

# Antitrust Injury and Standing in Foreclosure Cases

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## I. INTRODUCTION

Under the Telecommunications Act of 1996,<sup>1</sup> an incumbent local exchange carrier (ILEC) is obliged to cooperate with potential entrants by making its infrastructure available to them on terms that will not preclude effective competition.<sup>2</sup> Since an incumbent's failure to cooperate satisfactorily may be characterized as an illegal effort to

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1. Telecommunications Act of 1996, Pub. L. No. 104-104, 110 Stat. 56 (codified in scattered sections throughout 47 U.S.C.).

2. See 47 U.S.C. §§ 251-252 (2000) (imposing obligations on ILECs to assist competitive local exchange carriers (CLECs) in entering the incumbent's market and subsequently competing with the incumbent).

maintain its monopoly, a natural question is whether such a failure exposes the incumbent to antitrust liability.<sup>3</sup> In its recent *Trinko*<sup>4</sup> decision, the Supreme Court ruled that it did not. As with most Supreme Court opinions, *Trinko* raised some interesting *substantive* legal issues, which we are exploring elsewhere. Justice Stevens's concurring opinion, which was joined by Justices Souter and Thomas, raised an interesting *procedural* question: does the consumer have standing to pursue an antitrust claim in the event that an incumbent monopolist arguably maintained its monopoly in violation of section 2 of the Sherman Act by foreclosing its rivals? Justice Stevens found that only the foreclosed entrants could sue for damages.<sup>5</sup> But, as we shall show, his reasoning is flawed. In our view, at least one third of the Supreme Court is confused about the economics of foreclosure.<sup>6</sup> We contend that the economic analysis and the antitrust case law support our view that both consumers and foreclosed rivals should have standing to sue for damages in such cases. We also examine the practical difficulties that private plaintiffs will encounter in proving their damages.

## II. THE *TRINKO* LITIGATION

### A. Antitrust Background

It is well known that the structural condition of monopoly, without more, is not a violation of section 2 of the Sherman Act, which states in relevant part that "[e]very person who shall monopolize . . . any part of the trade or commerce among the several States . . . shall be deemed guilty of a felony."<sup>7</sup> It is the act of monopolizing that offends the Sherman Act rather than the structural condition of monopoly. A compact statement of the test for illegal monopolization was provided in the Supreme Court's *Grinnell* decision: "The offense of monopoly under § 2 of the Sherman Act has two elements: (1) the possession of monopoly power in the relevant market and (2) the willful acquisition or maintenance of that power as distinguished from growth or development as a consequence of a superior product, business acumen, or historic accident."<sup>8</sup> To the extent that this test separates the deserving from the undeserving, it is a useful standard.<sup>9</sup>

There are several evidentiary hurdles for a successful plaintiff. First, the plaintiff must define a relevant antitrust market, which has two components: a product market<sup>10</sup>

3. According to the Supreme Court's ruling in *United States v. Grinnell Corp.*, efforts to maintain monopoly power violate section 2 of the Sherman Act. *United States v. Grinnell Corp.*, 384 U.S. 563 (1966).

4. *Verizon Commc'ns Inc. v. Law Offices of Curtis V. Trinko, LLP*, 540 U.S. 398 (2004).

5. *Id.* at 416. Oliver Wendell Holmes advised us that "[t]he general tendency of the law, in regard to damages at least, is not to go beyond the first step." *S. Pac. Co. v. Darnell-Taenzler Lumber Co.*, 245 U.S. 531, 533 (1918). We argue below that the first step in foreclosure cases involves both consumers and foreclosed rivals.

6. It is not clear whether the rest of the Court is similarly confused. Justice Scalia's majority opinion found in favor of Verizon on other grounds. As a result, the Court's disposition of the case made it unnecessary to consider petitioner's contention that respondent lacked antitrust standing. *Trinko*, 540 U.S. at 416 n.5.

7. 15 U.S.C. § 2 (2004).

8. *Grinnell Corp.*, 384 U.S. at 570-71.

9. Not everyone believes it to be useful. See, e.g., Einar Elhauge, *Defining Better Monopolization Standards*, 56 STAN. L. REV. 253 (2003) (describing the *Grinnell* standard as problematic).

10. For a useful survey of product market definition issues, see PHILLIP E. AREEDA, HERBERT

and a geographic market.<sup>11</sup> Second, having defined the relevant market, the plaintiff must prove that the defendant has monopoly power in that market. This requires a showing that the defendant is able to profitably raise price above the competitive level for a sustained period of time.<sup>12</sup> Once these two hurdles have been successfully negotiated, the first prong of the *Grinnell* test has been satisfied. The third evidentiary burden is to show that the defendant has engaged in exclusionary conduct.<sup>13</sup> That is, the monopolist's success must be attributed to some sort of predatory, or otherwise exclusionary, conduct.<sup>14</sup> If the monopolist has engaged in such conduct, its monopoly will violate section 2.<sup>15</sup>

### B. The Telecommunications Act Requirements

The production of local telephone service is marked by substantial economies of scale, which makes competition infeasible. Local telephone service, therefore, is a natural monopoly.<sup>16</sup> In order to enjoy the productive efficiency of a single producer while minimizing the allocative inefficiency of monopoly, local telephone service historically had been subject to traditional forms of public utility regulation.<sup>17</sup> Dissatisfied with the results of this regulation, Congress decided to enhance competition in local telephone service markets. However, it faced difficulty in overcoming the natural monopoly problem. The solution appeared to be deceptively simple: permit new entrants to use those assets owned by the incumbent that exhibit substantial economies of scale. In this way, there would be no decrease in productive efficiency and, of course, no need for unnecessary and socially wasteful duplication of those assets exhibiting substantial scale economies.

To achieve this outcome, Congress passed the Telecommunications Act of 1996 (the

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HOVENKAMP & JOHN L. SOLOW, ANTITRUST LAW ¶¶ 560-65 (2002).

11. *Id.* ¶¶ 550-56.

12. Abba Lerner proposed the following measure:  $\lambda = (P - MC) / P$  where  $P$  is the price charged and  $MC$  is marginal cost, which is equal to the competitive price. Abba Lerner, *The Concept of Monopoly and the Measurement of Monopoly Power*, 1 REV. ECON. STUD. 157, 169 (1934). Thus,  $\lambda$  measures the monopoly mark-up as a percentage of the monopoly price. See William M. Landes & Richard A. Posner, *Market Power in Antitrust Cases*, 94 HARV. L. REV. 937 (1981) (adapting Lerner's concept to the dominant firm); see also AREEDA, HOVENKAMP & SOLOW, *supra* note 10, ¶¶ 501-22.

13. For a brief examination of recent judicial guidance on impermissible, unilateral conduct see Herbert Hovenkamp, *Exclusion and the Sherman Act*, 72 U. CHI. L. REV. 147 (2005).

14. In some cases, this may be quite difficult to prove. Frank Easterbrook points out that aggressive competitive conduct and aggressive exclusionary conduct often look alike. Frank Easterbrook, *On Identifying Exclusionary Conduct*, 61 NOTRE DAME L. REV. 972 (1986). Both types of conduct injure competitors and benefit the monopolist, but one is objectionable while the other is not.

