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C. SCOTT HEMPHILL & PHILIP J. WEISER

Beyond *Brooke Group*: Bringing Reality to the Law of Predatory Pricing

ABSTRACT. This Feature offers a roadmap for bringing and deciding predatory pricing cases under the Supreme Court's restrictive *Brooke Group* decision. *Brooke Group* requires a plaintiff to show that the defendant set a price below cost and had a sufficient likelihood of recouping its investment in predation. This framework, which was adopted without any contested presentation of its merits, has endured despite its flaws. Beyond this framework, the Court opined in dicta that predation is implausible.

We identify points of flexibility within the Court's framework that permit an empirically grounded evaluation of the predation claim. Under the price-cost test, a plaintiff has leeway to select an appropriate measure of cost, including incremental cost. In considering recoupment, *Brooke Group*'s skeptical dicta should be confined to the particular market structure and theory of recoupment analyzed in that case. The dicta do not apply, for example, to a monopolist who recoups by earning a reputation for predation. A further reason to confine *Brooke Group*'s dicta is the Court's highly unusual reweighing of the evidence presented at trial. As we explain using new historical research, this was not the Court's initial plan after oral argument, but Justice Kennedy switched his vote. We also make the case against extending the price-cost test to more complex pricing strategies, such as loyalty discounts, in which the motivation for a stringent rule – to avoid costly false positives – has little purchase.

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INTRODUCTION

Over the past twenty-five years, antitrust claims alleging a predatory price cut have fallen into disuse. This can largely be attributed to the Supreme Court's 1993 decision in *Brooke Group Ltd. v. Brown & Williamson Tobacco Corp.*,¹ which established the current framework for evaluating predatory pricing claims. Under *Brooke Group*, a plaintiff must show that the alleged predator both set a price below cost and had a sufficient likelihood of recouping its predation-period losses through post-predation gains. The price-cost and recoupment tests are difficult to satisfy and were imposed to serve the Court's stated goal to avoid condemning—and thereby chilling—procompetitive price cuts. Beyond this framework, *Brooke Group* offered the view, expressed in dicta, that predation is implausible.

In this Feature, we reconsider the application of *Brooke Group* to modern predation cases and other pricing strategies. As we explain, *Brooke Group*'s two-part framework was adopted by the Court without any contested presentation of its merits, and both parts of the framework are subject to serious criticism.² The price-cost test permits the exclusion of higher-cost rivals whose presence would otherwise place downward pressure on prices. The recoupment test exonerates some below-cost pricing whose condemnation would have little chilling effect on procompetitive conduct. Using the tests in tandem can yield inconsistent, even paradoxical, results. Despite these infirmities, however, the *Brooke Group* framework appears to be well entrenched in the Court's jurisprudence.³ We therefore take the framework as given and suggest how best to apply it in practice, recognizing that the Court could revisit this precedent in an appropriate case.

Our main contribution is to articulate the elements of a successful predation claim and explain how courts should operate within the strictures of *Brooke Group*. For example, suppose that an airline has monopoly power on a route between its hub and another major city. In response to new entry by a low-cost carrier (LCC), the incumbent drops its price and increases capacity on the route. The LCC gives up and exits the market, whereupon the incumbent returns to its previous price and quantity. Other entrants are thereby discouraged from challenging the incumbent on this and other routes.

How should a court approach these facts? Using recent airline predation cases to illustrate our argument, we identify three elements of flexibility within

1. 509 U.S. 209 (1993).

2. See *infra* Section I.A.

3. See *infra* Section I.A (describing the Supreme Court's use of the *Brooke Group* framework in later cases).

the *Brooke Group* framework that, taken together, enable a court to conduct an empirically grounded evaluation of the predation claim. First, where the evidence shows recoupment by a monopolist, *Brooke Group*'s skepticism does not apply. *Brooke Group* dealt with alleged recoupment by an oligopoly, with no conspiracy among its members to facilitate the scheme, a market structure that (in the Court's view) made successful predation particularly unlikely. Monopolies are different. Second, a plaintiff is free, even under *Brooke Group*, to show that the defendant successfully recouped by acquiring a reputation for predation in other markets. The *Brooke Group* Court had no opportunity to consider reputation or any of the other modern economic theories under which recoupment is a rational strategy. Third, for purposes of the price-cost test, the plaintiff has leeway to select an appropriate measure of cost. *Brooke Group* itself used average variable cost, but anticipated the use of other measures, such as incremental cost.⁴

The Court's unusually detailed review of particular case facts in *Brooke Group* provides a further reason to confine *Brooke Group*'s dicta that predation is implausible. As we explain using new historical research, the Court did not initially plan to provide such a detailed review of the case. The Justices initially voted to reverse the court of appeals, but Justice Kennedy switched his vote. His final opinion for the Court, affirming the judgment of the court below, relied on an unusual, fact-bound reassessment of the sufficiency of the evidence. The Court's extensive review afforded numerous opportunities to express skepticism about the particular predatory strategy at issue in the case. Where real-world predation cases differ from the facts and theories that the Court considered in detail, the Court's skeptical dicta from *Brooke Group* should not apply.

Our secondary contribution is to caution against extending the *Brooke Group* framework into other areas of antitrust law. Using loyalty discounts as an example, we argue against the extension of *Brooke Group* to pricing strategies that are more complex than the relatively simple price cutting at issue in predatory pricing cases. Defendants and some commentators have argued that the *Brooke Group* framework, particularly the price-cost test, should be applied to such strategies. We disagree. In our view, the premises used to justify that test for simple price cutting do not apply to more complex strategies.

This Feature proceeds in three Parts. Part I presents and criticizes the *Brooke Group* framework, placing the Court's dicta within the context of the unusual, fact-bound case from which it emerged. Using airline predation as an example, Part II identifies points of flexibility when applying the recoupment and price-

4. Measures of incremental revenue may also be employed, subject to limitations discussed in Section II.C.

cost tests. Part III explains why the price-cost test should not be extended to the analysis of loyalty discounts.

I. THE DOCTRINE AND DICTA OF *BROOKE GROUP*

This Part assesses the doctrine and dicta developed in *Brooke Group*. Section I.A provides a critical review of the two legal tests adopted by the Court. Section I.B describes the Court’s skeptical – and highly fact-bound – dicta.

A. *The Brooke Group Framework*

The Court’s opinion in *Brooke Group* set out, for the first time, two essential requirements that a plaintiff must establish for a successful claim of predatory pricing. First, the plaintiff must show that the defendant set a price below its cost.⁵ The Court required an “appropriate” measure of cost, but left open which measure should be used.⁶ Second, a plaintiff must establish a likelihood of recoupment: a “reasonable prospect” or “dangerous probability”⁷ that the defendant will “recoup[] its investment in below-cost prices.”⁸ Plaintiffs can establish recoupment by showing either an ex ante likelihood of recoupment, or that recoupment was achieved in fact.⁹ The price-cost and recoupment tests may be considered in either order.

5. *Brooke Group*, 509 U.S. at 223. Previous cases had reserved “as a formal matter” whether above-cost prices could count. *Id.*

6. *Id.* at 222.

7. *Id.* at 224. “Reasonable prospect” is the standard for a nonconspiratorial oligopoly challenged under the Robinson-Patman Act. 15 U.S.C. § 13(a) (2012). “Dangerous probability” is the standard for predatory pricing by a monopolist under section 2 of the Sherman Act. 15 U.S.C. § 2 (2012). *Brooke Group* analyzed a nonconspiratorial oligopoly while concluding that the fundamental test is the same under either standard.

8. *Brooke Group*, 509 U.S. at 224; see also Stephen Calkins, *The October 1992 Supreme Court Term and Antitrust: More Objectivity than Ever*, 62 ANTITRUST L.J. 327, 384 n.303 (1994) (“Until *Brooke Group*, recoupment as a separate element of the offense was exceptional.”). *Matsushita Electronic Industrial Co. v. Zenith Radio Corp.* had discussed recoupment too, but not as a general prerequisite to recovery. 475 U.S. 574 (1986).

9. *Brooke Group*, 509 U.S. at 232-33 (describing ex ante and ex post recoupment); *id.* at 238 (concluding that plaintiff had failed to show recoupment in either form).

1. Price-Cost Test

Prior to *Brooke Group*, economists urged an approach to predatory pricing that minimized error costs.¹⁰ The application of any legal rule risks two types of error. In the antitrust context, the condemnation of procompetitive behavior is termed a “false positive.” Permitting anticompetitive behavior is called a “false negative.” The error costs of a substantive antitrust rule depend upon the harm and frequency of false positives and false negatives, including distortion in the conduct of firms in response to the rule. Determining the error costs of a particular rule is a complex task and requires a good understanding of the relevant inputs. In the case of predatory pricing, such a judgment depends in part on the frequency of procompetitive and anticompetitive price cuts, and the benefits and harms that arise from each.¹¹

The Court’s price-cost test reflects the avoidance of one type of error costs: false positives. The Court explained that price cuts are generally desirable – the “mechanism by which a firm stimulates competition” and “the very conduct the antitrust laws are designed to protect.”¹² As the Court saw it, a price cut – at least as long as the price remains above cost – is unambiguously desirable because it increases output, thereby raising total and consumer welfare. A false condemnation of an innocent price cut is thus costly because it “chills” desirable price cuts.¹³ That is, the major problem is not the erroneous result in the case at hand, but rather the potential for the false condemnation to discourage *other* price cuts.

