalies: The Endowment Effect, Loss Aversion, and Status Quo Bias*, 5 J. ECON. PERSP., no. 1, 1991, at 193, 197–203.

144. For the original formulation of prospect theory in general, and loss aversion specifically, see Daniel Kahneman & Amos Tversky, *Prospect Theory: An Analysis of Decision Under Risk*, 47 ECONOMETRICA 263 (1979). *See also* Amos Tversky & Daniel Kahneman, *Rational Choice and the Framing of Decisions*, *in* DECISION MAKING: DESCRIPTIVE, NORMATIVE, AND PRESCRIPTIVE INTERACTIONS 167 (David E. Bell et al. eds., 1988) [hereinafter Tversky & Kahneman, *Rational Choice*]; Amos Tversky & Daniel Kahneman, *Loss Aversion in Riskless Choice: A Reference-Dependent Model*, 106 Q.J. ECON. 1039 (1991) [hereinafter Tversky & Kahneman, *Loss Aversion*]. For discussion of research on closely related phenomena see Thaler et al., *supra* note 142.

145. *See, e.g.*, Kahneman et al., *supra* note 143, at 197–99 (documenting and surveying literature surrounding status quo bias); Tor, *supra* note 8, at 264–68. For a description of some of these experiments, see Thaler et al., *supra* note 142, at 64–68.

146. Kahneman et al., *supra* note 143, at 195.

asked to examine a mug and indicate a price for which they would be willing to sell or buy one.[147] The researchers then conducted a series of markets in which mugs were traded according to the parties' valuations.[148]

Economic theory predicts that about half the mugs would be traded since about half the subjects who were given a mug would value it more than those who were not given one, while the other half would value it less and therefore trade it.[149] In fact, however, only about ten percent of the mugs were traded.[150] Other studies revealed that the reluctance of potential sellers to sell (as reflected in relatively high valuations), rather than potential buyers' reluctance to buy, caused the low volume of trade.[151]

In another experimental illustration, participants given a number of investment options and an existing allocation of investments tended to make choices that retained the existing allocation.[152] Importantly, similar findings appear in real-world settings, where employees who are offered a variety of investment options for their pension savings tend to allocate their contributions equally among the set of options their institution happens to provide.[153] More generally, further studies provide diverse field evidence, from the equity premium in financial markets, through downward-sloping labor supply by New York cab drivers, to consumers who do not reduce consumption following bad-income news, to name but a few examples.[154]

Yet loss-averse manufacturers will engage in costly preventive efforts, expending resources well beyond the expected financial harm they believe price-cutting will inflict upon them, to preserve the status quo and prevent the painful prospect of a potential loss from materializing.[155]

147. *Id.*

148. *Id.*

149. *See* Daniel Kahneman et al., *Experimental Tests of the Endowment Effect and the Coase Theorem*, 98 J. POL. ECON. 1325, 1328 (1990).

150. *Id.* at 1332 tbl. 2. This occurred because the median mug owner was unwilling to sell for less than $5.25, while the median mug buyer was unwilling to pay more than $2.25 to $2.75. *Id.*

151. Thaler et al., *supra* note 142, at 65–66.

152. William Samuelson & Richard Zeckhauser, *Status Quo Bias in Decision Making*, 1 J. RISK & UNCERTAINTY 7, 12–14 (1988).

153. Shlomo Benartzi & Richard H. Thaler, *Naive Diversification Strategies in Defined Contribution Saving Plans*, 91 AM. ECON. REV. 79 (2001) (providing varied evidence for this – naive diversification rule, and discussing its underlying causes and economic implications).

154. *See* Colin F. Camerer, *Prospect Theory in the Wild: Evidence from the Field*, *in* ADVANCES IN BEHAVIORAL ECONOMICS 148 (Colin F. Camerer et al. eds., 2004) (collecting and reviewing numerous field studies evidencing loss aversion and related phenomena).

155. *Cf.* James A. Fanto, *Quasi-Rationality in Action: A Study of Psychological Factors in Merger Decision-Making*, 62 OHIO ST. L.J. 1333, 1405–07 (2001); Robert H. Frank, *Why Is Cost-Benefit Analysis So Controversial?*, 29 J. LEGAL STUD. 913, 918 (2000).

### *2. Fairness-Driven Behavior*

Both anecdotal and empirical evidence suggest that manufacturers who think price-cutting practices violate norms of fairness in business relations will oppose them more than is rationally justified by the practices' expected harm.[156] Anecdotally, manufacturers (and other advocates of their positions) have repeatedly asserted that price-cutting retailers are benefiting from the exploitation of the manufacturers' brand names (as in the case of loss leading) and the efforts of competing retailers.[157] In fact, the term "free riding" projects an image of someone who is benefiting from the efforts of others without reciprocity or one whose unfair behavior merits condemnation.[158]

These anecdotes fit well with a large body of empirical studies showing how individuals oppose behaviors they consider unfair even when such opposition is costly for them.[159] This behavioral tendency is illustrated by the common rejection in the famous ultimatum game of positive sums of money by allocation recipients, who prefer that both they and the party offering an allocation they perceive as unfair get nothing.[160] These findings hold, moreover, even when the game is played involving very large stakes.[161] Recipients' readiness to reject offers of significant sums of money reveals that they not only care about the fairness of the allocation, but are even willing to forgo financial gain to punish the unfair behavior of an anonymous party they will never encounter again.[162]

156. Note that the approach taken here is descriptive. *Cf.* Daniel Kahneman et al., *Fairness as a Constraint on Profit Seeking: Entitlements in the Market*, 76 AM. ECON. REV. 728, 728–29 (1986).

157. *See supra* notes 46–51 and accompanying text; *see also* O.S.C. Corp. v. Apple Computer, Inc., 601 F. Supp. 1274, 1276–77 (C.D. Cal. 1985) (involving a retailer challenge to vertical restraints imposed by Apple Computer in response to alleged free riding); Kelly, *supra* note 63, at 363 (arguing that "[f]ree riding is not limited to the most sophisticated consumer products" (internal quotation marks omitted)).

158. *See, e.g.*, *infra* note 168 and accompanying text (describing public goods games).

159. *See, e.g.*, MORAL MARKETS: THE CRITICAL ROLE OF VALUES IN THE ECONOMY (Paul J. Zak ed., 2008); Matthew Rabin, *Incorporating Fairness into Game Theory and Economics*, 83 AM. ECON. REV. 1281, 1283–84 (1993); Tor, *supra* note 8, at 268–72, 282–83; Avishalom Tor et al., *Fairness and the Willingness to Accept Plea Bargain Offers*, 7 J. EMPIRICAL LEGAL STUD. 97, 98–99 (2010).

160. The ultimatum game literature is extensive. *See generally* COLIN F. CAMERER, BEHAVIORAL GAME THEORY: EXPERIMENTS IN STRATEGIC INTERACTION 48–59 (2003) (reviewing and summarizing main findings in this area). In a typical game one player (Proposer) is asked to allocate a given sum of money to himself and another player (Responder). The latter must then choose whether to accept the offered allocation. If Responder accepts, each party gets a share according to the offer; if Responder rejects the offer, however, both parties get nothing. *Id.* at 43. (Note that the basic game is anonymous and without repetition, so considerations of reputation and future retaliation should be irrelevant.) A rational Responder should accept any positive sum, since the alternative to acceptance is rejection without any payment. Yet Responders typically reject offers below twenty to thirty percent and Proposers usually offer an even greater proportion of forty to fifty percent of the sum that stands for allocation. *Id.* at 49–50 & tbl.2.2.

161. *Id.* at 60–62.

162. Note that the independent role of fairness-related concerns—as opposed to strategic considerations—in this allocation setting is further highlighted by ultimatum game variants that show that Responders reject comparatively inferior allocations even where their rejections have no impact on

Other research shows that fairness-driven behavior persists where market prices are concerned. For instance, participants in household surveys of public opinion evaluated the fairness of market behavior by comparing it to a reference standard or transaction; their responses suggested that parties are generally entitled to the terms of the reference transaction and firms are entitled to their reference profit.[163] Price hikes (or other changes in the terms of market transactions) are therefore viewed as unfair when a firm exploits a profit-increasing opportunity at consumers' expense, but considered fair when the firm is merely seeking to maintain its extant profitability in the face of changed economic conditions.[164]

Importantly, past transactions between the parties in the market, especially recent ones, commonly provide the relevant reference point for fairness judgments.[165] The terms of the ongoing business relationships of a manufacturer and its distributors thus would usually constitute the parties' reference transaction.[166] Manufacturers faced with price-cutting behavior they believe benefits retailers at their expense will view that behavior as unfair and seek to prevent it, even at a significant cost.[167]

This conclusion is further reinforced by experimental studies of free-riding behavior in public goods games, whereby multiple participants simultaneously decide how much to contribute to a common pool out of an endowment they receive.[168] The dominant strategy for self-interested participants is to free ride and contribute nothing, although the group's total surplus is maximized when all participants contribute all of their endowment.[169] Early studies found that free riding is pervasive by the last of the game's usual ten rounds, with about seventy-five per-

Proposers' payoff. *E.g.*, Gary E. Bolton & Rami Zwick, *Anonymity Versus Punishment in Ultimatum Bargaining*, 10 GAMES & ECON. BEHAV. 95, 115–16 (1995); Duncan K.H. Fong & Gary E. Bolton, *Analyzing Ultimatum Bargaining: A Bayesian Approach to the Comparison of Two Potency Curves Under Shape Constraints*, 15 J. BUS. & ECON. STAT. 335 (1997). Other studies reveal the role of Responders' negative emotional reactions to unfair allocations. *E.g.*, Armin Falk et al., *On the Nature of Fair Behavior*, 41 ECON. INQUIRY 20 (2003); Madan M. Pillutla & J. Keith Murnighan, *Unfairness, Anger, and Spite: Emotional Rejections of Ultimatum Offers*, 68 ORGANIZATIONAL BEHAV. & HUM. DECISION PROCESSES 208 (1996).

163. Kahneman et al., *supra* note 156, at 729–37.

164. *Id.*; *see also* Daniel Kahneman et al., *Fairness and the Assumptions of Economics*, *in* RATIONAL CHOICE: THE CONTRAST BETWEEN ECONOMICS AND PSYCHOLOGY 101, 112 (Robin M. Hogarth & Melvin W. Reder eds., 1986) [hereinafter RATIONAL CHOICE]; Richard H. Thaler, *The Ultimatum Game*, *in* WINNER'S CURSE, *supra* note 142, at 21, 32–35.

165. Kahneman et al., *supra* note 156, at 729–31.

166. *Id.* at 729 ("Transactors have an entitlement to the terms of the reference transaction and firms are entitled to their reference profit.").

167. *See* Kahneman et al., *supra* note 164, at 104–08; *supra* notes 160, 162; *see also* Richard H. Thaler, *Anomalies: The Ultimatum Game*, 2 J. ECON. PERSP., no. 4, Fall 2008 at 195, 202–03 (1988) (reviewing various market settings in which the ultimatum game might arise).

168. *See* John O. Ledyard, *Public Goods: A Survey of Experimental Research*, *in* THE HANDBOOK OF EXPERIMENTAL ECONOMICS 111, 112 (John H. Kagel & Alvin E. Roth eds., 1995).

169. *Id.*

cent of participants contributing nothing and the rest only little, despite significant initial contributions.[170]

More recent research revealed, however, that contribution levels change dramatically when participants can punish free riders, even when punishment is costly.[171] In this case, participants contribute the dramatic majority of their endowment and free riding is radically diminished, because many participants willingly punish free riders at a cost to themselves.[172] These findings specifically illustrate the prevalence of costly, fairness-driven behavior that seeks to punish and reduce free riding, such as that observed in some RPM cases, in an environment in which both free riding and no punishment would have been universal if participants were all (or even predominantly) self-interested.

### *D. A Pro-Resale Price Maintenance Preference*

A manufacturer may address the potential harms of retail price-cutting through a number of alternative business arrangements, each possessing different advantages and disadvantages. Vertical integration, for one, is the most effective, providing full control of the distribution channel, but also very costly and often impractical. Other viable options include monitoring and compensation for the provision of services, taking over the marketing effort, and various vertical restraints. Monitoring is typically costly,[173] however, and taking over the marketing prevents free riding (at retail) but not loss leading or the suboptimal provision of at- or post-sale services. Therefore, vertical restraints are often a relatively attractive method of defending the manufacturer's interests.[174]

Vertical territorial restraints reduce or eliminate intrabrand competition by allocating territories or customers, or by limiting the number of distributors. They prevent (or lower the probability of) free riding, and reduce the likelihood of loss leading.[175] Vertical price restraints include RPM, as well as suggested prices and refusals to deal, which eliminate or reduce intrabrand price competition and make it very difficult for retailers to engage in free riding or loss leading. Among the latter restraints, RPM is the dominant arrangement, while the other restraints seek to achieve the same purpose indirectly (usually, when the law prohibits RPM).[176]

170. See *id.* at 112–13.

171. Ernst Fehr & Simon Gächter, *Cooperation and Punishment in Public Goods Experiments*, 90 AM. ECON. REV. 980 (2000).

172. *Id.*

173. *See supra* note 58 and accompanying text.

174. For a detailed comparison of the different arrangements and their legal treatment, see generally Grimes, *supra* note 38; Grimes, *supra* note 3.

175. *See* 8 AREEDA & HOVENKAMP, *supra* note 14, ¶ 1619, at 219–22; Marvel, *supra* note 51, at 76. That is, with the exception of exclusive dealing that eliminates it altogether.

176. *See* Ippolito, *supra* note 75, at 269–70 & tbl.3 (finding the dramatic majority of the 203 litigated RPM cases between 1976 and 1982, when RPM was per se illegal, involved multiple allegations

RPM is thus one attractive candidate for combating the practices' harms. Yet other methods can achieve similar (though not identical) results without a direct interference with retail prices, sometimes at a lower cost. A further analysis reveals, however, that manufacturers not only hold biased judgments and preferences regarding retail price-cutting, overestimating its harms and being inordinately averse to its presence, respectively, but may also exhibit an unjustified preference for RPM as the superior means for addressing these practices. This pro-RPM bias results from manufacturing managers' overweighting of the retail price dimension in their choice, their ambiguity aversion, and their need for risk control. Together, these factors make the direct, clear effect of RPM on retail prices particularly attractive to manufacturers, in contrast with those indirect price effects of the alternative arrangements,[177] which only follow their regulation of other aspects of the vertical relationship (such as marketing efforts or territorial boundaries).[178] Consequently, manufacturers, especially those who already are averse to price-cutting and overestimate its expected harms, will be prone to using RPM excessively and inefficiently.