15. In *Trinko*, the Court cited and quoted its *Grinnell* standard, but did not say much else about the conduct element of an illegal effort to maintain monopoly. *Verizon Commc'ns Inc. v. Law Offices of Curtis V. Trinko, LLP*, 540 U.S. 398, 407 (2004).

16. Monopoly is *natural* in the sense that price competition among rival producers leads to financial losses for everyone and these losses lead to exit from the industry until only one firm remains. For more on natural monopoly, see WILLIAM W. SHARKEY, *THE THEORY OF NATURAL MONOPOLY* (1982). For a compact treatment, see LUIS M.B. CABRAL, *INTRODUCTION TO INDUSTRIAL ORGANIZATION* 75-78 (2000). For a more extensive survey, see Ronald R. Braeutigam, *Optimal Policies for Natural Monopolies*, in 2 HANDBOOK OF INDUSTRIAL ORGANIZATION 1290 (Richard Schmalensee & Robert D. Willig eds., 1989).

17. Traditional public utility regulation involves setting prices that the natural monopolist can charge at levels that limit the monopolist's return on investment to approximate competitive levels.

Act).<sup>18</sup> Among other things, the Act imposed certain obligations on incumbents that would facilitate the entry of rivals. Section 251 requires that an incumbent share its network with its competitors.<sup>19</sup> Of course, an incumbent could make entry infeasible by charging exorbitant access charges that would render entry unprofitable.<sup>20</sup> In this way, the incumbent could claim to be willing to accommodate entry, but never actually do so. In order to make entry economically feasible for the would-be competitors, therefore, the charges for using the elements of the network were confined to regulated rates that approximated marginal cost.<sup>21</sup>

The Act requires that an incumbent provide access to its network elements on an unbundled basis at rates that are "just, reasonable, and nondiscriminatory."<sup>22</sup> Although the incumbent can charge a "just and reasonable"<sup>23</sup> rate for the unbundled network elements (UNEs), what is just and reasonable is in the eye of the beholder. The Federal Communications Commission (FCC) decided on the so-called Total Element Long-run Incremental Cost (TELRIC) standard. TELRIC rates, that is, UNE prices, are "based on the use of the most efficient telecommunications technology currently available and the lowest cost network configuration, given the existing location of the incumbent local exchange carrier's wire center."<sup>24</sup>

The Act requires that an incumbent provide access to its network on an unbundled basis so an entrant can pick and choose which elements to lease from the incumbent and which to acquire from third parties. In this way, entrants would not have to unnecessarily duplicate the telephone infrastructure, but would still be able to offer competitive telephone service. Ideally, the new entrants would offer attractive features, innovative pricing plans, and services that were missing under the former regulatory regime.

### C. The Trinko Litigation

In spite of Verizon's obligation to process the orders of would-be entrants, many orders went unfulfilled and others were delayed.<sup>25</sup> Following a series of complaints by competitors, the New York Public Service Commission (PSC) and the FCC opened separate investigations into Verizon's alleged misconduct.<sup>26</sup> Ultimately, the PSC ordered Verizon to pay \$10 million to the entrants, and the FCC consent order involved a \$3 million "voluntary contribution" (i.e., fine) to the U.S. Treasury by Verizon.<sup>27</sup>

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18. Telecommunications Act of 1996, Pub. L. No. 104-104, 110 Stat. 56 (codified in scattered sections throughout 47 U.S.C.).

19. 47 U.S.C. § 251 (2000).

20. The allegations in *Covad Communications Co. v. BellSouth Corp.*, 374 F.3d 1044 (11th Cir. 2004), illustrate the problem. Covad tried to compete with BellSouth in the provision of DSL Internet service, but found that it could not operate profitably because BellSouth charged a high wholesale price for access to its local telephone network. In essence, Covad alleged a vertical "price squeeze."

21. As one would expect, there is a substantial dispute over the proper cost measure—both in principle and in practice. *Verizon Commc'ns Inc. v. Fed. Commc'ns Comm'n*, 535 U.S. 467 (2002).

22. 47 U.S.C. § 251(c)(3) (2000).

23. *Id.* § 252(d)(1).

24. 47 C.F.R. § 51.505(b)(1) (2005).

25. *Verizon Commc'ns Inc. v. Law Offices of Curtis V. Trinko, LLP*, 540 U.S. 398, 403 (2004).

26. *Id.* at 403.

27. In addition, Verizon was subject to additional reporting requirements and heightened monitoring by the PSC and the FCC. These added measures were lifted prior to the *Trinko* decision. *Id.* at 403-04.

On the heels of the FCC consent order, Trinko filed a class action suit seeking injunctive relief and treble damages for the injuries suffered as a result of Verizon's stalling tactics. Trinko was an AT&T local service customer who alleged that Verizon delayed filling some competitors' customer orders and failed to fill others.<sup>28</sup> Trinko alleged that Verizon's actions were an effort to sabotage the quality of the service provided by its competitors and thereby to discourage customer switching.<sup>29</sup> In effect, this behavior was aimed at preserving Verizon's monopoly in local telephone service by deterring potential customers from switching to rivals that were trying to get a foothold in the market. The antitrust issue was whether this conduct violated section 2.

Based on the *Grimell* test, those incumbents that, in fact, delay the entry of rivals or sabotage their efforts will appear to have violated section 2. It is unclear how one could characterize such behavior as anything other than the "willful maintenance" of monopoly power. Writing for the majority, however, Justice Scalia explained that Verizon had no duty to cooperate with would-be entrants under the antitrust laws.<sup>30</sup> Accordingly, Verizon's failures under the Telecommunications Act had to be disciplined under that Act rather than under the Sherman Act.<sup>31</sup>

Justice Stevens, along with Justices Souter and Thomas, would not have addressed the substantive issues examined by the majority. Instead, they would have dismissed Trinko's claim for a lack of antitrust standing. The concurring opinion found the relationship between Verizon's conduct and Trinko's alleged injuries to be "indirect."<sup>32</sup> That is, "whatever antitrust injury [Trinko] suffered because of Verizon's conduct was purely derivative of the injury that AT&T suffered."<sup>33</sup> Because of this, Justice Stevens feared that Trinko's suit raised "both the risk of duplicative recoveries and the danger of complex apportionment of damages."<sup>34</sup> As we will show below, this view is clearly incorrect as a matter of economics.

### III. PRIVATE DAMAGE ACTIONS

In the United States, enforcement of the Sherman Act is a curious combination of public and private efforts. Public enforcement is provided by the Antitrust Division of the Department of Justice (DOJ), the Federal Trade Commission (FTC), and the State Attorneys General. Private enforcement is provided by those who have been injured by an antitrust violation. The statutory basis for private damage actions can be found in section 4 of the Clayton Act:<sup>35</sup> "[A]ny person who shall be injured in his business or

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28. *Id.* at 404-05.

29. *Id.* at 405; see T. Randolph Beard et al., *Regulation, Vertical Integration, and Sabotage*, 49 J. INDUS. ECON. 319 (2001) (offering an interesting analysis of sabotage in such settings).

30. *Trinko*, 540 U.S. at 409.