The Court’s approach accepts some false negatives – anticompetitive above-cost price cuts – in order to avoid the chilling effect of false positives.¹⁴ Such a lenient rule, however, can be costly. An important source of false negatives is above-cost price cuts that exclude a higher cost rival whose presence otherwise would have constrained the dominant firm’s prices. Moreover, some excluded entrants would have become more efficient if enabled to grow, gain scale, and

10. An early, influential example is Paul L. Joskow & Alvin K. Klevorick, *A Framework for Analyzing Predatory Pricing Policy*, 89 YALE L.J. 213 (1979).

11. For a discussion of error costs in antitrust law, see Jonathan B. Baker, *Predatory Pricing After Brooke Group: An Economic Perspective*, 62 ANTITRUST L.J. 585, 591-93 (1994). As Baker also discusses in later work, the Chicago School project heavily emphasizes false positives and downplays the importance of false negatives. Jonathan B. Baker, *Taking the Error Out of “Error Cost” Analysis: What’s Wrong with Antitrust’s Right*, 80 ANTITRUST L.J. 1, 2 (2015).

12. *Brooke Group*, 509 U.S. at 226 (quoting *Cargill, Inc. v. Monfort of Colo., Inc.*, 479 U.S. 104, 122 n.17 (1986)).

13. *Id.* (“[M]istaken inferences . . . are especially costly, because they chill the very conduct the antitrust laws are designed to protect.” (quoting *Cargill*, 479 U.S. at 122 n.17)); see also *id.* (“[T]he costs of an erroneous finding of liability are high.”).

14. See Aaron S. Edlin, *Stopping Above-Cost Predatory Pricing*, 111 YALE L.J. 941, 952 (2002) (discussing the tradeoff between the costs of underinclusion and overinclusion).

learn by doing. A further cost of a lenient rule is that other firms that might be deterred from entering after they observe aggressive price cuts aimed at excluding earlier entrants. In short, the long-run welfare costs of exclusion from predatory price cutting could be much greater than the short-run benefits of lower prices.

Brooke Group did not deny that its test is underinclusive,¹⁵ but defended its rule on the ground that a more aggressive test that extended liability to above-cost price cuts was “beyond the practical ability of a judicial tribunal to control without courting intolerable risks of chilling legitimate price-cutting.”¹⁶ The Court further asserted in dicta that false negatives would be rare, quoting its statements in earlier cases that “predatory pricing schemes are rarely tried, and even more rarely successful.”¹⁷

As discussed below, this famous dictum about predatory pricing was offered without adequate empirical support.¹⁸ Indeed, it relied on a selective evaluation of the academic literature, including John McGee’s controversial 1958 article concluding that Standard Oil had not engaged in predation.¹⁹ It was also immaterial to the case at hand. In the first place, the Court seems to have meant the term “predatory pricing” to encompass only below-cost pricing; even if that were rare, it would tell us little about whether firms engage in successful schemes to exclude rivals by price cutting that does not entail below-cost prices. More important, the Court plainly believed that it was clear from earlier case law that below-cost pricing could be illegal,²⁰ and was presumably therefore deterred by existing law. Nonetheless, it held that defendants needed the additional recoupment arrow in their quiver in order to minimize the chilling effect of false positives.

15. The Court exonerated the “exclusionary effect” of above-cost price cuts on two distinct grounds: either (1) because they were directed at a higher-cost competitor and hence (the Court thought) “competition on the merits,” or (2) because such price cuts are “beyond the practical ability” of courts to distinguish. *Brooke Group*, 509 U.S. at 223. The Court apparently recognized that above-cost price cuts can sometimes exclude lower-cost competitors; otherwise, the second reason would be unnecessary.

16. *Id.*

17. *Id.* at 226 (quoting *Matsushita Elec. Indus. Co. v. Zenith Radio Corp.*, 475 U.S. 574, 589 (1986)).

18. See *infra* Section I.B.3.

19. *Matsushita*, 475 U.S. at 589-90 (citing John S. McGee, *Predatory Price Cutting: The Standard Oil (N.J.) Case*, 1 J.L. & ECON. 137, 157 (1958)); see also Christopher R. Leslie, *Revisiting the Revisionist History of Standard Oil*, 85 S. CAL. L. REV. 573 (2012) (rebutting McGee’s conclusion that Standard Oil did not engage in predatory pricing).

20. *Brooke Group*, 509 U.S. at 222-23 (citing *Cargill, Inc. v. Monfort of Colo., Inc.*, 479 U.S. 104, 117 (1986), and *Matsushita*, 475 U.S. at 585 n.8, among other cases).

2. *Recoupment Test*

The *Brooke Group* Court's analysis of error costs contained an important gap. The Court defended the price-cost test by reference to error costs, but did not analyze the recoupment test with similar care.²¹ To see why this is problematic, consider that the recoupment test has bite in a subset of cases the Court refers to as "unsuccessful predation."²² This refers to cases where the defendant sets a price below cost, but (1) was unlikely *ex ante* to recoup enough profit to make the strategy profitable overall; and (2) failed in fact to recoup such profits *ex post*.

The Court concluded that unsuccessful predation is harmless because the low prices benefit consumers ("a boon to consumers"²³), and hence, condemning unsuccessful predation is a further form of false positive.²⁴ The conclusion that unsuccessful predation is harmless is not quite right, because below-cost prices are distortive even when they do not exclude, a point the Court quietly acknowledged in part.²⁵ But more importantly, the Court failed to address whether (and on what theory) condemning unsuccessful predation would chill desirable price cuts. After all, punishing the typical case of unsuccessful predation—below-cost pricing by a would-be predator who is irrational or mistaken about the profitability of the scheme—is not likely to chill price competition when profitability does not depend on recoupment.²⁶

21. The final paragraph of Part II.A of the Court's opinion discusses error costs and contains several of the quotations discussed above. The paragraph immediately follows a discussion of recoupment but pertains to the overall approach, not the recoupment test in particular. It begins, "[t]hese prerequisites to recovery are not easy to establish," and the "prerequisites" are the price-cost and recoupment tests. *Id.* at 226.

22. *Id.* at 224.

23. *Id.*

24. *Id.* ("Without [recoupment], predatory pricing produces lower aggregate prices . . . , and consumer welfare is enhanced.").

25. *Id.* (acknowledging "inefficient substitution").

26. See Louis Kaplow, *Recoupment, Market Power, and Predatory Pricing*, ANTITRUST L.J. (forthcoming 2018) (manuscript at 38), http://www.law.northwestern.edu/research-faculty/scarlecenter/events/antitrust/documents/Kaplow_MPRRecoup6.417.pdf [<http://perma.cc/V93F-JLCX>].

3. *Interaction of the Tests*

The *Brooke Group* framework sets up a tension between the price-cost and recoupment tests.²⁷ A price below cost is, in effect, prima facie evidence that the firm thought it could recoup its predatory price cut. That action suggests, at a minimum, that the firm believed that recoupment was likely. After all, to set such a price and not expect to recoup later profits on account of predation is inconsistent with rational profit-maximizing behavior. Thus, where the recoupment requirement affects the outcome of a case, that result is either a false negative or else an instance where the would-be predator is irrational or mistaken, whether due to a miscalculation or becoming the unlucky “victim” of changed market conditions.²⁸

The recoupment test makes most sense, not as an additional *substantive* requirement for anticompetitive predation, but as a hedge against an erroneous *factual* determination of below-cost pricing.²⁹ The idea is that, to guard against a false positive from a mistaken application of the price-cost test, courts should also require proof that recoupment was likely because, if it were not likely, the defendant would not have deliberately sold at a price below cost.

But if that is the rationale, the two tests should be viewed as factors informing a single overall analysis, rather than as sharply distinct inquiries.³⁰ The *Brooke Group* decision would be less problematic if it explicitly allowed recoupment evidence to inform the price-cost inquiry, and vice versa. Even as written, the *Brooke Group* framework does not preclude this approach. Consider, for example, a case where there is clear documentary evidence of pricing below cost. In such a case, it is reasonable to conclude that the defendant had an ex ante

27. Even “[i]f circumstances indicate that below-cost pricing could likely produce its intended effect on the target,” such harm to a competitor is not enough. *Brooke Group*, 509 U.S. at 225. “[T]here is still the further question whether it would likely injure competition in the relevant market.” *Id.*; see also *id.* at 224 (noting that harm to rivals from below-cost pricing “is of no moment to the antitrust laws if competition is not injured”).