### *1. Overweighting the Price Dimension*

A number of processes lead manufacturers to overweight the price dimension—that is, the impact on retail prices—when choosing among distribution arrangements. For this reason, while a rational manufacturer would seek to reduce the potential harmful *effects* of price-cutting by the most efficient means, its real-world counterparts are excessively concerned with the elimination of price-cutting itself, a task for which RPM is best suited.

When decision makers choose among options, they usually seek an alternative that dominates the other options in all respects.[179] If no such alternative is available, they tend to prefer the option that is superior with respect to a single, most important attribute (instead of comparing

beyond RPM, such that only 18.5% of the private cases in the sample *did not* include other antitrust charges); Paldor, *supra* note 6, at 320–21; *supra* notes 26–28 and accompanying text (discussing the *Colgate* doctrine in relation to RPM).

177. The direct effect of RPM may also make it preferable to manufacturers due to decision makers' tendency to neglect indirect effects—such as those of the alternative arrangements—in competitive settings. *See* Avishalom Tor & Max H. Bazerman, *Focusing Failures in Competitive Environments: Explaining Decision Errors in the Monty Hall Game, the Acquiring a Company Problem, and Multiparty Ultimatums*, 16 J. BEHAV. DECISION MAKING 353 (2003).

178. The sole exception is vertical integration, which results in a complete regulation of the distribution within the integrated firm. This method does not offer an alternative to price control in most cases due to its extremely high costs and far-reaching consequences. In addition, there are many industries and products in which integration is irrelevant (e.g., prepackaged food). Vertical integration will, therefore, not be included in the following comparison. *Cf.* Pac. Bell Tel. Co. v. Linkline Commc'ns, Inc., 129 S. Ct. 1109, 1122–23 (2009) (finding no antitrust liability for disparities between wholesale and retail prices within a vertically integrated firm).

179. Amos Tversky et al., *Contingent Weighting in Judgment and Choice*, 95 PSYCHOL. REV. 371, 372 (1988).

the various options' benefits and costs, for example).[180] This approach is attractive for avoiding difficult, time-consuming trade-offs between the various attributes of the competing alternatives.[181] It also provides a compelling *reason for choice*, which can later be used to explain and justify it to oneself and others.[182]

Research further reveals that the importance of an attribute depends on how the choice task is framed.[183] Decision frames impact choice, for instance, because they make those attributes of the available alternatives that relate most clearly and directly to the problem as framed appear more compatible with the task.[184] In the present case, therefore, *compatibility* implies that the price dimension will be prominent in manufacturers' choice of a preventive measure. Consequently, RPM, which is superior with respect to the prominent price attribute, will also appear more attractive overall and thus will be chosen more often than the alternative distribution arrangements that are less frame-compatible.[185]

180. Eldar Shafir et al., *Reason-Based Choice*, 49 COGNITION 11, 15 (1993); Tversky et al., *supra* note 179, at 372–75. The significance people attach to the prominent attribute in choice can be illustrated by a study that presented participants with pairs of gift packages consisting of cash and coupons. For each pair, a component of one alternative was missing (e.g., package *A* included no cash and a coupon for book purchase worth thirty-two dollars, while package *B* included twenty dollars and a coupon worth eighteen dollars). Participants were asked to determine the value of the missing component (e.g., an amount of cash in package *A*) that would render the two alternatives equally attractive (e.g., ten dollars). A week later, the same participants were asked to choose between the alternatives they previously equated. They were also asked, independently, which dimension—cash or coupons—they considered more important. When choosing between the packages, eighty-eight percent of the participants chose the alternative that was superior on the dimension they considered more important, despite having equated the packages' value a week earlier. Paul Slovic, *Choice Between Equally Valued Alternatives*, 1 J. EXPERIMENTAL PSYCHOL.: HUM. PERCEPTION & PERFORMANCE 280 (1975).

181. Tversky et al., *supra* note 179, at 372.

182. ROBYN M. DAWES, RATIONAL CHOICE IN AN UNCERTAIN WORLD 146–51 (1988); Shafir et al., *supra* note 180, at 14–15.

183. *See, e.g.*, Barbara J. McNeil et al., *On the Framing of Medical Decisions*, *in* DECISION MAKING: DESCRIPTIVE, NORMATIVE, AND PRESCRIPTIVE INTERACTIONS, *supra* note 144, at 562; Tversky & Kahneman, *Rational Choice*, *supra* note 144, at 167; s*ee also* Tor, *supra* note 8, at 260–63 (providing an overview of framing effects). For the original development of the concept of decision frames and demonstration of their effects on people's preference, see Amos Tversky & Daniel Kahneman, *The Framing of Decisions and the Psychology of Choice*, 211 SCIENCE 453 (1981).

184. As Tversky et al. explain, "[a]ccording to this principle, the weight of any input component is enhanced by its compatibility with the output." Tversky et al., *supra* note 179, at 376 (using compatibility to explain the difference in valuations as a result of the procedure used to elicit them). Compatibility effects are numerous and not limited to choice problems, found even in perception tasks, where people respond faster to stimuli that are response-compatible. Compatibility might therefore reflect the way basic mental processes function rather than a heuristic process that is specific to more complex decision-making processes. *See* Marcus Selart, *Aspects of Compatibility and the Construction of Preference*, *in* DECISION MAKING: COGNITIVE MODELS AND EXPLANATIONS 58 (Rob Ranyard et al. eds., 1997).

185. The effects of compatibility are likely to be compounded by focusing, where RPM is preferred since it better fits the model of the price-cutting problem. Because of focusing, manufacturers are also less likely to thoroughly examine alternative solutions once the model-fitting solution has been found. *See* P. Legrenzi et al., *Focusing in Reasoning and Decision Making*, 49 COGNITION 37, 38–39, 53, 60 (1993); *see also* John R. Chambers, *Why the Parts Are Better (or Worse) than the Whole: The Unique-Attributes Hypothesis*, 21 PSYCHOL. SCI. 268, 273–24 (2010) (finding a similar effect results

### 2. *Overestimating the Benefits of Resale Price Maintenance*

While the overweighting of the price-dimension biases manufacturers towards RPM, other decision processes lead them to overvalue the benefits of this restraint. Exhibiting a *certainty effect*, for one, individuals discount the weight they assign to outcomes that are merely probable as compared to certain ones.[186] For example, most people prefer a sure win of thirty dollars to an eighty percent chance of winning forty-five dollars.[187] Another implication of the certainty effect, which pertains to our analysis, is that people value the elimination of risk (e.g., a reduction of risk from a ten percent to a zero percent chance) more than they value its comparable reduction (e.g., from twenty percent to a ten percent chance).[188] Managers subject to the certainty effect will thus overvalue RPM's elimination of price-cutting compared to its mere reduction by territorial restraints, even when the latter are more efficient.

The risk-eliminating advantages of RPM also make it attractive to manufacturers due to *comparative ambiguity aversion*. When choosing among alternatives, people typically prefer well-defined risks whose probability distribution is known to options involving unspecified or ambiguous risks.[189] Further studies show that ambiguity aversion operates in the domain of losses as well as in the domain of gains. In one study, for example, participants playing the roles of buyers and sellers of business insurance valued the insurance more highly when faced with an ambi-

from the tendency to use the dimension distinguishing the target of evaluation (e.g., RPM) positively or negatively from other group members (i.e., other distribution restraints) as the standard for evaluation, which makes the target appear particularly positive or negative).

186. Tversky & Kahneman, *Rational Choice*, *supra* note 144, at 182; *cf. infra* note 189 (discussing the subadditivity of ambiguous prospects).

187. Tversky & Kahneman, *Rational Choice*, *supra* note 144, at 182.

188. *See* Cass R. Sunstein, *Probability Neglect: Emotions, Worst Cases, and Law*, 112 YALE L.J. 61, 76 (2002).

189. *See, e.g.*, Stanley Kaplan & B. John Garrick, *On the Quantitative Definition of Risk*, 1 RISK ANALYSIS 11, 19–22 (1981); Donald P. Morgan, *Rating Banks: Risk and Uncertainty in an Opaque Industry*, 92 AM. ECON. REV. 874, 874–75 (2002). Ellsberg provided an early example of ambiguity avoidance when he asked people to consider a bet on the color of a ball that would be randomly drawn from one of two imaginary urns, each of which holds red and black balls: Urn I contains one hundred balls with unknown proportions of red and black balls, while Urn II contains fifty black balls and fifty red ones. When the urns are considered separately, most people are indifferent between betting on a black ball and betting on a red one; they perceive that there is an equal (0.5) chance of drawing a ball of a particular color from Urn I with its unknown proportion of balls of the two colors, as well as a similar (0.5) chance of drawing such a ball from Urn II, which contains equal numbers of black and red balls. Nevertheless, when asked to bet on the drawing of a red ball from one of the urns, most people prefer to bet on a drawing from Urn II with its known proportion of balls. Moreover, when asked to bet again, but this time on a black ball, they tend again to prefer the well-defined prospect of drawing the ball from Urn II to drawing it from Urn I with its ambiguous probability. Daniel Ellsberg, *Risk, Ambiguity, and the Savage Axioms*, 75 Q.J. ECON. 643, 650–56 (1961). Note that it is also possible that the combined probability for drawing either a red or a black ball from Urn II is higher than Urn I. Nevertheless, further studies have shown the paradoxical choices of the subjects reflect the subadditivity of complimentary ambiguous prospects rather than the superadditivity of well-defined ones. *See* Hillel J. Einhorn & Robin M. Hogarth, *Decision Making Under Ambiguity*, *in* RATIONAL CHOICE, *supra* note 164, at 41, 44–46.

guous probability of loss than when faced with a comparable but unambiguous probability of loss.[190]

Importantly, ambiguity aversion occurs for comparisons between ambiguous and well-defined alternatives.[191] Thus, although decision makers routinely make decisions under ambiguity (or uncertainty), they typically discount the value of ambiguous options relative to unambiguous ones and choose the latter over the former if given the opportunity to do so.[192] Moreover, recent evidence also suggests that ambiguity aversion results from comparative ignorance—that is, the comparison one makes with more familiar events or more knowledgeable individuals.[193]

Manufacturers, averse to the ambiguous, potentially negative, consequences of price-cutting, may prefer instead to bear the familiar costs associated with price control through RPM. In the same vein, ambiguity aversion is also likely to make alternative vertical restraints, whose efficacy in preventing the harms of price-cutting is more ambiguous, seem less attractive when compared to the clearer costs associated with RPM.

Beyond the effects of certainty and ambiguity, research suggests that managers in particular view risk as a challenge that they attempt to overcome with the exercise of skill, rather than as a factor that merely affects the expected value of different options.[194] This *managerial risk-control* attitude suggests that manufacturers will often focus on creating business arrangements that minimize the risks of price-cutting instead of engaging in a cost-benefit analysis of alternative distribution restraints.[195]

There is even specific evidence of managers' efforts to control risks even when objectively impractical or inefficient,[196] much like giving the common "illusion of control," in which people behave as if random events—such as lotteries—are controllable.[197] Moreover, decision makers' attempts to control chance events are enhanced in the presence of competition, when decisions are made in familiar contexts, and when people can choose among alternative behaviors.[198] Yet all of these fac-

190. *See* Einhorn & Hogarth, *supra* note 189, at 51–64 (discussing several studies).

191. Craig R. Fox & Amos Tversky, *Ambiguity Aversion and Comparative Ignorance*, 110 Q.J. ECON. 585, 587–88 (1995).

192. *Id.*

193. *Id.*; *see also* Craig R. Fox & Martin Weber, *Ambiguity Aversion, Comparative Ignorance, and Decision Context*, 88 ORGANIZATIONAL BEHAV. & HUM. DECISION PROCESSES 476 (2002) (providing further evidence for the comparative ignorance account of ambiguity aversion).

194. *See* ZUR SHAPIRA, RISK TAKING: A MANAGERIAL PERSPECTIVE 72–83 (1995); James G. March & Zur Shapira, *Managerial Perspectives on Risk and Risk Taking*, 33 MGMT. SCI. 1404, 1410–11 (1987); *see also* Daniel Kahneman & Dan Lovallo, *Timid Choices and Bold Forecasts: A Cognitive Perspective on Risk Taking*, 39 MGMT. SCI. 17 (1993).

195. *Cf.* SHAPIRA, *supra* note 194, at 73–74.

196. *See id.* (quoting studies).

197. *See* Ellen J. Langer, *The Illusion of Control*, *in* JUDGMENT UNDER UNCERTAINTY, *supra* note 109, at 231, 231–32. For instance, exhibiting this illusion, people who choose a lottery ticket demand a significantly higher price for selling it than do those who received a similar ticket without choice. *Id.* at 236–37.

198. *Id.* at 237–38.

tors—competition, familiarity, and choice—are common in managerial decision making, which might explain managers' strong tendency to attempt to control chance events. Furthermore, managerial activities typically involve a combination of skill and luck that further reinforces the illusion of control.[199]

In fact, the illusion of control belongs to a broader family of egocentric and motivational biases.[200] For instance, individuals overestimate their abilities and skills in domains ranging from driving ability and academic achievements to investment performance and professional success.[201] Egocentric biases also lead them to align their expectations about the outcomes of events with their preferences about these outcomes,[202] especially when people have a measure of control over outcomes.[203]

Importantly, there is an increasing body of evidence that senior managers exhibit particularly strong egocentric and motivational biases, for instance overestimating their companies' and their own potential and performance.[204] Managers' biased perceptions also impact their business decision making, from the choice of when and how to finance the firm's activities to corporate acquisitions and more.[205] These processes, there-

199. *Cf. id.* at 232, 238.

200. *See* Tor, *Entry*, *supra* note 7, at 504–05 & n.88; *see also*, Dale W. Griffin & Carol A. Varey, *Towards a Consensus on Overconfidence*, 65 ORGANIZATIONAL BEHAV. & HUM. DECISION PROCESSES 227, 228 (1996); Lee Ross et al., *The "False Consensus Effect": An Egocentric Bias in Social Perception and Attribution Processes*, 13 J. EXPERIMENTAL SOC. PSYCHOL. 279 (1977).

201. *E.g.*, David Dunning et al., *Ambiguity and Self-Evaluation: The Role of Idiosyncratic Trait Definitions in Self-Serving Assessments of Ability*, 57 J. PERSONALITY & SOC. PSYCHOL. 1082 (1989); Terrance Odean, *Volume, Volatility, Price, and Profit When All Traders Are Above Average*, 53 J. FIN. 1887 (1998); Ola Svenson, *Are We All Less Risky and More Skillful than Our Fellow Drivers?*, 47 ACTA PSYCHOLOGICA 143 (1981); Shelley E. Taylor & Jonathon D. Brown, *Illusion and Well-Being: A Social Psychological Perspective on Mental Health*, 103 PSYCHOL. BULL. 193 (1988).