31. In *Covad Communications Co. v. BellSouth Corp.*, 374 F.3d 1044 (11th Cir. 2004), BellSouth allegedly refused to provide nondiscriminatory access to its network, which is required by the Act and was required by BellSouth's interconnection agreement with Covad. Based on *Trinko*, the Eleventh Circuit barred Covad's claim because BellSouth's provision of access to its network is not voluntary; it is an involuntary statutory imposition. *Id.* at 1048.

32. *Trinko*, 540 U.S. at 416.

33. *Id.* at 417.

34. *Id.*

35. 15 U.S.C. § 15 (2000). Originally, the private damage provision was found in section 7 of the Sherman

property by reason of anything forbidden in the antitrust laws may sue therefore . . . and shall recover threefold the damages by him sustained and the cost of suit, including a reasonable attorney's fee."<sup>36</sup> Thus, section 4 of the Clayton Act provides a powerful economic incentive for private enforcement of the antitrust laws. Based on a plain reading of section 4 of the Clayton Act, it would appear that literally anyone who suffered any injury flowing from an antitrust violation could recover treble damages. But appearances can be deceiving. The Supreme Court has never read section 4 literally.<sup>37</sup> For one thing, cognizable injuries have been confined to *antitrust* injuries. In addition, standing to sue requires that the plaintiff be the direct victim of the antitrust violation.

#### A. Antitrust Injury

A successful antitrust plaintiff must prove more than injury in fact. The Supreme Court has ruled that:

Plaintiffs must prove *antitrust* injury, which is to say injury of the type the antitrust laws were intended to prevent and that flows from that which makes defendants' acts unlawful. The injury should reflect the anticompetitive effect either of the violation or of anticompetitive acts made possible by the violation. It should, in short, be "the type of loss that the claimed violations . . . would be likely to cause."<sup>38</sup>

Thus, the antitrust injury requirement connects the plaintiff's injury to the economic rationale of the antitrust laws.<sup>39</sup> In price fixing cases, for example, the difference between the cartel price and the price that would have prevailed absent the conspiracy, that is, the overcharge, constitutes antitrust injury.<sup>40</sup> In foreclosure cases, the forgone profit of excluded firms constitutes antitrust injury.<sup>41</sup> As we shall see below, both were present in *Trinko*.

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Act. 15 U.S.C. § 7 (1890).

36. 15 U.S.C. § 15(a) (2000). Private parties can also sue for injunctive relief, but we are only concerned with damages here.

37. See *Associated Gen. Contractors v. Cal. Council of Carpenters*, 459 U.S. 519 (1983) (exemplifying a compact treatment of the Supreme Court's limitations on those who can sue for damages; the majority opinion was written by Justice Stevens, the author of the concurring opinion in *Trinko*).

38. *Brunswick Corp. v. Pueblo Bowl-O-Mat*, 429 U.S. 477, 489 (1977) (emphasis added) (quoting *Zenith Radio Corp v. Hazeltine Research, Inc.*, 395 U.S. 100, 125 (1969)).

39. See William H. Page, *Antitrust Damages and Economic Efficiency: An Approach to Antitrust Injury*, 47 U. CHI. L. REV. 467 (1980) (demonstrating an early observation along these lines); see also Roger D. Blair & William H. Page, *The Role of Economics in Defining Antitrust Injury and Standing*, 17 MANAGERIAL & DECISION ECON. 127, 128 (1996) ("Plaintiffs must prove *antitrust* injury, which is to say injury of the type the antitrust laws were intended to prevent and that flows from that which makes defendant's acts unlawful.").

40. See *Reiter v. Sonotone Corp.*, 442 U.S. 330 (1979) (ruling that consumers were injured in their property due to overcharges resulting from a price fixing conspiracy).

41. *Trabert & Hoeffler, Inc. v. Piaget Watch Co.*, 633 F.2d 477, 482-83 (7th Cir. 1980) ("Even if the termination did not constitute an automatic injury to Trabert & Hoeffler, there is ample evidence in the record to support a finding that the procuring of substitutes would not have ameliorated the immediate losses suffered.").

### B. Antitrust Standing

A single antitrust violation can ripple through the economy. In a price fixing case, for example, the industry output is reduced and the price is raised above the noncollusive level. Consumers are, of course, injured, but so are producers of complements, consumers of substitutes, input suppliers, stockholders, and a host of others. In some sense, all of these parties have suffered antitrust injury, but it would be a judicial nightmare to permit them all to sue for treble damages. Fortunately, the Supreme Court has not read section 4 of the Clayton Act literally. As a result, not everyone who has suffered antitrust injury will have standing to pursue private damages under section 4 of the Clayton Act. The Supreme Court's decisions in *Illinois Brick*<sup>42</sup> and *Associated General Contractors*<sup>43</sup> make it clear that a proper plaintiff must have been the direct victim of the antitrust violations. These opinions express the Court's concerns regarding duplicative recoveries, a need for complex apportionment of damages, and preservation of the effectiveness of private enforcement efforts.<sup>44</sup>

The source of judicial concern can be seen quite clearly with a price fixing example. The manufacturers of lysine, an animal feed additive, fixed prices in violation of section 1 of the Sherman Act.<sup>45</sup> The lysine was sold at collusive prices to producers of animal feed who suffered the initial overcharge. The feed was subsequently sold to farmers at prices that reflected the increased lysine cost. The farmers then sold cattle to meat packers at prices that reflected the higher cost of feed due to the higher costs of lysine. It is clear that the meat packers' prices to retail grocers and restaurants would reflect their higher costs. Finally, the ultimate consumer was also overcharged at the grocery store or the restaurant due to the lysine cartel. It is obvious that there would be severe problems of proof along this chain from the lysine producer to the ultimate consumer of beef. At each step, one would be faced with estimating "but-for" prices. It would become increasingly difficult to prove the extent of any net overcharge as one moved away from the site of the conspiracy. This is precisely the sort of problem that the Supreme Court sought to avoid with its *Hanover Shoe*<sup>46</sup> and *Illinois Brick*<sup>47</sup> decisions.

These two decisions have limited antitrust standing to direct purchasers of the affected product. In *Hanover Shoe*, a producer of shoes who leased shoe machinery from United Shoe claimed that United's lease policy was an instrument of illegal monopolization of the shoe machinery industry.<sup>48</sup> Hanover argued that it was entitled to receive the difference between what it paid in rentals and what it would have paid if United Shoe had sold its machines.<sup>49</sup> In response, United Shoe argued that Hanover Shoe

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42. *Ill. Brick Co. v. Illinois*, 431 U.S. 720 (1977) (clarifying that only direct purchasers can claim to be injured and attempt to collect treble damages as a result).

43. *Associated Gen. Contractors v. Cal. State Council of Carpenters*, 459 U.S. 519 (1983) (reversing the lower court decision that plaintiffs could make a claim for damages because there were more direct victims of the antitrust violations).

44. *See id.* (citing *Illinois Brick* with concern).

45. *In re Amino Acid Lysine Antitrust Litig.*, No. 95 C 7679, 1996 WL 355368 (N.D. Ill. June 24, 1996).

46. *Hanover Shoe, Inc. v. United Shoe Mach. Corp.*, 392 U.S. 481, 481 (1968).

47. *Ill. Brick*, 431 U.S. at 720.

48. *Hanover Shoe*, 392 U.S. at 481.

