

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

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### ABSTRACT

*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 regarding the overall RPM evaluation, however, scholars, the Court, and the limited 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 anti-competitive manifestations. Importantly, however, all of these theories also assume – like traditional antitrust scholarship more generally – that manufacturers are strictly rational actors, who employ only profit-maximizing arrangements.*

*In contrast, a behavioral analysis suggests that real-world, boundedly-rational manufacturers are prone to overuse RPM, at times harming consumers. The available evidence reveals this excessive reliance on RPM slowly diminishes over time, as biased manufacturers are taught or disciplined by the market. The slow demise of this practice, however, may entail significant efficiency losses over many years. Yet because RPM will sometimes be procompetitive, Leegin's rejection of its per-se condemnation in favor of a rule of reason analysis is still justified. The present analysis therefore not only offers a novel account of resale price maintenance, but also shows how boundedly rational RPM challenges the various post-Leegin approaches developed by some 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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## TABLE OF CONTENTS

<b>INTRODUCTION</b> .....	<b>2</b>
<b>I. THE RPM DEBATE</b> .....	<b>5</b>
A. A BRIEF HISTORY .....	5
B. THEORY .....	7
1. <i>Anticompetitive Accounts</i> .....	7
2. <i>Procompetitive Effects</i> .....	8
C. EVIDENCE .....	11
D. THE ASSUMPTION OF MANUFACTURER RATIONALITY .....	13
<b>II. BOUNDEDLY RATIONAL RPM</b> .....	<b>15</b>
A. REAL MANUFACTURERS .....	15
B. OVERESTIMATING THE EXPECTED HARM FROM PRICE-CUTTING .....	17
1. <i>Anchoring on Biased Information</i> .....	17
2. <i>Availability Biases in Recall and Construction</i> .....	20
3. <i>The Consequences of Judgment by Representativeness</i> .....	22
C. PRICE-CUTTING AVERSION .....	24
1. <i>Loss Aversion</i> .....	25
2. <i>Fairness-Driven Behavior</i> .....	26
D. A PRO-RPM PREFERENCE .....	29
1. <i>Overweighting the Price Dimension</i> .....	30
2. <i>Overestimating the Benefits of RPM</i> .....	32
<b>III. THE SLOW DEMISE OF BOUNDEDLY-RATIONAL RPM</b> .....	<b>36</b>
A. NATURAL EXPERIMENTS .....	36
B. LEARNING .....	40
1. <i>Impediments to Information Search</i> .....	40
2. <i>Biases in Information Evaluation</i> .....	43
3. <i>The Difficulty of Abandoning RPM</i> .....	45
C. FIRMS .....	46
D. MARKETS .....	52
<b>IV. TOWARDS A BEHAVIORALLY-INFORMED STRUCTURED RULE OF REASON</b> .....	<b>55</b>
A. <i>LEEGIN</i> REEXAMINED .....	56
B. REVISITING THE DEBATE OVER RPM'S NEW RULE OF REASON .....	58
<b>CONCLUSION</b> .....	<b>65</b>

## INTRODUCTION

The Supreme Court's recent decision in *Leegin Creative Leather Products, Inc. v. PSKS, Inc.*<sup>1</sup> replaced the longstanding per-se rule against

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<sup>1</sup> 551 U.S. 877 (2007).

minimum resale price maintenance (RPM)<sup>2</sup> with a rule of reason (ROR) approach and resurrected the debate over this vertical restraint that forbids dealers from selling the products purchased from a manufacturer below a prescribed price.<sup>3</sup> Proponents of this practice again point to its potential procompetitive benefits, while RPM detractors emphasize its possible anticompetitive consequences.<sup>4</sup>

Despite their disagreements, however, the Court, legal and economic scholars, and the limited empirical data appear near-unanimous in agreeing such arrangements can either increase or decrease efficiency.<sup>5</sup> Consequently, the RPM debate predominantly revolves around theoretical assertions regarding the likely frequency and significance of RPM's pro- versus anti-competitive manifestations.<sup>6</sup> 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.<sup>7</sup>

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

<sup>3</sup> See, e.g., Alan Devlin, *On the Ramifications of Leegin Creative Leather Products, Inc. v. PSKS, Inc.: Are Tie-ins Next?*, 56 CLEV. ST. L. REV. 387 (2008); Ashley Doty, *Leegin v. PSKS: New Standard, New Challenges*, 23 BERK. 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, *Dr. Miles is Dead, Now What?: Structuring a Rule of Reason for Evaluating Minimum Resale Price Maintenance*, 50 WM. & MARY L. REV. 1937 (2009); Scott Looper, *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); 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); Randal C. Picker, *Twombly, Leegin, and the Reshaping of Antitrust*, 2007 SUP. CT. REV. 161 (2007); Jason A. Casey, Note, *The Rule of Reason After Leegin: Reconsidering the Use of Economic Analysis in the Antitrust Arena*, 42 SUFFOLK U. L. REV. 919 (2009); Note, *Leegin's Unexplored "Change in Circumstance": The Internet and Resale Price Maintenance*, 121 HARV. L. REV. 1600 (2008).

<sup>4</sup> See *infra* notes 28-49 and accompanying text.

<sup>5</sup> See *infra* notes 50-65 and accompanying text.

<sup>6</sup> 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).

<sup>7</sup> Avishalom Tor, *The Fable of Entry: Bounded Rationality, Market Discipline, and Legal Policy*, 101 MICH. L. REV. 482, 488 (2002) [hereinafter: *Entry*]; Avishalom Tor, *Illustrating a Behaviorally-Informed Approach to Antitrust Law: Section 2 Predation and Beyond*, 18 ANTITRUST 52, 52-53 (2003); see also Russell B. Korobkin & Thomas S. Ulen, *Law & Behavioral Science: Removing the Rationality Assumption from Law & Economics*, 88 CAL. L.

In contrast, a behavioral analysis of RPM suggests that real-world, boundedly rational manufacturers<sup>8</sup> 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. Hence, manufacturers who are free to employ RPM will overuse it, at times harming both themselves and their consumers and generating efficiency losses.<sup>9</sup>

Both the historical evidence and relevant empirical data suggest the excessive reliance on RPM with its attendant efficiency losses will diminish over time, as biased manufacturers either learn when the practice is inefficient or are disciplined by the market.<sup>10</sup> However, the slow demise of RPM entails significant consumer harm over many years. At the same time, because RPM will sometimes be efficiency-enhancing, *Leegin's* rejection of its per-se condemnation in favor of a rule of reason analysis may well be justified.<sup>11</sup>

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 and the central role of the assumption of manufacturer rationality in the debate over this practice. Part II then shows how behavioral evidence suggests that real-world manufacturers tend excessively to use RPM to combat retail price-cutting. Part III reveals 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 some 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*.

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REV. 1051, 1053 (2000) (discussing the growth of behavioral economics as a critique of rational choice models). *See generally infra* notes 66-72. and the accompanying text.

<sup>8</sup> The concept of bounded rationality was originally developed by Herbert A. Simon. *See* Herbert A. Simon, *A Behavioral Model of Rational Choice*, 69 Q.J. ECON. 99 (1956); Herbert A. Simon, *Rational Choice and the Structure of the Environment*, 63 PSYCHOL. REV. 129 (1958). *See also* Avishalom Tor, *The Methodology of the Behavioral Economics of Law*, 3 HAIFA L. REV. 237, 242-44 & n.16 (2008) [hereinafter *Behavioral Methodology*] (discussing the evolution of the concept of bounded rationality and explaining the present, broader usage).

<sup>9</sup> *See infra* Sections III.B-C.

<sup>10</sup> *See infra* Sections III.A-C.

<sup>11</sup> *See infra* Part IV.

## I. THE RPM DEBATE

### A. A Brief History

In the 1911 case of *Dr. Miles*,<sup>12</sup> the Supreme Court proclaimed the per se illegality of resale price maintenance.<sup>13</sup> *Dr. Miles*, a manufacturer of nonprescription, trademarked drugs, entered contracts specifying “the minimum prices at which sales shall be made by its vendees and by all subsequent purchasers who traffic in its remedies.”<sup>14</sup> The defendant dealer (“Parke”) refused to enter such a contract, and continued selling *Dr. Miles*’ drugs to discounting retailers who then sold them at prices below those specified in the restraining contracts. The Supreme Court, however, found the contracts invalid under section 1 of the Sherman Act.<sup>15</sup>

Although the per se rule of *Dr. Miles* was reconfirmed continually in the following decades,<sup>16</sup> its impact has been curtailed for almost forty years by the passage of the Miller-Tydings Act of 1937 and the McGuire Act of 1955. These Acts amended the Sherman Act to allow RPM where permitted by state “fair trade” laws.<sup>17</sup>

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<sup>12</sup> *Dr. Miles Medical Co. v. John D. Parke & Sons Co.*, 220 U.S. 373 (1911).

<sup>13</sup> For a detailed discussion of the decision and its reading, see PHILLIP E. AREEDA & HERBERT HOVENKAMP, *ANTITRUST LAW: AN ANALYSIS OF ANTITRUST PRINCIPLES AND THEIR APPLICATION*, chap. 16B (1989).

<sup>14</sup> *Id.* at 394.

<sup>15</sup> 15 U.S.C. § 1 (2006). 220 U.S. at 408-409 (Justice Holmes dissented).

<sup>16</sup> Early post-*Dr. Miles* cases restricted the prohibition of RPM. See *United States v. General Electric Co.*, 272 U.S. 476 (1926); *United States v. Colgate & Co.*, 250 U.S. 300 (1919). These exceptions, which threatened to engulf the per se rule, were rejected by subsequent Court decisions that reaffirmed *Dr. Miles*. See *Albrecht v. Herald Co.*, 390 U.S. 145, 149 (1968); *United States v. Arnold, Schwinn, & Co.*, 388 U.S. 365 (1967); *United States v. Parke, Davis, & Co.*, 362 U.S. 29 (1960). For recent opinions, see, for example, *Business Electronics Corp. v. Sharp Electronics Corp.*, 485 U.S. 717, 736 (1988); *Rebel Oil Co. v. Atlantic Richfield Co.*, 51 F.3d 1421, 1444 (9th Cir. 1995).

<sup>17</sup> 50 Stat. 693 (1937) (permitting “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 an one dealer’s agreement would bind all others. 66 Stat. 631 (1955); see also Richard Squire, *Antitrust and the Supremacy Clause*, 59 STAN. L. REV. 77, 84 n.30 (2006) (describing these provisions). For detailed descriptions, see AREEDA & HOVENKAMP, *supra* note 13, § 1629; and S.C. Hollander, *United States of America, in RESALE PRICE MAINTENANCE* 65 (B.S. Yamey ed., 1966).

Many states enacted fair trade laws, leading manufacturers explicitly to employ RPM in their distribution systems. Notably, many of the products for which prices were fixed were common over-the-counter products that involve minimal retail service. Yet despite the initial popularity of RPM, its usage slowly declined over time. Competition from states that did not enact fair trade laws or from new entry into the market, evasion by discounting retailers, and more made RPM less attractive to manufacturers than it originally seemed.<sup>18</sup> Congress ultimately repealed both the Miller-Tydings and McGuire Acts in 1975, however, reinstating the per-se rule of *Dr. Miles*.<sup>19</sup>

The Supreme Court in *Leegin*<sup>20</sup> explicitly overruled *Dr. Miles*, adopting instead a rule of reason for evaluating RPM.<sup>21</sup> The case arose when PSKS discounted Leegin's "Brighton" line of leather belts despite the latter's announced policy of only selling to non-discounting dealers.<sup>22</sup> Leegin ceased selling to PSKS when the latter refused to discontinue discounting and the retailer sued, alleging Leegin violated section 1 of the Sherman Act. In the district court, Leegin's evidence of the alleged pro-competitive effects of its policy was excluded under the per se rule against RPM. PSKS won an award of \$1,200,000, trebled to a total of \$4,000,000 including fees,<sup>23</sup> and the decision was upheld by the Fifth Circuit.<sup>24</sup>

The Supreme Court, divided 5-4, overturned the lower court, deciding the rule of reason should apply to resale price maintenance and stating that "[t]he reasons upon which *Dr. Miles* relied do not justify a *per se* rule."<sup>25</sup> Reexamining the 1911 precedent and surveying an economics literature "replete with procompetitive justifications for a manufacturer's use of resale price maintenance," the Court found sufficient justification to apply a rule of

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<sup>18</sup> Hollander, *supra* note 17, at 81.

<sup>19</sup> See Consumer Goods Pricing Act, 89 Stat. 801 (1975). House and Senate reports suggested the undesirability of RPM as an arrangement that inhibits price competition and facilitates cartels that raise consumer prices. H.R. Rep No. 341, 94th Cong., 1st Sess. 1, 1-5 (1975); S. Rep. No. 466, 94th Cong., 1st Sess. 2, 2-3 (1975).

<sup>20</sup> 551 U.S. 877 (2007).

<sup>21</sup> *Leegin* followed a series of decisions chipping away at per se restrictions on vertical arrangements over a few decades. *E.g.*, *Monsanto Co. v. Spray-Rite Serv. Corp.*, 465 U.S. 753 (1984); *Continental T.V., Inc. v. GTE Sylvania, Inc.*, 433 U.S. 36 (1977); *State Oil v. Khan*, 522 U.S. 3 (1997).

<sup>22</sup> 551 U.S. at 883. Leegin specifically sought dealers who would "support the Brighton product."

<sup>23</sup> *Id.* at 884-85.

<sup>24</sup> *PSKS, Inc. v. Leegin Creative Leather Prods, Inc.*, 171 Fed. App'x 464 (5th Cir. 2006).

<sup>25</sup> 551 U.S. at 889-90.

reason.<sup>26</sup> The opinion then explicitly left lower courts the task of developing RPM's rule of reason analysis, providing them only with "certain factors" relevant to the inquiry.<sup>27</sup>

## B. Theory

### 1. *Anticompetitive Accounts*

Scholars have proffered several explanations of the likely causes and effects of resale price maintenance. Critics argue such arrangements facilitate manufacturing or retail-level cartels,<sup>28</sup> which are inherently unstable and subject to secret defection by members undercutting the cartel's prices.<sup>29</sup> 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.<sup>30</sup> RPM can also facilitate retail-level cartels, allowing a single manufacturer or "upstream" firm to impose uniform price conditions on retail cartel members and making it easy for retailers to detect each other's cheating or defection.<sup>31</sup>

Even in the absence of express cartelization at either the up- or downstream levels, a widespread use of RPM in an industry can "soften" competition in concentrated markets.<sup>32</sup> When there are only a few

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<sup>26</sup> *Id.* In dissent, Justice Breyer noted a bright-line rule provided greater certainty and pointed to stare decisis considerations. *Id.* at 917, 923 (Breyer, J., dissenting).

<sup>27</sup> *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 summary judgment to Leegin, as 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 Products, Inc.*, No. CV 2:03 CV 107, 2009 WL 938561, at \*1, \*5, \*8 (E.D. Tex. Apr. 6, 2009).

<sup>28</sup> See, e.g., William Comanor, *Vertical Price Fixing, Vertical Market Restrictions, and the New Antitrust Policy*, 98 HARV. L. REV. 983 (1985); Warren S. Grimes, *Brand Marketing, Intra-brand Competition, and the Multibrand Retailer: The Antitrust Law of Vertical Restraints*, 64 ANTITRUST L.J. 83 (1995).