28. There are also circumstances where a naïve application of the price-cost test might yield a potential false positive – for example, when a firm introduces a product with temporary low prices, or sets a low price in anticipation of later scale economies. But such potential false positives are not solved by the recoupment test, because presumably such strategies will be profitable in the later period. Put the other way, a finding of no recoupment casts doubt on both the predation explanation and the competing “later scale economies” story, rather than cleanly distinguishing between them. Kaplow, *supra* note 26, provides an extensive discussion of the test’s inability to distinguish between competing explanations for the defendant’s conduct.

29. This approach works best if the court is equipped with a robust understanding of the full range of modern recoupment theories.

30. See Kaplow, *supra* note 26 (manuscript at 13-17) (discussing triangulation).

expectation, and thus likelihood, of recoupment. A court applying the *Brooke Group* framework should conclude that such evidence outweighs equivocal expert evidence about whether the industry's market structure supports recoupment.³¹

A pragmatic approach to the *Brooke Group* framework suggests a flexible application of both tests. Under this approach, the sharper the price cut and the larger the profit sacrifice, the stronger the indication that the defendant expected *ex ante* to recoup.³² On the other hand, clear evidence about recoupment (whether positive or negative) should outweigh equivocal evidence about prices. This approach shares a kinship to cases that treat profit sacrifice as an indication of market power.³³ And indeed, the analysis of recoupment closely resembles the analysis of market power, which is already an explicit requirement in predatory pricing cases decided under section 2 of the Sherman Act.

4. Adoption Without Analysis

The limits of the *Brooke Group* framework reflect the unique manner in which the Court decided the case. Notably, because of how the parties argued the case, the Court accepted the price-cost and recoupment tests with little analysis. During oral argument, the plaintiff conceded that it had the burden to show both below-cost prices and a likelihood of recoupment.³⁴ Without any contested

31. *Brooke Group* does place one limit on this approach. If the *only* evidence of recoupment comes from below-cost pricing, that is not enough. See *Brooke Group*, 509 U.S. at 226 (“Evidence of below-cost pricing is not alone sufficient to permit an inference of probable recoupment and injury to competition.”).

32. We thus reject the suggestion that a steep price cut reduces the likelihood of predation because it makes recoupment more difficult to accomplish. That approach gets things backwards, as explained in C. Scott Hemphill, *The Role of Recoupment in Predatory Pricing Analyses*, 53 STAN. L. REV. 1581, 1592-93 (2001).

33. See, e.g., Fed. Trade Comm'n v. Actavis, Inc., 133 S. Ct. 2223, 2236 (2013) (noting that “the ‘size of the payment from a branded drug manufacturer to a prospective generic is itself a strong indicator of power’”) (quoting 12 PHILLIP E. AREEDA & HERBERT HOVENKAMP, ANTITRUST LAW ¶ 2046, at 351 (3d ed. 2012)).

34. See Transcript of Oral Argument at *5, *Brooke Group Ltd. v. Brown & Williamson Tobacco Corp.*, 509 U.S. 209 (1993) (No. 92-466), 1993 WL 754943 (“We accept the burden of showing that prices were discriminatory, below average variable cost, and were undertaken with a reasonable prospect of recoupment.”). As Stephen Calkins notes, discussing the academic work of Philip Areeda, plaintiff's counsel, “[i]t would have been awkward for Areeda to have done otherwise, since his writings seemed to support a recoupment requirement.” Calkins, *supra* note 8, at 384 n.304. Areeda was even more closely associated with a price-cost test. See Phillip Areeda & Donald F. Turner, *Predatory Pricing and Related Practices Under Section 2 of the Sherman Act*, 88 HARV. L. REV. 697, 699-700 (1975).

presentation of the two tests, the Court had no real opportunity to assess their merits.

The effect of this deprivation is visible in the internal analysis of the Court.³⁵ The papers of Justice Blackmun, a *Brooke Group* dissenter, contain several memoranda written by the Justice's clerk assigned to the case. One memo analyzed Justice Kennedy's draft opinion for the Court and identified its main holding ("the only actual law made") as the adoption of the price-cost and recoupment tests.³⁶ The clerk noted by way of explanation that both parties had "agreed upon these requirements, and I did not understand any of the Justices to find either of them objectionable."³⁷ This perspective, to the extent it might have been shared more broadly by the Justices, is very surprising, since the Court was announcing important new rules without any contested presentation of their merits. Moreover, the Court relied on *Matsushita's* dated and selective review of the academic literature to justify its test and its imprudent (and now famous) dictum about the rarity of predatory pricing.³⁸ In light of this history, and the limits of the test, courts should be leery of extending this test without careful consideration.

The clerk's further conclusion that the decision was "very narrow" rested in part on the assumption that the holding was limited to the type of predation claim at issue: predation by an oligopoly without any conspiracy among its members to facilitate the scheme, and pursued not under the Sherman Act but under a different antitrust statute, the Robinson-Patman Act.³⁹ Several courts of appeals subsequently reached the same conclusion that *Brooke Group* does not

35. Cf. William E. Kovacic, *Antitrust in the O'Connor-Rehnquist Era: A View from Inside the Supreme Court*, ANTITRUST, Summer 2006, at 21 (using papers of Justice Blackmun and other Justices to examine several other antitrust cases).

36. Memorandum from Sherry Colb to Justice Blackmun 1 (May 28, 1993) (on file with the Library of Congress) ("I have read Justice Kennedy's opinion in the case, from which you, Justice White and Justice Stevens voted to dissent at Conference The grounds of the decision here are very narrow. The only actual law made by this decision is the provision of two requirements to prove a Robinson-Patman Act predatory price discrimination claim: (1) below-cost pricing, and (2) a reasonable prospect of recoupment. Both pet[itioner]r and resp[ondent] agreed upon these requirements, and I did not understand any of the Justices to find either of them objectionable.").

37. *Id.*

38. See *infra* Section I.B.3.

39. See *supra* note 7.

apply to the Sherman Act or monopolists.⁴⁰ Later Supreme Court cases, however, came to a different conclusion.⁴¹ In *Weyerhaeuser Co. v. Ross-Simmons Hardwood Lumber Co.*, the Court held that the framework applies to the evaluation of predatory bidding under the Sherman Act.⁴² And in *Pacific Bell Telephone Co. v. linkLine Communications, Inc.*, the Court embraced *Brooke Group's* price-cost test in the analysis of price squeezes.⁴³

The *Brooke Group* framework appears to be well entrenched, notwithstanding its infirmities and its adoption without any contestation of its merits. But the tests are not set in stone. In antitrust cases, the modern Court openly embraces new economic thinking as a basis for changing its mind. To that end, it recently declared that, in the antitrust field, the Court has “felt relatively free to revise [its] legal analysis as economic understanding evolves and . . . to reverse antitrust precedents that misperceived a practice’s competitive consequences.”⁴⁴ For purposes of this Feature, we take as given the *Brooke Group* framework, but recognize that the Court could revisit this precedent in an appropriate case.

B. Dicta

The Court’s dicta in *Brooke Group*—the “music” of the opinion—reflects a deeply skeptical attitude toward predatory pricing claims. The Court commented on the “general implausibility of predatory pricing,”⁴⁵ suggesting that “predatory pricing schemes are rarely tried, and even more rarely successful”⁴⁶ and concluding that “the costs of an erroneous finding of liability are

40. See, e.g., *LePage’s Inc. v. 3M*, 324 F.3d 141, 151-52 (3d Cir. 2003) (en banc) (suggesting that “nothing in the decision suggests” that the *Brooke Group* decision is “applicable to a monopolist”); see also *Spirit Airlines v. Nw. Airlines*, 431 F.3d 917, 951-52 (6th Cir. 2005) (concluding that even if defendant priced above cost, plaintiff could pursue a section 2 theory notwithstanding *Brooke Group*).

41. See *ZF Meritor, LLC v. Eaton Corp.*, 696 F.3d 254, 274 n.11 (3d Cir. 2012) (noting later Supreme Court cases as a basis for disregarding the suggestion in *LePage’s* that *Brooke Group* does not apply broadly).

42. 549 U.S. 312, 315 (2007).

43. 555 U.S. 438, 448-55 (2009).

44. *Kimble v. Marvel Entm’t, LLC*, 135 S. Ct. 2401, 2412-13 (2015); see also *State Oil Co. v. Khan*, 522 U.S. 3, 21 (1997) (switching from per se liability to the rule of reason for maximum resale price maintenance while noting that “this Court has reconsidered its decisions construing the Sherman Act when the theoretical underpinnings of those decisions are called into serious question”).

45. *Brooke Group Ltd. v. Brown & Williamson Tobacco Corp.*, 509 U.S. 209, 227 (1993).

46. *Id.* at 226 (quoting *Matsushita Elec. Indus. Co. v. Zenith Radio Corp.*, 475 U.S. 574, 589 (1986)).

high.”⁴⁷ The basis for the Court’s unfriendly dicta was contingent upon the particular market structure at issue, the Court’s highly unusual review of the evidence, and its reliance on a selective reading of the academic literature. Together, these limitations suggest that *Brooke Group*’s skeptical dicta should be confined to the factual context of that case.