49. *Id.* at 484. For an argument that Hanover suffered no damages because selling and leasing durables

suffered no cognizable injury because the illegal overcharge was passed on to Hanover's customers in the form of higher shoe prices.<sup>50</sup> The Supreme Court was unimpressed with United Shoe's argument and held that Hanover Shoe was entitled to the full overcharge.<sup>51</sup> The Court expressed concern that a pass-on defense would substantially raise the cost of bringing a case because "[t]reble-damage actions would often require additional long and complicated proceedings involving massive evidence and complicated theories."<sup>52</sup>

The *Illinois Brick*<sup>53</sup> decision subsequently made the rule regarding passing-on symmetric. Whereas *Hanover Shoe* precluded the use of passing-on as a defense, *Illinois Brick* precluded its offensive use. The defendants in this case manufactured concrete block, which they sold primarily to masonry contractors in the Chicago area.<sup>54</sup> These contractors submitted bids to general contractors for the masonry portion of construction projects.<sup>55</sup> In turn, the general contractors submitted bids to the State of Illinois and some 700 governmental entities who were indirect purchasers of concrete block.<sup>56</sup> The issue before the Supreme Court was whether these indirect purchasers could sue the concrete block manufacturers for treble damages.<sup>57</sup> On the one hand, the plaintiffs wanted to prove that some of the illegal overcharges had been passed on to them. On the other hand, the manufacturers pointed out that permitting indirect purchasers to do so would lead to duplicative awards unless *Hanover Shoe* were overruled.<sup>58</sup>

The Supreme Court refused to overrule its *Hanover Shoe* decision and went on to point out that:

Permitting the use of pass-on theories under section 4 essentially would transform treble-damages actions into massive efforts to apportion the recovery among all potential plaintiffs that could have absorbed part of the overcharge—from direct purchasers to middlemen to ultimate consumers. However appealing this attempt to allocate the overcharge might seem in theory, it would add whole new dimensions of complexity to treble-damages suits and seriously undermine their effectiveness.<sup>59</sup>

Thus, the Supreme Court's rule regarding a pass-on argument is symmetric. Only direct

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amounts to the same thing, see Roger D. Blair & Jill Boylston Herndon, *A Note on Hanover Shoe*, 43 ANTITRUST BULL. 351 (1998).

50. *Hanover Shoe*, 392 U.S. at 488.

51. *Id.*

52. *Id.* at 493.

53. *Ill. Brick Co. v. Illinois*, 431 U.S. 720 (1977).

54. *Id.* at 726.

55. *Id.*

56. *Id.*

57. *Id.* at 728.

58. *Ill. Brick*, 431 U.S. at 730.

59. *Id.* at 737. This decision created some interesting, albeit conflicting, commentary. Two articles that analyze this issue and reach opposite conclusions are William M. Landes & Richard A. Posner, *Should Direct Purchasers Have Standing to Sue under the Antitrust Laws? An Economic Analysis of the Rule of Illinois Brick*, 46 U. CHI. L. REV. 602 (1979) (supporting the *Illinois Brick* decision), and Robert G. Harris & Lawrence A. Sullivan, *Passing on the Monopoly Overcharge: A Comprehensive Policy Analysis*, 128 U. PA. L. REV. 269 (1979) (opposing the *Illinois Brick* decision).

purchasers have standing to sue.<sup>60</sup>

IV. THE ECONOMICS OF FORECLOSURE

An incumbent monopolist's efforts to foreclose its would-be rivals has an obvious adverse impact upon the rival's business. But foreclosure also has just as obvious an adverse impact on the monopolist's customers, as it perpetuates monopoly pricing. These impacts are not duplicative and, therefore, damage awards will not require complex apportioning. In addition, permitting consumers to sue for damages will enhance the deterrent effect of private enforcement without undermining our sense of fairness.<sup>61</sup> The economic impact of foreclosure can be seen most clearly with a simple example that is summarized graphically in Figure 1 where  $D$ ,  $MR$ , and  $MC_I$  represent the incumbent monopolist's demand, marginal revenue, and marginal cost, respectively. The profit maximizing price and output are shown as  $P_I$  and  $Q_{II}$ , respectively, and profit is equal to area  $P_Iabc$ .

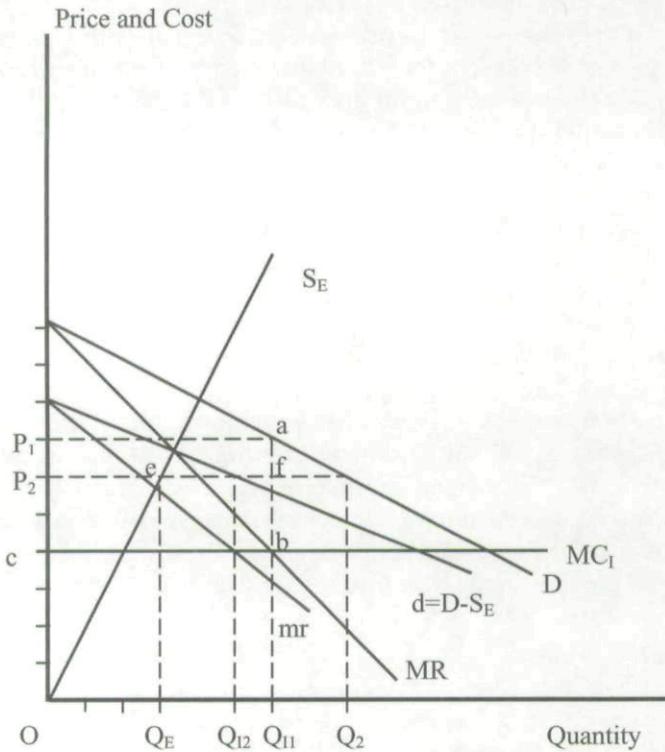


Figure 1

60. See Roger D. Blair & Jeffrey L. Harrison, *Reexamining the Role of Illinois Brick in Modern Antitrust Standing Analysis*, 68 GEO. WASH. L. REV. 1 (1999) (providing a recent evaluation of antitrust laws).

61. We are not advocating draconian punishment unrelated to the injury caused. On the contrary, we advocate the extension of standing to those parties directly injured by the foreclosure.

Now, suppose that some would-be rivals threaten to enter. If entry is successful, their collective supply function will be  $S_E$  in Figure 1. Following entry, the incumbent's problem is to maximize its profits given the competitive presence of the entrants.<sup>62</sup> On the assumption that the entrants will expand their output until supply equals the prevailing price set by the incumbent,<sup>63</sup> the incumbent can take that supply response into account and determine the residual demand for its own output. The residual demand is found by subtracting the entrants' supply from the market demand. In other words, we want to find  $d = D - S_E$ . In order to maximize its profit, the incumbent will produce the quantity at which its marginal cost equals the marginal revenue ( $mr$ ) associated with the residual demand.