202. *See, e.g.*, Elisha Babad, *Wishful Thinking and Objectivity Among Sports Fans*, 2 SOC. BEHAV. 231 (1987); Elisha Babad & Yosi Katz, *Wishful Thinking—Against All Odds*, 21 J. APPLIED SOC. PSYCHOL. 1921 (1991); David V. Budescu & Meira Bruderman, *The Relationship Between the Illusion of Control and the Desirability Bias*, 8 J. BEHAV. DECISION MAKING 109 (1995); Donald Granberg & Edward Brent, *When Prophecy Bends: The Preference–Expectation Link in U.S. Presidential Elections, 1952–1980*, 45 J. PERSONALITY & SOC. PSYCHOL. 477, 477–79 & tbl.1 (1983); Robert A. Olsen, *Desirability Bias Among Professional Investment Managers: Some Evidence from Experts*, 10 J. BEHAV. DECISION MAKING 65, 66–70 (1997); Roy M. Poses & Michele Anthony, *Availability, Wishful Thinking, and Physicians' Diagnostic Judgments for Patients with Suspected Bacteremia*, 11 MED. DECISION MAKING 159, 165–67 (1991); George Wright & Peter Ayton, *Subjective Confidence in Forecasts: A Response to Fischhoff and MacGregor*, 5 J. FORECASTING 117 (1986) (all reporting biases in predictions and estimates in the direction of participants' preferences, in both laboratory studies and observational data).

203. *E.g.*, Babad, *supra* note 202; Babad & Katz, *supra* note 202; Granberg & Brent, *supra* note 202.

204. *See, e.g.*, Kahneman & Lovallo, *supra* note 194; Laurie Larwood & William Whittaker, *Managerial Myopia: Self-Serving Biases in Organizational Planning*, 62 J. APPLIED PSYCHOL. 194 (1977); March & Shapira, *supra* note 194; P.G. Moore, *The Manager's Struggles with Uncertainty*, 140 J. ROYAL STAT. SOC'Y: SERIES A GEN. 129 (1977).

205. *E.g.*, John A. Doukas & Dimitris Petmezas, *Acquisitions, Overconfident Managers and Self-Attribution Bias*, 13 EUR. FIN. MGMT. 531 (2007); Ulrike Malmendier & Geoffrey Tate, *Who Makes Acquisitions? CEO Overconfidence and the Market's Reaction*, 89 J. FIN. ECON. 20 (2008); Richard Roll, *The Hubris Hypothesis of Corporate Takeovers*, 59 J. BUS. 197 (1986); Ulrike Malmendier et al., *Overconfidence and Early-Life Experiences: The Impact of Managerial Traits on Corporate Financial*

fore, are likely to reinforce manufacturers' beliefs in their ability to control the risks of price-cutting on the one hand, and lead them to overestimate the success of their RPM programs on the other.[206]

## III. THE SLOW DEMISE OF BOUNDEDLY RATIONAL RESALE PRICE MAINTENANCE

Part II marshals forth a large body of behavioral research indicating that some real world manufacturers exhibit a pro-RPM bias. Yet we might expect that, notwithstanding their behavioral tendencies, manufacturing managers will not manifest such inefficient behavior when making repeated business decisions, operating within firms in market settings. Both the historical evidence and behavioral research reveal, however, that the efficacy of repeated decisions, organizations, and market pressure in correcting manufacturer bias is limited. Consequently, when antitrust law poses no constraints on RPM, some manufacturers will overuse it for extensive periods of time.

### *A. Natural Experiments*

The history of RPM in the United States provides a "natural experiment"[207] in which naturally occurring phenomena that are the product of social or political forces allow for a comparison between a period when RPM was legalized to a period when the practice was illegal.[208]

During the period in which RPM was legalized under fair trade laws, many manufacturers employed RPM in their distribution systems.[209]

*Policies* (Nat'l Bureau of Econ. Research, Working Paper No. 15,659, 2010), *available at* http://www.nber.org/papers/w15659.

206. Moreover, through motivated reasoning, manufacturers' bias may further reinforce their negative view of price-cutting, its harms and unfairness, as well as their positive judgments of the benefits of RPM. Thus, the empirical findings on egocentric biases also show decision makers engage in motivated reasoning, investing ambiguous information with the meaning or implications they would prefer it to have. *See* Scott T. Allison et al., *On Being Better but Not Smarter than Others: The Muhammad Ali Effect*, 7 SOC. COGNITION 275, 282–89 (1989) (especially studies 2 and 3); David Dunning et al., *Self-Serving Prototypes of Social Categories*, 61 J. PERSONALITY & SOC. PSYCHOL. 957 (1991) (showing how people judge positive traits to be overwhelmingly more characteristic of themselves than negative attributes, define personal attributes in idiosyncratic ways that emphasize their perceived strengths, and exhibit a great bias when they can choose the dimension on which to focus their judgment). For an in-depth discussion of the role of ambiguity in related phenomena, see Tor, *Entry*, *supra* note 7, at 524–28.

207. For an overview of natural experiments, see Thad Dunning, *Improving Causal Inference: Strengths and Limitations of Natural Experiments*, 61 POL. RES. Q. 282 (2008). *See also* David A. Butz & Andrew N. Kleit, *Are Vertical Restraints Pro- or Anticompetitive? Lessons from Interstate Circuit*, 44 J.L. & ECON. 131 (2001); James C. Cooper et al., *Vertical Antitrust Policy as a Problem of Inference*, 23 INT'L J. INDUS. ORG. 639, 648–58 & tbl.1 (2005) (surveying seventeen empirical studies of vertical exclusion).

208. Dunning, *supra* note 207, at 282–83 (noting that such experiments have some distinct advantages over laboratory studies).

209. *See* Edward S. Herman, *A Statistical Note on Fair Trade*, 4 ANTITRUST BULL. 583, 587 (1959) (detailing how as many as nine hundred manufacturers utilized RPM, and the goods they produced amounted to seven percent of total retail sales in the United States).

As only a number of states passed fair trade laws enabling the practice of RPM, state-based comparisons of price trends during the period shed some light on the impact of such arrangements.

One study compared prices and market trends before and after the repeal of the fair trade laws, strongly suggesting RPM is inefficient.[210] In particular, the study found, based on price trends of fair trade versus non-fair-trade goods, that consumers saved between one and two billion dollars in the twelve-month period following repeal.[211] Prices of discount retailers fell by 11.6% from those maintained prior to repeal, whereas the prices of non-discounting retailers fell only by 1.8%.[212]

Another study investigated the output effects of RPM on liquor sales by comparing sales in fair-trade states and non-fair-trade states between 1974 and 1978—that is, before and after the repeal.[213] The results revealed RPM lowered per capita liquor consumption by eight percent, controlling for other factors.[214] In California, liquor store licenses dropped in value between twenty-three percent and twenty-five percent following the repeal.[215] These findings provide clear examples of output-decreasing, inefficient RPM.[216]

Post-repeal studies also uncovered the fact that early RPM agreements were very popular in unconcentrated markets.[217] For certain standard-fare convenience goods, such as toothpaste, cereal, shaving razors, and chewing gum, manufacturers were eager to set minimum retail prices to avoid price-cutting, which they believed might degrade their brand's image or reputation.[218] Most modern service-related accounts of RPM simply did not apply to these product markets.[219]

Notably, during the period of the fair-trade laws, RPM agreements proliferated, as estimates suggest that prices subject to these agreements

210. Lawrence Shepard, *The Economic Effects of Repealing Fair Trade Laws*, 12 J. CONSUMER AFF. 220 (1978).

211. *Id.* at 227.

212. *Id.* at 230 tbl.3.

213. Stanley I. Ornstein & Dominique M. Hanssens, *Resale Price Maintenance: Output Increasing or Restricting? The Case of Distilled Spirits in the United States*, 36 J. INDUS. ECON. 1 (1987).

214. *Id.* at 5.

215. *Id.* at 6–7.

216. Studies of periods of legal RPM in other countries provide similar findings that further corroborate the conclusion that RPM creates inefficient outcomes. *See, e.g.*, F.D. Boggis, *The European Economic Community*, *in* RESALE PRICE MAINTENANCE, *supra* note 20, at 179, 215–16; Skeoch, *supra* note 67, at 29, 61; B.S. Yamey, *United Kingdom*, *in* RESALE PRICE MAINTENANCE, *supra* note 20, at 249, 293–95.

217. *See, e.g.*, Hollander, *supra* note 20, at 81.

218. *See* Robert L. Steiner, *How Manufacturers Deal with the Price-Cutting Retailer: When Are Vertical Restraints Efficient?*, 65 ANTITRUST L.J. 407, 436 (1997).

219. *Id.*; *see also* Philip L. Hersch, *The Effects of Resale Price Maintenance on Shareholder Wealth: The Consequences of* Schwegmann, 42 J. INDUS. ECON. 205, 214 (1994) ("Notwithstanding these results, evidence was uncovered of systematic differences in the efficacy of RPM based on firm and market characteristics. With respect to why manufacturers adopt RPM, support was found for the dealer cartel, free-rider, and product reputation hypotheses, with the latter being somewhat tenuous. Support was not found for the manufacturer cartel or price discrimination hypotheses.").

ranged from four to ten percent of retail sales.[220] The American Fair Trade Council claimed that during the peak period of 1950–1952, almost sixteen hundred manufacturers were using RPM.[221] After 1950, RPM gradually decreased in popularity, and both the political will and economic support for the practice waned until the fair-trade laws were repealed in 1976.[222] At the time of repeal, only twenty-four states still had such laws.[223]

This significant, albeit slow, decline in the popularity of legal RPM even before the repeal of the fair-trade laws suggests that many of those manufacturers who initially thought it attractive decided to discontinue the practice after ultimately finding it unprofitable.[224]

The same pattern—initial enthusiasm followed by a subsequent decline in popularity—occurred in European countries as well, indicating that the variation in state laws alone tells only part of the story. For example, in Denmark, Sweden, Germany, and the United Kingdom, the practice peaked and subsequently declined during the mid-1900s.[225] The transnational evidence therefore suggests that RPM is of questionable economic advantage for most manufacturers, although many of them nevertheless attempt to employ it.[226]

This general pattern is also apparent from observational studies of individual firms' practices showing protracted periods of "learning" that generated significant social costs. For example, jeans producer Levi Strauss employed RPM with its downstream distributors long after its revenue figures suggested the practice was no longer (if ever) efficient.[227] Indeed, after Levi's use of RPM was discontinued, it experienced a significant rise in both sales and profits.[228]

The same effect was evident in a study of FTC consent agreements enjoining RPM by seven audio components manufacturers.[229] The study suggested that manufacturers utilized these agreements to produce more

220. *See* Herman, *supra* note 209, at 586.

221. *Study of Monopoly Power: Hearing on Resale Price Maintenance, H.R. 4365, H.R. 4592, H.R. 4662, and H.R. 6367 [H.R. 6925] Before the Antitrust Subcomm. of the H. Comm. on the Judiciary*, 82d Cong. 731 (1952) (Appendix A to statement of John W. Anderson, President, American Fair Trade Council), *cited in* Hollander, *supra* note 20, at 80 n.36.

222. *See supra* notes 20–25 and accompanying text.

223. H.R. REP. NO. 94-341, at 1 (1975). And only five had nonsigner provisions. *See* S. REP. NO. 94-466, at 2 (1975), *reprinted in* 1975 U.S.C.C.A.N. 1569, 1570.

224. *See* Carl H. Fulda, *Resale Price Maintenance*, 21 U. CHI. L. REV. 175, 202–06 (1954) (explaining that state variation in the scope of allowable fair trade laws resulted in a patchwork of RPM regulations, enabling dealers to purchase products free from price restraints and that manufacturers in turn had difficulty in enforcing these agreements and often abandoned them entirely); Hollander, *supra* note 20, at 81–93.

225. *See* U. af Trolle, *Sweden*, *in* RESALE PRICE MAINTENANCE, *supra* note 20, at 101, 109, 125; Boggis, *supra* note 216, at 205–08; H. Kjølby, *Denmark*, RESALE PRICE MAINTENANCE, *supra* note 20, at 145, 154–60; Yamey, *supra* note 216, at 252–65, 274.

226. *See supra* Part II.C.

227. *See* Oster, *supra* note 68, at 55–56.

228. *See id.* at 75–76.

229. *See* McEachern & Romeo, *supra* note 68, at 232–36.

retail shelf space, point-of-sale demonstrations, and quality certification to help develop the consumer market.[230] As stereo systems became more familiar to consumers, RPM agreements and retailer services lost their importance.[231] Yet these practices persisted even as the marketing strategy became inefficient for suppliers of low-end components.[232]

### *B. Learning*

What seems to be puzzling historical evidence on the slow demise of inefficient RPM in the United States and abroad can be better understood once we consider the mechanisms through which such errors may be eliminated. For instance, to learn of their mistake and correct it, manufacturers who employ inefficient RPM must obtain the relevant information, analyze it correctly, and choose to abandon the practice in favor of an alternative vertical arrangement or none at all. Yet not only does RPM by its nature limit the feedback available to manufacturers from the market,[233] but it also faces a number of behavioral and informational impediments at each of the steps: they are less likely to seek additional information when they form a specific anti-price-cutting heuristic and exhibit overconfidence in their judgment;[234] they are prone to bias when evaluating their information due to its limited and noisy nature, the processes that generated their initial bias, and the tendency to seek confirming evidence; and they may be reluctant to abandon RPM due to loss aversion and the sunk costs effect.

#### *1. Impediments to Information Search*

When people deal with recurring situations that call for similar judgments and choices, they often form *specific heuristics* that account for common characteristics of these situations, to economize on the time and costs required for repeatedly making similar judgments and choices.[235] In contrast to those general heuristics, like availability or represen-

230. *Id.* at 225.

231. *Id.* at 226.

232. The study's authors suggested that simple mistakes, inertia, risk aversion, and a prisoners' dilemma were possible explanations for the persistence of an inefficient vertical restraint. *Id.* The authors also noted that similar RPM agreements for high-end audio components exerted positive consumer welfare returns, but the overall effect of the FTC's consent orders enjoining RPM was to improve social welfare. *Id.* at 208–13.