<sup>29</sup> See Frank H. Easterbrook, *Vertical Arrangements and the Rule of Reason*, 53 ANTITRUST L.J. 135, 141 (1984).

<sup>30</sup> See Herbert Hovenkamp, *Vertical Restrictions and Monopoly Power*, 64 B.U. L. REV. 521, 534 (1984); Lester Tesler, *Why Should Manufacturers Want Fair Trade?*, 3 J.L. & ECON. 86, 99-104 (1960) (describing manufacturer cartelization in the lightbulb industry); Oliver E. Williamson, *Assessing Vertical Market Restrictions: Antitrust Ramifications of the Transaction Cost Approach*, 127 U. PA. L. REV. 953, 967 (1979).

<sup>31</sup> See HERBERT HOVENKAMP, *ECONOMICS AND FEDERAL ANTITRUST LAW* 87-89 (1985).

<sup>32</sup> 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

manufacturers or retailers, the practice makes easier supra-competitive, oligopolistic pricing.<sup>33</sup>

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.<sup>34</sup>

## 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 point-of-sale services that enhance demand and total sales of manufacturers' products.

For example, Bowman and Tesler argued that product-specific services, such as product demonstrations, can stimulate demand, but free riding may prevent their provision when retailers compete over price.<sup>35</sup> Discounting retailers, who do not incur the cost of providing services, can reduce product prices, benefiting from or free riding on their competitors' investment.<sup>36</sup> RPM can overcome free riding by removing the possibility of price-cutting, encouraging retailers to compete over service-provision. The resulting

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Stiglitz, *The Role of Exclusive Territories in Producers Competition*, 26 RAND J. ECON. 431, 32 (1995).

<sup>33</sup> See ANDREU MAS-COLELL, MICHAEL D. WHINSTON & JERRY R. GREEN, MICROECONOMIC THEORY 383, 387 (1995). See generally Herbert Hovenkamp, *The Rationalization of Antitrust*, 116 HARV. L. REV. 917, 936 (2003) (discussing the *Antitrust Law* treatise's position on oligopoly behavior) (citing 8 PHILLIP E. AREEDA, ANTITRUST LAW P1604, at 37-78 (1989); Richard A. Posner, *Oligopoly and the Antitrust Laws: A Suggested Approach*, 21 STAN. L. REV. 1562 (1969) (suggesting that oligopolistic coordination should be illegal).

<sup>34</sup> See Alan J. Meese, *Raising Rivals' Costs: Can the Agencies Do More Good than Harm?*, 12 GEO. MASON L. REV. 241, 264-65 (2003); see also Milton Handler, *Statement Before the Small Business Administration*, 11 ANTITRUST BULL. 417, 424-25 (1966) (positing that "an exclusive buying provision can constitute a vital quid pro quo to avoid placing the seller at the dealer's mercy").

<sup>35</sup> See W.S. Bowman, *The Prerequisites and Effects of Resale Price Maintenance*, 22 U. CHI. L. REV. 825 (1955); Tesler, *supra* note 30, at 89.

<sup>36</sup> See *Continental T.V., Inc. v. GTE Sylvania, Inc.*, 433 U.S. 36, 55 (1977) ("[D]iscounting retailers can free-ride on retailers who furnish services and then capture some of the increased demand those services generate."); Tesler, *supra* note 30, at 91.

increased demand and consumer perception of value may offset the higher prices caused by RPM.<sup>37</sup>

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.<sup>38</sup> In an effort to prevent discounts from harming a brand’s image, RPM binds retailers who might engage in loss leading. Under this theory, RPM may be efficient or pro-competitive if loss leading reduces a product’s value. Despite the long-standing concern of manufacturers over loss-leading,<sup>39</sup> however, this justification for RPM has not gained substantial traction among scholars.<sup>40</sup>

Closely related, others suggest RPM can promote consumer welfare through brand promotion and improved goodwill.<sup>41</sup> Though manufacturers can control their brand through advertising, retailer or dealer services can heighten a brand’s image in competitive markets for similar goods. Brand imaging often is essential to wide distribution and high-volume, low-cost production of goods, since new products under the same brand will have higher demand than new products of unknown brands.<sup>42</sup> Even if free riding cannot be perfectly controlled, manufacturers still may provide incentives, such as RPM, for retailers to provide product-specific services to improve their brand’s image.<sup>43</sup>

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<sup>37</sup> See Easterbrook, *supra* note 29, 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, 484-91 (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 (1981); see also Ralph A. Winter, *Vertical Control and Price Versus Nonprice Competition*, 108 Q.J. ECON. 61 (1993) (arguing RPM prevents retailers from focusing on infra-marginal consumers).

<sup>38</sup> E.g. Howard P. Marvel & Stephen McCafferty, *The Welfare Effects of Resale Price Maintenance*, 28 J.L. & ECON. 363, 375 (1985).

<sup>39</sup> Manufacturer concerns over loss leading are not a new phenomenon. See RESALE PRICE MAINTENANCE BY MEANS OF FAIR TRADE LAWS 3 (American Fair Trade Council, 1942).

<sup>40</sup> Cf. Howard P. Marvel, *The Resale Price Maintenance Controversy: Beyond the Conventional Wisdom*, 63 ANTITRUST L.J. 59, 73-76 (1994) (detailing the theory of price cutting and loss leading).

<sup>41</sup> See generally Warren S. Grimes, *Spiff, Polish, and Consumer Demand Quality: Vertical Price Restraints Revisited*, 80 CAL. L. REV. 815, 822-23 (1991) (detailing procompetitive theories of product branding through vertical restraints).

<sup>42</sup> See Nicholas S. Economides, *The Economics of Trademarks*, 78 TRADEMARK REP. 523, 525-27 (1988).

<sup>43</sup> See Robert L. Steiner, *Judging the Welfare Performance of Manufacturers’ Advertising*, 10 J. ADVERTISING 3, 12-13 (1981).

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.<sup>44</sup> If consumers recognize retailers choose a narrow range of products to sell from among multiple brands, such information is a valuable quality-endorsement of the brands selected.

RPM also may be a superior enforcement mechanism in contracts for the provision of services. Murphy and Klein 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.<sup>45</sup> 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.<sup>46</sup> Other scholars have noted that such incentives similarly extend to retailer agreements to provide post-sale services such as installation, warranty, and repair services.<sup>47</sup>

Seeking further to extend the service-encouragement account of RPM, Klein and others argued recently that retailers lack sufficient incentives effectively to promote a manufacturer's products even absent free riding.<sup>48</sup> Due to 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 where retailers are compensated for supplying increased manufacturer-specific promotional efforts."<sup>49</sup>

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<sup>44</sup> Howard P. Marvel & Stephen McCafferty, *Resale Price Maintenance and Quality Certification*, 15 RAND J. ECON. 346 (1984).

<sup>45</sup> Benjamin Klein & Kevin M. Murphy, *Vertical Restraints as Contract Enforcement Mechanisms*, 31 J.L. & Econ. 265 (1988).

<sup>46</sup> *Id.* at 285, 295.

<sup>47</sup> See, e.g., Thomas A. Piriano, Jr., *The Case for Presuming the Legality of Quality Motivated Restrictions on Distribution*, 63 NOTRE DAME L. REV. 1, 30-31 (1988); see also *Continental 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 28, at 102 ("Dealers need have no free-riding concern on post-sale services (because dealers may charge for such services). Dealers also have a built-in incentive to provide many presale amenities because they translate directly into increased sales.").

<sup>48</sup> Benjamin Klein, *Competitive Resale Price Maintenance in the Absence of Free-Riding* 16 (FTC Hearings on Resale Price Maintenance, FTC, Washington, DC, Feb. 10, 2009).

<sup>49</sup> *Id.* at 25; see Benjamin Klein & Joshua D. Wright, *The Economics of Slotting Contracts*, 50 J.L. & ECON. 421 (2007); Winter, *supra* note 37. Note, however, that services-related accounts of RPM assume that all demand increasing activities of retailers are efficient and beneficial. If, however, retailers divert demand from competing products based on their private benefits from

### C. Evidence

The case for resale price maintenance is premised on its welfare-enhancing consequences.<sup>50</sup> Yet the several extant case studies that provide evidence of free-riding in products such as household automobiles, wall covering, and personal computers, do not show that free-riding creates detrimental economic consequences.<sup>51</sup>

At the same time, empirical studies suggest RPM can facilitate express manufacturer cartels.<sup>52</sup> 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. The first group shows consistently that the abolition of RPM tends to lower retail profit margins and prices, sometimes also increasing output.<sup>53</sup> Foreign country studies of RPM in jurisdictions that permit or previously permitted the practice further support the critics' view of anticompetitive effects.<sup>54</sup> Case studies conducted in the United States and abroad provide similar results for specific goods.<sup>55</sup> Notably, if RPM only raises prices without increasing output, it is likely inefficient, while higher prices accompanied by increased output would indicate consumers value the added services potentially provided under RPM.

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larger margins, increased demand for a given product may not be welfare-promoting. More generally, although outside the present scope, procompetitive accounts of RPM depend on a questionable assumption of consumer rationality in choosing among products and services.

<sup>50</sup> See *Leegin Creative Leather Prods., Inc. v. PSKS, Inc.*, 551 U.S. 877, 889 (2007).

<sup>51</sup> 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 nn.6-8 (1988).

<sup>52</sup> See, e.g., *C-O-Two Fire Equip. Co. v. United States*, 197 F.2d 489, 492 (9th Cir. 1952).

<sup>53</sup> H.R. Rep. No. 341, 94th Cong., 1st Sess. 1, 1-5 (1975); S. Rep. No. 466, 94th Cong., 1st Sess. 2, 2-3 (1975). These reports found that prices ranged from 16-19% 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. 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. INDUST. ECON. 1 (1987); Lawrence Shepard, *The Economic Effects of Repealing the Fair Trade Laws*, 12 J. CONSUMER AFFAIRS 220 (1978) (detailing the inefficiencies of the fair trade laws and the consumer welfare gains resulting from their repeal).

<sup>54</sup> See, e.g., David Flarh, *Vertical Restraints in Japan*, in JAPAN AND THE WORLD ECONOMY 187 (1989); L.A. Skeoch, *Canada*, in RESALE PRICE MAINTENANCE, *supra* note 17, at 23; see also *infra* notes 180-182.

<sup>55</sup> See S. Oster, *The FTC v. Levi Strauss: An Analysis of the Economic Issues*, in IMPACT EVALUATIONS OF THE FTC VERTICAL RESTRAINTS CASES 48 (R. Lafferty et al. eds., 1984) [hereinafter IMPACT EVALUATIONS] (finding a significant rise in sales and profits after RPM was enjoined); W. McEachern & A. Romeo, *Vertical Restraints in the Audio Components Industry: An Economic Analysis of FTC Intervention*, in IMPACT EVALUATIONS 233.

Studies on price changes before and after the repeal of the fair trade laws<sup>56</sup> provide a glimpse into the effects of RPM agreements. For example, one study of bread prices in Washington before and after RPM was enjoined concluded that retail prices dropped while output did not—suggesting that the agreement did not serve an efficient purpose.<sup>57</sup>

Yet RPM also has some demonstrated beneficial effects. Empirical studies summarized by the FTC suggested that, though the impact of RPM varies considerably, the practice is pro-competitive in some cases.<sup>58</sup> 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.<sup>59</sup> In another 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.<sup>60</sup>

Ippolito's thorough empirical study of 203 litigated RPM cases between 1975 and 1982 also suggested that most uses of the practice in the sample were pro-competitive,<sup>61</sup> 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.”<sup>62</sup> However, the author's own careful analysis reveals the cases were likely to concern mostly procompetitive uses of RPM (insofar as they concerned minimum RPM at all) due to selection effects,<sup>63</sup> suggesting that data sheds little light on the overall prevalence of pro- versus anti-competitive RPM.<sup>64</sup>

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<sup>56</sup> For further discussion of these studies, see Section IV.A, *supra*.

<sup>57</sup> See A. McLaughlin, “An Economic Analysis of Resale Price Maintenance” (unpublished dissertation, UCLA), *cited in* T. OVERSTREET, *RESALE PRICE MAINTNENANCE: ECONOMIC THEORIES AND EMPIRICAL EVIDENCE* 22 n. 2 (1983) (finding that bread retail prices in Washington declined, but output did not, after a market-wide RPM practice was enjoined, suggesting that such an arrangement did not serve an efficient purpose)..

<sup>58</sup> See Thomas Overstreet, *Resale Price Maintenance: Economic Theories and Empirical Evidence*, Bureau of Economics Staff Report to the Federal Trade Commission 160 (1983), *available at* <http://www.ftc.gov/be/econrpt/233105.pdf>; *see also* Lambert, *supra* note 3, at 1989 (reexamining of the FTC's findings and arguing “they cannot support the view that RPM is, more often than not, anticompetitive.”).

<sup>59</sup> *Id.* at 134.

<sup>60</sup> *Id.* at 122-23.

<sup>61</sup> See Pauline M. Ippolito, *Resale Price Maintenance: Empirical Evidence from Litigation*, 34 *J.L. & ECON.* 263, 266-67 (1991).

<sup>62</sup> *Id.* at 292.

<sup>63</sup> 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

All in all, the empirical evidence shows RPM results in higher margins for retailers and higher prices for consumers. There are indications the practice might restrict or expand output. However, the empirical data also suggests RPM has facilitated illicit horizontal behavior. The data does not establish clearly which outcomes—negative or positive—are more likely to occur,<sup>65</sup> only indicating 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 this practice can either increase or decrease efficiency, but disagrees on the likely frequency and significance of its pro- versus anticompetitive manifestations. Importantly, however, following traditional economic analysis of law generally<sup>66</sup> and antitrust law and

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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 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 the resulted in detailed published judgments and decided 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 pro-competitive RPM cases.

<sup>64</sup> 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. *Id.* at 279.

<sup>65</sup> See Overstreet, *supra* note 58, at 160-64 (noting the ambiguous and varying empirical results of studies on RPM); Howard P. Marvel, The Benefits of Resale Price Maintenance 25 (FTC Hearings on Resale Price Maintenance, Feb. 17, 2009) (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).

<sup>66</sup> See, e.g., RICHARD POSNER, ECONOMIC ANALYSIS OF LAW 3 (6th ed. 2003) ("The task of economics . . . is to explore the implications of assuming that man is 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: "the view taken will generally be that actors are "rational" . . . and . . . maximize their

economics specifically,<sup>67</sup> extant theories of RPM uniformly assume manufacturers are strictly rational actors, who employ only profit-maximizing RPM arrangements.<sup>68</sup>

For instance, RPM detractors argue that it facilitates rational, anticompetitive, coordination among manufacturers or retailers.<sup>69</sup> Therefore, they often interpret the empirical evidence showing that such arrangements increase retail prices without increasing output as indicative of such rational anticompetitive strategies.<sup>70</sup>

Similarly, supporters of RPM argue that manufacturers would never use this practice unless its costs were justified by the profitable retail services it encourages.<sup>71</sup> Otherwise, they assert, rational manufacturers would never adopt such a practice to their own detriment but instead maximize profits by demanding the highest possible wholesale prices.<sup>72</sup>

However, a substantial body of empirical evidence demonstrates systematic deviations from rational behavior, both at the individual level and in aggregate market outcomes.<sup>73</sup> As Part III reveals, moreover, some of these findings specifically suggest that real-world manufactures are prone

expected utility"); Christine Jolls, Cass R. Sunstein & Richard Thaler, *A Behavioral Approach to Law and Economics*, 50 STAN. L. REV. 1471, 1481-85 (1998); Tor, *Behavioral Methodology*, *supra* note 8, at 239-41 (briefly reviewing rational actor models in law and economics).