These results are depicted in Figure 1, where we show the residual demand as  $d = D - S_E$  and the corresponding marginal revenue is  $mr$ . Now, the incumbent maximizes its profit subject to the presence of the entrants by producing  $Q_{I2}$ , where  $mr$  equals  $MC_I$ . The profit maximizing price is  $P_2$ . The entrants will respond to this price competitively by producing  $Q_E$  and, of course, selling at a price of  $P_2$ . As we can see in Figure 1, a total output of  $Q_2 = Q_{I2} + Q_E$  clears the market at a price of  $P_2$ .<sup>64</sup>

In the context of this example, we can examine the economic effects of foreclosure. If the incumbent monopolist is successful in foreclosing the entrants, it will maintain the monopoly solution. The monopolist's profits are equal to  $(P_1 - MC_I)Q_{I1}$ . If foreclosure is not successful, entry will lead to a price reduction from  $P_1$  to  $P_2$  and a reduction in the former monopolist's output from  $Q_{I1}$  to  $Q_{I2}$ . This, of course, reduces the incumbent's profit from  $(P_1 - MC_I)Q_{I1}$  to  $(P_2 - MC_I)Q_{I2}$ . Avoiding this reduction in profit provides a powerful economic incentive for the incumbent monopolist to foreclose entry. As long as the cost of foreclosing the entrants is smaller than the difference in profits, the foreclosure strategy will be profitable. In this event, we should anticipate efforts in that direction.

As a result of the foreclosure, the would-be entrants have lost profits (producer surplus) equal to triangle  $OP_2e$  in Figure 1. Presumably, those lost profits represent antitrust injury to the entrants. Moreover, this loss is a *direct* result of the foreclosure. It is hard to argue that they would not have antitrust standing and this, in fact, is what Justice Stevens found. But the entrants are not alone, as consumers have also been directly injured due to the foreclosure. An incumbent monopolist does not foreclose its would-be rivals out of sheer animus. Rather, it forecloses them so it can protect its own profits. As a result of the foreclosure, the price is  $P_1$  rather than  $P_2$  in our example. The

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62. We are employing the dominant firm price leadership model, which can be found in most intermediate microeconomics textbooks. See, e.g., ROBERT S. PINDYCK & DANIEL L. RUBINFELD, MICROECONOMICS 462-63 (4th ed. 1998). It is also standard fare in industrial organization. See, e.g., F.M. SHERER & DAVID ROSS, INDUSTRIAL MARKET STRUCTURE AND ECONOMIC PERFORMANCE 224-25, 233 (3d ed. 1990). The collusive variant of the dominant firm model was used to assess market power by Thomas R. Saving, *Concentration Ratios and the Degree of Monopoly*, 11 INT'L ECON. REV. 139 (1970), and subsequently by William M. Landes & Richard A. Posner, *Market Power in Antitrust Cases*, 94 HARV. L. REV. 937 (1981).

63. The entrants could behave differently, but this assumed behavior is the most competitive conduct that the incumbent should expect. If the entrants behave differently, the price and output will be different and injuries will have to be recalculated.

64. We assume that the entrants do not collude with the incumbent and that there is no collusion among the entrants.

usual measure of consumer damages is the overcharge, i.e., the difference between the actual price and the "but-for" price ( $P_1 - P_2$ ) multiplied by the quantity sold ( $Q_{II}$ ). This is the rectangular area  $P_1afP_2$ . As is plain to see, this area does not overlap the area representing the lost profits of the would-be entrants. Consequently, there is no duplication in the damages claimed. Nor is there any need for complex apportionment of the damage award because the claims are distinct.

#### A. Implications for Standing

In *Associated General Contractors*,<sup>65</sup> the Court identified at least three factors that must be considered in determining standing in specific cases.<sup>66</sup> As we shall see, both consumers and foreclosed rivals should have antitrust standing based on these factors.

First, a proper plaintiff must have been injured in fact and must clearly state the claimed damages.<sup>67</sup> This is straightforward for both consumers and foreclosed rivals. When a monopolist improperly maintains its monopoly, consumers pay (arguably) higher prices than they would have paid had entry occurred and the monopolist faced some competition. Consumers are denied the benefits of competition and, as a result, they have been injured in fact. Those who purchase the monopolist's wares at the higher price typically allege damages equal to the amount of the overcharge: the price differential multiplied by the number of units purchased. This injury is easy to state clearly.

Foreclosed rivals have been denied the opportunity to compete and perhaps earn profit. As a result, they have suffered injury to their "business" in an amount equal to the forgone profit. This injury is also easy to state clearly.

Second, there are considerations of directness, duplication, complex apportionment, and alternative plaintiffs.<sup>68</sup> Both consumers and foreclosed rivals are directly injured by the monopolist's effort to maintain its monopoly status. One direct effect of the foreclosure is the higher price that consumers pay. Another direct effect is the loss of profits that the foreclosed rivals could have earned by competing. The directness of the injuries alleged seems undeniable. Neither consumers nor foreclosed rivals would seem remote in any sense of the word.

As the economic model of foreclosure shows, the injuries suffered and the damages claimed by consumers and foreclosed rivals are disjoint. There is no overlap of triangle  $OP_2e$  (the forgone profit) and rectangle  $P_1afP_2$  (the overcharge) in Figure 1. Foreclosure imposes a total injury equal to the sum of the two areas.<sup>69</sup> Since there is no duplication in the damages alleged, there is no need for complex apportionment.<sup>70</sup> Consumers will state a claim for overcharges while foreclosed rivals will assert a claim for lost profit without

65. *Associated Gen. Contractors v. Cal. State Council of Carpenters*, 459 U.S. 519, 542-44 (1983).

66. See PHILLIP E. AREEDA, HERBERT HOVENKAMP & ROGER D. BLAIR, 2 ANTITRUST LAW ¶ 335 (2d ed. 2000) (generally discussing these factors).

67. *Id.* ¶ 292.

68. *Id.* ¶ 293.

69. Strictly speaking, there are others who have been injured. Specifically, those consumers who have been priced out of the market have suffered the usual deadweight social welfare loss due to monopoly. In antitrust cases, however, these losses are not cognizable since they defy proof.

70. Apportionment issues surface when a direct buyer and its customer both sue. The damage equals the overcharge, which is straightforward. If the indirect buyer were to have standing, then the damage award must be apportioned on the basis of a pass-on analysis, which can be very complicated.

stepping on each other's toes.

There are no alternative plaintiffs that are better situated to pursue the alleged damages.<sup>71</sup> Consumers and foreclosed rivals are not alternative plaintiffs. They are separate and have distinct claims. The foreclosed would-be entrants have no claim to the overcharges and the consumers have no claim to the lost profits. Consumers are *additional*, rather than *alternative*, plaintiffs.

Third, the injuries alleged must be *antitrust* injuries. As we discussed above, the injuries suffered by consumers are clearly antitrust injuries. In *Associated General Contractors*, written by Justice Stevens, the Court pointed out that the private damage provision in the Sherman Act was Congress's attempt to provide a "remedy for consumers who were forced to pay excessive prices by the giant trusts."<sup>72</sup> This, of course, is precisely the fate of consumers who purchase from a monopolist that has successfully foreclosed its would-be rivals. As Justice Stevens acknowledged in *Trinko*, would-be entrants suffer injury to their business.<sup>73</sup> Since this injury is essential for the monopolist to impermissibly maintain its monopoly, it would appear to be the type of injury the antitrust laws were designed to prevent. Thus, it would appear to be antitrust injury.