233. *Cf.* TIROLE, *supra* note 85, at 188 (noting that in a model of vertical restraints with uncertainty, "RPM uses decentralized information nonoptimally" and "[i]ndeed the retail price is fixed before the uncertainty is resolved so it is not responsive to demand and retail-cost conditions at all" and contrasting this limitation of RPM with the ability of retailers to respond to the resolution of uncertainty under exclusive territories).

234. A tendency that is compounded by "satisficing," where decision makers seek solutions that are "good enough" and then cease to consider or search for alternatives. *See, e.g.*, JAMES G. MARCH & HERBERT A. SIMON, ORGANIZATIONS 173–83 (1958).

235. Hillel J. Einhorn, *Learning from Experience and Suboptimal Rules in Decision Making*, *in* JUDGMENT UNDER UNCERTAINTY, *supra* note 109, at 268, 269–70.

tativeness, specific heuristics concern concrete settings, such as "never order fish in an Indian restaurant" or "do not walk in neighborhood *A* after dark." In the same vein, manufacturers who adopt RPM after initially concluding it is their best response to price-cutting may form a specific heuristic that equates price-cutting with significant harm and its solution with RPM instead of repeatedly engaging in similar, costly and time-consuming analyses of their potential responses to retailers' practices.

The economizing advantages of specific heuristics, however, also spell their disadvantages and limitations. After all, the very reliance on such heuristics to avoid constant reanalysis means that decision makers simply follow the heuristic in the situations it covers. They will not seek that information which otherwise might lead them to reassess their judgments unless they nevertheless encounter evidence that these judgments are wrong.[236]

Despite this inherent limitation, specific heuristics often are beneficial, especially when the initial judgment on which they are based is sound. Yet when initial judgments are erroneous, as may happen where manufacturers form an anti-price-cutting heuristic, rule following reduces the likelihood that additional information will be sought or that initial mistakes will be recognized.

The specific-heuristic barrier to the reevaluation of initial judgments will often be reinforced by manufacturers' *post-decisional overconfidence* in their RPM choice.[237] Many studies show that confidence in decisions is only moderately related to their accuracy,[238] instead of being determined by numerous factors[239] including pre-decisional confidence in the initial choice,[240] perceived expertise,[241] and motivation,[242] all of which tend to make manufacturers overconfident in their past choice.

236. *Id.* at 280–83.

237. *See* Dan Zakay, *Post-Decisional Confidence—Can It Be Trusted?*, *in* DECISION MAKING: COGNITIVE MODELS AND EXPLANATIONS, *supra* note 184, at 233, 234–36; *cf.* Jack W. Brehm, *Postdecision Changes in the Desirability of Alternatives*, 52 J. ABNORMAL & SOC. PSYCHOL. 384 (1956) (providing an early foray into this field of research).

238. *See, e.g.*, Hart Blanton et al., *Overconfidence as Dissonance Reduction*, 37 J. EXPERIMENTAL SOC. PSYCHOL. 373, 381 (2001).

239. *See* Dane K. Peterson & Gordon F. Pitz, *Confidence, Uncertainty, and the Use of Information*, 14 J. EXPERIMENTAL PSYCHOL.: LEARNING, MEMORY & COGNITION 85, 91–92 (1988). *See generally* Zakay, *supra* note 237, at 236–39, 242–43.

240. Arie W. Kruglanski et al., *Interactive Effects of Need for Closure and Initial Confidence on Social Information Seeking*, 9 SOC. COGNITION 127 (1991); Zakay, *supra* note 237, at 239–41; *see also supra* note 200.

241. David Trafimow & Janet A. Sniezek, *Perceived Expertise and Its Effect on Confidence*, 57 ORGANIZATIONAL BEHAV. & HUM. DECISION PROCESSES 290 (1994); *cf.* Fox & Tversky, *supra* note 191.

242. *See* Baruch Fischhoff & Ruth Beyth-Marom, *Hypothesis Evaluation from a Bayesian Perspective*, 90 PSYCHOL. REV. 239 (1983); Ofra Mayseless & Arie W. Kruglanski, *What Makes You So Sure? Effects of Epistemic Motivations on Judgmental Confidence*, 39 ORGANIZATIONAL BEHAV. & HUM. DECISION PROCESSES 162 (1987).

First, people are systematically overconfident in the accuracy of their probability assessments.[243] Importantly, people are overconfident in their level of performance in difficult, but not easy, tasks.[244] We have seen, however, that the evaluation of price-cutting is particularly challenging, suggesting manufacturers will be overconfident in the accuracy of their conclusions.

Second, manufacturers are also likely to perceive themselves as experts, since they are knowledgeable and experienced in their businesses area. In fact, both the evidence on egocentric biases generally and the findings on managers' illusion of control suggest that manufacturers overestimate their ability and expertise in controlling price-cutting risks,[245] which in turn contributes to their post-decisional overconfidence.

Third, manufacturers are motivated to avoid further consideration of their decision. After all, a reversal of an RPM strategy after its public announcement and implementation is bound to be seen by the manufacturer, its retailers and competitors alike as an acknowledgment of the program's failure, as well as a reversal of a strategic commitment. Business decision makers, however, are particularly averse to such course reversals, in light of the high value they attach to commitment and reputation effects. Hence, they will sometimes incur significant costs before publicly changing their declared business strategy, exhibiting a *sunk cost effect*.[246] In the RPM case, moreover, these motivations may occasionally be reinforced by the economic benefits some manufacturers receive from the softening of horizontal competition.[247] Altogether, therefore, initial overconfidence, perceived expertise, and motivational factors combine to facilitate manufacturers' post-decisional overconfidence, further reduc-

243. *See* Sarah Lichtenstein et al., *Calibration of Probabilities: The State of the Art to 1980*, *in* JUDGMENT UNDER UNCERTAINTY, *supra* note 109, at 306. Calibration has also been called realism, external validity, reliability, and more. *Id.* at 306–07. For instance, in one questionnaire study of the appropriateness of extreme confidence only seventy-two to eighty-three percent of the items in one task to which "definite" responses were given were correct, while in another task items that were assigned the extreme probability of zero were in fact correct twenty to thirty percent of the time. Baruch Fischhoff et al., *Knowing with Certainty: The Appropriateness of Extreme Confidence*, 3 J. EXPERIMENTAL PSYCHOL.: HUM. PERCEPTION & PERFORMANCE 552, 554 (1977).

244. Lichtenstein et al., *supra* note 243, at 314–17; Don A. Moore & Daylian M. Cain, *Overconfidence and Underconfidence: When and Why People Underestimate (and Overestimate) the Competition*, 103 ORGANIZATIONAL BEHAV. & HUM. DECISION PROCESSES 197 (2007).

245. *See supra* Part III.B.

246. *See* Hal R. Arkes & Catherine Blumer, *The Psychology of Sunk Cost*, 35 ORGANIZATIONAL BEHAV. & HUM. DECISION PROCESSES 124 (1985); Gregory B. Northcraft & Gerrit Wolf, *Dollars, Sense, and Sunk Costs: A Life Cycle Model of Resource Allocation Decisions*, 9 ACAD. MGMT. REV. 225 (1984); Barry M. Staw, *The Escalation of Commitment: An Update and Appraisal*, *in* ORGANIZATIONAL DECISION MAKING 191 (Zur Shapira ed., 1997); *see also* IRVING L. JANIS & LEON MANN, DECISION MAKING: A PSYCHOLOGICAL ANALYSIS OF CONFLICT, CHOICE, AND COMMITMENT 279–308 (1977) (examining the effects of commitment); John S. Hammond et al., *The Hidden Traps in Decision Making*, 84 HARV. BUS. REV., Jan. 2006, at 118.

247. *Cf. supra* notes 42, 107 and accompanying text.

ing the likelihood that they will search for new information to reevaluate their RPM strategy.[248]

### *2. Biases in Information Evaluation*

Even manufacturers who wish to evaluate the efficacy of their arrangements may find the task challenging given the nature of the available information, the processes that generated their initial bias, and the tendency to seek confirming evidence.

The post-decisional evidence available to manufacturers is even more limited and noisy than the information they have prior to the adoption of RPM.[249] It is limited because RPM largely eliminates both price competition and the information on how the manufacturers would have fared if they were to employ an alternative vertical arrangement or none at all.[250] Moreover, manufacturers cannot easily overcome this problem by comparing their pre- and post-RPM performance, because market conditions change constantly, making it difficult to isolate the RPM effect from the multitude of economic factors impacting the manufacturers' performance over time.[251] Furthermore, because the immediate effect of RPM, almost by definition, is to raise retail prices, manufacturers may expect the short-run loss of profits, but assume that RPM will prove beneficial in the longer run. Because of this limited and noisy information, however, an otherwise successful manufacturer might remain altogether unaware of an inefficient price restraint, while one experiencing RPM-driven losses may have little basis to attribute these losses specifically to RPM rather than to the multitude of other economic factors shaping its performance.[252]

248. *Cf.* J. Edward Russo & Paul J.H. Schoemaker, *Managing Overconfidence*, 33 SLOAN MGMT. REV., no. 2, 1992, at 7 (discussing overconfidence in managerial decision making).

249. *See supra* notes 103–08 and accompanying text.

250. *See supra* note 233 and accompanying text.

251. For this reason, they cannot employ an approach resembling the simpler and now increasingly popular "difference-in-differences" analysis of empirical antitrust studies of cost and price changes. *See, e.g.*, John Simpson & David Schmidt, *Difference-in-Differences Analysis in Antitrust: A Cautionary Note*, 75 ANTITRUST L.J. 623 (2008) (discussing the advantages and limitations of this approach).

252. Tversky and Kahneman explain the difficulty of learning to overcome errors:

> Effective learning takes place only under certain conditions: it requires accurate and immediate feedback about the relation between the situational conditions and the appropriate response. The necessary feedback is often lacking for the decisions made by managers, entrepreneurs, and politicians because (i) *outcomes are commonly delayed and not easily attributable to a particular action*; (ii) *variability in the environment degrades the reliability of the feedback*, especially where outcomes of low probability are involved; (iii) *there is often no information about what the outcome would have been if another decision had been taken*; and (iv) most important decisions are unique and therefore provide little opportunity for learning.

Tversky & Kahneman, *Rational Choice*, *supra* note 144, at 187–88 (emphases added) (citation omitted); *see also* Einhorn, *supra* note 235, at 273 (emphasizing the importance of unambiguous feedback for learning); Richard E. Nisbett et al., *Improving Inductive Inference*, *in* JUDGMENT UNDER UNCERTAINTY, *supra* note 109, at 445, 445–46 (noting that decision makers need to know that an error has occurred, how it has occurred, and how to improve the decision process).

The accurate analysis of RPM's long-term effects is also inhibited by the same psychological processes that generated manufacturers' excessive reliance on RPM to begin with: their tendency to overestimate the expected harms of price-cutting, price-cutting aversion, and RPM preference.[253] These processes are reinforced by the *confirmation bias* wherein people examine hypotheses by studying the consequences of the decisions made based on these hypotheses.[254] Outcomes that fit the hypothesis are deemed to confirm it, whereas those that do not fit falsify the hypothesis. This method of hypothesis testing, however, violates the rules of logic that call for the testing of alternative hypotheses to find whether they also produce the desirable outcomes.

In the presence of the confirmation bias, therefore, hypotheses are falsified only when there is an outcome of the main hypothesis that disconfirms it. Yet such disconfirmation is unlikely to occur in the present case when RPM prevents price-cutting. If, however, manufacturers were to test alternative arrangements, such as territorial limitations, they may find these arrangements significantly diminish the practices' negative effects on their products at a lower cost.[255]

### *3. The Difficulty of Abandoning Resale Price Maintenance*

Finally, if the challenges to reaching an accurate post-decisional assessment of RPM's performance are not enough, additional behavioral phenomena make it difficult for manufacturers to abandon RPM even in the face of negative consequences. Specifically, loss aversion and the sunk costs effect, as well as dealer pressure, suggest that manufacturers will preserve even an inefficient extant arrangement and only change their course of action when they determine RPM causes substantial harm.

Loss-averse manufacturers will be reluctant to abandon the status quo RPM policy for an alternative arrangement (or none at all), unless they determine the former generates substantially higher net costs, since the potential pain from adopting an unsuccessful alternative would oth-

253. *See supra* Part III.

254. For a review of the literature on the confirmation bias and hypotheses testing, see Fischhoff & Beyth-Marom, *supra* note 242. The following analysis is based on: Einhorn, *supra* note 235; Joshua Klayman & Young-Won Ha, *Confirmation, Disconfirmation, and Information in Hypothesis Testing*, 94 PSYCHOL. REV. 211 (1987), *reprinted in* RESEARCH ON JUDGMENT AND DECISION MAKING: CURRENTS, CONNECTIONS, AND CONTROVERSIES 205, 205–43 (William M. Goldstein & Robin M. Hogarth eds., 1997); Joshua Klayman, *Varieties of Confirmation Bias*, 32 PSYCHOL. LEARNING & MOTIVATION 385 (1995).

255. *Cf.* Klayman & Ha, *supra* note 254, at 212–14. The confirmation bias is less problematic when, regardless of the examination of alternatives, falsifying evidence is likely if the hypothesis is wrong. For example, a manufacturer who takes over the advertisement of a complex product that people buy only infrequently might find national advertising ineffective and therefore conclude that promotion should be done mostly at the local level. The same conclusion could have been reached by giving incentives to local dealers to promote the product and achieving good results (a "negative hit").

erwise overshadow the potential gain from a successful one.[256] Similarly, the sunk cost effect and the factors facilitating it suggest that manufacturers will be slow to concede error, drop their commitment to RPM, and adopt a new course of action, tending to do so only when the negative consequences of the arrangement appear particularly significant.[257]

Moreover, the inhibiting effects of loss aversion and sunk costs tend to be reinforced by dealer pressure. Even where dealers do not possess sufficient power to coerce a manufacturer initially to employ RPM, their interest in preserving it can diminish the manufacturer's willingness to abolish the arrangement. In fact, non-discounting dealers are particularly likely to pressure a manufacturer to preserve an extant RPM program they have adjusted to. For one, retailers who invested in service-related arrangements (e.g., expensive showrooms or extensive salespeople training) on the assumption of guaranteed resale margins would want to avoid the painful loss of their investment.[258] Inefficient dealers, whose higher costs are not justified by unique quality or a similar attribute, would also pressure manufacturers to retain RPM, to avoid the severe damage that free retail price competition will inflict upon them.