<sup>67</sup> E.g., 1 AREEDA & HOVENKAMP, *supra* note 13, P113, at 137 (stating that "as a general proposition business firms are (or must be assumed to be) profit-maximizers"); RICHARD A. POSNER, ANTITRUST LAW ix (2d ed. 2001) ("[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."); Maurice E. Stucke, *Behavioral Economists at the Gate: Antitrust in the Twenty-First Century*, 38 LOY. U. CHI. L.J. 513, 514 (2007); See generally Tor, *Entry*, *supra* note 7, at 488 (discussing the role of the rationality assumption in law and economics and providing further references).

<sup>68</sup> 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) (noting that "[t]he standard assumption in most economic models is that the primary objective of a manager of a firm is to maximize the firm's profits. . . ."); JEAN TIROLE, THE THEORY OF INDUSTRIAL ORGANIZATION 34-35 (1988); A. MITCHELL POLINSKY, AN INTRODUCTION TO LAW AND ECONOMICS 10 (2d ed. 1989); Korobkin & Ulen, *supra* note 7, at 1053.

<sup>69</sup> See *supra* notes 29-31 and accompanying text.

<sup>70</sup> See *id.*

<sup>71</sup> See *supra* notes 35-37 and accompanying text.

<sup>72</sup> See POSNER, *supra* note 67, at ix; 1 AREEDA & HOVENKAMP, *supra* note 13, P113, at 137; Marvel, *supra* note 65, at 4 ("No manufacturer will ever wish unilaterally to keep its margins high unless it sells more in consequence of those higher margins.").

<sup>73</sup> See, e.g., Colin Camerer, *Individual Decision Making*, in HANDBOOK OF EXPERIMENTAL ECONOMICS 111 (John H. Kagel & Alvin E. Roth eds., 1995).

inefficiently and excessively to employ RPM to the detriment of their own businesses and their consumers alike. As we show, moreover, the presence of systematic error in manufacturers' RPM decision making – besides any rational anti- or procompetitive reasons for utilizing this practice – calls for a reassessment of RPM and its antitrust analysis.

## II. BOUNDEDLY RATIONAL RPM

### A. Real Manufacturers

Despite its centrality in RPM discourse, there is reason to believe the assumption of rationality 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 overall outcomes of retail price cutting in their distribution system.<sup>74</sup> These expected outcomes are an aggregate function of the various benefits and costs of every potential consequence of price cutting to the manufacturer, multiplied by its probability.<sup>75</sup> To reach this determination, a manufacturer must obtain and analyze a large quantity of information about his retailers, their distribution practices, and the interactions between these practices and the operations of his own business. This information, however, is only partly available to retailers or to the manufacturer.<sup>76</sup>

Second, after determining the overall expected value (benefit or harm) of price cutting, manufacturers must also decide whether and how to address it.<sup>77</sup> This choice should be based on the relative benefits and costs of the alternative distribution arrangements, since the dangers posed by price cutting

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<sup>74</sup> All judgments are essentially probabilistic. See Tor, *Behavioral Methodology*, *supra* note 8, at 244-46 (2008); see also Robyn M. Dawes, *Behavioral Decision Making and Judgment*, in THE HANDBOOK OF SOCIAL PSYCHOLOGY 497 (Daniel T. Gilbert et al. eds., 1998).

<sup>75</sup> Rational actions 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 (1947) (providing a technical appendix of expected utility theory); see also sources cited *supra* notes 66-73.

<sup>76</sup> See Hovenkamp, *supra* note 30, at 534.

<sup>77</sup> See Arnold C. Cooper et al., *Entrepreneurs' Perceived Chances of Success*, J. BUS. VENTURING 97, 102 (1988); Tor, *Behavioral Methodology*, *supra* note 8, at 257-71; see also Dawes, *supra* note 74, at 497-99.

can often be addressed by various means beyond RPM, such as territorial allocation, incentive contracts, and more.<sup>78</sup> Ultimately, the rational manufacturer employs RPM always and only when it is profit-maximizing.<sup>79</sup>

Importantly, however, there is much evidence suggesting that real manufacturers – like other decision makers – are not perfectly rational. Instead, they possess limited cognitive resources and are affected by motivation and emotion—that is, they are “boundedly rational.”<sup>80</sup> 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.<sup>81</sup> While highly adaptive and often useful,<sup>82</sup> however, heuristic judgment and cue-dependent choice also lead manufacturers systematically and predictably to deviate from strictly rational behavior.<sup>83</sup>

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 retail price cutting on the one hand, and an unjustifiable preference for RPM as the means for addressing these perceived harms on the other. The following sections examine these judgment and decision processes, showing how they converge to lead manufacturers to employ RPM excessively and inefficiently.<sup>84</sup>

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<sup>78</sup> See *supra* note 149 and accompanying text (briefly discussing alternatives to RPM and citing some further references).

<sup>79</sup> Cf. AREEDA & HOVENKAMP, *supra* note 13, at ¶1633d, 334-35 (describing the issues a court seeking to determine whether a given instance of RPM serves a legitimate function must ascertain).

<sup>80</sup> *Supra* note 8.

<sup>81</sup> See, e.g., Tor, *Behavioral Methodology*, *supra* note 8, at 242.

<sup>82</sup> See, e.g., BOUNDED RATIONALITY: THE ADAPTIVE TOOLBOX (Gerd Gigerenzer & Reinhard Selten eds., 2001), JOHN W. PAYNE, JAMES R. BETTMAN & ERIC J. JOHNSON, 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”).

<sup>83</sup> 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 produces market outcomes that deviate from rational choice model predictions); Jolls et al., *supra* note 7, at 1481-85 (identifying testable predictions stemming from behavioral economic theory in which economic actors 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).

<sup>84</sup> Importantly, however, this evidence does not imply that RPM is never efficient.

## 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.<sup>85</sup> Yet manufacturers may find retail-level conduct such as price-cutting difficult to identify; they may engage in costly policing efforts, but still obtain only partial evidence. More commonly, they will rely on complaints from competing distributors or on publicly available information from local advertising or media reports.<sup>86</sup>

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 loss-leading and free-riding 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,<sup>87</sup> yet frequently are inconclusive.<sup>88</sup> Consequently, the manufacturer may have to rely, at least in part, on dealers' complaints or public information—to the extent available—not just to identify price-cutting events but also to determine their purpose and effect.<sup>89</sup>

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<sup>85</sup> Note that even obtaining full information on a representative sample of cases from which manufacturers might extrapolate overall effects may prove very difficult.

<sup>86</sup> See, e.g., *Brooke Group Ltd. v. Brown & Williamson Tobacco Corp.*, 509 U.S. 209, 225 (1993) (discussing the difficulty of identifying below-cost pricing and the intended effects on firm rivals and consumer prices generally); *Monsanto Co. v. Spray-Rite Service Corp.*, 465 U.S. 752 (1984) (discussing the viability of dealer complaints versus publicly available market evidence necessary to support a § 1 claim under the Sherman Act).

<sup>87</sup> 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 indicated, but monitoring services is difficult and costly. See *supra* notes 35-37 and accompanying text.

<sup>88</sup> Such as the intentions of the retailer, the latter's profit margins on the manufacturer's products and on other products, the extent to which he provides relevant services. Cf. *AREEDA & HOVENKAMP*, *supra* note 13, at ¶1633d1, 335 ("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.").

<sup>89</sup> See, e.g., *Monsanto*, 465 U.S. at 765-66 (discussing the reaction of competitors to price-cutting behavior)

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 the problem of price-cutting by low-cost competitors which harms their profits regardless of its possible pro-competitive benefits. Other manufacturers and trade organizations are also likely to exaggerate the occurrence and negative impact of loss leading and free-riding to legitimate those distribution restraints that tend to soften competition.<sup>90</sup> Similarly, media reports of price-cutting occasions are likely to 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.<sup>91</sup>

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 rare, extreme, occurrences is well-known.<sup>92</sup> Moreover, even a manufacturer who is fully aware of the bias in the data is unlikely sufficiently to discount his information due to *anchoring*.

Anchoring operates when people make estimates by starting from an initial value, based on information provided by the environment or a partial computation, and then adjust that estimate to reach a final answer.<sup>93</sup> 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

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<sup>90</sup> Cooper et al., *supra* note 32, at 293; Rey & Stiglitz, *supra* note 32, at 432. Moreover, the interaction between manufacturers who for the reasons explored below independently overestimate the problems of price-cutting reinforces this bias.

<sup>91</sup> See, e.g., *Wal-Mart Expands Low-Cost Prescription Drug Program*, BUS. J. MILWAUKEE, Aug. 18, 2009, available at <http://www.bizjournals.com/milwaukee/stories/2009/08/17/daily25.html> (discussing Wal-Mart's well-advertised prescription drug program and its affect on competitors now choosing to offer similar services).

<sup>92</sup> See e.g., Paul Slovic, Baruch Fischhoff & Sarah Lichtenstein, *Facts versus Fears: Understanding Perceived Risk*, in JUDGMENT UNDER UNCERTAINTY: HEURISTICS AND BIASES 463, 467-468 (Daniel Kahneman, Paul Slovic & Amos Tversky eds., 1982) [hereinafter JUDGMENT UNDER UNCERTAINTY].

<sup>93</sup> Amos Tversky & Daniel Kahneman, *Judgment under Uncertainty: Heuristics and Biases*, in JUDGMENT UNDER UNCERTAINTY, *supra* note 92, at 3, 14-18; Nicolas Epley & Thomas Gilovich, *When Effortful Thinking Influences Judgmental Anchoring*, 18 J. BEHAV. DECISION MAKING 199, 209 (2005).

estimates that are biased toward the initial value.<sup>94</sup> Importantly, moreover, insufficient adjustment occurs even for anchors that are obviously irrelevant, patently wrong, biased, or extreme.<sup>95</sup>

For anchoring to occur, moreover, decision makers must note the anchor, but need not be aware they are anchoring on it.<sup>96</sup> In fact, recent studies have shown anchoring operates even for clearly incidental environmental anchors, finding estimates of athletes' performance biased by the numbers on their clothing; estimates of the proportion of sales in the domestic market influenced by a product's model number; and even participants' estimates of how much they would spend at a restaurant biased by whether it was named "Studio 17" or "Studio 97."<sup>97</sup>

Significantly, anchoring has even been shown to affect professional decision makers, such as accountants and real-estate brokers in their domain of expertise,<sup>98</sup> even in much easier tasks than determining the overall expected value of price-cutting. The tendency to exhibit such behavior suggests that individual firms are capable of the same deviations from rationality as consumers. All in all, manufacturers 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.<sup>99</sup>

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<sup>94</sup> See, e.g., Paul Slovic & Sarah Lichtenstein, *Comparison of Bayesian and Regression Approaches in the Study of Information Processing in Judgment*, 6 *ORG. BEHAV. & HUM. PERFORMANCE* 649 (1971); Tversky & Kahneman, *supra* note 93, at 14-18.

<sup>95</sup> Tversky & Kahneman, *supra* note 93, at 14.

<sup>96</sup> 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, Dale Griffin & Daniel Kahneman eds., 2002). See also Nicholas Epley & Thomas Gilovich, *Putting the Adjustment Back in the Anchoring and Adjustment Heuristic*, 12 *PSYCH. SCI.* 391, 391-392 (2001).

<sup>97</sup> Clayton R. Critcher & Thomas Gilovich, *Incidental Environmental Anchors*, 21 *J. BEHAV. DEC. MAKING* 241 (2008).

<sup>98</sup> See, e.g., Edward E. Joyce & Gary C. Biddle, *Anchoring and Adjustment in Probabilistic Inference in Auditing*, 19 *J. ACCT. RES.* 120 (1981) (accountants); Gregory Northcraft & Margaret Neale, *Experts, Amateurs, and Real Estate: An Anchoring and Adjustment Perspective on Property Pricing Decisions*, 39 *ORG. BEHAV. & HUM. DEC. PROCESS.* 84 (1987) (real estate brokers); see also Critcher & Gilovich, *supra* note 97 (finding in Study 1 that anchoring effects were not qualified by participants' expertise in the relevant domain).

<sup>99</sup> See also *infra* note 122 and accompanying text (reviewing evidence on 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 on manufacturers' estimates of the dangers of retail price-cutting are exacerbated by the availability heuristic, which is often used to assess the frequency of a class or the probability of events.<sup>100</sup> 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.<sup>101</sup>

Availability-based judgments are rapid and effortless; decision makers are therefore usually unaware of the processes they use to reach these judgments.<sup>102</sup> 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.<sup>103</sup> 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 over-publicized.<sup>104</sup>

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<sup>100</sup> Tversky & Kahneman, *supra* note 93, at 11-14; *see also* Amos Tversky & Daniel Kahneman, *Availability: A Heuristic for Judging Frequency and Probability*, in *JUDGMENT UNDER UNCERTAINTY*, *supra* note 92, at 163 [hereinafter *Availability*] (exploring different types of judgments by availability); 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).

<sup>101</sup> Tversky & Kahneman, *supra* note 93, at 13; L.J. Chapman & J.P. Chapman, *Illusory Correlation as an Obstacle to the Use of Valid Psychodiagnostic Signs*, 74 *J. ABNORMAL PSYCHOL.* 271 (1969). 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 93, 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 96, 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).

<sup>102</sup> *See* Baruch Fischhoff et al., *Evolving Judgments of Terror Risks: Foresight, Hindsight, and Emotion*, 11 *J. EXPERIMENTAL PSYCHOL.* 124, 126, 135 (2005).

<sup>103</sup> *E.g.*, Tversky & Kahneman, *Availability*, *supra* note 100.

<sup>104</sup> Accidents are overestimated, being judged to cause as many fatalities as diseases, while the latter in fact cause about 16 times more deaths. Similarly, the risk of homicide is dramatically overestimated, while the risk of death by stroke is underestimated. In general, overestimated

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,<sup>105</sup> manufacturers are likely excessively to 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.<sup>106</sup> People commonly make an effort to recall relevant instances of an occasion (e.g. how many times did it snow last March?), then supplement their 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?).<sup>107</sup> 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.<sup>108</sup> 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 together well, what is likely to happen?), then proceed to produce different potential outcomes.<sup>109</sup>

Importantly, however, the ease with which the simulation reaches a particular result is used to judge the propensity of the real-life situation under

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causes of death tend to be more dramatic and sensational, and thus both heavily publicized by the media and easier to recall per se. 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 92, at 465-72.

<sup>105</sup> The natural salience of harmful price-cutting in manufacturer's minds is further reinforced by individuals' preoccupation "with highly desirable outcomes . . . or with highly undesirable outcomes . . . [c]onsequently, availability provides a mechanism by which occurrences of extreme utility (or disutility) may appear more likely than they actually are." Tversky & Kahneman, *Availability*, *supra* note 100, at 178.

<sup>106</sup> Daniel Kahneman & Amos Tversky, *The Simulation Heuristic*, in JUDGMENT UNDER UNCERTAINTY, *supra* note 92, at 201, 202-03 [hereinafter *Simulation*].

<sup>107</sup> See also Tversky & Kahneman, *Availability*, *supra* note 100, at 166, 175-178.

<sup>108</sup> Kahneman & Tversky, *Simulation*, *supra* note 106, at 201.