1. *Oligopoly Recoupment*

An important source of the Court’s inhospitality towards predatory pricing cases is the unusual facts presented in *Brooke Group*. Because the cigarette makers were an oligopoly and were not alleged to have been acting in concert, recoupment by supracompetitive pricing was thought to be less likely than if the defendant were a single, monopoly cigarette maker. Oligopoly recoupment would have required sharing gains among multiple firms, which would have led to a much smaller payoff to the firm accused of below-cost pricing compared to a situation where the firm was a monopoly. Further, the required oligopoly coordination itself would have been a daunting challenge. As the Court put it: “This anticompetitive minuet is most difficult to compose and to perform, even for a disciplined oligopoly.”⁴⁸

The Court’s conclusion on this point is doubtful. As Justice Stevens’s dissent pointed out, the manufacturers had a long history of “supracompetitive, parallel pricing,” including “lockstep” price increases twice a year.⁴⁹ This history made successful coordination more likely: “I would suppose, however, that the professional performers who had danced the minuet for 40 to 50 years would be better able to predict whether their favorite partners would follow them in the future than would an outsider, who might not know the difference between Haydn and Mozart.”⁵⁰ Whatever the merits of the Court’s analysis, the important point is that the Court’s dicta was written in a particularized factual setting in which successful predation was thought to be particularly unlikely.⁵¹

47. *Id.*

48. *Id.* at 228. Further, just one member of the cigarette oligopoly committed the unlawful conduct, and its strategy was meant to discipline the victim, rather than exclude it.

49. *Id.* at 253 (Stevens, J., dissenting).

50. *Id.* at 257. This quotation adds a further critique of the Court – that the Court wrongly believed that its own independent analysis of coordination was more accurate than the evidence of below-cost pricing, which itself suggested the likelihood of recoupment.

51. A further limitation of the Court’s analysis is that disciplining a single member of an oligopoly is often easy and effective.

2. *Unusual Review of the Evidence*

The importance of the particular facts is reflected in the Court's unusually deep dive into the sufficiency of the evidence. The court of appeals had affirmed a judgment for defendants, notwithstanding a jury verdict for plaintiffs, holding that one of the unusual facts described above—recoupment by an oligopoly—made recoupment too implausible to support liability as a matter of law.⁵² The Supreme Court rejected that extreme view.

The Court might have stopped there, reversing and remanding for further proceedings. Indeed, Justice Blackmun's notes from Conference indicate that five Justices had initially supported this disposition: the three Justices (Stevens, White, and Blackmun) who ultimately dissented, plus Chief Justice Rehnquist and Justice Kennedy.⁵³ The remaining four Justices had voted to affirm. Had the Court issued a narrow reversal in accordance with this initial vote, there would be no occasion for fact-bound skepticism about successful recoupment.

In what would have been an equally benign holding, an overlapping coalition of five Justices expressed interest in dismissing the writ of certiorari as improvidently granted, on the ground that no issue of law was truly presented by the case.⁵⁴ This position contrasts sharply with the ultimate result of the case, which made new law by requiring the price-cost and recoupment tests. Had the Court taken this path and simply dismissed the writ of certiorari, the effect would be similar to affirmance (as far as the parties were concerned). But then there would be no *Brooke Group* opinion at all; the lower court's judgment for defendants would be the final word. Five Justices, all of whom ultimately joined the opinion of the Court, favored this approach: Justices O'Connor, Scalia, and Souter, plus—once again—Chief Justice Rehnquist and Justice Kennedy. Justice Stevens circulated a memo to the Justices the day after Conference, arguing that plaintiff (the petitioner) did not agree that no legal issue was presented by the case, and hence dismissal was not an appropriate result.⁵⁵ Ultimately, the dismissal idea was dropped, though in helping to defeat it, Justice Stevens may have opened a path to affirmance despite his own preference for reversal.

52. *Liggett Group, Inc. v. Brown & Williamson Tobacco Corp.*, 964 F.2d 335, 342 (4th Cir. 1992) (“To rely on the characteristics of an oligopoly to assure recoupment of losses from a predatory pricing scheme after one oligopolist has made a competitive move is . . . economically irrational.”).

53. Notes from Conference (Mar. 31, 1993) (on file with the Library of Congress). The votes to reverse and remand or vacate and remand are indicated in Justice Blackmun's notes by “RR,” “VR,” or simply “-.”

54. *Id.* (noting that five Justices indicated an inclination to “DIG”).

55. Memorandum to the Conference (Apr. 1, 1993).

Justice Blackmun's clerk, in a memo evaluating whether the Court should dismiss the writ, worried that Justice Kennedy might change his vote from reverse to affirm.⁵⁶ The next day, the Justices voted again. Both Justice Kennedy and the Chief Justice switched their votes to affirm, making the vote 6-3 to affirm.⁵⁷

Justice Kennedy's opinion for the Court, affirming the judgment below, relied upon an extensive and highly unusual review of the record.⁵⁸ The opinion ultimately concluded that the evidence, even viewed in the light most favorable to plaintiff, could not support recoupment. Justice Stevens, forced into dissent, criticized this approach as unwise and unjustified, and noted that the majority imposed an improper burden of proof of the plaintiff.⁵⁹ The Court's extensive review afforded numerous opportunities to express skepticism about the particular predatory strategy at issue in the case.⁶⁰ As a result, the Court's skepticism about liability is rooted, in part, in the details of its unusually deep, particularized inquiry.

3. *Selective Reliance on Literature About Recoupment*

A final source of *Brooke Group's* inhospitality to predatory pricing claims was the Chicago School perspective about the low likelihood of successful predation. For example, consider the Court's famous statement that predation is "rarely

56. Memorandum from Sherry Kolb to Justice Blackmun 1 (Mar. 31, 1993) (on file with the Library of Congress) ("I am not confident about the result. Five Justices voted the right way (i.e., to reverse and remand). However, when Justice Kennedy voted to reverse, he also said that he was 'close to Nino.' Since Justice Scalia's vote was to affirm, and he said that the bar would be 'shocked' if the Court reversed, I worry that Justice Kennedy's vote may change."). These comments by Justice Kennedy and Justice Scalia are reflected in (and likely based on) Justice Blackmun's Conference notes. See Notes from Conference, *supra* note 53. The Conference notes suggest that Justice Kennedy expressed interest in the full range of outcomes: reversal, dismissal, or affirmance.

57. See Notes from Conference, *supra* note 53 (additional annotation recording vote on April 2, 1993, with 6-3 to affirm); Docket, No. 92-466, available in Lee Epstein, Jeffrey A. Segal & Harold J. Spaeth, *The Digital Archive of the Papers of Justice Harry A. Blackmun*, WASH. U. ST. LOUIS (2007), <http://epstein.wustl.edu/research/blackmunDockets/1992/Paid/docket-92-466.pdf> [<http://perma.cc/6G73-4MC4>] (noting, in blue pencil, the results of revote taken on April 2, 1993). The docket sheet suggests that the Chief Justice's preference at the second vote was dismissal as a first choice, affirmance as a second choice.

58. The Court's opinion acknowledged the unusual nature of this inquiry. *Brooke Group*, 509 U.S. at 230 ("It is not customary for this Court to review the sufficiency of the evidence . . .").

59. *Id.* at 244, 258 (Stevens, J., dissenting).

60. See, e.g., *id.* at 230-31 (noting the "complex chain of cause and effect" at issue); *id.* at 238 (concluding that plaintiff failed to provide evidence of actual or likely supracompetitive pricing).

tried, and even more rarely successful.”⁶¹ This stark view was not the result of the Court’s own analysis, but rather a partial quotation of the Court’s 1986 opinion in *Matsushita*. *Matsushita*, which dealt with oligopoly (like *Brooke Group*), attributed this conclusion to a “consensus among commentators.”⁶² *Matsushita* based its assertion of consensus on works by Chicago School scholars Robert Bork, Frank Easterbrook, and John McGee, from the early 1980s or before, that emphasized the uncertainties of recoupment, including the possibilities that the predation would not exclude rivals and that new entry would prevent profit-taking.⁶³ The Court selectively relied on this literature, which was contested at the time and which later work has undermined.⁶⁴ Consequently, the kind of skepticism reflected in *Brooke Group* is inapt when a plaintiff relies on modern economic learning not presented to or relied on by the Court.

II. APPLYING *BROOKE GROUP*

Some observers worry that, after *Brooke Group*, a meritorious predation case is almost impossible to win. While it is true that no predatory pricing case (as far as we know) has been litigated to a final judgment for plaintiffs,⁶⁵ this is not

61. *Id.* at 226 (quoting *Matsushita Elec. Indus. Co. v. Zenith Radio Corp.*, 475 U.S. 574, 589 (1986)).

62. *Matsushita*, 475 U.S. at 589 (“[T]here is a consensus among commentators that predatory pricing schemes are rarely tried, and even more rarely successful.”).