#### V. PROVING ANTITRUST DAMAGES

When an incumbent monopolist is successful in preventing or delaying entry, we have argued that both consumers and the foreclosed entrants should have antitrust standing to pursue antitrust damages.<sup>74</sup> Consumers have been denied the benefits of enhanced competition—lower prices and/or higher quality—and should be able to recover for the injuries suffered. Foreclosed entrants have been denied an opportunity to earn profits and should be given a chance to recover for their lost opportunity. But having standing to sue and being able to prove antitrust damages are two entirely different things.

##### A. Standards of Proof

A plaintiff must prove the fact of injury and the amount. The fact of injury must be proved with reasonable certainty. In other words, the plaintiff must prove with reasonable certainty that the defendant's antitrust violation caused the plaintiff's injury. In *Story Parchment*, for example, the Supreme Court referred to a "rule [that] precludes the

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71. One can see that better situated private enforcers may exist in cases where the plaintiff is an indirect buyer since there are usually fewer direct buyers and their injury may be easier to measure. In cases where the consumers of a close substitute are "overcharged" due to the antitrust violation of another producer, private enforcement would be better served by the customers of the firm committing the antitrust violation. This is not the case here.

72. *Associated Gen. Contractors v. Cal. State Council of Carpenters*, 459 U.S. 519, 530 (1983).

73. *Verizon Commc'ns Inc. v. Law Offices of Curtis V. Trinko, LLP*, 540 U.S. 398 (2004).

74. This Part draws on Roger D. Blair & William H. Page, "Speculative" Antitrust Damages, 70 WASH. L. REV. 423 (1995), and AREEDA, HOVENKAMP & BLAIR, *supra* note 66, ¶¶ 391-96. See also HERBERT HOVENKAMP, *THE ANTITRUST ENTERPRISE: PRINCIPLE AND EXECUTION* ch. 3 (2005) (providing a compact, highly readable account of private enforcement of the antitrust laws).

recovery of uncertain damages."<sup>75</sup> Once the *fact* of injury has been satisfied, however, there is a relaxed standard of proof for the precise amount of damages. Damage awards can be based on *just and reasonable* estimates.<sup>76</sup> There is, of course, a difference between drawing a just and reasonable inference, which is permitted, and pure speculation, which is not permitted. A reasonable inference is not a stab in the dark. It must be based upon an analysis of relevant data rather than the product of guesswork.

### B. Measurement of Damages

In general, an antitrust plaintiff should recover the difference between its actual economic condition and the condition it would have enjoyed but for the antitrust violation. For foreclosed would-be entrants, the damage is lost profit, that is, the difference between its actual profits and the profits it would have earned but for the foreclosure. For consumers, the damage measure is the overcharge that results from the reduced level of competition. In other words, it is the actual price paid less the price that would have been paid but for the foreclosure, multiplied by the quantity purchased. For the most part, actual profits and actual prices are easily proved.<sup>77</sup> The but-for profits and the but-for prices, however, may be a much different matter. These must be estimated and have a sound evidentiary foundation. Otherwise, they will be rejected as speculative.

### C. Estimating Overcharges

To estimate overcharge damages, the plaintiff will have to estimate the but-for price. If the incumbent monopolist is successful in maintaining its monopoly, there will be no data to establish the impact of competition on price. Theoretically, the effect on price will depend upon the behavior of the monopolist and the would-be entrants. In a situation like *Trinko*, AT&T could have behaved in a number of ways: Cournot, Bertrand, Chamberlin, and so on.<sup>78</sup> Thus, we cannot be sure what the theoretical result would be without some case-specific information regarding post-entry competition. This, of course, makes it difficult to infer the but-for price even if we know what the demand and cost functions are.

At times, we can rely on data from other markets. If the would-be entrant was a successful entrant in another geographic market, its performance there may be used as a so-called "yardstick," but this approach requires controlling for differences across the geographic markets.<sup>79</sup> At a minimum, this is a daunting prospect.

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75. *Story Parchment Co. v. Paterson Parchment Paper Co.*, 282 U.S. 555, 562 (1931).

76. In *Story Parchment*, the Court ruled that the *amount* of the damages may be proven "as a matter of just and reasonable inference." *Id.* at 563.

77. In the case of prices, this is not always the case. For some products, the *nominal* actual price must be adjusted for off-invoice discounts, rebates, free products, generous trade-in allowances, free credit, and the like.

78. We address these possibilities in the next Part. For a reasonable and accessible account see JAMES W. FRIEDMAN, *OLIGOPOLY THEORY* (1983).

79. See AREEDA, HOVENKAMP & BLAIR, *supra* note 66, ¶ 391f; see also HERBERT HOVENKAMP, *FEDERAL ANTITRUST POLICY: THE LAW OF COMPETITION AND ITS PRACTICE* 670 (2d ed. 1999) (describing the "yardstick" damage model).

#### D. Estimating Lost Profits

Foreclosed entrants have to estimate the profits that they would have earned if they had actually entered the market. This will be very difficult for would-be entrants that have no track record in any market. The burden is somewhat easier for those with a successful experience elsewhere. In that event, that performance provides a "yardstick" of sorts. Differences across the markets—economic and demographic characteristics, number and identity of rivals, cost differences, and the like—must be taken into account before a reasonable inference can be drawn.

#### E. Summary

Despite both overcharged consumers and foreclosed rivals having suffered antitrust injury, they may not be able to avoid speculation in proving their damages should they have standing to sue. But this is not a standing issue.<sup>80</sup> Instead, it is a problem of proof that should be raised at the summary judgment stage.

### VI. COMPLICATIONS OF DUOPOLY THEORY

The preceding analysis relied upon the dominant firm model. The economic results of foreclosure in that model are unambiguous because the entrants behave in a predictable way: they follow the pricing lead of the incumbent and expand their output until price equals marginal cost. Things become less clear if there is potential entry by a single firm because we then have to rely upon duopoly theory. In a market with only two firms, the economic results vary depending upon the behavior of the two firms. We examine a few duopoly models here to provide a flavor of the problems that may arise.

#### A. Cournot Behavior

Following the entry of a single rival, the duopolists could compete on quantity as suggested by Cournot.<sup>81</sup> In this event, the equilibrium involves a price and output between the monopoly and the competitive results. In Figure 2, the competitive outcome is at a price of  $P_1$ , which is equal to marginal cost and average cost, and a quantity of  $Q_1$ .

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80. In *Associated General Contractors*, the Court expressed some concern with speculation, but that did not refer to the proof of damages; it referred to the fact of damages. *Associated Gen. Contractors v. Cal. State Council of Carpenters*, 459 U.S. 519, 542 (1983).

81. This model was first presented by AUGUSTIN A. COURNOT, *RECHERCHES SUR LES PRINCIPES MATHÉMATIQUES DE LA THÉORIE DES RICHESSES* (1838). In spite of its age, the Cournot model endures and still proves useful.