<sup>109</sup> *Id.*

consideration to produce that state.<sup>110</sup> Consequently, the simulation heuristic leads to a bias in favor of scenarios where dramatic events mark causal transitions.<sup>111</sup>

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 losses to the manufacturer by debasing his brand name, for instance, would seem more likely 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 belong 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.<sup>112</sup> Relying on representativeness, for instance, decision makers may judge the guilt of a criminal defendant or suspect based on the degree to which he resembles the relevant class of offenders.<sup>113</sup>

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<sup>110</sup> *Id.*

<sup>111</sup> 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 of the man. 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. They did so 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 203-207. 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

<sup>112</sup> Amos Tversky & Daniel Kahneman, *Subjective Probability: A Judgment of Representativeness*, in JUDGMENT UNDER UNCERTAINTY, *supra* note 92, at 32, 39-40 [hereinafter *Subjective Probability*]; see also Amos Tversky & Daniel Kahneman, *Judgments of and by Representativeness*, in JUDGMENT UNDER UNCERTAINTY, *supra* note 92, at 84, 85-88 (elaborating on the representativeness relation).

<sup>113</sup> Russell D. Covey, *Criminal Madness: Cultural Iconography and Insanity*, 61 STAN. L. REV. 1375, 1381 (2009); Chad M. Oldfather, *Heuristics, Biases, and Criminal Defendants*, 91 MARQ. L. REV. 249 (2007); Murad Hussain, Note, *Defending the Faithful: Speaking the Language of Group Harm in Free Exercise Challenges to Counterterrorism Profiling*, 117 YALE L.J. 920, 933 n.60 (2008) (discussing the impact of the representativeness heuristic on terrorist and criminal profiling).

As in the case of availability, judgments by similarity or representativeness are both relatively easy and typically sensible, since 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.<sup>114</sup> Three of these representativeness-driven errors 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.<sup>115</sup> This phenomenon often persists even for worthless or irrelevant evidence, only disappearing when no information is available,<sup>116</sup> or when the information is non-specific, impoverished or incoherent.<sup>117</sup> In real-life situations, however, evidence is rarely unavailable and the relevant evidence is usually vivid, specific,<sup>118</sup> and causally related to the subject of the evaluation.<sup>119</sup> Consequently, the neglect of prior probabilities is common.

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<sup>114</sup> See Maya Bar-Hillel, *Studies of Representativeness*, in JUDGMENT UNDER UNCERTAINTY, *supra* note 92, at 69; Maya Bar-Hillel & Efrat Netter, *How Alike Is It? Versus "How Likely Is It?: A Disjunction Fallacy in Probability Judgments*, in Heuristics and Biases, *supra* note 96, at 82; Tversky & Kahneman, *Subjective Probability*, *supra* note 112, at 47;

<sup>115</sup> Tversky & Kahneman, *Subjective Probability*, *supra* note 112 (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 30%, with engineers comprising the other 70%, 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 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 92, at 48, 53-54; cf. Maya Bar-Hillel, *The Base Rate Fallacy Controversy*, in DECISION MAKING UNDER UNCERTAINTY 39 (Roland W. Scholz ed., 1983).

<sup>116</sup> Kahneman & Tversky, *supra* note 115, at 56.

<sup>117</sup> Amos Tversky & Daniel Kahneman, *Evidential Impact of Base Rates*, in JUDGMENT UNDER UNCERTAINTY, *supra* note 92, at 153, 159.

<sup>118</sup> Richard E. Nisbett et al., *Popular Induction: Information is Not Necessarily Informative*, in JUDGMENT UNDER UNCERTAINTY, *supra* note 92, at 101, 112.

<sup>119</sup> Bar-Hillel, *supra* note 115, at 45-48.

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 (already biased) 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.<sup>120</sup> Thus, decision makers overweight the characteristics displayed by the evidence they have, neglecting the statistical implication 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. After learning of a few cases of supposedly harmful price-cutting, manufacturers thus are likely to believe such occurrences far more typical than they really are. Alternatively, if a manufacturer discovers a distributor has engaged in price cutting, and such retailer actions are rare in the industry or highly dealer-specific, the manufacturer may latch onto the singular instance as evidence that price cutting will occur with greater frequency.

Finally, representativeness also causes insensitivity to predictability – that is, to the reliability of the source of the information.<sup>121</sup> 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 their advisors' conflicts-of-interest – as is probably the case with manufacturers and retailers – do not sufficiently discount the advice they receive from these advisors.<sup>122</sup>

### C. Price-Cutting Aversion

Manufacturers tend to overestimate the expected harm of price-cutting due to the combined effects of anchoring, availability, and representativeness.

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<sup>120</sup> That is, the probability that a sample was drawn from a particular population. Tversky & Kahneman, *Judgment under Uncertainty*, *supra* note 93, at 5-7.

<sup>121</sup> *Id.* at 8, 428. Additional factors involved in the creation of this illusion were identified in Tversky & Kahneman, *Judgment under Uncertainty*, *supra* note 93, at 9.

<sup>122</sup> 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.

This systematic judgmental bias is reinforced by two decision phenomena – loss aversion and fairness-driven behavior – that make manufacturers particularly averse to the negative consequences of price-cutting and thus more likely to try to prevent their occurrence.

### 1. *Loss Aversion*

Rational manufacturers would not oppose retailers' price-cutting except where its expected harms outweigh its expected benefits.<sup>123</sup> Their preferences, moreover, would not depend on their current practices or market position,<sup>124</sup> except insofar as these factors affect expected profits.<sup>125</sup> In contrast, real-world decision makers 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.<sup>126</sup> They also exhibit loss aversion, finding the pain associated with the negative prospect of a potential loss (e.g. losing \$1,000) far stronger than the pleasure of the positive prospect of a comparable gain (i.e. \$1,000).<sup>127</sup>

Loss aversion and the status-quo bias have been documented extensively.<sup>128</sup> In a famous early demonstration, one half of a group of Cornell students were given Cornell coffee mugs. All participants were then asked to examine a mug and indicate a price for which they would be willing to sell or

<sup>123</sup> More precisely net present value (NPV). See Tor, *Entry*, *supra* note 7, at 497-502 (discussing NPV assessments under perfect rationality and bounded rationality).

<sup>124</sup> See Boyan Jovanovic, *Selection and the Evolution of Industry*, 50 *ECONOMETRICA* 649 (1982); Tor, *Entry*, *supra* note 7, at 498-99.

<sup>125</sup> RICHARD H. THALER, *THE WINNER'S CURSE: PARADOXES AND ANOMALIES OF ECONOMIC LIFE* (1994).

<sup>126</sup> See, e.g., Daniel Kahneman, Jack L. Knetsch & Richard H. Thaler, *The Endowment Effect, Loss Aversion, and Status Quo Bias*, *J. ECON. PERSP.*, Winter 1991, at 193 (1991) [hereinafter *Endowment Effect*].

<sup>127</sup> 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) [hereinafter *Prospect Theory*]; 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, Howard Raiffa & Amos Tversky eds., 1988); Amos Tversky & Daniel Kahneman, *Loss Aversion in Riskless Choice: A Reference-Dependent Model*, *Q.J. ECON.* 1039 (1991) [hereinafter *Loss Aversion*]. For discussion of research on closely related phenomena see THALER, *supra* note, 125, at ch. 6.

<sup>128</sup> See, e.g., *id.*, at 193 (documenting and surveying literature surrounding status quo bias); Tor, *Behavioral Methodology*, *supra* note 8, at 264-68. For a description of some of these experiments, see THALER, *supra* note 125, at 64-68.

buy one. The researchers then conducted a series of markets where mugs were traded according to the parties' valuations.

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. In fact, however, only about 10% of the mugs were traded.<sup>129</sup> Other studies revealed the reluctance of potential sellers to sell (as reflected in relatively high valuations), rather than the consequence of the potential buyers' reluctance to buy, causes the low volume of trade.<sup>130</sup>

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.<sup>131</sup> 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.<sup>132</sup>

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.

## 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.<sup>133</sup> Anecdotally, manufacturers (and other advocates of their positions) have repeatedly asserted that price-cutting retailers are benefiting from the exploitation of the manufacturers' brand name (as in the case of loss-leading)

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<sup>129</sup> Since 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-\$2.75. Daniel Kahneman, Jack L. Knetsch & Richard Thaler, *Experimental Tests of the Endowment Effect and the Coase Theorem*, 98 J. POL. ECON. 1325 (1990).

<sup>130</sup> THALER, *supra* note 125.

<sup>131</sup> William Samuelson & Richard Zeckhauser, *Status Quo Bias in Decision Making*, 1 J. RISK & UNCERTAINTY 7, 12-19 (1988).

<sup>132</sup> Shlomo Benartzi & Richard H. Thaler, *Naive Diversification Strategies in Defined Contribution Saving Plans*, 91 AM. ECON. REV. 79 (2001) (providing varied evidence for this  $1/n$  naïve diversification rule, and discussing its underlying causes and economic implications).

<sup>133</sup> Note that the approach taken here is descriptive. *Cf.* Daniel Kahneman, Jack L. Knetsch & Richard Thaler, *Fairness as a Constraint on Profit Seeking: Entitlements in the Market*, 76 AM. ECON. REV. 728, 729 (1986) [hereinafter *Fairness I*].

and the efforts of competing retailers.<sup>134</sup> In fact, the term “free riding” projects an image of someone who is benefiting from the efforts of others without reciprocity, one whose unfair behavior merits condemnation.<sup>135</sup>

These anecdotes fit well with a large body of empirical studies showing how people oppose behaviors they consider unfair even when such opposition is costly for them.<sup>136</sup> 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.<sup>137</sup> These findings hold, moreover, even when the game is played over very large stakes.<sup>138</sup> Recipients' readiness to reject offers of significant sums of money reveals 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.<sup>139</sup>

<sup>134</sup> See *supra* notes 36-38 and accompanying text; see also *United States v. Socony-Vacuum Oil Co.*, 310 U.S. 150, 221 (1940) (discussing competitor claims of “[r]uinous competition, financial disaster, evils of price cutting and the like . . . throughout our history as ostensible justifications for price-fixing”).

<sup>135</sup> As in those public goods games described *infra* note 144 and accompanying text.

<sup>136</sup> See, e.g., PAUL J. ZAK, *MORAL MARKETS: THE CRITICAL ROLE OF VALUES IN THE ECONOMY* (2008); Matthew Rabin, *Incorporating Fairness into Game Theory and Economics*, 83 AM. ECON. REV. 1281 (1993); Tor, *Behavioral Methodology*, *supra* note 8, at 268-70, 282-83; Avishalom Tor, Oren Gazal-Ayal & Stephen M. Garcia, *Fairness and the Willingness to Accept Plea Bargain Offers*, J. EMPIRICAL LEGAL STUD. (forthcoming 2010).

<sup>137</sup> The ultimatum game literature is extensive. See generally COLIN F. CAMERER, *BEHAVIORAL GAME THEORY: EXPERIMENTS ON STRATEGIC INTERACTION* 48-56 (2003) (reviewing and summarizing the 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 62-63. (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 20-30% and Proposers usually offer an even greater proportion of 40-50% of the sum that stands for allocation. *Id.* & tbl. 2.2.

<sup>138</sup> *Id.* at 60-62.

<sup>139</sup> 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 Responders reject comparatively inferior allocations even where their rejections have no impact on Proposers' payoff. E.g., Gary Bolton & Rami Zwick, *Anonymity versus Punishment in Ultimatum Bargaining*, 10 GAMES & ECON. BEHAV. 95 (1995); Duncan K.H. Fong & Gary E. Bolton, *Analyzing Ultimatum Bargaining: A Bayesian Approach to the Comparison of Two*

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 suggesting that parties are generally entitled to the terms of the reference transaction while firms are entitled to their reference profit.<sup>140</sup> 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.<sup>141</sup>

Importantly, past transactions between the parties in the market, especially recent ones, commonly provide the relevant reference point for fairness judgments.<sup>142</sup> The terms of the ongoing business relationships of a manufacturer and his distributors are concerned would usually constitute the parties' reference transaction. Manufacturers faced with price-cutting behavior that they believe benefits retailers at their expense will thus view that behavior as unfair and seek to prevent it, even at a significant cost.<sup>143</sup>

This conclusion is further reinforced, moreover, by experimental studies of free-riding behavior in public goods games, where multiple participants simultaneously decide how much to contribute to a common pool out of an endowment they receive.<sup>144</sup> 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 their endowment. Early studies found that free-riding is pervasive by the last of the game's usual

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*Potency Curves under Shape Constraint*, 15 J. BUS. & ECON. STAT. 335 (1997). Other studies reveal the role of Responders' negative emotional reactions to unfair allocations. *E.g.*, Armin Falk, Ernest Fehr & Urs Fischbacher, *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 ORG. BEHAV. & HUM. DEC. PROC. 208 (1996).

<sup>140</sup> Kahneman et al., *Fairness I*, *supra* note 133, at 729-37.

<sup>141</sup> *Id.*; see THALER, *supra* note 125, at 32-35; Daniel Kahneman, Jack L. Knetsch & Richard Thaler, *Fairness and the Assumptions of Economics*, in RATIONAL CHOICE: THE CONTRAST BETWEEN ECONOMICS AND PSYCHOLOGY 101 (Robin M. Hogarth & Melvin W. Reder eds., 1986) [hereinafter *Fairness II*].

<sup>142</sup> Kahneman et al., *Fairness I*, *supra* note 133, at 729-30.

<sup>143</sup> *Id.*, Kahneman et al., *Fairness II*, *supra* note 141, at 104-08; see *supra* notes 137-138; see also Richard H. Thaler, *The Ultimatum Game*, J. ECON. PERSPECTIVES, Fall 1988, at 195 (reviewing various market settings in which the ultimatum game might arise).

<sup>144</sup> See generally John Ledyard, *Public Goods: A Survey of Experimental Research*, in HANDBOOK OF EXPERIMENTAL ECONOMICS 111 (John H. Kagel & Alvin E. Roth eds., 1995).

10 rounds, with about 75% of participants contributing nothing and the rest only little, despite significant initial contributions,<sup>145</sup>

More recent research revealed, however, that contribution levels change dramatically when participants can punish free-riders, even when punishment is costly.<sup>146</sup> 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.<sup>147</sup> 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 where both free-riding and no punishment would have been universal if participants were all (or even predominantly) self-interested.

#### D. A Pro-RPM 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,<sup>148</sup> however, and taking over the marketing prevents free riding (at retail) but not loss-leading. Therefore, vertical restraints appear as a relatively attractive method of defending the manufacturer's interests, requiring fewer efforts and resources than do most other alternatives.<sup>149</sup>

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.<sup>150</sup> 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,

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<sup>145</sup> *Id.*

<sup>146</sup> Ernst Fehr & Simon Gächter, *Cooperation and Punishment in Public Goods Experiments*, 90 AM. ECON. REV. 980 (2000).

<sup>147</sup> *Id.*

<sup>148</sup> See *supra* note 45 and accompanying text.

<sup>149</sup> For a detailed comparison of the different arrangements and their legal treatment, see Grimes, *supra* note 28; and Grimes, *supra* note 3.