63. *Id.* at 589–90 (citing, inter alia, ROBERT H. BORK, *THE ANTITRUST PARADOX: A POLICY AT WAR WITH ITSELF* 145 (1978); Frank Easterbrook, *Predatory Strategies and Counterstrategies*, 48 U. CHI. L. REV. 263, 268 (1981); John S. McGee, *Predatory Pricing Revisited*, 23 J.L. & ECON. 289, 295–97 (1980); McGee, *supra* note 19, at 157).

64. See, e.g., Patrick Bolton, Joseph F. Brodley & Michael H. Riordan, *Predatory Pricing: Strategic Theory and Legal Policy*, 88 GEO. L.J. 2239 (2000) (offering theoretical and empirical support for predation as a rational strategy).

65. This is true as of November 2017. For an earlier assessment of the case law, see Edlin, *supra* note 14, at 941 (reaching the same conclusion as of 2002). See also Daniel A. Crane, *The Paradox of Predatory Pricing*, 91 CORNELL L. REV. 1, 16 n.58 (2005) (reporting favorable plaintiff’s verdict and subsequent settlement in a case decided under Texas law).

too revealing, as very few antitrust cases reach a final judgment. Numerous predatory pricing cases have survived summary judgment,⁶⁶ while others have survived dismissal.⁶⁷ It is likely that still other cases have settled favorably without ever leaving a notable opinion.⁶⁸

This is not to say that winning a predation case, even with strong facts, is easy. Far from it. Our claim is only that predation cases are not hopeless, and our project is to provide guidance to litigants and courts about the right approach. Thus, in this Part, we consider how courts (and parties) can and should adapt *Brooke Group* to the facts of real-world predation cases. Courts can accept the framework—both the price-cost test and the recoupment test—without accepting dicta that does not apply to the factual setting of their particular cases. Indeed, *Brooke Group* itself invites adaptation as to both tests.

As noted in the Introduction, we identify three points of flexibility regarding *Brooke Group*. Section II.A explains that where the evidence pertains to recoupment by a monopolist, the conditions of recoupment are more favorable than those in *Brooke Group*, and the Court's skepticism should not apply. The same is true of an oligopoly whose members, unlike the cigarette manufacturers in *Brooke Group*, enter a predatory pricing conspiracy. Section II.B argues that, where the recoupment strategy is different from the strategy *Brooke Group* considered, the court should maintain an open mind. In particular, a plaintiff is free to allege recoupment under any of the modern economic theories of predation, such as the establishment of a reputation for predation. Section II.C describes

66. *E.g.*, *Spirit Airlines, Inc. v. Nw. Airlines, Inc.*, 431 F.3d 917 (6th Cir. 2005); *Multistate Legal Studies, Inc. v. Harcourt Brace Jovanovich Legal & Prof'l Publ'ns, Inc.*, 63 F.3d 1540 (10th Cir. 1995); *Servicetrends, Inc. v. Siemens Med. Sys., Inc.*, 870 F. Supp. 1042 (N.D. Ga. 1994); *Cont'l Airlines v. Am. Airlines*, 824 F. Supp. 689 (S.D. Tex. 1993). In *Continental Airlines*, plaintiffs' predation claim was tried to verdict in August 1993, a few months after *Brooke Group* was decided. *See Jury Verdict for American Airlines, AMR Corp., Cont'l Airlines v. Am. Airlines*, 824 F. Supp. 689 (S.D. Tex. 1993) (No. 3:92-CV-00259).

67. *E.g.*, *Beech-Nut Nutrition Corp. v. Gerber Products Co.*, 69 Fed. Appx. 350, 352 (9th Cir. 2003) (holding that plaintiff properly pled below-cost pricing in its bids for government contracts); *Aventura Cable Corp. v. Rifkin/Narragansett S. Fla. CATV Ltd. P'ship*, 941 F. Supp. 1189 (S.D. Fla. 1996); *see also Covad Commc'ns Co. v. BellSouth Corp.*, 374 F.3d 1044, 1051-52 (11th Cir. 2004) (denying dismissal as to price squeeze allegations evaluated under *Brooke Group*). We omit cases where the predation allegations were perfunctory or idiosyncratic.

68. The list is longer if discounting and bundling cases are included. *See, e.g.*, *Kinetic Concepts, Inc. v. Hillenbrand Indus., Inc.*, 262 F. Supp. 2d 722, 725-26 (W.D. Tex. 2003) (describing jury verdict in favor of plaintiff in a bundling case); *Company News; Brunswick To Settle Pricing Suits for \$65 Million*, N.Y. TIMES (Dec. 23, 1999), <http://www.nytimes.com/1999/12/23/business/company-news-brunswick-to-settle-pricing-suits-for-65-million.html> [http://perma.cc/9RE6-7E8Y] (describing settlement in a probable discounting case); *see also Crane, supra* note 65, at 15-16 (discussing both cases).

the leeway that a plaintiff has, for purposes of the price-cost test, in selecting an appropriate measure of cost and revenue.

Although the analysis has general applicability, we illustrate our points in the context of a particular industry: airlines. The airline industry represents a useful example, given Alfred Kahn's opinion that, in contrast to the Supreme Court's view, airline predation was neither "rarely attempted" nor "rarely successful,"⁶⁹ the Department of Transportation's conclusion that incumbent airlines preyed in response to LCC entry in the 1990s,⁷⁰ and a pair of major predation cases — *United States v. AMR Corp.*⁷¹ and *Spirit Airlines, Inc. v. Northwest Airlines, Inc.*⁷² — which resulted in appellate opinions at summary judgment.⁷³

A. Monopoly Recoupment

The *Brooke Group* opinion invites a flexible, context-specific approach to recoupment. For example, the Court prescribes "a close analysis of both the scheme alleged by the plaintiff and the structure and conditions of the relevant market."⁷⁴ As for market structure and conditions, recoupment is unlikely "[i]n certain situations," but not all.⁷⁵ Recoupment is unlikely, and hence "summary disposition . . . is appropriate," "where the market is highly diffuse and competitive, or where new entry is easy, or the defendant lacks" the ability to absorb the rival's sales.⁷⁶ And at least one precondition for recoupment — whether a price cut is capable of causing exit or altering behavior — depends on a variety of factors.⁷⁷ The

69. Alfred E. Kahn, *Alfred Kahn on Predation at Air Hubs: An AAI Column*, AM. ANTITRUST INST. (Dec. 7, 1999), <http://www.antitrustinstitute.org/content/alfred-kahn-predation-air-hubs-aa-i-column> [<http://perma.cc/4EVU-KEBX>] ("There are in fact strong reasons to believe that, at least so far as the airlines business is concerned, the Supreme Court's view . . . is simply incorrect.").

70. UNITED STATES DEP'T OF TRANSP., COMPETITION IN THE U.S. DOMESTIC AIRLINE INDUSTRY: THE NEED FOR A POLICY TO PREVENT UNFAIR PRACTICES: REVISED 8 (1998); see also *id.* (attachment describing four examples in detail); Chris Sagers, "Rarely Tried, and . . . Rarely Successful": *Theoretically Impossible Price Predation Among the Airlines*, 74 J. AIR L. & COM. 919, 924-25 (2009) (collecting sources noting presence of airline predation).

71. 335 F.3d 1109 (10th Cir. 2003).

72. 431 F.3d 917 (6th Cir. 2005).

73. Airline predation cases are enormously complicated, and we are not attempting a comprehensive review.

74. *Brooke Group, Ltd. v. Brown & Williamson Tobacco Corp.*, 509 U.S. 209, 226 (1993).

75. *Id.*

76. *Id.*

77. *Id.* at 225 (enumerating as factors "the extent and duration of the alleged predation, the relative financial strength of the predator and its intended victim, and their respective incentives and will").

Court thus recognized that the result of the recoupment analysis varies from case to case.

One source of flexibility arises where a monopoly, rather than oligopoly, is concerned. If recoupment is undertaken by a monopoly protected by high barriers to entry, we are far from the oligopoly considered in *Brooke Group*. Airlines offer a suitable example. Although the airline industry is commonly described as oligopolistic, particular routes are sometimes dominated by individual firms, particularly at an incumbent airline's hub.

For example, in *Spirit Airlines*, the Sixth Circuit considered alleged predation by Northwest Airlines at its Detroit hub.⁷⁸ Spirit, an LCC, introduced nonstop service from Detroit to Philadelphia and Boston. In response to low-price competition from the LCC, Northwest matched the fares on both routes and added capacity.⁷⁹ Spirit presented evidence of a high Northwest market share on both routes (72% and 89% prior to entry, respectively) and significant barriers to entry, including brand loyalty and control of scarce gates.⁸⁰ The district court granted summary judgment to Northwest. The Sixth Circuit reversed and remanded the case for trial.⁸¹ In doing so, the court recognized a “corollary” to *Brooke Group*'s statement about market structure: “where the market is highly concentrated, the barriers to entry are high, the defendant has market power and excess capacity, and evidence of actual recoupment is present, summary judgment is inappropriate.”⁸² The Sixth Circuit's analysis ultimately rested not only on evidence about structure, but also upon evidence of actual recoupment by Northwest from fewer flights and higher prices once Spirit exited the market.⁸³

We are also skeptical that *Brooke Group* addresses how to approach tacit coordination by a stable oligopoly. In *Brooke Group*, the Court painted the cigarette

78. *Spirit Airlines, Inc. v. Nw. Airlines, Inc.*, 431 F.3d 917, 921 (6th Cir. 2005).