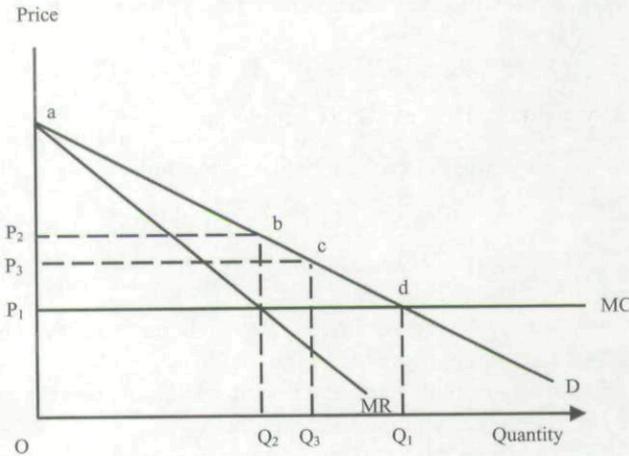


Figure 2

If the market were monopolized, a profit maximizing monopolist would produce where marginal cost (MC) and marginal revenue (MR) are equal, that is, at a quantity of  $Q_2$ . The corresponding price would be  $P_2$ . Given the constant marginal (and average) cost, the monopoly output is equal to one half of the competitive output, or,  $Q_2 = Q_1 / 2$ . When a single rival enters, the Cournot duopoly solution involves a total quantity equal to two thirds of the competitive output. Each firm produces the same amount, or, one third of the competitive output. Price is necessarily between the competitive and monopoly levels. This Cournot result is shown as  $P_3$  and  $Q_3$  in Figure 2.

Now suppose that the incumbent forecloses the entrant (or vice versa). The price will rise from the Cournot level of  $P_3$  to the monopoly level of  $P_2$  and quantity will fall from  $Q_3$  to  $Q_2$ . Thus, consumers are clearly worse off as a result of the foreclosure. In Figure 2, we can see that consumer surplus shrinks from area  $acP_3$  to the smaller triangle  $abP_2$ , which is the economic rationale for objecting to foreclosure.

To provide some benchmark for analyzing damages, we start with the competitive and monopoly results. Suppose that demand is linear:  $P = a - bQ$ , where  $a$  and  $b$  are positive constants, and marginal (and average) cost is constant:  $MC = c$ .

Competition drives price to equal marginal and average cost:  $P = a - bQ = c$ , and, therefore, the competitive output is  $Q = (a - c) / b$ . For a monopoly, output will be selected to maximize the monopolist's profit ( $\Pi$ ):  $\Pi = (a - bQ)Q - cQ$ . A maximum of profit requires selecting output such that the first derivative of  $\Pi$  vanishes:  $d\Pi/dQ = a - 2bQ - c = 0$ , which, in turn, requires an output of  $Q = (a - c) / 2b$ . It is plain to see that the monopolist's output is one half of the competitive output.

If there are two firms competing on quantity, their profit functions are interdependent because price depends upon the total quantity produced:

$$\Pi_1 = (a - b(Q_1 + Q_2))Q_1 - cQ_1, \text{ and } \Pi_2 = (a - b(Q_1 + Q_2))Q_2 - cQ_2.$$

Once again, profit maximization requires that the first derivatives vanish:

$$d\Pi_1 / dQ_1 = a - 2bQ_1 - bQ_2 - c = 0, \text{ and } d\Pi_2 / dQ_2 = a - 2bQ_2 - bQ_1 - c = 0.$$

The interdependence of the profits is unmistakable—each firm's optimal output depends upon the output of its rival. These optimality conditions give rise to the following reaction functions:

$$Q_1 = (a - bQ_2 - c) / 2b, \text{ and } Q_2 = (a - bQ_1 - c) / 2b.$$

For equilibrium, neither firm can have an incentive to alter its quantity. Thus, the reaction functions must be solved simultaneously, which yields:  $Q_1 = Q_2 = (a - c) / 3b$ , which is one third of the competitive output. Thus, the Cournot output is two thirds of the competitive output. These results can be summarized graphically.

Prior to the foreclosure, consumers paid  $P_3$  for  $Q_3$ . After the foreclosure, price rises to  $P_2$ . Thus, consumers will claim damages of  $(P_2 - P_3)Q_2$ , which is the usual overcharge measure. As for the foreclosed firm, observe that total profits in the market were  $\Pi = (P_3 - MC)Q_3$  and each firm earned one half of that sum prior to the foreclosure. Since  $P_3 > MC$ , this profit was positive, but now it is gone due to the foreclosure. This lost profit is certainly an injury to the foreclosed firm's business and it results from the anticompetitive exclusion. Therefore, the loss constitutes antitrust injury. The foreclosed entrant had been competing on quantity. The fact that it lost *excess* profits should not stand in its way when it sues.<sup>82</sup> The entry improved matters for consumers and consequently was procompetitive. Moreover, successful entry should induce further entry as profits are still above competitive levels.<sup>83</sup> As further entry occurs, the price and quantity move closer to the competitive level.<sup>84</sup> As a result, antitrust policy should protect these excess profits to encourage further entry.

82. In *Trinko*, the Court explained that monopoly profit is an essential element of the free market system. In some cases, the lure of monopoly profit induces innovation and risk taking. Profit attracts entry and a move toward the competitive result, which benefits consumers. *Verizon Commc'ns Inc. v. Law Offices of Curtis V. Trinko, LLP*, 540 U.S. 398, 407 (2004).

83. As long as the firms in the industry earn positive profits in excess of a competitive return on investment, further entry should be expected.

84. It is easy to show that Cournot behavior results in an output equal to  $n / (n + 1)$  multiplied by the competitive output. Let  $Q$  denote the total industry output,  $Q_i$  Firm  $i$ 's individual output, and  $n$  the number of firms in the industry. Profit for Firm  $i$  is given by  $\Pi_i = (a - b(Q_i + Q_2 + \dots + Q_n))Q_i - cQ_i$ , where profit for Firm  $i$  is a function of its own quantity as well as the quantity produced by all other  $(n - 1)$  firms. Firm  $i$ 's reaction function is found by substituting  $nQ_i = Q$  into its first order condition,  $a - bQ - c - Q_i b = 0$ , and solving for  $Q_i$ :  $Q_i = (a - c) / b(n + 1)$ . For  $n$  symmetric firms, the Cournot equilibrium occurs where the reaction functions intersect and all  $n$  firms produce the same quantity. Recognizing that the competitive quantity,  $Q_c$ , equals  $(a - c) / b$ , Firm  $i$ 's reaction function can be restated as  $Q_i = Q_c / (n + 1)$ . Total output under Cournot competition with  $n$  firms is therefore given by  $Q = nQ_i = nQ_c / (n + 1)$ . We can easily see from this equation that as  $n$  approaches infinity, the Cournot solution approaches the competitive solution because the ratio  $n / (n + 1)$  approaches one. See, e.g., DENNIS W. CARLTON & JEFFREY M. PERLOFF, *MODERN INDUSTRIAL ORGANIZATION* 165-66 (3d ed. 2005); JEAN TIROLE, *THE THEORY OF INDUSTRIAL ORGANIZATION* 218-21 (2000).

### B. Bertrand Behavior

Bertrand criticized Cournot's duopoly model for its assumption that firms would compete on quantity.<sup>85</sup> Bertrand argued that the duopolists would compete on price. This seemingly innocuous change in assumptions leads to dramatically different results, which can be illustrated in Figure 2.