<sup>150</sup> See AREEDA & HOVENKAMP, *supra* note 13, § 1619; Marvel, *supra* note 134, at 76. That is, with the exception of exclusive dealing that eliminates it altogether.

while the other restraints often serve to achieve the same purpose indirectly (usually, when the law prohibits RPM).<sup>151</sup>

RPM is thus one attractive candidate for combating the practices' harms. Yet other methods, especially territorial restraints, can achieve similar (though not identical) results without a direct interference with retail prices, sometimes at a lower cost. However, a further analysis reveals that manufacturers may exhibit a pro-RPM bias due to the overweighting of the retail price dimension in choice, ambiguity aversion, and the 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,<sup>152</sup> which only follow the regulation of other aspects of the vertical relationship (such as marketing efforts or territorial boundaries).<sup>153</sup> 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 arrangements. For this reason, while a rational manufacturer would seek to reduce those harmful potential *effects* of price-cutting by the most efficient means, his real-world counterparts are excessively concerned with the elimination of price-cutting itself, a task for which RPM is best suited.

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<sup>151</sup> See Ippolito, *supra* note 61, at 269-270 & tbl. 3 (finding the dramatic majority of the 203 litigated RPM cases between 1975-1982, when RPM was per se illegal, studied involved multiple allegations 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;

<sup>152</sup> The direct effect of RPM may also make it preferable to manufacturers due to decision makers tendency to neglect indirect effect – 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 Multi-Party Ultimatums*, 16 J. BEHAV. DEC. MAK. 353 (2003).

<sup>153</sup> 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 its extremely high costs and far-reaching consequences. In addition, there are many industries and products in which integration is irrelevant (e.g., pre-packaged food). Vertical integration will, therefore, not be included in the following comparison. *Cf.* Pac. Bell Tele. Co. v. Linkline Comm'ns, 129 S. Ct. 1109, 1122 (2009) (finding no antitrust liability for disparities between wholesale and retail prices within a vertically integrated firm).

When decision makers choose among options, they usually seek an alternative that dominates the other alternatives in all respects.<sup>154</sup> If no alternative is strongly dominant, however, they tend to prefer the alternative that is superior with respect to a single attribute they consider most important (instead of attempting an overall comparison of benefits and costs, for example).<sup>155</sup> This approach is attractive because it avoids the difficult, time-consuming trade-off between the various attributes of the competing alternatives.<sup>156</sup> It also provides a compelling reason for choice, which can later be used to explain and justify that choice to oneself and others.<sup>157</sup>

Further research revealed how the importance of an attribute is context-dependent, depending on how the choice task is framed.<sup>158</sup> 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.<sup>159</sup> In the present case, therefore,

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<sup>154</sup> Amos Tversky, Shmuel Shattah & Paul Slovic, *Contingent Weighting in Judgment and Choice*, 95 PSYCHOL. REV. 371, 372 (1988) [hereinafter *Contingent Weighting*].

<sup>155</sup> *Id.* at 372-375; Eldar Shafir, Itamar Simonson & Amos Tversky, *Reason-Based Choice*, 49 COGNITION 11, 15 (1993). 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 (for example, package A included no cash and a coupon for book purchase worth \$32, while package B included \$20 and a coupon worth \$18). Participants were asked to determine the value of the missing component (i.e. an amount of cash in package A) that would render the two alternatives equally attractive (e.g. \$10). 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, 88% 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 & PERF. 280 (1975).

<sup>156</sup> Tversky et al., *Contingent Weighting*, *supra* note 154, at 372.

<sup>157</sup> ROBYN M. DAWES, RATIONAL CHOICE IN AN UNCERTAIN WORLD 146-51 (1988); Shafir et al., *supra* note 155, at 14-15.

<sup>158</sup> See, e.g., Barbara J. McNeil, Stephen G. Pauker & Amos Tversky, *On the Framing of Medical Decisions*, in DECISION MAKING, *supra* note 127, at 562; Tversky & Kahneman, *supra* note 127, at 167; see also Tor, *supra* note 74, 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), reprinted in RATIONAL CHOICE 122 (Jon Elster ed., 1986).

<sup>159</sup> 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., *Contingent Weighting*, *supra* note 155, at 376 (using compatibility to explain the difference in valuations as a result of the

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 will thus be chosen more often than alternative distribution arrangements that are less frame-compatible.<sup>160</sup>

## 2. *Overestimating the Benefits of RPM*

While the overweighting of the price dimension biases manufacturers towards RPM, other decision processes lead them to over-value the benefits of this restraint. Exhibiting a certainty effect, for one, people discount the weight they assign to outcomes that are merely probable as compared to certain ones.<sup>161</sup> For example, most people prefer a sure win of \$30 to an 80% chance of winning \$45. 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 10% to a 0% chance) more than they value its comparable *reduction* (e.g.. from 20% to a 10% chance). Manufacturers subject to the certainty effect will thus overvalue RPM's elimination of price-cutting compared to its mere reduction by territorial restraints, even where the latter are more efficient.

The risk-eliminating advantages of RPM also make it attractive for manufacturers' choice due the phenomenon of 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.<sup>162</sup> Further research showed that ambiguity aversion operates

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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).

<sup>160</sup> 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 thoroughly to examine alternative solutions once the model-fitting solution has been found. P. Legrenzi, V. Girotto & P.N. Johnson-Laird, *Focusing in Reasoning and Decision Making*, 49 COGNITION 37, 38-39, 53, 60 (1993).

<sup>161</sup> Tversky & Kahneman, *supra* note 158, at 129-32; *cf. infra* note 162 (discussing the subadditivity of ambiguous prospects).

<sup>162</sup> Gideon Keren, *On the Ability of Assessing Non-veridical Perceptions: Some Calibration Studies*, 67 ACTA PSYCHOLOGICA 95 (1988). 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 1 contains 100 balls with unknown proportions of red and black balls, while urn 2 contains 50 black balls

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 ambiguous probability of loss than when faced with a comparable but unambiguous probability.<sup>163</sup>

Importantly, ambiguity aversion concerns comparisons between ambiguous and well-defined alternatives.<sup>164</sup> Thus, while 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. Recent evidence also suggests, moreover, that ambiguity aversion results from "comparative ignorance" – that is, the comparison with more familiar events or more knowledgeable individuals.<sup>165</sup>

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.

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and 50 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 1 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 2, 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 2 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 2 to drawing it from urn 1 with its ambiguous probability. Daniel Ellsberg, *Risk, Ambiguity, and the Savage Axioms*, 75 Q.J. ECON. 643 (1961). Note it also possible the combined probability for drawing either a red or a black ball from urn 2 is higher than 1. 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 141, at 41, 44-46.

<sup>163</sup> See *id.* at 51-64, 57 (discussing several studies).

<sup>164</sup> Craig R. Fox & Amos Tversky, *Ambiguity Aversion and Comparative Ignorance*, 110 Q.J. ECON. 585, 587-88, 598 (1995).

<sup>165</sup> *Id.*; see also Craig R. Fox & Martin Weber, *Ambiguity Aversion, Comparative Ignorance, and Decision Context*, 88 ORG. BEHAV. & HUM. DEC. PROC. 476 (2002) (providing further evidence for the comparative ignorance account of ambiguity aversion).

Beyond the effects of certainty and ambiguity, research on managerial decision making suggests that managers in particular view risk as a challenge they attempt to overcome by the exercise of skill, rather than as another factor that affects the expected value of different options.<sup>166</sup> This managerial attitude, which dovetails with the certainty effect and ambiguity aversion, 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.<sup>167</sup>

In fact, there is specific evidence of managers' efforts to control risks even where objectively impractical or inefficient,<sup>168</sup> much like the common "illusion of control," where people behave as if random events are controllable.<sup>169</sup> 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.<sup>170</sup> 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.<sup>171</sup> Yet all of these factors – competition, familiarity, and choice – are common in managerial decision making, a pattern that might explain managers' strong tendency to attempt the control of chance events. Furthermore, in most cases managerial activities involve a combination of skill and chance, which further reinforces the illusion of control.<sup>172</sup>

In fact, the illusion of control belongs to a broader family of egocentric and motivational biases.<sup>173</sup> For instance, decision makers have been shown to overestimate their abilities and skills in domains ranging from driving ability, through academic achievements, to investment performance and professional

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<sup>166</sup> See ZUR SHAPIRA, *RISK TAKING: A MANAGERIAL PERSPECTIVE* chap. 6 (1994); James G. March & Zur Shapira, *Managerial Perspectives on Risk and Risk Taking*, 33 *MGMT. SCIENCE* 1404 (1987); see also Daniel Kahneman & Dan Lovallo, *Timid Choices and Bold Forecasts: A Cognitive Perspective on Risk Taking*, 39 *MGMT. SCIENCE* 17 (1993).

<sup>167</sup> Cf. SHAPIRA, *supra* note 166, at 73.

<sup>168</sup> See *id.* (quoting studies).

<sup>169</sup> See Ellen J. Langer, *The Illusion of Control*, in *JUDGMENT UNDER UNCERTAINTY*, *supra* note 92, at 231.

<sup>170</sup> *Id.* at 235-37.

<sup>171</sup> *Id.*

<sup>172</sup> Cf. *id.* at 232, 238.

<sup>173</sup> See Tor, *supra* note 123, at 504-05; see, e.g., Dale W. Griffin & Carol A. Varey, *Towards a Consensus on Overconfidence*, 65 *ORGANIZATIONAL BEHAV. & HUM. DECISION. PROC.* 227 (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).

success.<sup>174</sup> Egocentric biases also lead people to align their expectations about the outcomes of events with their preferences about these outcomes.<sup>175</sup> This is clearly true where people have a measure of control over outcomes,<sup>176</sup> like manufacturers imposing RPM on retailers. These processes, therefore, may further 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 RPM programs on the other.<sup>177</sup>

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<sup>174</sup> E.g., David Dunning et al, *Ambiguity and Self-Evaluation: The Role of Idiosyncratic Trait Definitions in Self-Serving Appraisals 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).

<sup>175</sup> 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 (1991); George Wright & Peter Ayton, *Subjective Confidence in Forecasts: A Response to Fischhoff and McGregor*, 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).

<sup>176</sup> E.g., Badad, *supra* note 175; Badad & Katz, *supra* note 175; Granberg & Brent, *supra* note 175.

<sup>177</sup> 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, David M. Messick & George R. Goethals, *On Being Better But Not Smarter than Others: The Muhammad Ali Effect*, 7 SOC. COGNITION 275 (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); Marsha T. Gabriel, Joseph W. Critelli & Jullana S. Ee, *Narcissistic Illusions in Self-Evaluations of Intelligence and Attractiveness*, 62 J. PERSONALITY 143 (1994) (finding a medium correlation between participants' self-rated intelligence and their performance on objective measures and no correlation at all between self-rated and other

### III. THE SLOW DEMISE OF BOUNDEDLY-RATIONAL RPM

Part II marshaled forth a significant body of behavioral research indicating that real-world manufacturers are likely to exhibit a pro-RPM bias. Yet we might expect that even boundedly-rational manufacturers will not manifest such inefficient behavior, their behavioral tendencies notwithstanding, when making repeated business decisions, operating through 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 over-use it for extensive periods of time, generating significant social harm.

#### A. Natural Experiments

The history of RPM in the United States provides a “natural experiment.”<sup>178</sup> During the period in which RPM was legalized under fair trade laws, many manufacturers employed RPM in their distribution systems.<sup>179</sup> 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. In

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measures of attractiveness,); Leigh Thompson & George Loewenstein, *Egocentric Interpretations of Fairness and Interpersonal Conflict*, 51 ORGANIZATIONAL BEHAV. & HUM. DECISION PROCESSES 176, 184-96 (1992) (especially Experiment 2); Judith Weiner Regan et al., *Do People Have Inflated Views of Their Own Ability?*, 31 J. PERSONALITY & SOC. PSYCHOL. (1975) 295, p. 295 (“Self-esteem needs must be aroused in a situation in which distortion of one’s ability level is possible.”). For an in-depth discussion of the role of ambiguity in related phenomena, see Tor, *Entry*, *supra* note 7, at 524-28. People also display judgments of fairness that are biased towards their self interest. For example, study participants exhibited systematically biased expectations of the decision a judge would arrive at in a tort case, depending on their designation as either “plaintiffs” or “defendants,” although their roles were merely ad hoc designations and they had no opportunity to address the judge. See George Loewenstein et al., *Self-Serving Assessments of Fairness and Pretrial Bargaining*, 22 J. LEGAL STUD. 135, 151 tbl.2 (1993; see also Linda Babcock et al., *Biased Judgments of Fairness in Bargaining*, 85 AM. ECON. REV. 1337 (1995).

<sup>178</sup> See, e.g., 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 (FTC Working Paper, Feb. 18, 2005).

<sup>179</sup> See E.S. Herman, *A Statistical Note on Fair Trade*, 4 ANTITRUST BULL. 583 (1959) (detailing how as many as 900 manufacturers utilized RPM, and the goods they produced amounted to 7% of total retail sales in the United States).

particular, the study found consumers paid nearly \$6.5 billion more in fair trade states than non-fair trade states prior to repeal. 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%.<sup>180</sup>

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. The results revealed RPM lowered per-capita liquor consumption by 8%, controlling for other factors. In California, liquor store licenses dropped in value between 23-25% following the repeal. These findings provide clear examples of output-decreasing, inefficient RPM.<sup>181</sup>

Post-repeal studies also uncovered the fact that RPM agreements were very popular in unconcentrated diffuse markets, such as consumer goods manufacturing and retail products.<sup>182</sup> Standard-fare convenience goods, such as toothpaste, cereal, shaving razors, and chewing gum were markets with little product differentiation. Yet manufacturers were eager to set minimum retail prices to avoid price-cutting, despite the irrelevance of most service-related accounts of RPM in these product markets.<sup>183</sup>

Notably, during the period of the fair trade laws, RPM agreements proliferated, as estimates suggest that prices subject to these agreements ranged from 4-20%.<sup>184</sup> The American Fair Trade Council claimed that during the peak period of 1950-1952, almost 1600 manufacturers were using RPM.<sup>185</sup> After 1950, RPM gradually decreased in popularity, and both the political will and

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<sup>180</sup> Lawrence Shepard, *The Economic Effects of Repealing Fair Trade Laws*, 12 J. CONSUMER AFF. 220 (1978).

<sup>181</sup> 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). 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 179, 216 (B.S. Yamey ed., 1966); L.A. Skeoch, *Canada*, in RESALE PRICE MAINTENANCE, *supra*, at 23, 61; B.S. Yamey, *United Kingdom*, in RESALE PRICE MAINTENANCE, *supra*, at 249, 293-95.

<sup>182</sup> See S.C. Hollander, *United States of America*, in RESALE PRICE MAINTENANCE, *supra* note 181, at 65, 81.

<sup>183</sup> See Robert L. Steiner, *How Manufacturers Deal with the Price-Cutting Retailer: When Are Vertical Restraints Efficient?*, 65 ANTITRUST L.J. 407, 436 (1997).

<sup>184</sup> See Herman, *supra* note 179.