79. *Id.* at 924.

80. *Id.* at 923.

81. *Id.* at 953. The trial never happened because Northwest Airlines went bankrupt for unrelated reasons. See *U.S. Airlines File for Bankruptcy Protection*, N.Y. TIMES (Sept. 15, 2005), <http://www.nytimes.com/2005/09/15/business/worldbusiness/us-airlines-file-for-bankruptcy-protection.html> [<http://perma.cc/WS6Q-C94A>].

82. *Spirit Airlines*, 431 F.3d at 931.

83. *Id.* at 951 (noting the incongruity that, after Spirit exited the Detroit-Philadelphia market, Northwest “dropped flights notwithstanding the increased customer demand of ‘price-sensitive travelers’ for those routes”).

business as highly dynamic, with price competition apt to break out at any moment.⁸⁴ In other cases, where the stability of oligopoly is supported by high levels of concentration, substantial profits, and a low likelihood of entry, the use of predatory pricing to deter entry should be a cause for concern. Indeed, as this market structure has become the norm in important industries, this scenario is hardly a hypothetical concern. As a recent Goldman Sachs report explained, touting the profitability of such industries:

There is a natural pull toward consolidation among mature or maturing industries. An oligopolistic market structure can turn a cut-throat commodity industry into a highly profitable one. Oligopolistic markets are powerful because they simultaneously satisfy multiple critical components of sustainable competitive advantage—a smaller set of relevant peers faces lower competitive intensity, greater stickiness and pricing power with customers due to reduced choice, scale cost benefits including stronger leverage over suppliers, and higher barriers to new entrants all at once.⁸⁵

The report emphasized a number of industries as potentially fulfilling its “dreams of oligopoly,” including airlines, beer, and wireless telephony.⁸⁶

Although *Brooke Group* expressed skepticism about oligopoly recoupment, the Court recognized that it all depends on the facts: “However unlikely [oligopoly recoupment] may be as a general matter, when the realities of the market and the record facts indicate that it has occurred and was likely to have succeeded, theory will not stand in the way of liability.”⁸⁷ As discussed in Part I, an important reason the Court rejected oligopoly recoupment was the difficulty of coordination, particularly without any allegation of conspiracy.⁸⁸ Regardless of

84. See *Brooke Group, Ltd. v. Brown & Williamson Tobacco Corp.*, 509 U.S. 209, 238 (1993). For a contrary view of the facts, see Christopher R. Leslie, *Predatory Pricing and Recoupment*, 113 COLUM. L. REV. 1695, 1736-37 (2013).

85. See Robert D. Boroujerdi et al., *Does Consolidation Create Value?*, GOLDMAN SACHS 3 (Feb. 12, 2014), <http://assets.documentcloud.org/documents/3124001/Goldman-merger-analysis.pdf> [<http://perma.cc/KA5E-2234>].

86. *Id.* at 8-20. There is interdependence between optimal merger control and predation liability. Merger policy must be particularly vigilant to the extent that an industry, once concentrated, is beyond regulation. If predation liability is deliberately underinclusive, then that places additional pressure on merger control. Viewed from the other side, if lenient merger review permits increased concentration, the optimal predatory pricing rule is more aggressive.

87. *Brooke Group*, 509 U.S. at 229 (citing *Eastman Kodak Co. v. Image Tech. Servs., Inc.*, 504 U.S. 451, 466-67 (1992)).

88. See *supra* Section I.B.1.

whether coordination by cigarette makers in the 1980s was feasible, other oligopolies will sometimes be able to coordinate their predatory conduct and recoupment, even without a provable agreement.⁸⁹

B. Modern Economic Theory of Recoupment

Brooke Group also should not determine the result when a plaintiff offers a modern economic theory of recoupment. In *Brooke Group*, the Court concluded that a particular strategy of oligopoly recoupment could not be supported by the facts of that case. But over the past forty years, economists have developed sound theories of recoupment that were not presented to or passed upon by the Court.⁹⁰ For example, a firm might develop a reputation for predation by its conduct in one or multiple markets, and thereby deter entry into and preserve monopoly profits in other markets.⁹¹ In that case, a predator could recoup its investment in below-cost prices even if supracompetitive pricing in the market in which the predation occurred did not suffice to recover the investment. A second recoupment strategy is to exploit imperfections in capital markets to deny financing to the rival.⁹²

The relevance of modern recoupment theories was recognized in *United States v. AMR Corp.*, which considered alleged predation by American Airlines at its Dallas-Fort Worth hub.⁹³ In response to low-price competition from various LCCs on four city-pairs, American dropped its fares to match prices and increased capacity by adding flights and switching to larger planes.⁹⁴ The Department of Justice (DOJ) sued, alleging that this conduct improperly induced the

89. See generally C. Scott Hemphill & Tim Wu, *Parallel Exclusion*, 122 YALE L.J. 1182 (2013) (exploring the potential for parallel exclusion schemes to be effective without provable agreement among the excluders).

90. Nor would all of these theories have been a good fit for the facts of the case as presented to the Court.

91. See Bolton, Brodley & Riordan, *supra* note 64, at 2299-2310 (describing the theory of reputation-based recoupment and supportive evidence drawn from the early history of local telephone competition).

92. See *id.* at 2285-99 (presenting the theory of financial market predation and describing evidence). Yet another strategy is to mislead competitors into thinking that market demand is low or that the incumbent's own cost is low, in order to bluff the would-be entrant into staying out of the market. See *id.* at 2311-21 (discussing the cost and demand signaling strategies). For reviews of feasible recoupment strategies, see Janusz A. Ordovery & Garth Saloner, *Predation, Monopolization and Antitrust*, in 1 HANDBOOK OF INDUSTRIAL ORGANIZATION 537 (Richard Schmalensee & Robert D. Willig eds., 1989); and Christopher R. Leslie, *Predatory Pricing and Recoupment*, 113 COLUM. L. REV. 1695, 1720-39 (2013).

93. 335 F.3d 1109 (10th Cir. 2003).

94. *Id.* at 1112.

exit of the LCCs, after which American raised its prices and reduced the frequency of its flights. DOJ alleged that recoupment was accomplished in part by building a reputation for predation and thus deterring entry in both these routes and others.⁹⁵ The district court granted summary judgment to American, concluding that neither test of the *Brooke Group* framework had been satisfied.⁹⁶ The Tenth Circuit affirmed on the ground (discussed below) that DOJ had not established below-cost pricing and thus did not reach the analysis of recoupment.⁹⁷

Even though the Tenth Circuit affirmed a judgment for the defendants, the court also recognized that modern theories of recoupment can provide a logical basis for sidestepping the skepticism of *Brooke Group*. It noted academic work concluding “that price predation is not only plausible, but profitable, especially in a multi-market context where predation can occur in one market and recoupment can occur rapidly in other markets.”⁹⁸ The court concluded: “Although this court approaches the matter with caution, we do not do so with the incredulity that once prevailed.”⁹⁹ This open-minded approach is supported both by the evolution in economic thinking and by the need for different theories to describe facts quite different from those considered in *Brooke Group*.¹⁰⁰

C. Appropriate Measures of Cost and Revenue

In making the price-cost comparison, *Brooke Group* also invites a flexible approach to the measurement of cost. Under the particular approach to predation that justifies use of a price-cost test, marginal cost—the cost of producing an

95. *Id.* at 1111.

96. *Id.* at 1113.

97. *Id.* at 1120–21.

98. *Id.* at 1115 (citing Baker, *supra* note 11, at 590); see also *id.* at 1114–15 (citing Bolton, Brodley & Riordan, *supra* note 64, at 2241, and quoting its statement that “[m]odern economic analysis has developed coherent theories of predation that contravene earlier economic writing claiming that predatory pricing conduct is irrational”).

99. *Id.* at 1115; see also Kenneth G. Elzinga & David Mills, *Predatory Pricing*, in 2 OXFORD HANDBOOK OF INTERNATIONAL ANTITRUST ECONOMICS 40, 53 (Roger D. Blair & D. Daniel Sokol eds., 2015) (“The *Brooke Group* formula does not prevent a plaintiff from demonstrating that a defendant’s conduct fits the mold of a reputation-based predatory pricing theory . . .”).