### *C. Firms*

The obstacles to learning how to correct an excessive use of RPM notwithstanding, one might expect manufacturers to fare better than individuals faced with similar challenges. After all, the former make their decisions within business firms that rely on organizational routines, on decision making by agents and often by groups, and on various means for monitoring and disciplining managers. Firms are also typically subject to market pressure from their competitors, which may eliminate boundedly rational behavior. The empirical evidence on managers and firms suggests, however, that the mechanisms for improving and disciplining their performance are imperfect, significantly promoting rational action in some settings but not in others. The present Section therefore examines the potential advantages of firms over individuals in RPM decision making, while the following one considers the efficacy of markets in disciplining its inefficient use.

Organizational routines can be superior to individual decisions when firms have the time and means to learn from experience and repeated feedback, developing "organizational repairs"—that is, internal

256. On loss aversion and the status quo bias, see *supra* Part III.C.1. Note that manufacturers are particularly likely to consider RPM as their reference point since information about its negative consequences, when such occur, takes significant time to materialize in the best of cases. *See supra* text accompanying note 116. Moreover, decision makers distinguish "costs" (such as those incurred by continuing the use of RPM) from "losses" (like the potential harms of price cutting), viewing the latter but not the former as negative. *See* Daniel Kahneman & Amos Tversky, *Choices, Values, and Frames*, 39 AM. PSYCHOLOGIST 341, 348–49 (1984).

257. On sunk costs effects, see *supra* note 246 and accompanying text.

258. Note that such dealers may also exhibit their own loss aversion and a sunk cost effect.

procedures and rules that aim to overcome systematic individual shortcomings.[259] The management literature provides various anecdotal illustrations, for example, of organizations using maxims intended to remind employees not to make biased attributions, employing strategies aimed at collecting sufficient and relevant information, and developing methods for evaluating their information and hypotheses in a more objective fashion.[260] Yet organizational repairs appear to have limited success and are largely unpredictable, tending to be most efficacious when based on bottom-up learning in a specific domain.[261] These characteristics, however, do not apply to managers' RPM judgment and decision tasks, which concern the firm's overall distribution strategy, and are made infrequently, and at the highest management levels, and are also subject to limited and noisy feedback.[262]

Although organizational repairs seem unlikely to overcome the shortcomings of managerial RPM decision behavior, managers may better approximate rational action simply because they function as agents of the firm, as suggested by some evidence that agents tend to behave more rationally than individuals acting on their own behalf.[263] For instance, experimental participants taking the role of agents did not exhibit the common endowment effect—a manifestation of loss aversion wherein individuals value entitlements they possess more highly than identical ones they do not hold[264]—when transacting on behalf of their princi-

259. *See generally* Chip Heath et al., *Cognitive Repairs: How Organizational Practices Can Compensate for Individual Shortcomings*, 20 RES. ORGANIZATIONAL BEHAV. 1 (1998).

260. *Id.* at 4–12 (discussing various common judgment and decision errors then suggesting ways organizations may attempt to correct them and providing anecdotal evidence for such cognitive repairs).

261. *Cf. id.* at 12–17 (discussing various classifications of repairs along different dimensions and their likely efficacy).

262. *Id.* at 12–15 (discussing methods of social feedback). Moreover, the organizational context may even raise the commitment costs of abandoning RPM. This arrangement, for instance, also conveys the message that the company wants to keep a firm control over its distribution channels. Its reversal may therefore be perceived as a managerial weakness and harm the manager's position within and not only outside the firm. *See* RICHARD M. CYERT & JAMES G. MARCH, A BEHAVIORAL THEORY OF THE FIRM 235–37 (2d ed. 1992) (discussing "[d]ecisions as artifacts"); *cf.* Kahneman & Lovallo, *supra* note 194, at 28 ("Officially adopted forecasts are also likely to be biased by their secondary functions as demands, commands and commitments." (citation omitted)).

263. The agency relationship between managers and firms also generates some disadvantages, most notably due to the potential divergence of the parties' self-interest, which is of a lesser concern here. For further background on managerial incentives and agency costs, see FRANK H. EASTERBROOK & DANIEL R. FISCHEL, THE ECONOMIC STRUCTURE OF CORPORATE LAW 90–108 (1991); Eugene F. Fama, *Agency Problems and the Theory of the Firm*, 88 J. POL. ECON. 288 (1980); Michael C. Jensen & William H. Meckling, *Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure*, 3 J. FIN. ECON. 305 (1976); Oliver E. Williamson, *Managerial Discretion and Business Behavior*, 53 AM. ECON. REV. 1032 (1963).

264. *See* Kahneman et al., *supra* note 143, at 194; Kahneman et al., *supra* note 149, at 1326, 1328; Richard Thaler, *Toward a Positive Theory of Consumer Choice*, 1 J. ECON. BEHAV. & ORG. 39, 43–47 (1980); *supra* Part II.C.1; *see also* Russell Korobkin, *The Endowment Effect and Legal Analysis*, 97 NW. U. L. REV. 1227, 1228 (2003).

pals.[265] In the same vein, the evidence on egocentric biases suggests these are less likely to impact judgments made on behalf of others when the agent has not adopted the principal's perspective.[266]

The better alignment of agent judgment and choice with rational action, however, would do little to assist managers in overcoming the challenges of judging retailers' practices and choosing the appropriate response to them. For one, the limited evidence of agents' increased rationality pertains only to a few of the multiple processes that converge to generate manufacturers' RPM preference. Moreover, a closer look reveals that none of the above advantages of agents over principals is likely to benefit managers in the RPM case. To wit, the elimination of the endowment effect in the agents' case was driven by their framing of the relevant entitlements based on exchange value.[267] The impact of loss aversion in the present case, however, concerned the managers' price-cutting aversion and their resistance to abandoning RPM once adopted, both of which relate to the managers' own decisions rather than to entitlements held by the firm for exchange.[268] Similarly, agents' advantage regarding egocentric biases is unlikely to pertain to judgments of their own managerial ability and expertise. More generally, agents' advantages are less likely to hold when managers make judgments and decisions concerning their own performance.[269]

265. Jennifer Arlen et al., *Endowment Effects Within Corporate Agency Relationships*, 31 J. LEGAL STUD. 1, 33 (2002) (finding that experimental participants acting as agents did not exhibit a significant endowment effect because they framed entitlements in terms of exchange value). Another study similarly found a significant decrease in the concern for fairness when participants in a bargaining transaction acted as agents owing a duty—such as that of corporate managers—to maximize the return to the principal. Kent Greenfield & Peter C. Kostant, *An Experimental Test of Fairness Under Agency and Profit-Maximization Constraints (with Notes on Implications for Corporate Governance)*, 71 GEO. WASH. L. REV. 983 (2003).

266. *Cf.* Tor, *Entry*, *supra* note 7, at 505 (discussing entry decisions by overconfident managers).

267. *See* Kahneman et al., *supra* note 149, at 1329–33 (finding no endowment effect when using induced-value tokens in Experiment 1); Tversky & Kahneman, *Loss Aversion*, *supra* note 144, at 1039. *But see* Ian Bateman et al., *A Test of the Theory of Reference-Dependent Preferences*, 112 Q.J. ECON. 479, 503–04 (1997) (finding some loss aversion for monetary payoffs as well); Ian Bateman et al., *Testing Competing Models of Loss Aversion: An Adversarial Collaboration*, 89 J. PUB. ECON. 1561, 1576–78 (2005) (same). *See generally* Nathan Novemsky & Daniel Kahneman, *The Boundaries of Loss Aversion*, 42 J. MARKETING RES. 119 (2005) (exploring the boundary conditions of loss aversion).

268. *See* Eric van Dijk & Daan van Knippenberg, *Buying and Selling Exchange Goods: Loss Aversion and the Endowment Effect*, 17 J. ECON. PSYCHOL. 517, 519 (1996) (finding that participants in an experimental market exhibited loss aversion for exchange goods when traders are uncertain about future exchange prices).

269. *Cf.* Tor, *Entry*, *supra* note 7, at 535–36 (arguing that the advantage of financiers over new entrants in making decision regarding new ventures diminishes when they adopt the entrants' perspective). *See generally* MAX H. BAZERMAN, JUDGMENT IN MANAGERIAL DECISION MAKING (5th ed. 2002) (reviewing and applying individual-level phenomena to managerial decision making); LEE ROY BEACH & TERRY CONNOLLY, THE PSYCHOLOGY OF DECISION MAKING: PEOPLE IN ORGANIZATIONS (2d ed. 2005) (same); Leigh Thompson & Jo-Ellen Pozner, *Organizational Behavior*, *in* SOCIAL PSYCHOLOGY: HANDBOOK OF BASIC PRINCIPLES 913, 914 (Arie W. Kruglanski & E. Tory Higgins eds., 2d ed. 2007) (reviewing research on individual decision making in organizations and stating that "[t]he fundamental theme is that organizational decision makers . . . are hopelessly victimized by their own nonrational thought processes").

Yet manufacturers may still perform better than individuals when their judgments and decisions are made by a small group of senior managers with the benefits of multiple viewpoints, cumulative experience, and deliberation.[270] Despite the intuitive appeal of this claim, however, an examination of the empirical literature provides little reason to believe senior management groups will reliably avoid individuals' excessive reliance on RPM. Instead, it appears that small groups sometimes outperform individuals but at other times exhibit similar or even more extreme judgmental biases and decision errors; their performance mostly depends on case-specific variables.[271]

270. *See* Stephen M. Bainbridge, *Why a Board? Group Decisionmaking in Corporate Governance*, 55 VAND. L. REV. 1, 19–31 (2002) (arguing that boundedly rational managers function optimally on a board with diverse viewpoints); *cf.* Donald C. Langevoort, *The Human Nature of Corporate Boards: Law, Norms, and the Unintended Consequences of Independence and Accountability*, 89 GEO. L.J. 797, 800 (2001) [*hereinafter* Langevoort, *Human Nature*] ("[I]t may be that optimally functioning boards require not only a mix of insiders and monitors but also some class of board members who can function effectively as mediators, reducing some of the dysfunctional effects that come from the inevitable polarization of the board."); Donald C. Langevoort, *Resetting the Corporate Thermostat: Lessons from the Recent Financial Scandals About Self-Deception, Deceiving Others and the Design of Internal Controls*, 93 GEO. L.J. 285, 289 (2004) (advocating enhanced internal reporting controls that increase as the risk of self-serving managerial behavior increases); Paul F. Levy, *The Nut Island Effect: When Good Teams Go Wrong*, HARV. BUS. REV., Mar. 2001, at 51, 52.

271. *See generally* Daniel Gigone & Reid Hastie, *Proper Analysis of the Accuracy of Group Judgments*, 121 PSYCHOL. BULL. 149 (1997) (reviewing the literature and concluding that groups excel as judges only under limited conditions and tend to perform at the level of their average members when performing tasks whose solutions are not easily demonstrable); Gayle W. Hill, *Group Versus Individual Performance: Are* N + *1 Heads Better than One?*, 91 PSYCHOL. BULL. 517 (1982) (providing an extensive literature review finding, across a variety of tasks, that group performance was generally qualitatively and quantitatively superior to the performance of the average individual but often inferior to that of the best individual in a statistical aggregate and often inferior to the potential suggested in a statistical pooling model); Norbert L. Kerr et al., *Bias in Judgment: Comparing Individuals and Groups*, 103 PSYCHOL. REV. 687 (1996) (reviewing the empirical literature on the relative susceptibility of individuals and groups to systematic judgmental biases and finding there is no clear or general pattern); Norbert L. Kerr & R. Scott Tindale, *Group Performance and Decision Making*, 55 ANN. REV. PSYCHOL. 623 (2004) (reviewing some of the main findings in this area); John M. Levine & Richard L. Moreland, *Small Groups*, *in* 2 THE HANDBOOK OF SOCIAL PSYCHOLOGY, *supra* note 91, at 415, 438–39 (same). *But see* R. Scott Tindale et al., *Group Decision Making*, *in* THE SAGE HANDBOOK OF SOCIAL PSYCHOLOGY 381 (Michael A. Hogg & Joel Cooper eds., 2003) (reviewing a number of research strands in group research and arguing they show the general superiority of groups, despite some unique biases and problems in their decision making). For examples of specific studies comparing individuals and groups, see Linda Argote et al., *The Base-Rate Fallacy: Contrasting Processes and Outcomes of Group and Individual Judgment*, 46 ORGANIZATIONAL BEHAV. & HUM. DECISION PROCESSES 296 (1990) (finding that group discussion amplifies judgment by representativeness when the individuating information is informative but also increases the normatively appropriate impact of base rates when information is not representative); Roger Buehler et al., *Collaborative Planning and Prediction: Does Group Discussion Affect Optimistic Biases in Time Estimation?*, 97 ORGANIZATIONAL BEHAV. & HUM. DECISION PROCESSES 47 (2005) (detailing studies showing an optimistic bias for both individual and group predictions, with the latter being more optimistic than those generated individually); Chip Heath & Rich Gonzalez, *Interaction with Others Increases Decision Confidence but Not Decision Quality: Evidence Against Information Collection Views of Interactive Decision Making*, 61 ORGANIZATIONAL BEHAV. & HUM. DECISION PROCESSES 305 (1995); L. Robin Keller et al., *An Examination of Ambiguity Aversion: Are Two Heads Better than One?*, 2 JUDGMENT & DECISION MAKING 390 (2007) (finding that the majority of the dyads exhibited greater ambiguity aversion than the two individuals' average); Richard F. Martell & Mae R. Borg, *A Comparison of the Behavioral Rating Accuracy of Groups and Individuals*, 78 J. APPLIED PSYCHOL. 43 (1993) (finding that groups' delayed ratings of behavior were more accurate than those of individuals, where-

Moreover, some common characteristics of group decision making, including deliberation, often cause additional biases beyond those exhibited by individuals.[272] Groups, for instance, may exhibit groupthink, promoting an erroneous consensus that does not reflect the information held by individual group members.[273] Their deliberations, instead of leading to a superior integration of group members' information and perspectives, may also cause group polarization so that the collective group view is more extreme than individual members' pre-deliberation tendencies.[274] Hence, while senior management's collective judgment and decision making will sometimes outperform individual managers', there is little reason to believe they will approximate the predictions of rational models when faced with the multiplicity of phenomena that generate the excessive reliance on RPM.