<sup>185</sup> U.S. House of Representatives, *Committee on the Judiciary, Resale Price Maintenance (sub-committee hearings) (1952)*, cited in Hollander, *supra* note 182.

economic support for the practice waned until the fair trade laws were repealed in 1976.<sup>186</sup> At the time of repeal, only 24 states still had such laws.<sup>187</sup>

This significant, if 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.<sup>188</sup>

Yet 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 examples, in Denmark, Sweden, Germany, and the United Kingdom, the practice peaked and subsequently declined during the mid-1900s.<sup>189</sup> The transnational evidence therefore suggests RPM is costly and difficult to maintain in competitive markets and thus of questionable economic advantage for most manufacturers, although many of them nevertheless attempt to employ it.<sup>190</sup>

This general pattern is also apparent from case studies of individual firms' practices showing protracted periods of "learning" that generated significant social costs. For example, jean producer Levi Strauss employed RPM with its downstream distributors long after its revenue figures suggested the practice was no longer (if ever) efficient.<sup>191</sup> Indeed, after Levi's use of RPM was enjoined, it experienced a significant rise in both sales and profits.<sup>192</sup>

Corning Glass's RPM practices prior to an FTC order seeking to enjoin their agreements provide another relevant illustration, in this case of the long term use of RPM in circumstances that support none of the main extant account

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<sup>186</sup> See *supra* notes 17-19 and accompanying text.

<sup>187</sup> And only five had nonsigner provisions. H.R. Rep. No. 341, 94th Cong., 1st Sess. 1, 1-5 (1975); S. Rep. No. 466, 94th Cong., 1<sup>st</sup> Sess. 2, 2-3 (1975).

<sup>188</sup> See Hollander, *supra* note 181, at 81-93; C.H. Fulda, *Resale Price Maintenance*, 21 U. CHI. L. REV. 175 (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. Manufacturers in turn had difficulty in enforcing these agreements and often abandoned them entirely.)

<sup>189</sup> See U. Af Trolle, *Sweden*, in *RESALE PRICE MAINTENANCE*, *supra* note 181, at 109; H. Kjoelby, *Denmark*, *RESALE PRICE MAINTENANCE*, *supra* note 181, at 160; Boggis, *supra* note 181; Yamey, *supra* note 181.

<sup>190</sup> See *supra* Section II.C.

<sup>191</sup> See S. Oster, *The FTC v. Levi Strauss: An Analysis of the Economic Issues*, in *IMPACT EVALUATIONS OF THE FTC VERTICAL RESTRAINTS CASES* 48 (R. Lafferty et al. eds, 1984).

<sup>192</sup> See *id.*

of the practice, anticompetitive and procompetitive alike.<sup>193</sup> Corning's use of the restraint—spanning almost forty years<sup>194</sup>—occurred in a market in which its competitors did not use the practice extensively.<sup>195</sup> Its RPM may have promoted the market penetration of Corning's innovative product lines when they were first introduced,<sup>196</sup> under uncommon market conditions.<sup>197</sup>

Corning briefly fared better following its abandonment of RPM,<sup>198</sup> but its sales later declined. Yet a detailed study found no evidence the practice supported dealer or supplier collusion,<sup>199</sup> nor that it was likely to have been used to secure those commonly asserted procompetitive dealer services.<sup>200</sup> Instead, the data indicated RPM in this case probably served to support the broad distribution of its products, which were sold, inter alia, by a variety of small retail outlets.<sup>201</sup>

Thus, Corning's use of RPM may have been an effective short- to medium-run strategy for building market share, but it continued well after the manufacturer and its brands were well established.<sup>202</sup> The practice still may

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<sup>193</sup> See *In re Corning Glass Works*, 85 F.T.C. 1061 (1975), *modifying* 82 F.T.C. 1675 (1973), *aff'd*, 500 F.2d 293 (7th Cir. 1975). See generally Pauline M. Ippolito & Thomas R. Overstreet, *Resale Price Maintenance: An Economic Assessment of the FTC's Case Against the Corning Glass Works*, 39 J.L. & ECON. 285 (1996).

<sup>194</sup> See Ippolito & Overstreet, *supra* note 193, at 289.

<sup>195</sup> *Id.* at 300. Corning did not use any other restraint in conjunction with RPM. *Id.* at 290.

<sup>196</sup> *Id.* at 323.

<sup>197</sup> Cf. AREEDA & HOVENKAMP, *supra* note 13, § 1615d. It can be argued that some high cost retailers were not willing to carry Corning's products in the absence of RPM, because competitive retailer margins would have been too low for inefficient dealers. If this was the case then Corning's use of RPM traded the welfare of the majority of its consumers for their minority. Apparently, most of Corning's consumers were willing to purchase its products for the higher maintained prices. At the same time, the nature of the company's products was such that some consumers did not purchase the products once they were not immediately available to them.

<sup>198</sup> See OVERSTREET, *supra* note 55, at 25 n.2.

<sup>199</sup> Ippolito & Overstreet, *supra* note 193, at 298-301.

<sup>200</sup> *Id.* at 323.

<sup>201</sup> *Id.* at 322. Ippolito and Overstreet explain that Corning's RPM practices are only partially compatible with anti-free-riding or "quality assurance" theories, *id.* at 323-24, and suggest that "a more likely explanation" is the "outlets theory for RPM, in which minimum resale margins are mandated to provide the level of returns necessary for additional outlets to carry the goods," *id.* at 324-25.

<sup>202</sup> Corning, for instance, was the largest domestic cooking glassware manufacturer during at least the last decade before it was forced to abandon its RPM program, with its closest rival (and foreign imports) trailing significantly behind. See *id.* at 297-98, 301.

have benefited Corning at the time of its forced abandonment, if not for the commonly cited reasons, but its overall efficiency is unclear.<sup>203</sup>

## B. Learning

The seemingly puzzling historical evidence on the slow demise of inefficient RPM in the U.S. 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 manufacturers face a number of behavioral and informational impediments at each of these steps: They are less likely to seek additional information when they form a specific anti-price-cutting heuristic and exhibit overconfidence in their judgment;<sup>204</sup> 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.<sup>205</sup> Unlike those general heuristics, like availability or representativeness, 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 retailers' practices and the potential responses to them.

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<sup>203</sup> As noted, Corning's ultimate loss of sales likely resulted from the loss of smaller, high-cost outlets, but it is unclear whether market-wide output had also diminished. *See id.* at 326.

<sup>204</sup> 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* JAMES G. MARCH & HERBERT A. SIMON, *ORGANIZATIONS* 173-83 (1958).

<sup>205</sup> Hillel J. Einhorn, *Learning from Experience and Suboptimal Rules in Decision Making*, in *JUDGMENT UNDER UNCERTAINTY*, *supra* note 92, at 268, 270.

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 have led them to reassess their judgments unless they nevertheless encounter evidence these judgments are wrong.<sup>206</sup>

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.<sup>207</sup> Many studies show confidence in decisions is only moderately related to their accuracy,<sup>208</sup> instead being determined by numerous factors<sup>209</sup> including pre-decisional confidence in the initial choice,<sup>210</sup> perceived expertise,<sup>211</sup> and motivation,<sup>212</sup> all of which tend to make manufacturers overconfident in their past choice.

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<sup>206</sup> *Id.* at 280-86.

<sup>207</sup> Dan Zakay, *Post-Decisional Confidence – Can It Be Trusted?*, in DECISION MAKING, *supra* note 159, at 233, 234-36; *cf.* J.W. Brehm, *Post-Decision Changes in Desirability of Alternatives*, 52 J. ABNORMAL & SOC. PSYCHOL. 384 (1956) (providing an early foray into this field of research).

<sup>208</sup> See Brett W. Pelham, Tracy DeHart & Mauricio Carvallo, *Overconfidence as Dissonance Resolution*, 37 J. EXPERIMENTAL & SOCIAL PSYCHOL. 373 (2001).

<sup>209</sup> See Dane K. Peterson & Gordon F. Pitz, *Confidence, Uncertainty and the Use of Information*, 14 J. EXPERIMENTAL PSYCHOL LEARNING, MEMORY & COGNITION 85 (1988). See generally Zakay, *supra* note 207, at 236-39, 242-43.

<sup>210</sup> Arie W. Kruglanski, Nathaniel Peri & Dan Zakay, *Interactive Effects of Need for Closure and Initial Confidence on Social Information Seeking*, 9 SOCIAL COGNITION 127 (1991). See *supra* note 173; Zakay, *supra* note 208, at 239-41.

<sup>211</sup> D. Trafimow & J.A. Sniezek, *Perceived Expertise and Its Effect on Confidence*, 57 ORGANIZATIONAL BEHAVIOR & HUM. DECISION PROCESSES 290 (1994); *cf.* Fox & Tversky, *supra* note 164.

<sup>212</sup> Baruch Fischhoff & Ruth Beyth-Marom, *Hypothesis Evaluation from a Bayesian Perspective*, 90 PSYCHOL. REV. 239 (1983); O. Mayseless & A.W. Kruglanski, *What Makes You So Sure? Effects of Epistemic Motivations on Judgmental Confidence*, 39 ORGANIZATIONAL BEHAVIOR & HUM. DECISION PROCESSES 62 (1987).

First, people are systematically overconfident in the accuracy of their probability assessments.<sup>213</sup> For instance, in one questionnaire study of the appropriateness of extreme confidence only 72%-83% 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 20%-30% of the time.<sup>214</sup> Importantly, people are overconfident in their level of performance in difficult, but not in easy, tasks.<sup>215</sup> We have seen, however, that the evaluation of the expected harms of price-cutting is particularly challenging, suggesting manufacturers will be overconfident in the accuracy of these evaluations.

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,<sup>216</sup> which in turn contributes to their post-decisional overconfidence.

Third, manufacturers are motivated to avoid a 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, exhibit an "escalation of commitment" or "sunk cost effect."<sup>217</sup> In the RPM case, moreover, these motivations may occasionally be

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<sup>213</sup> Sarah Lichtenstein, Baruch Fischhoff & Lawrence D. Phillips, *Calibration of Probabilities: The State of the Art to 1980*, in JUDGMENT UNDER UNCERTAINTY, *supra* note 92, at 306. Calibration has also been called realism, external validity, reliability, and more. *Id.* at 306-07.

<sup>214</sup> Baruch Fischhoff, Paul Slovic & Sarah Lichtenstein, *Knowing with Certainty: The appropriateness of Extreme Confidence*, 3 J. EXPERIMENTAL PSYCHOL. HUM. PERCEPTION & PERFORMANCE 552 (1977).

<sup>215</sup> Lichtenstein et al., *supra* note 213, at 314-17; Don A. Moore & Dayllan M. Cain, *Overconfidence and Underconfidence: When and Why People Underestimate (and Overestimate) the Competition*, 103 ORGANIZATIONAL BEHAV. & HUM. DECISION PROCESSES 197 (2007).

<sup>216</sup> See *supra* Section III.B.

<sup>217</sup> 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

reinforced by the economic benefits some manufacturers receive from the softening of horizontal competition.<sup>218</sup> Altogether, therefore, initial overconfidence, perceived expertise, and motivational factors combine to facilitate manufacturers' post-decisional overconfidence, thereby further reducing the likelihood they will search for information to reevaluate their RPM strategy.<sup>219</sup>

## 2. Biases in Information Evaluation

Even manufacturers who wish to evaluate the efficacy of their arrangements, moreover, 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.<sup>220</sup> It is limited, because RPM largely eliminates price competition and with it the information on how the manufacturers would have fared if they were to employ an alternative vertical arrangement or none at all.<sup>221</sup> Manufacturers cannot easily overcome this problem, moreover, by comparing their pre- and post-RPM performance, since market conditions change constantly, making it difficult to isolate the RPM effect from the multitude of economic factors impacting the manufacturers' performance over time.<sup>222</sup> Furthermore, since the immediate effect of RPM, almost by definition, is to raise retail prices, manufacturers may expect the short-run loss of profits, but assume RPM will prove beneficial in the longer run. Because of this limited

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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 chap. 11 (1977) (examining the effects of commitment); John S. Hammond, Ralph L. Keeney & Howard Raiffa, *The Hidden Traps in Decision Making*, 84 HARV. BUS. REV. 118 (2006).

<sup>218</sup> Cf. *supra* notes 32, 90, and accompanying text.

<sup>219</sup> Cf. J. Edward Russo & Paul Schoemaker, *Managing Overconfidence*, 33 SLOAN MGMT. REV. 7 (1992) (discussing overconfidence in managerial decision making).

<sup>220</sup> *Supra* notes 85-91 and accompanying text.

<sup>221</sup> In this respect RPM differs from some other vertical arrangements that allow variation and experimentation by manufacturers to examine their efficacy..

<sup>222</sup> 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).

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 his performance.<sup>223</sup>

The accurate analysis of RPM's long-term effects is also inhibited by the same psychological processes that generated manufacturers' excessive reliance on RPM: Their tendency to overestimate the expected harms of price-cutting, price-cutting aversion, and pro-RPM preference.<sup>224</sup> These processes are reinforced, moreover, by the confirmation bias wherein people examine hypotheses by studying the consequences of the decisions made based on these hypotheses.<sup>225</sup> Outcomes that fit the hypothesis are deemed to confirm it, while those that do not fit falsify the hypothesis. However, this method of hypothesis-testing violates the rules of logic that call for the testing 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 once RPM

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<sup>223</sup> 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 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, *supra* note 127, at 90 (citation omitted) (emphases added); *see also* Einhorn, *supra* note 205 (emphasizing the importance of unambiguous feedback for learning); Richard Nisbett et al., *Improving Inductive Inference*, in JUDGMENT UNDER UNCERTAINTY, *supra* note 92, 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).

<sup>224</sup> *See supra* Section III.

<sup>225</sup> For a review of the literature on the confirmation bias and hypotheses testing, see Fischhoff & Beyth-Marom, *supra* note 212. The following analysis is based on 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 205 (William M. Goldstein & Robin M. Hogarth eds., 1997); Einhorn, *supra* note 205; and Joshua Klayman, *Varieties of Confirmation Bias*, 32 DECISION MAKING FROM A COGNITIVE PERSPECTIVE 385 (1995).

prevents price-cutting. If, however, manufacturers were to test alternative arrangements, such as territorial limitations, they might have found these arrangements significantly diminish the practices at a lower cost.<sup>226</sup>

### 3. *The Difficulty of Abandoning RPM*

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

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 otherwise overshadow the potential gain from a successful one.<sup>227</sup> 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.<sup>228</sup>

The inhibiting effects of loss aversion and sunk costs tend to be reinforced, moreover, 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.

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<sup>226</sup> Cf. Klayman & Ha, *supra* note 226, 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").

<sup>227</sup> On loss aversion and the status quo bias, see *supra* Subsection 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 99.

<sup>228</sup> On sunk costs effects, see *supra* note 217 and accompanying text.

expensive showrooms or extensive salespeople training) on the assumption of guaranteed resale margins would want to avoid the painful loss of their investment.<sup>229</sup> 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 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" – various internal procedures and rules that aim to overcome systematic individual shortcomings.<sup>230</sup> 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.<sup>231</sup> Yet organizational repairs appear to have limited success and are largely unpredictable, tending to be most efficacious when

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<sup>229</sup> Note that such dealers are also likely to exhibit loss aversion and a sunk cost effect.

<sup>230</sup> See generally Chip Heath, Richard P. Larrick & Joshua Klayman, *Cognitive Repairs: How Organizational Practices Can Compensate for Individual Shortcomings*, 20 RES. ORGANIZATIONAL BEHAVIOR 1, 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).

<sup>231</sup> *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).

based on bottom-up learning in a specific domain.<sup>232</sup> These characteristics, however, do not apply to managers' RPM judgment and decision tasks, which concern the firm's general distribution strategy, are made infrequently, at the highest management levels, and subject to limited and noisy feedback.<sup>233</sup>

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, since there is some evidence that agents tend to behave more rationally than individuals acting on their own behalf.<sup>234</sup> 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<sup>235</sup> – when transacting on behalf of their principals.<sup>236</sup> In the same vein, the evidence on

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<sup>232</sup> *Cf. id.* 12-16 (discussing various classifications of repairs along different dimensions and their likely efficacy).