100. In *Spirit Airlines*, plaintiffs apparently did not make a reputation argument. Kenneth G. Elzinga & David E. Mills, *Predatory Pricing in the Airline Industry: Spirit Airlines v. Northwest Airlines* (2005), in THE ANTITRUST REVOLUTION: ECONOMICS, COMPETITION, AND POLICY 307, 312–13, 329 (John E. Kwoka Jr. & Lawrence J. White eds., 6th ed. 2014). Nevertheless, the Sixth Circuit appeared to recognize such a theory in the course of discussing market definition and barriers to entry. See *Spirit Airlines, Inc. v. Nw. Airlines*, 431 F.3d 917, 936 n.5, 947 (6th Cir. 2005).

additional unit of output—is the theoretically correct measure of cost. However, marginal cost is difficult to measure, so parties and courts resort to proxies. The Court did not insist on a particular proxy for marginal cost, but instead left to lower courts the determination of an “appropriate” measure of cost. The Court mentioned, presumably as acceptable alternatives, both average variable cost (AVC) and incremental cost.¹⁰¹ The latter measure—the “avoidable” cost on the relevant increment of production—can often exceed AVC.¹⁰² With higher cost measures, aggressive price cutting is more likely to result in prices judged to be below cost.

Where good incremental cost measures are available, courts can evaluate them. *AMR* acknowledged this flexibility, rejecting “[s]ole reliance” on route-wide AVC because doing so “may obscure the nature of a particular predatory scheme.”¹⁰³ The Tenth Circuit considered several price-cost tests offered by DOJ that employed incremental or avoidable cost, though the court ultimately found flaws in all of them. DOJ made the most headway with a test labeled “Test Four,” which compared price to the average avoidable cost of the extra capacity—that is, the costs that American would have avoided if it had not added extra capacity to the route at issue.¹⁰⁴ The Tenth Circuit ultimately rejected Test Four on the narrow ground that the cost measure included some costs that were in fact unavoidable, such as airport ticket agents.¹⁰⁵

The Tenth Circuit’s rejection of Test Four exemplifies the pull of *Brooke Group* towards more restrictive approaches to predatory pricing. In our view, Test Four was a sensible approach to evaluating American’s capacity expansion and illustrates more broadly how incremental cost measures can be used when evaluating a particular decision.

101. See *Brooke Group, Ltd. v. Williamson Tobacco Corp.*, 509 U.S. 209, 222 n.1 (1993) (noting the parties’ agreement that AVC applies); *id.* at 223 (quoting the reference to incremental cost in *Cargill, Inc. v. Monfort of Colo., Inc.*, 479 U.S. 104, 117-18 n.12 (1986)); *id.* at 256 n.16 (Stevens, J., dissenting) (same).

102. If the incremental cost is upward sloping, it exceeds AVC at high volumes. An upward sloping incremental cost is plausible for airlines because, with added capacity, load factors fall, and hence the per-passenger cost is higher. See Aaron S. Edlin & Joseph Farrell, *The American Airlines Case: A Chance To Clarify Predation Policy (2001)*, in *THE ANTITRUST REVOLUTION: ECONOMICS, COMPETITION, AND POLICY* 502, 515-16 (John E. Kwoka Jr. & Lawrence J. White, eds., 4th ed. 2004).

103. *AMR Corp.*, 335 F.3d at 1116; see also *id.* (“[T]here may be times when courts need the flexibility to examine both AVC as well as other proxies . . .”).

104. Reply Brief for Appellant at 12, *AMR Corp.*, 335 F.3d 1109 (No. 01-3202).

105. *AMR Corp.*, 335 F.3d at 1119-20 (criticizing inclusion of “variable, non-proportional common costs . . . [including] (1) airport ticket agents, (2) arrival agents, (3) ramp workers, and (4) security”).

Measuring avoidable cost, however, often raises tricky technical issues. For example, in the context of capacity increases in the airline sector, an important component of avoidable cost is the cost of aircraft ownership. If an airline leases another plane in order to add capacity, the avoidable nature of this cost is obvious. If it instead adds capacity by redeploying the aircraft from another route, it incurs the opportunity cost of lost net revenues on that route.¹⁰⁶ Absent good evidence of the full opportunity cost, measuring the cost of ownership, such as leasing rates, is a suitable proxy.¹⁰⁷ In *AMR*, Test Four included the cost of aircraft ownership;¹⁰⁸ the Tenth Circuit did not decide whether including this cost was permissible.¹⁰⁹ In *Spirit Airlines*, the Sixth Circuit accepted the inclusion of a market-based lease rate.¹¹⁰

Brooke Group also offers some flexibility in evaluating revenue. A central question is to what extent a plaintiff is permitted to compare *incremental revenue*, rather than price, with cost. Using incremental revenue in response to a price cut or capacity expansion provides a revenue figure that is generally less than that implied by price – so using incremental revenue, rather than price, makes it more likely that the arrangement will be found to flunk the price-cost test. An increase in airline capacity may fail to yield much incremental revenue for two reasons.

The first reason is passenger diversion. If the new plane is completely full, but with passengers that otherwise would take an existing flight, there is no incremental revenue. Test Four took this effect into account. It did not simply look at the passengers that happened to sit on the new flight; it included only revenue attributable to those incremental passengers who would not have flown on

106. This assumes the extra plane has a productive alternative use, as opposed to sitting idle in the desert due to an overinvestment in capacity.

107. Had there been no redeployment, American can be presumed to have earned at least enough to cover its aircraft cost, or else it would have sold or leased the aircraft to others.

108. *AMR Corp.*, 335 F.3d at 1118 & n.12 (describing VAUDNC-AC).

109. The district court had rejected its inclusion on the incorrect ground that, for other purposes, aircraft ownership is considered a fixed cost. *See id.* (noting that aircraft ownership is “traditionally considered a fixed cost in the airline industry”). Compare Gregory J. Werden, *The American Airlines Decision: Not with a Bang but a Whimper*, ANTITRUST, Fall 2003, at 32, 34 (suggesting that the Tenth Circuit likely viewed whether to include aircraft ownership as a disputed fact), with Aaron Edlin, *Predatory Pricing*, in RESEARCH HANDBOOK ON THE ECONOMICS OF ANTITRUST LAW 144, 162 & n.65 (Einer Elhauge ed., 2012) (concluding that the Tenth Circuit rejected its inclusion).

110. *See Spirit Airlines, Inc. v. Nw. Airlines, Inc.*, 431 F.3d 917, 940 (6th Cir. 2005) (accepting a measure of costs, characterized as AVC, that included the “cost of the additional aircraft . . . that represented the incremental capacity in Northwest’s response to Spirit’s presence”) (citation omitted).

American on that route but for the capacity increase.¹¹¹ *AMR* accepted this approach, disagreeing with the district court's critique that Test Four amounted to a short-run profit maximization test.

Price erosion provides a second reason for low incremental revenues: reduced revenue from inframarginal units that the defendant otherwise would have sold at a higher price. DOJ offered a second test, labeled "Test One," that took this effect into account. *AMR* illustrated the point with an example:

[I]f an airline earned \$20.6 million on a route that cost \$18 million to operate, it would have \$2.6 million in profit. If the airline then added a flight to the route that would cost \$500,000 to operate, but brought in an additional \$1 million in revenue from passengers, the airline would make \$500,000 profit. If adding this extra capacity to the route reduced the profitability of other flights on that route, reducing revenue for the rest of the route by \$600,000 down to \$20 million, under Test One, this conduct would be considered predatory because rather than comparing the additional flight's \$1 million in revenue to its \$500,000 in costs, Test One looks only to the reduction in profits on the route as a whole from \$2.6 million to \$2.5 million. Thus, this conduct would be labeled predatory because the profits for the route as a whole declined, even though the capacity additions themselves were profitable and the route as a whole was still profitable.¹¹²

In contrast to Test One, such conduct would be permitted under Test Four.¹¹³

111. See Edlin & Farrell, *supra* note 102, at 515-16 (showing, in a hypothetical example with diversion but no price erosion, that both Test One and Test Four condemn the capacity expansion); Werden, *supra* note 109, at 36 n.35 (distinguishing the tests on the basis that Test One took account of price erosion).

112. *AMR Corp.*, 335 F.3d at 1118 n.13 (citing Einer Elhauge, *Why Above-Cost Price Cuts To Drive Out Entrants Are Not Predatory—and the Implications for Defining Costs and Market Power*, 112 *YALE L.J.* 681, 694 (2003)). Puzzlingly, the court incorrectly stated that "as long as a firm's prices exceed its marginal cost, each additional sale decreases losses or increases profits." *Id.* at 1116 (citation omitted). This statement misses the reduced revenue on inframarginal units.

113. The capacity increase would be condemned under Test Four if the lost revenue was due to diversion rather than price erosion. In terms of the hypothetical, suppose that the new flight has \$1 million in revenue, of which \$600,000 came from passengers diverted from other flights, which is the source of the \$600,000 revenue reduction on the other flights. Then it would be condemned under Test Four: the \$400,000 in incremental revenue attributable to the capacity increase is less than its \$500,000 cost.