Initially, a profit maximizing monopolist will charge a price of  $P_2$  and sell a quantity of  $Q_2$ . Entry of a single rival will lead to a series of price cuts as each firm tries to undercut the other and take the entire market. The price cutting strategy will appear to be profitable as long as price exceeds marginal cost, that is, until price reaches the competitive level of  $P_1$ . At this point, even with only two firms, consumers will enjoy the competitive outcome.

Since foreclosure of the entrant will cause the price to rise from the competitive level ( $P_1$ ) to the monopoly level ( $P_2$ ) and output to shrink from  $Q_1$  to  $Q_2$ , consumers are clearly worse off. In Figure 2, consumer surplus falls from area  $adP_1$  to area  $abP_2$ . Consumers cannot sue for the reduction in consumer surplus, but they can sue for the resulting overcharges. Damages in this case will be equal to  $(P_2 - P_1)Q_2$ . Thus, foreclosure in a Bertrand model of duopoly leads to larger consumer damages than foreclosure in a Cournot duopoly model. As a result, it is important to correctly characterize the nature of rivalry in the but-for world.

The effect of foreclosure on the entrant appears to be zero. Presumably, the entrant was attracted to the industry by the monopoly profits that existed prior to its entry. The price competition following its entry resulted in the elimination of all excess profit. As a consequence, the foreclosed entrant may be disappointed, but redeploying its assets to another industry does not lead to any loss, except for the costs of transitioning from one industry to another. It is not clear just what the foreclosed entrant would claim by way of damages beyond the redeployment costs.<sup>86</sup> Again, we can see the importance of correctly characterizing the but-for world. When the but-for world is Bertrand, the foreclosed entrant loses nothing. In contrast, in a Cournot world, the foreclosed entrant loses half of  $(P_3 - MC)Q_3$ , which is clearly positive.

### C. Chamberlin Behavior

Dissatisfied with the myopic behavior of the Cournot duopolists, Chamberlin suggested a more enlightened pattern of behavior.<sup>87</sup> Chamberlin argued that sophisticated businessmen would not behave as Cournot suggested. Instead, the incumbent would accommodate the entry of a rival by reducing its output. In Figure 2, the incumbent had been producing  $Q_2$  at the time of entry. The entrant maximizes its profit by producing one half of  $Q_2$ , which leads an accommodating incumbent to cut its output in half thereby

85. Josef Bertrand, Book review of *Theorie Mathematique de la Richesse Sociale* and of *Recherches sur le Principes Mathematiques de la Theorie des Richesses*, 67 J. DES SAVANTS 499 (1883).

86. HOVENKAMP, FEDERAL ANTITRUST POLICY, *supra* note 79, at 676-77 (recommending that damage awards for precluded entrants be limited to sunk costs—the value of investments that the firms made and are not recoverable—plus lost profits on contracts that the firms signed but will not be able to execute due to their foreclosure).

87. EDWARD H. CHAMBERLIN, THE THEORY OF MONOPOLISTIC COMPETITION 30-55 (8th ed. 1962) (introducing the concept of *tacit* collusion, which appears to be a contradiction in terms).

maintaining the monopoly output.<sup>88</sup> As a result, price remains at  $P_2$  and each firm earns one half of the monopoly profit. Since one half of the monopoly profit is more than one half of any other profit, the entrant—also being enlightened—will not get greedy and will continue to produce one half of  $Q_2$ .<sup>89</sup>

In this case, consumers suffer no short-run harm. Neither price nor output is affected by entry. Consumer surplus is equal to area  $abP_2$  before and after entry and, therefore, foreclosure has no adverse impact on consumers. In contrast to consumer damages in a Cournot world of  $(P_2 - P_3)Q_2$  and damages of  $(P_2 - P_1)Q_2$  in a Bertrand world, consumers have no damages in a but-for world characterized by Chamberlin behavior.

The impact on the foreclosed entrant, however, is a different story. The foreclosed entrant loses one half of the monopoly profit of  $(P_2 - MC)Q_2$ , which it presumably cannot replace by redeploying its resources to another market. Thus, the damages are largest for a foreclosed entrant in the Chamberlin duopoly model. Damages are smaller in a Cournot world and nonexistent in a Bertrand world.<sup>90</sup>

There is an interesting policy question raised by the Chamberlin model: should the lost profits of a foreclosed entrant be protected by antitrust policy? This is a tough one. On the one hand, the entrant wanted a piece of the monopoly profit and succeeded in getting it. But when the incumbent accommodated the entry, the entrant stopped competing and accepted its one half share of the monopoly profits. In the short run, at least, there is no social benefit from the entry. On this reasoning, the entrant's profits do not deserve protection. On the other hand, successful entry will breed further entry since profits are positive. A second entrant could also be accommodated and, in principle, each firm would earn one third of the monopoly profit. This could go on indefinitely with the profit shares shrinking with every new entrant. But as the number of firms expands, "cheating" and an outbreak of competition become more likely. As a consequence, antitrust policy should protect the initial entrant even though there is no immediate social benefit to its entry.

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88. Franklin M. Fisher, *Games Economists Play: A Noncooperative View*, 20 RAND J. ECON. 113, 116 (1989) ("[A]t least with low enough discount rates and an infinite horizon, one of the Nash equilibria in any repeated game will be the old joint maximization solution, and this is likely also to be the case with less extreme assumptions. By definition, that solution is Pareto efficient (for the oligopolists)."); see also DOUGLAS G. BAIRD ET AL., *GAME THEORY AND THE LAW* 165-78 (1994) (discussing infinitely repeated games and tacit collusion); ROBERT GIBBONS, *GAME THEORY FOR APPLIED ECONOMISTS* 102-07 (1992) (discussing various punishment and trigger strategies in repeated games and what conditions allow collusion to be sustained).

89. One could criticize this solution since neither firm is maximizing its profit in a *static* sense. But viewed in a dynamic context, this solution makes sense from an economic perspective.

90. In addition to the three duopoly models presented here, there are a host of others. First, one can introduce product differentiation and asymmetric costs in the Cournot and Bertrand models. In addition, there are other refinements provided by HEINRICH VON STACKELBERG, *MARKTFORM UND GLEICHGEWICHT* (1934), and FREDERIK ZEUTHEN, *PROBLEMS OF MONOPOLY AND ECONOMIC WARFARE* (1930). Modern game theory has added further possible price-quantity solutions. For a survey, see Carl Shapiro, *Theories of Oligopoly Behavior*, in *THE HANDBOOK OF INDUSTRIAL ORGANIZATION* 329-414 (Richard Schmalensee & Robert Willig eds., 1989).

## VII. CONCLUDING REMARKS

In this paper, we have examined the law and economics of foreclosure. Based on Supreme Court precedents and a simple model of foreclosure, we have concluded that two groups suffer antitrust injury directly from foreclosure: overcharged consumers and foreclosed entrants. Both should have their day in court to prove their damages. These damages do not overlap and, therefore, pose no danger of duplication or require complex apportionment.

We have also examined the economic problems that a foreclosed entrant may face in proving damages. There are many equilibrium price and quantity solutions in duopoly models. As a result, the foreclosed entrant faces an added burden in proving damages: selecting a model for the purposes of estimating profit in the but-for world. These problems, however, should not preclude a grant of standing.

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