<sup>233</sup> *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. *Cf. Kahneman & Lovallo, supra* note 166, at 28 (“Officially adopted forecasts are also likely to be biased by their secondary functions as demands, commands and commitments.”); *see also* sources cited *supra* note 166; RICHARD M. CYERT & JAMES G. MARCH, *A BEHAVIORAL THEORY OF THE FIRM* 325-27 (2d ed. 1992) (discussing “[d]ecisions as artifacts”).

<sup>234</sup> 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. FISCHER, *THE ECONOMIC STRUCTURE OF CORPORATE LAW*, chap. 4 (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); and Oliver E. Williamson, *Managerial Discretion and Business Behavior*, 53 *AM. ECON. REV.* 1032 (1963)

<sup>235</sup> *See supra* Subsection III.C.1; Kahneman et al., *supra* note 128; Kahneman et al., *supra* note 129; Richard Thaler, *Toward a Positive Theory of Consumer Choice*, 1 *J. ECON. BEHAVIOR & ORGANIZATION* 39 (1980); *see also* Russell Korobkin, *The Endowment Effect and Legal Analysis*, 97 *NW. U.L. REV.* 1227 (2003).

<sup>236</sup> Jennifer Arlen et al., *Endowment Effects Within Corporate Agency Relationships*, 31 *J. LEGAL STUD.* 1 (2002) (finding that experimental participants acting as agents did not exhibit a significant endowment effect because they frame they frame 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. *See* 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).

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.<sup>237</sup>

The greater 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' pro-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.<sup>238</sup> 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.<sup>239</sup> Similarly, agents' advantage regarding egocentric biases is unlikely to pertain to those judgments of their own managerial ability and expertise in the RPM case. More generally, therefore, the advantages of agents are less likely to hold where managers make judgments and decisions that concern that implicate their own performance.<sup>240</sup>

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<sup>237</sup> Cf. Tor, *supra* note 7, at 505 (discussing entry decisions by overconfident managers).

<sup>238</sup> See Kahneman et al., *Experimental Tests*, *supra* note 129, Experiment 1 (finding no endowment effect when using induced-value tokens); Tversky & Kahneman, *Loss Aversion*, *supra* note 127, at 1039. *But see* Ian Bateman, Alistair Munro, Bruce Rhodes & Chris Starmer, *A Test of the Theory of Reference-Dependent Preferences*, 112 Q.J. ECON. (1997) 479 (finding some loss aversion for monetary payoffs as well); Ian Bateman, Daniel Kahneman, Alistair Munro, Chris Starmer & Robert Sugden, *Testing Competing Models of Loss Aversion: An Adversarial Collaboration*, 89 J. PUB. ECON. (2005) 1561 (same). *See generally* Nathan Novemsky & Daniel Kahneman, *The Boundaries of Loss Aversion*, 42 J. MARKET 119 (2005) (exploring the boundary conditions of loss aversion).

<sup>239</sup> *See also* Eric van Dijk & Daan van Knippenberg, *Buying and Selling Exchange Goods: Loss Aversion and the Endowment Effect*, 17 J. ECON. PSYCHOL. 517 (1996) (finding that participants in an experimental market exhibited loss aversion for exchange goods when traders are uncertain about future exchange prices).

<sup>240</sup> Cf. Tor, *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. 2001) (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

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.<sup>241</sup> Despite the intuitive appeal of such claims, however, an examination of the empirical literature provides little reason to believe senior management groups will reliably avoid individual managers' excessive reliance on RPM. Instead, it appears small groups sometimes outperform individuals but at other times exhibit similar or even more extreme judgmental biases and decision errors, mostly depending on case-specific variables.<sup>242</sup>

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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").

<sup>241</sup> See Stephen M. Bainbridge, *Why a Board? Group Decision making 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) ("[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 (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., March 2001, at 52.

<sup>242</sup> 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 74, at 415, 438-39 (same). *But see* R. Scott Tindale, Tatsuya Kameda, & Verlin B. Hinsz, *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

Moreover, some common characteristics of group decision making, including deliberation, often cause additional biases beyond those exhibited by individual decision makers.<sup>243</sup> Groups, for instance, may exhibit groupthink, promoting an erroneous consensus that does not reflect the information held by individual group members.<sup>244</sup> Their deliberations, instead of leading to a

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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 & Richard 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 Ro Borg, *A Comparison of the Behavioral 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, whereas 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). See also Kerr & Tindale, *supra* (reviewing some findings in this area).

<sup>243</sup> See also Joyce Berg, John Dickhaut, & Kevin McCabe, *The Individual versus the Aggregate*, in JUDGMENT AND DECISION RESEARCH IN ACCOUNTING AND AUDITING 102 (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 (Michal A. Hogg & Scott Tindale eds., 2001).

<sup>244</sup> See, e.g., IRVING L. JANIS, *GROUPTHINK* (2d ed., rev. 1983) (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 30 years and arguing it shows that groupthink-like phenomena are common – though not universal – in mundane,

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.<sup>245</sup> 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 not to adopt inefficient RPM arrangements or abandon them once there is evidence of their inefficiency.<sup>246</sup> Yet while corporate boards, which observe and monitor managerial behavior and are less personally involved in it, possess some advantages, they are largely subject to the same behavioral phenomena that impact managers and senior management groups.<sup>247</sup> Even more importantly, however, boards typically possess limited efficacy as monitors and are unlikely to cause a reversal of managerial decision except in some extreme cases.<sup>248</sup> In fact, some boards will have little

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temporary, and even minimal groups); James 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).

<sup>245</sup> See, e.g., Daniel J. Isenberg, *Group Polarization: A Critical Review and Meta-Analysis*, 50 J. PERSONALITY & SOCIAL PSYCHOL. 1141 (1986) (examining polarization studies up to that date focusing on the two central account for the effect based on social comparison and persuasive argumentation processes); see also Cass R. Sunstein, *Group Judgments: Deliberation, Statistical Means, 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).

<sup>246</sup> 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 former); Iman Anabtawi & Lynn Stout, *Fiduciary Duties for Activist Shareholders*, 60 STAN. L. REV. 1255, 1267-69 (2008).

<sup>247</sup> 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, *supra* note 241, at 810-11; Sunstein, *supra* note 245, at 979. But see Bainbridge, *supra* note 242, 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).

<sup>248</sup> See Sanjai Bhagat & Bernard Black, *The Non-correlation Between Board Independence and Long-term Firm Performance*, 27 J. CORP. L. 231, 263 (2002); Larry E. Ribstein, *Partnership Governance of Large Firms*, 76 U. CHI. L. REV. 289, 290 (2009) (discussing the

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.<sup>249</sup> 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.<sup>250</sup> 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.<sup>251</sup> For one, noncompetitive markets, by definition, exert limited disciplinary pressure on the manufacturers operating within them. A monopolist or even oligopolists in markets with significant entry barriers may dissipate some of their supra-competitive profits by operating less efficiently.<sup>252</sup> The private benefits to manufacturers from the softening of horizontal competition at either wholesale

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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).

<sup>249</sup> 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 248, at 290.

<sup>250</sup> See, e.g., LUCIAN BEBCHUK & JESSE FRIED, *PAY WITHOUT PERFORMANCE: THE UNFULFILLED PROMISE OF EXECUTIVE COMPENSATION* (2004); Iman Anabtawi, *Explaining 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).

<sup>251</sup> See also Tor, *Behavioral Methodology*, *supra* note 8, at 310-14 (evaluating some of the arguments and evidence on the rationality-promoting effect of markets).

<sup>252</sup> See CARLTON & PERLOFF, *supra* note 68, at chap. 8; Harold Demsetz, *Barriers to Entry*, 72 AM. ECON. REV. 47 (1982); HARVEY LEIBSTEIN, *BEYOND ECONOMIC MAN: A NEW FOUNDATION FOR MICROECONOMICS* (2d ed. 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).

or retail, moreover, are more significant precisely in those markets that are more concentrated at either level.<sup>253</sup>

More importantly, however, both the empirical evidence and theoretical analyses suggest that even competitive markets do not always discipline boundedly rational behavior,<sup>254</sup> as further evidenced by certain elements of the current worldwide economic crisis.<sup>255</sup> 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.<sup>256</sup> However, arbitrage 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 products overpriced or underpriced by boundedly rational actors.<sup>257</sup> Yet these conditions rarely exist even in sophisticated financial markets,<sup>258</sup> not to mention those product markets where manufacturers compete. In fact, rational arbitrageurs would be

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<sup>253</sup> See *supra* note 32 and accompanying text.

<sup>254</sup> E.g., Thomas Russell & Richard H. Thaler, *The Relevance of Quasi-rationality in Competitive Markets*, in DECISION MAKING, *supra* note 127, at 508-16; see also J. Bradford De Long et al., *Noise Trader Risk in Financial Markets*, in ADVANCES IN BEHAVIORAL FINANCE 23 (Richard H. Thaler ed., 1993); Nicholas Barberis, Ming Huang & Tano Santos, *Prospect Theory and Asset Prices*, in 2 ADVANCES IN BEHAVIORAL FINANCE 224 (2005). For other accounts of non-rational behavior of both laymen and professionals in financial markets, see *id.* See also RICHARD H. THALER, QUASI RATIONAL ECONOMICS part V (financial markets) (1991); Stanley Schachter et al., *Aggregate Variables in Psychology and Economics: Dependence in the Stock Market*, in HANDBOOK OF BEHAVIORAL ECONOMICS VOL. B (BEHAVIORAL MACROECONOMICS) 237 (Benjamin Gilad and Stanley Kaish eds., 1986); 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 VOL. B, *supra*, at 273.

<sup>255</sup> See, e.g., Paul Krugman, *How Did Economists Get It So Wrong?*, N.Y. TIMES, Sept. 6, 2009; Francis A. Longstaff, Sanjay Mithal & Eric Neis, *Corporate Yield Spreads: Default Risk or Liquidity? New Evidence from the Credit Default Swap Market*, 60 J. FIN. 2213 (2005); Gretchen Morgenson, *Behind Insurer's Crisis, Blind Eye to a Web of Risk*, N.Y. TIMES, Sept. 28, 2008, at A1.

<sup>256</sup> ANDREI SHLEIFER, INEFFICIENT MARKETS: AN INTRODUCTION TO BEHAVIORAL FINANCE (2000) (providing a readable and comprehensive review of the behavioral finance literature); Andrei Shleifer & Robert Vishny, *The Limits of Arbitrage*, 52 J. FIN. 35 (1997).

<sup>257</sup> Shleifer, *supra* note 256.

<sup>258</sup> This observation is strikingly illustrated by the famous collapse of Long Term Capital Management, a multi-billion dollar hedge fund that whose trading strategy was based on risky arbitrage strategies. See ROGER LOWENSTEIN, WHEN GENIUS FAILED: THE RISE AND FALL OF LONG-TERM CAPITAL MANAGEMENT (2000).

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.<sup>259</sup>

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.<sup>260</sup> However, for this to happen, 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.<sup>261</sup>

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, at least where this restraint does not provide manufacturers with increased profitability due to the softening of horizontal competition, we should expect markets over time to drive out RPM or the manufacturers employing it inefficiently.

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.<sup>262</sup> In fact, those among the latter 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, manufacturers who overestimate their ability to control risks may take greater risks in other business domains and obtain the higher profits associated with these risks in some cases.

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<sup>259</sup> 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 differentiated the rational strategic response to RPM may involve the adoption of RPM. Cf. Ernst Fehr & Jean-Robert Tyran, *Individual Irrationality and Aggregate Outcomes*, J. ECON. PERSPECTIVES, Fall 2005, at 43 (showing how individual irrationality may translate to different aggregate market performance depending on whether deviations from rationality are strategic substitutes or complements).

<sup>260</sup> 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”).

<sup>261</sup> See, e.g., J. Bradford De Long et al., *The Survival of Noise Traders in Financial Markets*, 64 J. BUS. 1 (1991); cf. Tor, *supra* note 7, at 504-12.

<sup>262</sup> As also borne out by the historical evidence of RPM's initial popularity and slow decline over time. See *supra* notes 17-19 and accompanying text.

## IV. TOWARDS A BEHAVIORALLY-INFORMED STRUCTURED RULE OF REASON

The *Leegin* Court concluded that RPM should be subject to a rule-of-reason 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.<sup>263</sup> Our behavioral analysis confirms the basic logic of this reasoning even while revealing the more limited applicability of extant rationality-based arguments for and against RPM in antitrust law and scholarship.

To wit, we found that real-world manufacturers are prone excessively to use RPM and that market forces are often slow to correct their errors. In some of these cases the practice will generate significant consumer harm, while in many other instances RPM may be used where rational models predict it will not be employed but cause only limited consumer harm or benefit. Yet on other occasions, the practice will reflect those rational pro- or anticompetitive calculations typically assumed by past analyses of resale price maintenance.

Although suggesting that the hitherto unrecognized incidence of inefficient RPM may be quite common, however, our behavioral analysis is unable to quantify its costs and benefits. In this respect, therefore, the novel insights provided here share the shortcoming of extant RPM law and economic analysis.<sup>264</sup> Nevertheless, our findings can 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."<sup>265</sup>

We therefore first evaluate those few contours of the ROR approach outlined by the Court, finding them informative yet of limited power to resolve the question of RPM's evaluation in a given case. Thereafter we turn to explain the broader lessons of our novel analysis for RPM's new rule of reason. Specifically, our account challenges the suggested ROR approaches of both

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<sup>263</sup> *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 as 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"). *But see id.* at 919-23 (Breyer, J., dissenting) (finding insufficient economic justification for abandoning the per se rule); 8 AREEDA & HOVENKAMP, *supra* note 13, ¶ 1633a (counseling "against per se legality, per se illegality, or an open-ended rule of reason and suggest instead alternative arrays of presumptions").

<sup>264</sup> AREEDA & HOVENKAMP, *supra* note 13, at ¶1633d1, 335 (noting there absence of a practical way to quantify the actual cost and benefits of RPM in a given case).

<sup>265</sup> *Leegin*, 551 U.S. at 879.

sides in the RPM debate and provides a blueprint for the effective structuring of this rule under *Leegin*.

#### A. *Leegin* Reexamined

*Leegin* left the more concrete design of the rule of reason inquiry for price restraints for future development with time and experience by the lower courts, while citing several factors this inquiry should take into account.<sup>266</sup> Specifically, the Court enumerated three factors that should inform the ROR evaluation of RPM: how pervasive such arrangements are in the industry; where the impetus for the restraint originates from; and whether either the manufacturer or the retailer possesses market power.<sup>267</sup>

While still relevant according to the behavioral account, our analysis suggests somewhat different implications of these elements for courts evaluating whether a given vertical price restraint is anticompetitive. First, 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 will undercut any cartel at either the manufacturer or the retailer level.<sup>268</sup> The present analysis largely corroborates this approach, albeit for different reasons when boundedly rational RPM is concerned. Namely, when the practice is not widespread, the discipline provided by horizontal competition is far more effective. In such an environment, therefore, manufacturers who excessively rely on RPM may be weeded-out by their product-market competitors or more quickly learn to correct their error.<sup>269</sup>

When RPM is common in an industry, on the other hand, it not only increases consumer prices and softens horizontal competition at both the manufacturer and the retailer levels,<sup>270</sup> but also limits the efficacy of markets in disciplining manufacturers who overuse vertical price restraints. The prevalence of RPM in a given market, moreover, may facilitate its adoption by additional manufacturers, signaling price-cutting is dangerous and RPM an

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<sup>266</sup> *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").