Finally, the firm's board of directors may be able to monitor managers and pressure them either not to adopt inefficient RPM arrangements or to abandon them once there is evidence of their inefficiency.[275]

as in the immediate rating condition groups and individuals did not differ; at the same time, groups also demonstrated greater response bias than individuals); Paul W. Paese et al., *Framing Effects and Choice Shifts in Group Decision Making*, 56 ORGANIZATIONAL BEHAV. & HUM. DECISION PROCESSES 149 (1993) (finding, inter alia, that groups can increase or decrease individual framing effects depending on how decisions are presented); Glen Whyte, *Escalating Commitment in Individual and Group Decision Making: A Prospect Theory Approach*, 54 ORGANIZATIONAL BEHAV. & HUM. DECISION PROCESSES 430 (1993) (finding that groups exhibit more extreme escalation of commitment).

272. *See* Joyce Berg et al., *The Individual Versus the Aggregate*, *in* JUDGMENT AND DECISION-MAKING RESEARCH IN ACCOUNTING AND AUDITING 102 (Robert H. Ashton & Alison Hubbard Ashton eds., 1995) (developing a framework for comparing individual performance to group settings and providing evidence, inter alia, of group-level biases in addition to some individual biases that extend to groups, concluding the impact of aggregation on individual-level biases varies widely). More generally, group processes introduce an additional level of complexity and phenomena beyond those found in individuals. For a collection reviewing such processes, see BLACKWELL HANDBOOK OF SOCIAL PSYCHOLOGY: GROUP PROCESSES (Michael A. Hogg & Scott Tindale eds., 2001).

273. *See, e.g.*, IRVING L. JANIS, GROUPTHINK (2d ed., 1982) (the original development of the concept and its applications); Robert S. Baron, *So Right It's Wrong: Groupthink and the Ubiquitous Nature of Polarized Group Decision Making*, 37 ADVANCES EXPERIMENTAL SOC. PSYCHOL. 219 (2005) (reviewing the evidence on these phenomena over thirty years and arguing it shows that groupthink-like phenomena are common—though not universal—in mundane, temporary, and even minimal groups); James K. Esser, *Alive and Well After 25 Years: A Review of Groupthink Research*, 73 ORGANIZATIONAL BEHAV. & HUM. DECISION PROCESSES 116 (1998). *See generally* Robert J. MacCoun, *Comparing Micro and Macro Rationality*, *in* JUDGMENTS, DECISIONS, AND PUBLIC POLICY 116, 121–26 (Rajeev Gowda & Jeffrey C. Fox eds., 2002) (reviewing variables that sometimes cause groups to exhibit less accurate judgments than individuals).

274. *See, e.g.*, Daniel J. Isenberg, *Group Polarization: A Critical Review and Meta-Analysis*, 50 J. PERSONALITY & SOC. PSYCHOL. 1141 (1986) (examining polarization studies up to that date focusing on the two central accounts for the effect based on social comparison and persuasive argumentation processes); *see also* Cass R. Sunstein, *Group Judgments: Statistical Means, Deliberation, and Information Markets*, 80 N.Y.U. L. REV. 962, 984–1006 (2005) (reviewing biases that may be generated by group deliberation and dividing their underlying mechanisms into informational influences and social pressures).

275. We did not discuss other firm constituencies that are interested in its efficient management, such as shareholders, since those have little impact on its ongoing business strategy. *See* JAMES D. COX & THOMAS LEE HAZEN, CORPORATIONS 183, 327 (2d ed. 2003) (discussing the separate rights and obligations of managers and shareholders, emphasizing the limits of the latter compared to the

Yet while corporate boards, which observe and monitor managerial behavior and are less personally involved in it, possess some advantages over individuals, they are largely subject to the same behavioral phenomena that impact managers and management groups.[276] Even more importantly, however, boards typically possess limited efficacy as monitors and are unlikely to cause a reversal of managerial decisions except in some extreme cases.[277] In fact, some boards will have little awareness of the firm's specific distribution arrangements or their consequences given their limited information on and involvement with the day-to-day operations of the corporation.[278] And even boards or individual directors who are concerned about RPM and do not think its use is always efficient will typically be subject to managers' influence and control and will therefore not battle them over a distribution policy whose consequences in specific cases are often unclear.[279] Given RPM's nature, intra-firm correction of its excessive use is thus most likely to occur, if at all, only following a prolonged period of clear evidence of its negative consequences.

### *D. Markets*

Even if manufacturers find it difficult to identify mistaken uses of RPM and correct them, the competitive pressure exerted by their product-market rivals may cause either their abandonment of inefficient RPM arrangements or their failure and disappearance from the market altogether. Yet markets can fully eliminate the inefficient use of RPM only in limited circumstances.[280] For one, noncompetitive markets, by definition, exert limited disciplinary pressure on the manufacturers operating within them. Monopolists or even oligopolists in markets with significant entry barriers may dissipate some of their supra-competitive profits by

former); Iman Anabtawi & Lynn Stout, *Fiduciary Duties for Activist Shareholders*, 60 STAN. L. REV. 1255, 1267–69 (2008).

276. In fact some biases that are unique to groups, such as groupthink and polarization, may be exhibited more strongly by larger groups such as corporate boards. *See* Langevoort, *Human Nature*, *supra* note 270, at 810–11; Sunstein, *supra* note 274, at 979. *But see* Bainbridge, *supra* note 270, at 19–31 (arguing that the behavioral evidence suggests that group decision making in the corporate board case is often preferable to that of individuals).

277. *See* Sanjai Bhagat & Bernard Black, *The Non-Correlation Between Board Independence and Long-Term Firm Performance*, 27 J. CORP. L. 231, 263–64 (2002); Larry E. Ribstein, *Partnership Governance of Large Firms*, 76 U. CHI. L. REV. 289, 290 (2009) (discussing the ineffectiveness of various corporate devices, such as independent directors, at monitoring); Robert B. Thompson & Paul H. Edelman, *Corporate Voting*, 62 VAND. L. REV. 129, 138 (2009).

278. Marcel Kahan & Edward B. Rock, *Hedge Funds in Corporate Governance and Corporate Control*, 155 U. PA. L. REV. 1021, 1071–87 (2007); Ribstein, *supra* note 277, at 290–91.

279. *See, e.g.*, LUCIAN BEBCHUK & JESSE FRIED, PAY WITHOUT PERFORMANCE: THE UNFULFILLED PROMISE OF EXECUTIVE COMPENSATION (2004); Iman Anabtawi, *Explaning Pay Without Performance: The Tournament Alternative*, 54 EMORY L.J. 1557, 1574–79 (2005); Jonathan R. Macey, *A Pox on Both Your Houses: Enron, Sarbanes-Oxley and the Debate Concerning the Relative Efficacy of Mandatory Versus Enabling Rules*, 81 WASH. U. L.Q. 329, 343–45 (2003).

280. *See* Tor, *supra* note 8, at 310–14 (evaluating some of the arguments and evidence on the rationality-promoting effect of markets).

operating less efficiently.[281] Moreover, the private benefits to manufacturers from the softening of horizontal competition at either wholesale or retail are more significant precisely in those markets that are more concentrated at either level.[282]

More importantly, however, both the empirical evidence and theoretical analyses suggest that even competitive markets do not always discipline boundedly rational behavior.[283] To wit, arbitrage by rational actors who can identify, exploit, and consequently erode the profit opportunities generated by the errors of boundedly rational decision makers is an important source of market discipline.[284] Arbitrage, however, necessitates a sufficiently large group of arbitrageurs who can both identify the opportunity and bear the risk and costs involved with selling to or buying from the boundedly rational actors; it also requires the ready availability of substitutes for the overpriced or underpriced products by boundedly rational actors.[285] Yet these conditions rarely exist even in sophisticated financial markets,[286] not to mention those product markets in which most manufacturers compete. In fact, rational arbitrageurs would be hard pressed to find an easy way to benefit from an excessive use of RPM that causes the ultimate overpricing of some products at retail.[287]

281. *See* CARLTON & PERLOFF, *supra* note 85, ch. 9; HARVEY LEIBENSTEIN, BEYOND ECONOMIC MAN: A NEW FOUNDATION FOR MICROECONOMICS (1980) (developing a theory and adducing evidence for the importance "x-inefficiency"—that is, a non-allocative efficiency loss—where firms enjoy some degree of sheltering from competitive pressures); Giovanni De Fraja, *Efficiency and Privatisation in Imperfectly Competitive Industries*, 39 J. INDUS. ECON. 311 (1991); Harold Demsetz, *Barriers to Entry*, 72 AM. ECON. REV. 47 (1982).

282. *See supra* note 42 and accompanying text. Recall also that RPM is possible only for manufacturers possessing some market power with its attendant supra-competitive profits. *See supra* note 40 and the accompanying text.

283. *E.g.*, Thomas Russell & Richard Thaler, *The Relevance of Quasi Rationality in Competitive Markets*, *in* DECISION MAKING: DESCRIPTIVE, NORMATIVE, AND PRESCRIPTIVE INTERACTIONS, *supra* note 144, at 508, 508–16; *see also* Nicholas Barberis et al., *Prospect Theory and Asset Prices*, *in* ADVANCES IN BEHAVIORAL FINANCE 224 (Richard H. Thaler ed., 2005); J. Bradford De Long et al., *Noise Trader Risk in Financial Markets*, *in* 1 ADVANCES IN BEHAVIORAL FINANCE 23 (Richard H. Thaler ed., 1993). For other accounts of nonrational behavior of both laymen and professionals in financial markets, see RICHARD H. THALER, QUASI RATIONAL ECONOMICS 237–352 (1991) (financial markets); Shlomo Maital et al., *What Do People Bring to the Stock Market (Besides Money)? The Economic Psychology of Stock Market Behavior*, *in* HANDBOOK OF BEHAVIORAL ECONOMICS: BEHAVIORAL MACROECONOMICS, Vol. B 273 (Benjamin Gilad & Stanley Kaish eds., 1986) [hereinafter HANDBOOK OF BEHAVIORAL ECONOMICS]; Stanley Schachter et al., *Aggregate Variables in Psychology and Economics: Dependence and the Stock Market*, *in* HANDBOOK OF BEHAVIORAL ECONOMICS, *supra*, at 237.

284. *See generally* ANDREI SHLEIFER, INEFFICIENT MARKETS: AN INTRODUCTION TO BEHAVIORAL FINANCE (2000) (providing a readable and comprehensive review of the behavioral finance literature); Andrei Shleifer & Robert W. Vishny, *The Limits of Arbitrage*, 52 J. FIN. 35 (1997).

285. SHLEIFER, *supra* note 284, at 28–52.

286. This observation is strikingly illustrated by the famous collapse of Long Term Capital Management, a multi-billion dollar hedge fund whose trading strategy was based on risky arbitrage strategies. *See* ROGER LOWENSTEIN, WHEN GENIUS FAILED: THE RISE AND FALL OF LONG-TERM CAPITAL MANAGEMENT 123–42 (2000).

287. Moreover, while in a highly competitive product market competing product manufacturers can benefit from RPM-driven overpricing, in more concentrated markets or where products are highly

Similarly, market competition may weed out boundedly rational decision makers who deplete their resources by making inefficient decisions while their rational competitors enjoy higher profits.[288] For this to happen, however, the former must deviate from rational action in ways that consistently diminish their profits. For instance, overoptimistic traders in financial markets—as a group—may in fact earn higher returns on average and thus exhibit long-run survival.[289]

Nevertheless, of all the suggested processes of market discipline the latter is the most applicable to manufacturers who excessively rely on RPM and consequently diminish their long term performance. Hence, when the restraint does not provide manufacturers with increased profitability, markets over time should drive out its inefficient manifestations.

Even this more effective form of market discipline, however, may only operate over long horizons, since the marginal effects of inefficient RPM are unlikely to bring about the swift demise of those manufacturers who employ it.[290] In fact, those who consistently exhibit boundedly rational behavior may enjoy some economic advantages over their competitors, and occasionally may even benefit from their bounded rationality. For instance, managers who overestimate their ability to control risks may take greater risks in other business domains as well and sometimes obtain the higher profits associated with these risks.

## IV. TOWARD A BEHAVIORALLY INFORMED STRUCTURED RULE OF REASON

The *Leegin* Court concluded that RPM should be subject to a ROR analysis rather than an automatic per se condemnation, given its potential for generating either pro- or anticompetitive effects depending on the specific circumstances of its use.[291] Our behavioral analysis confirms the

differentiated the rational strategic response to RPM may involve the adoption of RPM. *Cf.* Ernst Fehr & Jean-Robert Tyran, *Individual Irrationality and Aggregate Outcomes*, 19 J. ECON. PERSP., no. 4, 2005 at 43, 45 (showing how individual irrationality may translate to different aggregate market performance depending on whether deviations from rationality are strategic substitutes or complements).

288. *See, e.g.*, *id.* at 44 (describing the common argument "that rational agents will drive the irrational agents from the market because the former make higher profits; thus, the impact of the rational agents on the aggregate outcome will increase over time").

289. *See, e.g.*, J. Bradford De Long et al., *The Survival of Noise Traders in Financial Markets*, 64 J. BUS. 1, 16–18 (1991); *cf.* Tor, *supra* note 7, at 504–14.

290. As also borne out by the historical evidence of RPM's initial popularity and slow decline over time. *See supra* notes 20–25 and accompanying text.

291. Leegin Creative Leather Prods., Inc. v. PSKS, Inc., 551 U.S. 877, 898–99 (2007) (adopting an essentially open rule of reason approach to RPM while noting, in passing, that courts can "devise rules over time for offering proof, or *even presumptions* where justified, to make the rule of reason a fair and efficient way to prohibit anticompetitive restraints and to promote procompetitive ones" (emphasis added)). *But see id.* at 919–29 (Breyer, J., dissenting) (finding insufficient economic justification for abandoning the per se rule); 8 AREEDA & HOVENKAMP, *supra* note 14, ¶ 1633a, at 372–73 ("These propositions . . . counsel against per se legality, per se illegality, or an open-ended rule of reason and suggest instead alternative arrays of presumptions.").

basic logic of this reasoning even while revealing the more limited applicability of extant rationality-based arguments both for and against RPM in antitrust law and scholarship.

We found that real-world manufacturers are prone to excessively use RPM and that market forces are often slow to correct their errors. At times, the practice generates significant consumer harm, while in other instances RPM may be used excessively but cause only limited consumer harm. Yet on other occasions, the practice reflects those rational pro- or anticompetitive calculations assumed by its past analyses.

Although our behavioral analysis suggests that inefficient RPM may be common when legal, we cannot quantify its incidence, costs and benefits. In this respect, therefore, the novel insights provided here share the significant shortcoming of extant RPM analyses.[292] Nevertheless, our findings provide some useful guidance following *Leegin*'s injunction that "[i]f the Rule of Reason were to apply to vertical price restraints, courts would have to be diligent in eliminating their anticompetitive uses from the market."[293]

We therefore evaluate those few contours of the ROR approach outlined by the Court first, finding them informative yet of limited power to resolve the question of RPM's evaluation in a given case. Then we explain the broader lessons of our novel analysis for RPM's new ROR which challenges the ROR approaches of both sides in the RPM debate and provides a blueprint for the effective structuring of the ROR under *Leegin*.

### *A.* Leegin *Reexamined*

*Leegin* left the future design and development of ROR inquiry to the lower courts, while citing several factors this inquiry should take into account.[294] Specifically, the Court enumerated three factors that should inform the ROR evaluation of RPM: (1) how pervasive such arrangements are in the industry; (2) where the impetus for the restraint originates from; and (3) whether the manufacturer or the retailer possesses market power.[295]

Although still relevant according to the behavioral account, our analysis suggests somewhat different implications for these elements for courts evaluating whether a given vertical price restraint is anticompetitive. First, relying on traditional, rational accounts, the Court stated that when RPM is not widespread in an industry one should not be concerned about its potential anticompetitive effects, since interbrand competition

292. 8 AREEDA & HOVENKAMP, *supra* note 14, ¶ 1633d1, at 382 (noting absence of a practical way to quantify the actual cost and benefits of RPM in a given case).

293. *Leegin*, 551 U.S. at 897.

294. *Cf. id.* at 929 (Breyer, J., dissenting) (arguing that the Court's decision "will create considerable legal turbulence as lower courts seek to develop workable principles").

295. *Id.* at 885–87 (majority opinion).

will undercut any cartel at either the manufacturer or the retailer level.[296] The present analysis largely corroborates this approach where boundedly rational RPM is concerned, albeit for different reasons. Namely, when the practice is not widespread, the discipline provided by horizontal competition is more effective. In such an environment, therefore, manufacturers who excessively rely on RPM may be weeded out by their product-market competitors or learn more quickly to correct their error.[297]

When RPM is common in an industry, on the other hand, it not only increases consumer prices and softens horizontal competition at both manufacture and retail levels,[298] but it also limits the disciplinary efficacy of markets. The prevalence of RPM in a given market may also facilitate its adoption by additional manufacturers, by signaling that price-cutting is dangerous and RPM is an attractive solution. In this way, an industry norm of employing this practice impacts manufacturers' judgments and preferences and reinforces their pro-RPM bias.[299]

Second, the Court cited the empirical evidence suggesting that if "retailers were the impetus for a vertical price restraint, there is a greater likelihood that the restraint facilitates a retailer cartel or supports a dominant, inefficient retailer."[300] The present analysis reveals, however, that retailer pressure increases the likelihood of inefficient RPM through manufacturer anchoring on the biased information retailers provide.[301] The behavioral evidence also suggests, moreover, that the Court was too confident in manufacturers' rationality when relying on their "incentive to protest inefficient retailer-induced price restraints."[302] Although manufacturers generally wish to maximize profits, they are less likely to refuse inefficient RPM than rational models would have us believe, especially when these arrangements benefit powerful dealers.

More generally, the Court placed too much faith in the procompetitive likelihood of independently adopted RPM. It is true that such ar-

296. *Id.* at 889–90 (citing ABA SECTION OF ANTITRUST LAW, ANTITRUST LAW AND ECONOMICS OF PRODUCT DISTRIBUTION 76 (2006); HERBERT HOVENKAMP, THE ANTITRUST ENTERPRISE: PRINCIPLE AND EXECUTION 184–91 (2005)); *see also supra* Part II.B.2.

297. *See supra* notes 251–53, 271–75 and accompanying text.

298. *See Leegin*, 551 U.S. at 895–96; *supra* note 42 and accompanying text; *cf. Leegin*, 551 U.S. at 923 (Breyer, J., dissenting) ("Increased concentration among manufacturers increases the likelihood that producer-originated resale price maintenance will prove more prevalent today than in years past, and more harmful.").

299. *Cf.* Amitai Aviram & Avishalom Tor, *Overcoming Impediments to Information Sharing*, 55 ALA. L. REV. 231 (2004) (discussing the effects of social norms on the market behavior of manufacturers and showing how they can reinforce extant behavioral patterns even when those become inefficient).

300. *Leegin*, 551 U.S. at 897–98 (citing Brief for William S. Comanor & Frederic M. Scherer as Amici Curiae Supporting Neither Party at 7–8, *Leegin*, 551 U.S. 877 (No. 06-480), 2007 WL 173679 at *7–8; POSNER, *supra* note 43, at 177); *cf. id.* at 912–17 (Breyer, J., dissenting) (expressing skepticism regarding the frequency of efficiency-enhancing vis-à-vis anticompetitive instances of RPM, based on a reading of available empirical evidence).

301. *See supra* Part III.B.1.

302. *Leegin*, 551 U.S. at 898.

rangements are less likely to be driven by dealer cartelization efforts, and our analysis suggests they are also less likely to have resulted from an overestimation of price-cutting risks due to biased dealer information.[303] Yet the distinction between "bad" dealer-initiated and "good" manufacturer-driven RPM—whatever its merits otherwise—misses the important class of arrangements examined throughout this Article, in which manufacturers excessively (and often independently) adopt this restraint. In many of these cases, however, RPM will be inefficient even when purely manufacturer-driven.

Third and last, the Court emphasized the importance of market power in determining the likely impact of RPM, essentially suggesting that practice is of little concern "unless the relevant entity has market power."[304] According to this reasoning, retailers lacking market power cannot force manufacturers to adopt inefficient RPM and manufacturers lacking such power are less capable of foreclosing competitors from distribution channels. While market power is clearly an important factor in evaluating the potentially harmful horizontal effects of a given price restraint,[305] we have shown that inefficient RPM can cause harm even absent retail or manufacturing market power.

Our analysis reveals an additional important role for market power in evaluating RPM. Because market power implies more limited market discipline, powerful manufacturers may excessively employ RPM for extended periods before their error is corrected,[306] while market discipline will more likely correct the overuse of RPM by manufacturers lacking market power. Nevertheless, as already noted, the historical evidence suggests the practice may be resilient even in unconcentrated markets where it is not pervasive.[307]

All in all, therefore, the analysis offered in this paper does not contradict the Court's position that a positive showing of pervasive RPM, dealer-initiated restraints, and market power at either the manufacturer or the retailer levels indicate a given arrangement is more likely to be anticompetitive. Unlike *Leegin's* suggested guidance, however, our findings reveal that the absence of the above indicators provides only limited comfort regarding the harms of RPM, except possibly in the case of manufacturers lacking market power who are subject to significant market discipline.

303. *Id.* at 892 (citing POSNER, *supra* note 43, at 172).

304. *Id.* at 898.

305. *Cf.* 8 AREEDA & HOVENKAMP, *supra* note 14, ¶ 1633c1(E)–(F), at 376.

306. This is true not only for dominant firms and monopolies, but even for significant market players with a differentiated product, as witnessed by the Levi's case study. *See supra* notes 227–28 and accompanying text.

307. *See supra* text accompanying note 214.

### *B. Revisiting the Debate over Resale Price Maintenance's New Rule of Reason*

Beyond allowing for the reevaluation of *Leegin*'s enumerated factors, the presence of boundedly rational RPM also reveals a new set of considerations that the future structuring of resale price maintenance's ROR should account for. Specifically, the Court suggested lower courts may "devise rules over time for offering proof, or even presumptions where justified, to make the rule of reason a fair and efficient way to prohibit anticompetitive restraints and to promote procompetitive ones."[308]

When pursuing such strategies, lower courts can develop different inquiry structures and presumptions, ranging from a completely open-ended approach, through inquiries requiring plaintiffs to make some prima facie case of the anticompetitive nature of the practice, to presumptions that the parties can later rebut that RPM is either pro- or anticompetitive, whether generally or in specific circumstances.[309] In fact, already before and especially since *Leegin*, some courts,[310] federal and state enforcement agencies,[311] and antitrust scholars[312] have employed or offered many different ROR approaches to RPM.

308. *Leegin*, 551 U.S. at 898–99. Nevertheless, the Court did not suggest presumptions where necessary or even desirable, in line with its approach regarding potentially harmful horizontal restraints in *California Dental Ass'n v. FTC*, 526 U.S. 756 (1999).

309. *See, e.g.*, 8 AREEDA & HOVENKAMP, *supra* note 14, ¶ 1633b, at 373–74; Lambert, *Now What?*, *supra* note 3, at 1960–2004 (reviewing and criticizing the main extant ROR approaches and offering an alternative structured approach).

310. *See, e.g.*, *In re* Ins. Brokerage Antitrust Litig., 618 F.3d 300, 315–16 (3d Cir. 2010) (restating the burden of proof allegations under the ROR as consistent with pre-*Leegin* case law); PSKS, Inc. v. Leegin Creative Leather Prods., Inc., 615 F.3d 412, 417–20 (5th Cir. 2010) (rejecting, at the motion to dismiss stage, allegations of anticompetitive RPM due to insufficient allegations of the defendant's market power and anticompetitive effects); McDonough v. Toys "R" Us, Inc., 638 F. Supp. 2d 461, 480–82 (E.D. Pa. 2009) (certifying class of antitrust plaintiffs alleging illegal RPM based on common allegations of coercive restraints that may not survive full rule of reason analysis); U.S. Horticultural Supply, Inc. v. Scotts Co., No. 04-5182, 2009 WL 89692, at *9–22 (E.D. Pa. Jan. 13, 2009) (applying rule of reason after *Leegin* and finding that plaintiffs failed to allege sufficiently an unreasonable restraint on trade or a relevant product market); Spahr v. Leegin Creative Leather Prods., Inc., No. 2:07-CV-187, 2008 WL 3914461, at *8–11 (E.D. Tenn. Aug. 20, 2008) (applying ROR to federal RPM claims, but holding that the plaintiff had not sufficiently alleged a relevant market); Trane U.S. Inc. v. Meehan, 563 F. Supp. 2d 743, 751–52 (N.D. Ohio 2008) (denying a defendant's motion to dismiss a plaintiff's RPM claim, despite acknowledging that *Leegin* requires the court to apply the rule of reason); Jacobs v. Tempur-Pedic Int'l, Inc., No. 4:07-CV-02-RLV, 2007 WL 4373980 (N.D. Ga. Dec. 11, 2007); Michael A. Lindsay, *State Resale Price Maintenance Laws After* Leegin, ANTITRUST SOURCE, Oct. 2009, at 3 n.20, http://www.abanet.org/antitrust/at-source/09/10/Oct09-Lindsay10-23f.pdf (citing Brien v. Leegin Creative Leather Prods., Inc., No. 04-CV-1668 (8th Judicial Dist., Sedgwick County Kan. July 9, 2008) (slip opinion) (applying ROR in state RPM claims)).

311. For example, the FTC modified its previous order prohibiting Nine West Footwear Company from "fixing, controlling, or maintaining the resale price a dealer may advertise, promote, offer for sale any Nine West Products, or coercing, pressuring, or otherwise securing a commitment from any dealer to maintain a resale price for Nine West Products." *In re* Nine W. Grp. Inc., No. C-3937, at 3–4 (F.T.C. May 6, 2008) (order) (footnotes omitted), http://www.ftc.gov/os/caselist/9810386/080506order.pdf. The FTC determined that "Nine West's potential use of RPM is currently not captured by the factors that *Leegin* identified as possible criteria for condemning RPM." *Id.* at 17. A group of state attorneys general submitted comments urging the FTC to refuse to reopen the Nine West order.

Understandably, despite the dramatic differences among them, all extant ROR approaches attempt only to distinguish rational procompetitive from rational anticompetitive instances of RPM. Those who credit procompetitive justifications for RPM have fashioned inquiries that favor defendants through burden of proof allocations, presumptions, and more.[313] At the same time, enforcement agencies and scholars believing RPM is frequently anticompetitive developed approaches that employ similar tools to plaintiffs' advantage, at least in those market settings thought to make the practice particularly pernicious.[314]

Yet the most basic lesson of our analysis is that many instances of RPM may be neither pro- nor anticompetitive as traditionally understood, but rather manifestations of manufacturers' tendency to employ this practice excessively. While boundedly rational RPM sometimes leads to higher prices as well as output reductions that harm manufacturers and consumers alike, however, at other times it may generate efficiency losses but no significant competitive harm.[315] Hence, insofar as the incidence of boundedly rational RPM when the practice is legal is not negligible—and the evidence marshaled here indicates it is not[316]—the various extant ROR positions should be reexamined.

Most obviously, boundedly rational RPM appears to challenge pro-defendant approaches, which view the practice as predominantly pro-

*See* Amended States' Comments Urging Denial of Nine West's Petition, *In re* Nine W. Grp., Inc., No. C-3937, http://www.ftc.gov/os/comments/ninewestgrp/080117statesamendedcomments.pdf [hereinafter Amended States' Comments]. The attorneys general urged the FTC to require Nine West to prove that "(1) its vertical price fixing caused retailers to provide actual enhanced value or services; (2) the enhanced value or services increased demand for its shoes; and (3) the increased demand from that value or those services was greater than the decreased demand caused by the higher price that consumers paid." *Id.* at 8.

312. Brief for William S. Comanor & Frederic M. Scherer, *supra* note 300; 8 AREEDA & HOVENKAMP, *supra* note 14, ¶ 1633b, 373–74; Grimes, *supra* note 3; Lambert, *A Decision-Theoretic Rule*, *supra* note 3, at 174; Lambert, *Now What?*, *supra* note 3, at 1997–2004; *see also* Posner, *supra* note 48 (suggesting per se legality for vertical restraints).

313. *See, e.g.*, *Spahr*, 2008 WL 3914461, at *8–12; Michael A. Carrier, *The Rule of Reason: An Empirical Update for the 21st Century*, 16 GEO. MASON L. REV. 827, 830 (2009) ("[P]laintiffs almost never win under the rule of reason . . . . [C]ourts decide almost all rule of reason cases by finding that the plaintiff failed to show an anticompetitive effect."); *cf.* Toledo Mack Sales & Serv., Inc. v. Mack Trucks, Inc., 530 F.3d 204, 225–28 (3d Cir. 2008) (upholding a vertical restraint claim under a rule of reason analysis after *Leegin*, and acknowledging that plaintiffs bear the burden of demonstrating an unlawful restraint of trade as well as a relevant product market); Lambert, *Now What?*, *supra* note 3, at 1997–98.