<sup>267</sup> *Id.* at 885-87 (majority opinion).

<sup>268</sup> *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 supra* Subsection II.B.2.

<sup>269</sup> *See supra* text accompanying notes 222-224, 242-245.

<sup>270</sup> *See Leegin*, 551 U.S. at 895-96; *supra* note 32 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.").

attractive solution. In this way, an industry norm of employing this practice impacts manufacturers' judgments and preferences and reinforces their pro-RPM bias.<sup>271</sup>

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.”<sup>272</sup> Without contradicting this observation, however, the present analysis also reveals that retailer pressure increases the likelihood of inefficient RPM through manufacturer anchoring on the biased information retailers provide.<sup>273</sup>

At the same time, the behavioral evidence suggests that Court was too confident in manufacturers' rationality when relying on their “incentive to protest inefficient retailer-induced price restraints.”<sup>274</sup> Although manufacturers generally wish to maximize profits they will be less likely to refuse inefficient RPM arrangements, especially when these benefit powerful dealers, than rational models would have us believe.

More generally, the Court placed too much faith in the procompetitive likelihood of independently-adopted RPM. It is true such arrangements 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.<sup>275</sup> 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, where manufacturers excessively (and often independently) adopt this restraint. Yet in many of these cases 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

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<sup>271</sup> Cf. Amitai Aviram & Avishalom Tor, *Overcoming Impediments to Information Sharing*, 55 ALABAMA 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).

<sup>272</sup> *Leegin*, 551 U.S. at 897-98 (citing Brief for William S. Comanor et al. as Amicus Curiae 7-8; POSNER, *supra* note 67, 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).

<sup>273</sup> See *supra* Subsection III.B.1.

<sup>274</sup> *Leegin*, 551 U.S. at 898.

<sup>275</sup> *Id.* at 892 (citing POSNER, *supra* note 67, at 172).

little concern “unless the relevant entity has market power.”<sup>276</sup> 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,<sup>277</sup> however, we have shown that inefficient RPM can cause harm even absent retail or manufacturing market power.

Moreover, our behavioral 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.<sup>278</sup> On the other hand, market discipline will be more likely to correct the overuse of RPM by manufacturers lacking market power. Nevertheless, as already noted, the historical evidence suggests the practice may be quite resilient even in those unconcentrated markets where it is not pervasive.<sup>279</sup>

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.

#### B. Revisiting the Debate over RPM'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 the future structuring of resale price maintenance's rule of reason 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

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<sup>276</sup> *Id.* at 898.

<sup>277</sup> *Cf. AREEDA & HOVENKAMP, supra* note 13, at 1633c(E)-(F).

<sup>278</sup> 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 191-192 and accompanying text.

<sup>279</sup> *See supra* text accompanying note 182.

rule of reason a fair and efficient way to prohibit anticompetitive restraints and to promote procompetitive ones.”<sup>280</sup>

When pursuing such strategies, lower courts can develop different inquiry structures and presumption, 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 only.<sup>281</sup> In fact, already before and especially since *Leegin* some courts,<sup>282</sup> federal and state enforcement agencies,<sup>283</sup> and antitrust scholars<sup>284</sup> have employed or offered many different rule of reason approaches.

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<sup>280</sup> 551 U.S. at 899. 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).

<sup>281</sup> See, e.g., AREEDA & HOVENKAMP, *supra* note 13, at 1633b; Lambert, *supra* note 3, at 1960-2004 (reviewing and criticizing the main extant ROR approaches and offering an alternative structured approach).

<sup>282</sup> See, e.g., *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); *U.S. Horticultural Supply, Inc. v. Scotts Co.*, No. 04-5182, 2009 WL 89692 (E.D. Pa. 2009) (applying the 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 (E.D. Tenn. Aug. 20, 2008) (applying the rule of reason to federal RPM claims, but holding that the plaintiff had not sufficiently alleged a relevant market); *Jacobs v. Tempur-Pedic Int'l, Inc.*, No. 4:07-CV-02-RLV, 2007 WL 4373980 (N.D. Ga. Dec. 11, 2007); *O'Brien v. Leegin Creative Leather Prods., Inc.*, No. 04-CV-1668 (8th Judicial Dist., Sedgwick County Kan. July 9, 2008), *direct appeal to supreme court granted*, No. 101,000 (Oct. 6, 2008) (applying the rule of reason in state RPM claims).

<sup>283</sup> 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.” Order Granting in Part Petition to Reopen and Modify Order Issued April 11, 2000, *In re Nine West Group Inc.*, No. C-3937, at 3-4 (F.T.C. May 6, 2008) [hereinafter *FTC Nine West Modification*], available at <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. See Amended States’ Comments Urging Denial of Nine West’s Petition, *In re Nine West Group, Inc.*, No. C-3937 (Jan. 18, 2008) [hereinafter *Amended States’ Comments*], available at <http://www.ftc.gov/os/comments/ninewestgrp/080117statesamendedcomments.pdf>. 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

Despite the dramatic differences among them, however, all extant ROR approaches attempt only to distinguish rational procompetitive from rational anticompetitive instances of RPM. Those who believe the practice commonly procompetitive fashion inquiries that favor defendants through burden-of-proof allocations, presumptions, and more.<sup>285</sup> At the same time, enforcement agencies and scholars believing RPM is frequently anticompetitive develop approaches that employ similar tools to plaintiffs' advantage, at least in those market settings thought to make the practice particularly pernicious.<sup>286</sup>

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 excessively to employ this practice. We found, moreover, that boundedly rational RPM sometimes leads not only to higher prices but also to output reductions that harm manufacturers and consumers alike, while at other times its effects may be more benign, even if not procompetitive.<sup>287</sup> Hence, insofar as the incidence of boundedly rational RPM is not negligible – and the evidence marshaled here indicates it may comprise a significant portion of RPM's use when the practice is legal<sup>288</sup> – the various extant positions in the ROR debate should be reexamined.

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

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services was greater than the decreased demand caused by the higher price that consumers paid." *Id.* at 8.

<sup>284</sup> Brief for William S. Comanor and Frederic M. Scherer as Amici Curiae Supporting Neither Party, *Leegin Creative Leather Prods., Inc. v. PSKS, Inc.*, 551 U.S. 877 (2007) (No. 06-480); *AREEDA & HOVENKAMP*, *supra* note 13, at 1633b; *Grimes*, *supra* note 3; *Lambert*, *supra* note 3, at 1997-2004; *see also* *Posner*, *supra* note 37 (suggesting a rule of per-se legality for vertical restraints).

<sup>285</sup> *See, e.g., Spahr*, 2008 WL 3914461 at \*8-12; *cf. Toledo Mack Sales & Service, Inc. v. Mack Trucks, Inc.*, 530 F.3d 204 (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*, *supra* note 3, at 1997-98.

<sup>286</sup> *See, e.g., Amended States' Comments*, *supra* note 283, at 8 (arguing that the defendant should carry the burden of proving the procompetitive effects of RPM that could not be achieved less restrictively); *FTC Nine West Modification*, *supra* note 283, at 14 (allowing the defendant to avoid the burden of proving procompetitive effects of RPM if it can prove the absence of "*Leegin* factors"). *See generally Lambert*, *supra* note 3, at 1973-85 (identifying and critiquing several competing proposals for structuring a rule of reason for RPM).

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<sup>288</sup> *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 63.

procompetitive.<sup>289</sup> Whether they employ an open-ended inquiry or offer 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.<sup>290</sup> However, one might think this assumption and the burdens consequently imposed on plaintiffs unwarranted once we recognize that boundedly rational RPM can occur even when those factors thought necessary to generate the practice's anticompetitive harms of manufacturer and dealer cartels or foreclosure are absent.<sup>291</sup>

At the same time, if less obviously, the presence of boundedly rational RPM also questions the more extreme pro-plaintiff approaches advanced by those who are particularly concerned about RPM's potential anticompetitive evils. These approaches tend effectively to place the burden on defendants to prove the practice procompetitive, either in all cases or where they cannot show the absence of *Leegin*-like factors.<sup>292</sup> However, placing the burden on defendants across the board may not be justified, since competitive markets not only make rational anticompetitive accounts of RPM less plausible, but also

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<sup>289</sup> Courts' previous attempt to conduct an unstructured rule of reason at least implicitly takes the position that an all-things-considered analysis can determine whether procompetitive benefits outweigh negative consequences. See *Chi. Bd. of Trade v. United States*, 246 U.S. 231 (1918); cf. *Lambert*, *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.").

<sup>290</sup> 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. 2009); *Spahr v. Leegin Creative Leather Prods., Inc.*, No. 2:07-CV-187, 2008 WL 3914461 (E.D. Tenn. Aug. 20, 2008). This standard 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 Michael A. Carrier, *The Rule of Reason: An Empirical Update for the 21st Century*, 16 GEO. MASON L. REV. 827 (2009) ("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*, *supra* note 3, at 1997-98.

<sup>291</sup> See *supra* notes 90-95 and accompanying text.

<sup>292</sup> See Amended States' Comments, *supra* note 283, at 8.

diminish the likelihood of long-lasting boundedly rational resale price maintenance.

Even more significantly, however, the typically outcome-determinative imposition of the burden to prove the absence of factors such as those enumerated by the *Leegin* Court on defendants may be unjustified as well. After all, our findings suggest RPM may often be boundedly rational, even to the detriment of its practitioners, but still generated only limited market-wide harm. When coupled with the empirical evidence showing RPM is sometimes 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 rule of reason depends not only on the balance of its pro- to anticompetitive manifestations, as commonly thought, but also on the relative prevalence of boundedly rational resale price maintenance. 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 very common. On the other hand, where boundedly rational resale price maintenance is not prevalent, extant ROR approaches may be justified in disregarding it.

Importantly, moreover, the rule of reason 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 concern. In such an environment, boundedly rational RPM at most will increase the prices and reduce the output of its practitioners. It will cause no appreciable market-wide consumer harm, neither softening horizontal competition nor reducing overall market output since consumers can easily 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 markets, where entry barriers are present, or where regulation limits entry and mobility.<sup>293</sup> 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 at either the manufacturer or dealer levels may cause significant consumer harm and should therefore be taken into account by its new rule of reason.

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<sup>293</sup> See Tor, *supra* note 7, at 493, 546.

In fashioning an appropriate ROR, however, boundedly rational resale price maintenance 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.<sup>294</sup> 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.<sup>295</sup>

Altogether, the behaviorally-informed account of RPM and its consequences thus provides a basis for structuring an appropriate rule of reason after *Leegin*: First, our conclusions militate in favor of placing on plaintiffs the burden of making the prima facie case in RPM's rule of reason inquiry.<sup>296</sup> To discharge of 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.<sup>297</sup> Alternatively, plaintiffs could provide indirect evidence of the

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<sup>294</sup> See *supra* Section III.B.

<sup>295</sup> 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 behaviorally-informed rule of reason. Cf. Frank H. Easterbrook, *The Limits of Antitrust*, 63 TEXAS 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 TEXAS L. REV. 685, 700 (2009) (contending that the risk of overenforcement “simply doesn’t exist anymore”).

<sup>296</sup> 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 the rule of reason). See Douglas H. Ginsburg, *Vertical Restraints: de Facto Legality under the Rule of Reason*, 60 ANTITRUST L.J. 67 (1991).

<sup>297</sup> Cf. Lambert, *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).

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.<sup>298</sup>

Second, where plaintiff has made either the direct or the indirect prima facie case, 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<sup>299</sup> – 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 were significantly more costly or less effective.<sup>300</sup> Otherwise, absent such a requirement, manufacturers could routinely proclaim the various theoretical harms of price cutting in their distribution system without more.

Incidentally, moreover, this requirement may serve the beneficial function of facilitating the debiasing boundedly rational RPM: Namely, biased manufacturers who are counseled of the need to prove the harms of price cutting may be more likely to recognize their concerns in this area are not fully justified and possibly even reduce their reliance on RPM.<sup>301</sup>

In any case, a defendant who is unable to make its own case in rebuttal could still prevail by undermining 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

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<sup>298</sup> FTC Nine West Modification, *supra* note 283, at 14; 8 AREEDA & HOVENKAMP, *supra* note 13, § 1633c1, at 330-31. 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.

<sup>299</sup> *Cf.* 8 AREEDA & HOVENKAMP, *supra* note 13, ¶ 1633e3(B), at 338.

<sup>300</sup> *Cf. id.*; Amended States' Comments, *supra* note 283, at 8.

<sup>301</sup> 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 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, *Behavioral Methodology*, *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).

that any decline was attributable to factors other than RPM.<sup>302</sup> 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).<sup>303</sup>

All in all, therefore, recognizing that RPM may often be boundedly rational rather than rationally pro- or anticompetitive, offers meaningful guidance for developing a structured rule of reason in this area. On the one hand, our findings challenge pro-defendant approaches that rely on the absence of factors associated with the anticompetitive effects of cartelization or foreclosure. On the other hand, however, this Article's analysis also indicates, first, that more extreme pro-plaintiff approaches are not supported by the empirical evidence; and, second, that the presence of boundedly rational RPM only translates to market-wide competitive harm in specific circumstances that should taken into account when structuring its rule of reason.

The resulting ROR blueprint therefore revealed the presence of boundedly rational RPM to moderate the conclusions of both camps in the post-*Leegin* debate. We outlined the main contours of an approach that avoids condemning RPM too easily, but is alert to indicia of both its traditionally anticompetitive harms and occasions of harmful boundedly rational resale price maintenance. This approach, moreover, also allows defendants to rebut using evidence they is available when RPM is in fact procompetitive.

## CONCLUSION

Scholars have long debated the merits and demerits of resale price maintenance, mostly agreeing this practice can have both procompetitive and anticompetitive consequences while disputing the relative frequency and significance of these two types of effects. Recently, moreover, the Supreme Court has replaced RPM's traditional per-se illegality with a rule of reason analysis, citing the economic evidence showing the practice is sometimes welfare-enhancing.

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<sup>302</sup> Cf. Lambert, *supra* note 3, at 1997-2000 (suggesting an approach that places a similar burden on plaintiffs).

<sup>303</sup> See *supra* note 290 (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.

This Article argued, however, that all past accounts of resale price maintenance 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 resale price maintenance revealed this practice may often be neither procompetitive nor anticompetitive in the traditional, rational 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.<sup>304</sup>

Because market forces are slow to eliminate the excessive or inefficient use of RPM, its presence should be taken into account in fashioning the rule of reason 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 pro-defendant and pro-plaintiff ROR approaches, and provided a blueprint for developing 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.<sup>305</sup> 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.<sup>306</sup>

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<sup>304</sup> See *supra* Part III.

<sup>305</sup> See also Aviram & Tor, *supra* note 271; Stucke, *supra* note 68; Tor, *Entry*, *supra* note 7; Avishalom Tor, *Illustrating a Behaviorally-Informed Approach to Antitrust Law: Section 2 Predation and Beyond*, 18 ANTITRUST 52 (2003).

<sup>306</sup> See Tor, *Behavioral Methodology*, *supra* note 8 (reviewing the main elements of the behavioral analysis of law and evaluating some of its limitations, real and imagined).