314. *See, e.g.*, *In re* Nine W. Grp., Inc., No. C-3937, at 14–16 (F.T.C. May 6, 2008) (order) (allowing the defendant to avoid the burden of proving procompetitive effects of RPM if it can prove the absence of "*Leegin* factors"); Amended States' Comments, *supra* note 311, at 8 (arguing that the defendant should carry the burden of proving the procompetitive effects of RPM that could not be achieved less restrictively); Warren S. Grimes, *A Dynamic Analysis of Resale Price Maintenance: Inefficient Brand Promotion, Higher Margins, Distorted Choices, and Retarded Retailer Innovation*, 55 ANTITRUST BULL. 101 (2010). *See generally* Lambert, *Now What?, supra* note 3, at 1973–85 (identifying and critiquing several competing proposals for structuring ROR for RPM).

315. *See supra* Parts III.A–B.

316. *See supra* Part III. As explained above, however, when the practice is illegal the proportion of the (generally lower) overall incidence of RPM that is boundedly rational is likely to be dramatically smaller. *See supra* note 77.

competitive.[317] Whether employing an open-ended inquiry or offering a structured ROR, such approaches assume it is appropriate to place a heavy burden on plaintiffs to develop a prima facie case showing the anticompetitive effects of RPM in each specific instance.[318] One might find this burden unwarranted once we recognize that boundedly rational RPM can occur even when those factors thought necessary to generate the practice's rationally anticompetitive harms are absent.[319]

At the same time, and perhaps less obviously, boundedly rational RPM also questions the more extreme pro-plaintiff approaches advanced by those who are particularly concerned about the practice's potential anticompetitive evils. These approaches often place the burden on defendants to prove the practice procompetitive, either in all cases or when they cannot show the absence of *Leegin*-like factors.[320] Placing the burden on defendants across the board may not be justified, however, because competitive markets not only make rational anticompetitive accounts of RPM less plausible, but also diminish the likelihood of long-lasting, boundedly rational RPM.

Significantly, even the imposition of the burden to prove the absence of factors such as those enumerated by the *Leegin* Court on defendants may be unjustified. After all, our findings suggest RPM may often be boundedly rational, but still generate only limited competitive harm. When coupled with the empirical evidence showing RPM is sometimes

317. Courts' previous attempts to conduct an unstructured ROR at least implicitly take the position that an all-things-considered analysis can determine whether procompetitive benefits outweigh negative consequences. *See* Bd. of Trade of Chi. v. United States, 246 U.S. 231 (1918); *cf.* Lambert, *A Decision-Theoretic Rule*, *supra* note 3, at 169–70; Lambert, *Now What?*, *supra* note 3, at 1963 ("Employing such an unpredictable rule would tend to chill even procompetitive uses of RPM, because businesses would not want to risk an adverse treble damages verdict in order to secure RPM's benefits.").

318. For instance, to make this showing, post-*Leegin* courts require plaintiffs to define a relevant market wherein the anticompetitive effects could take place. *See, e.g.*, U.S. Horticultural Supply, Inc. v. Scotts Co., No. 04-5182, 2009 WL 89692 (E.D. Pa. Jan. 13, 2009); Spahr, 2008 WL 3914461. This demand in unstructured ROR inquiries is one that plaintiffs commonly stumble upon, due to the evidentiary difficulties involved in establishing market definition. *See* Jonathan B. Baker, *Market Definition: An Analytical Overview*, 74 ANTITRUST L.J. 129, 129 (2007) ("Throughout the history of U.S. antitrust litigation, the outcome of more cases has surely turned on market definition than on any other substantive issue."); Michael S. Jacobs, *Market Power Through Imperfect Information: The Staggering Implications of* Eastman Kodak Co. v. Image Technical Services *and a Modest Proposal for Limiting Them*, 52 MD. L. REV. 336, 357–61 (1993) (noting the difficulty in defining relevant product markets, which "make proof of those violations more difficult for plaintiffs; and they turn summary judgment into a more effective remedy for defendants"). *See generally* Carrier, *supra* note 313, at 828 ("Courts dispose of 97% of cases at the first stage, on the grounds that there is no anticompetitive effect. They balance in only 2% of cases."). In the same vein, some scholars argue that an appropriate structured ROR would require plaintiffs to make their prima facie case by proving anticompetitive effects either directly or indirectly. *See* Lambert, *Now What?*, *supra* note 3, at 1997–98.

319. *See supra* notes 107–11 and accompanying text.

320. *See* Amended States' Comments, *supra* note 311, at 8 & n.14; *cf.* Frank Mathewson & Ralph Winter, *The Law and Economics of Resale Price Maintenance*, 13 REV. INDUS. ORG. 57, 60–61 (1998) (describing how Canadian law places the burden of proving RPM procompetitive on defendants, while recognizing a "loss leader" defense, a "bait-and-switch" defense, a misleading advertising defense, and a service defense).

rationally procompetitive, therefore, the data is unlikely to justify the de facto condemnation of RPM across the board.

More generally, our analysis suggests the preferred structure of RPM's ROR depends not only on the balance of its pro- versus anticompetitive manifestations, as commonly thought, but also on the relative prevalence of boundedly rational RPM. At the extreme, traditional rational accounts of the practice would be of little practical importance in a market where the excessive employment of RPM is common. On the other hand, where boundedly rational RPM is not prevalent, extant ROR approaches may be justified in disregarding it.

More importantly, the ROR should account not only for the incidence of boundedly rational RPM but also for its consequences. Thus, where the excessive employment of the practice covers only a small portion of a competitive market, it should be of little antitrust concern. In such an environment, boundedly rational RPM may generate an efficiency loss yet cause no appreciable market-wide consumer harm, since consumers can switch to competing products.

On the other hand, boundedly rational RPM is of greater concern when commonly used by manufacturers, especially in environments with more limited market discipline, including concentrated or regulated markets, where entry or mobility barriers are present.[321] In these circumstances, the practice can harm not only those manufacturers excessively using it but also competition more broadly, reducing horizontal competition and potentially diminishing market-wide output. Similarly, boundedly rational RPM in the presence of significant market power may cause considerable consumer harm and should therefore be taken into account by the new ROR.

In fashioning an appropriate ROR, however, boundedly rational RPM should not be considered in isolation, since the ultimate effects of RPM on a given market depend on the effects of both its rational and boundedly rational manifestations, taken together. Specifically, we have seen that at least some of the conditions that make rational anticompetitive RPM more likely—such as the prevalence of the practice in the industry or market power—also slow down the demise of boundedly rational instances of this practice.[322] When such factors are present, therefore, RPM should be of greater concern. On the other hand, when these factors are not present and rational anticompetitive RPM is less likely, boundedly rational instances of the practice may still exist. Yet the market-wide impact of such instances will tend to be more limited, especially when those manufacturers employing them face significant competitive discipline.[323]

321. *See* Tor, *Entry*, *supra* note 7, at 493, 546.

322. *See supra* Part III.B.

323. Notably, moreover, even where boundedly rational RPM may generate some small market-wide harm, error and enforcement cost concerns militate for disregarding it when structuring a

Altogether, the behaviorally informed account of RPM and its consequences thus provides a basis for structuring an appropriate ROR after *Leegin*: our conclusions militate in favor of placing on plaintiffs the burden of making the prima facie case in RPM's ROR inquiry.[324] To discharge this case, plaintiffs could make a direct showing that defendant's output decreased following the employment of the practice, a showing that would indicate its anticompetitive or boundedly rational and excessive nature.[325] Alternatively, plaintiffs could provide indirect evidence of the dangers of the specific practice, by establishing the presence of *Leegin*-like factors, especially the prevalence of RPM, concentration, or market power at either manufacture or retail.[326]

Where the plaintiff has made either a direct or indirect prima facie case, the defendant should be allowed to rebut. Importantly, such a rebuttal would have to show not only that the practice sought to address a real business problem[327]—such as free riding—but also that the problem generated measurable harm to the manufacturer. Defendants would also have to show, moreover, that less restrictive means for addressing this problem were significantly more costly or less effective.[328] Otherwise, absent such a requirement, manufacturers could routinely proclaim the various theoretical harms of price-cutting in their distribution system without more.

Incidentally, this requirement may serve the added beneficial function of facilitating the debiasing of boundedly rational managers: namely, biased manufacturers who are counseled of the need to prove the harms

behaveiorally informed ROR. *Cf.* Frank H. Easterbrook, *The Limits of Antitrust*, 63 TEX. L. REV. 1 (1984) (contending that the cost of condemning a beneficial practice is much higher than the harm of allowing an anticompetitive practice to continue). *But see* Stacey L. Dogan & Mark A. Lemley, *Antitrust Law and Regulatory Gaming*, 87 TEX. L. REV. 685, 700 (2009) (contending that the risk of over enforcement "simply doesn't exist anymore").

324. As noted above, an open-ended inquiry of whether the practice is on balance anticompetitive is impractical and sets too high a bar considering the evidence of RPM's potential harms. This is evidenced, for instance, by the history of vertical non-price restraints since *Continental T.V., Inc. v. GTE Sylvania Inc.*, 433 U.S. 36 (1977), which placed such restraints under ROR. *See* Douglas H. Ginsburg, *Vertical Restraints: De Facto Legality Under the Rule of Reason*, 60 ANTITRUST L.J. 67 (1991).

325. *Cf.* Lambert, *A Decision-Theoretic Rule*, *supra* note 3, at 215–16; Lambert, *Now What?*, *supra* note 3, at 1997 (proposing a regime in which "the party challenging an instance of RPM would bear the initial burden . . . to produce direct evidence of competitive harm by showing that the challenged instance of RPM had caused a reduction in output"); Richard A. Posner, *The Rule of Reason and the Economic Approach: Reflections on the* Sylvania *Decision*, 45 U. CHI. L. REV. 1, 18–19 (1977) (proposing a direct proof approach to vertical restraints in which the plaintiff bears the burden of proving that the manufacturer's restraint reduced its output of the relevant product).

326. *In re* Nine W. Grp. Inc., No. C-3937, at 14 (F.T.C. May 6, 2008) (order); 8 AREEDA & HOVENKAMP, *supra* note 14, ¶ 1633c1, at 374–77. Note that the dealer-initiation consideration is relevant but less important under the present analysis because it is not very indicative of the likelihood of boundedly rational RPM, although its association with traditional concerns regarding anticompetitive RPM still holds.

327. *Cf.* 8 AREEDA & HOVENKAMP, *supra* note 14, ¶ 1633e3(B), at 385.

328. *Cf.* Amended States' Comments, *supra* note 311, at 8; 8 AREEDA & HOVENKAMP, *supra* note 14, ¶ 1633e3(B), at 385.

of price-cutting may be more likely to recognize that their concerns are not fully justified and possibly even reduce their reliance on RPM.[329]

In any case, a defendant who is unable to make its own case in rebuttal could still prevail by undermining a plaintiff's case. For example, where the prima facie case was based on direct evidence of defendant's output reduction following the practice, the latter could show output did not, in fact, decline or that any decline was attributable to factors other than RPM.[330] In principle, defendant could also make an alternative showing that market-wide output did not decline, thereby revealing the practice was not harmful even if it were excessively used. But such an opportunity usually would not be meaningful in practice because it requires defendant to overcome the market definition obstacle (and then further to calculate market-wide output).[331]

## CONCLUSION

Scholars have long debated the merits and demerits of RPM, mostly agreeing that this practice can have both procompetitive and anticompetitive consequences while disputing the relative frequency and significance of these two types of effects. Moreover, the Supreme Court has recently replaced RPM's traditional per se illegality with a ROR analysis, citing the economic evidence that shows that the practice is sometimes welfare-enhancing.

This Article argued, however, that all past accounts of RPM have incorrectly assumed manufacturers are strictly rational decision makers who only engage in profit-maximizing RPM. Consequently, the fault lines in the law and scholarship of vertical price restraints have been drawn between "good" rational practices that are output increasing and "bad" rational ones, which decrease output.

Yet a behavioral analysis of RPM revealed that this practice may often be neither procompetitive nor anticompetitive in the traditional, ra-

329. Although this beneficial consequence is not particularly likely. First, manufacturers' excessive reliance on RPM is driven not only by their overestimation of the harms of price-cutting but also by their aversion to such practices and their preference for RPM. *See supra* Part II. Second and most importantly, although the empirical evidence shows the possibility of debiasing, it reveals that correcting judgments under uncertainty is difficult and occurs only under extremely limited circumstances. *Cf.* Christine Jolls & Cass R. Sunstein, *Debiasing Through Law*, 35 J. LEGAL STUD. 199, 200 (2006) ("[L]egal policy may respond best to problems of bounded rationality . . . by operating directly on the boundedly rational behavior and attempting to help people either to reduce or to eliminate it. We describe legal policy in this category as 'debiasing through law.'"). *See generally* Tor, *supra* note 8, at 297–300 (briefly reviewing the role of debiasing in legal settings and citing some of the main empirical findings in this area).

330. *Cf.* Lambert, *Now What?*, *supra* note 3, at 1997–2000 (suggesting an approach that places a similar burden on plaintiffs).

331. *See supra* note 318 (explaining the difficulty of establishing market definition). In the same vein, where plaintiff's prima facie case was based on indirect evidence of the practice's harm, such as by proving the presence of one or more of those market characteristics that make the practice suspect, defendant could also rebut by undermining that indirect case.

tional sense. Drawing on a range of empirical behavioral findings and supplementing them with anecdotal and historical evidence, we showed instead that RPM is often the product of systematic error on the part of real-world, boundedly rational manufacturers.[332]

Because market forces are slow to eliminate the excessive or inefficient use of RPM, its presence should be taken into account in fashioning the ROR after *Leegin*. We therefore evaluated the factors enumerated by the Court, finding them relevant to the inquiry if not always in the way envisioned in that opinion. This Article then explained how our novel account challenges the more extreme extant variants of both pro-defendant and pro-plaintiff ROR approaches. We completed the analysis by providing a blueprint for a better-informed, structured approach to RPM that takes into account its procompetitive, anticompetitive, and boundedly rational manifestations alike.

Finally, the recasting of a longstanding legal and economic debate through the analysis of boundedly rational RPM illustrates the potential of a behaviorally informed antitrust law.[333] As shown here, some significant phenomena that puzzle economists and challenge the law can be better understood and addressed when the reality of human behavior in markets and firms is taken into account, the inherent limitations of such analyses notwithstanding.[334]

332. *See supra* Part III.

333. *See also* Aviram & Tor, *supra* note 299; Stucke, *supra* note 7; Tor, *Entry*, *supra* note 7; Tor, *Illustrating*, *supra* note 7.

334. *See* Tor, *supra* note 8 (reviewing the main elements of the behavioral analysis of law and evaluating some of its limitations, real and imagined).