This example raises the question of whether *AMR* might have intended its hypothetical, and the associated critique, to apply to passenger diversion (in addition to profit erosion). We think not, for two reasons. First, if *AMR* rejected taking passenger diversion into account, it would have rejected Test Four on this ground, which it did not do. Second, the court cited and based its illustration on a discussion from an article by Einer Elhauge that appears to address

The *AMR* court's assertion that the "capacity additions themselves were profitable" begs the question of how one measures profit. When revenues on a new flight exceed the costs of that flight alone, the flight could in some sense be said to be profitable. But if the addition of a new flight reduces both revenue on other flights on the same route and profits on the route as a whole, the decision to add the new flight can hardly be called profitable. Nor can the addition of the new flight be said to be an efficient use of the firm's assets. It can be said, however, to reflect a sacrifice of profits, presumably for some strategic purpose.¹¹⁴

The *AMR* court rejected Test One as a "short-run profit-maximization" test.¹¹⁵ DOJ did not argue that *any* failure to maximize profits – such as by charging a lower price than the airline otherwise would – is actionable, and such an argument would seem to be foreclosed by *Brooke Group*. DOJ argued instead that a particular business strategy – which entailed an increase in capacity, a measurable reduction in profits, and a subsequent reversal after the rival had exited the market – should be regarded as predatory. DOJ presented good internal data and extrinsic evidence showing that American's conduct was far from profit-maximizing by American's own reckoning.¹¹⁶ The specific facts available in the case thus reduced the likelihood of false condemnation.¹¹⁷

The court's rejection of Test One reflects literal fidelity to *Brooke Group*, which refers to "price" rather than incremental revenue. However, Test One might be squared with the *Brooke Group* framework by exploiting the Court's comparative flexibility in the measurement of cost. As an economic matter, the cannibalized revenues taken into account by Test One could be treated as another

only price erosion, not passenger diversion. See Einer Elhauge, *Why Above-Cost Price Cuts To Drive Out Entrants Are Not Predatory – and the Implications for Defining Costs and Market Power*, 112 YALE L.J. 681, 694 (2003) (introducing an illustration of Test One by noting that it "necessarily takes into account the fact that adding the incremental capacity lowered prices (and thus profits) on the nonincremental flights" (emphasis omitted)).

114. In other areas of exclusionary conduct, a sacrifice approach yields a relatively narrow scope of liability, but here, the opposite is true.

115. *AMR Corp.*, 335 F.3d at 1118.

116. See, e.g., Reply Brief for Appellant at 6, *AMR Corp.*, 335 F.3d 1109 (No. 01–3202) ("American added three seats for every additional local passenger it carried.").

117. If a firm's internal documents about the profitability of its conduct indicate a sacrifice of profits (but for the opportunity to exclude a rival), we can be confident of the firm's intent to exclude, which is in turn evidence of effect. Moreover, false negatives are less likely – and recoupment more likely – where industry structure and history indicate the ability to repel new entrants by, among other things, establishing a reputation for predation.

opportunity cost.¹¹⁸ Nevertheless, *AMR* rejected this approach, noting accurately that “Test One effectively treats forgone or ‘sacrificed’ profits as costs.”¹¹⁹ Presumably, the *AMR* court saw deducting diverted revenues on the route as departing from *Brooke Group*’s insistence on a *price-cost* comparison.

The Sixth Circuit in *Spirit Airlines* sought to escape the price-cost test altogether. It suggested that predation through capacity additions might not be governed by *Brooke Group*, and, hence, above-cost pricing can be challenged as unlawful monopolization.¹²⁰ The court apparently thought that avoiding *Brooke Group* might be necessary to accommodate a comparison of incremental revenue and incremental cost from a capacity addition. We are skeptical that this approach is consistent with Supreme Court precedent. After all, adding capacity directly translates into changes in price and cost, and thus would appear to be within the *Brooke Group* framework. Unless and until the Supreme Court revisits *Brooke Group*, we expect courts will insist upon some sort of price-cost comparison.

In short, *AMR* and *Spirit Airlines* are fairly read as efforts to adapt the *Brooke Group* framework to the reality of modern predation cases. This is not to say the analyses are perfectly clear. Both courts struggled with highly complex facts, and the opinions are muddled in important respects.¹²¹ But, taken together, the cases reveal a willingness to evaluate recoupment realistically—rather than skeptically—and to make use of incremental cost measures instead of AVC, where available. As such, we are not ready to wave the white flag and say that no predatory pricing cases can prevail under *Brooke Group*; rather, we would counsel enforcers and parties to be creative about how to develop such cases and argue for flexibility within *Brooke Group*. Going forward, we believe that parties can litigate successful predatory pricing cases under the *Brooke Group* framework—for example, by identifying instances of monopoly recoupment or the development of a reputation for predation.

118. See Edlin, *supra* note 109, at 158 (proposing an “inclusive” cost measure along these lines). Alternatively, one could formulate an inclusive definition of price that included the lost revenue from a reduced price on inframarginal units.

119. *AMR Corp.*, 335 F.3d at 1118.

120. See *Spirit Airlines, Inc. v. Nw. Airlines, Inc.*, 431 F.3d 917, 951-53 (6th Cir. 2005).

121. See *supra* notes 106-109, 111-113, and accompanying text (discussing uncertainties in *AMR*’s approach to aircraft costs and passenger diversion).

III. AN UNWARRANTED EXTENSION: LOYALTY DISCOUNTS

Brooke Group's influence has extended beyond cases of simple price cutting. Its conclusory assertion that predatory pricing is rarely tried and even more rarely successful has been taken by some to mean that any conduct involving a profit sacrifice in order to exclude a rival is rare. Its conceptually simple idea of a price-cost test has proven attractive to those seeking to make the law of anticompetitive exclusion tractable and predictable. The Supreme Court itself has since repeated the assertion and extended the price-cost test to claims of monopsony overbidding¹²² and price squeezes, stating broadly in the latter case that “low prices are only actionable under the Sherman Act when the prices are below cost and there is a dangerous probability that the predator will be able to recoup the profits it loses from the low prices.”¹²³

We are concerned that the sometimes overly broad language in these cases and the more general influence of *Brooke Group* create a risk that *Brooke Group's* framework will be applied to more complex pricing strategies for which it is unsuited. One such strategy is a “loyalty” discount, in which a seller offers its customers discounts on a single product or product line. In contrast to a quantity or volume discounts, which are based upon the quantity that the customer buys from the seller, loyalty discounts are based on the customer purchasing at least a specified percentage – or “share” of its total purchases – of a particular type of product from the seller, rather than its competitors. Loyalty discounts often take the form of so-called “first-dollar” discounts, where the customer receives a price reduction on *all* units purchased if it meets the specified share requirement.

A full analysis of loyalty discounts is beyond the scope of this Feature. Here, we simply argue that *Brooke Group's* price-cost test is the wrong tool for evaluating this conduct. Determining whether *Brooke Group* ought to apply to loyalty discounts is an urgent task, not only because loyalty discounts are common, but also because several cases appear already to have taken that step. In *Virgin Atlantic Airways v. British Airways*,¹²⁴ for example, the Second Circuit rejected Virgin's challenge to loyalty discounts offered by British Airways to travel agents, because Virgin had not proven that the discounts drove British Airways' ticket prices below cost. In *Concord Boat Corp. v. Brunswick Co.*,¹²⁵ the Eighth Circuit overturned a judgment for plaintiffs that had complained about Brunswick Corporation's loyalty and quantity discounts, because the court found, among other grounds, that the discounted prices were above Brunswick's costs. By contrast, the Third

122. *Weyerhaeuser Co. v. Ross-Simmons Hardwood Lumber Co.*, 549 U.S. 312 (2007).

123. *Pac. Bell Tel. Co. v. linkLine Commc'ns, Inc.*, 555 U.S. 438, 457 (2009).

124. 257 F.3d 256, 269 (2d Cir. 2001).

125. 207 F.3d 1039, 1061-62 (8th Cir. 2000).

Circuit has eschewed any reliance on the price-cost test in this context.¹²⁶ In short, the law in this area is unsettled and would benefit from an appreciation of the limits of *Brooke Group*.

Like all discounts, loyalty discounts can be a form of output-enhancing price competition, and can mitigate the consequences of unanticipated market conditions when the buyer is not the ultimate consumer. For example, a share-based discount enables a manufacturer to bear some of the risk that would otherwise be borne by its distributor, which might not be able to reach quantity targets needed for a discount in times of unexpectedly low demand. Conversely, a share-based discount ensures that the distributor will continue to be motivated to promote the manufacturer's product, even if unexpectedly strong demand would render a quantity-based threshold trivial.

One possible application of *Brooke Group* would apply the discount to all units sold, and check whether the average net price is higher than some measure of cost. That approach has the virtue of simplicity, but it fails to reflect the particular risk to competition sometimes posed by loyalty discounts. In many cases, some level of a dominant firm's sales will be "noncontestable" in the sense that rivals cannot as a practical matter compete for them, perhaps because of capacity constraints or customer brand preferences. In these cases, the discount is offered only to win contested sales.

Thus, a more faithful adaptation of the price-cost test is to allocate the entire discount to the contested sales.¹²⁷ After all, the competitor would have to match, by lowering its price on the contested sales, the entire discount offered by the defendant on both contestable and noncontestable sales. Consequently, if the

126. In *ZF Meritor, LLC v. Eaton Corp.*, 696 F.3d 254 (3d Cir. 2012), the Third Circuit found unlawful loyalty discounts that were combined with other forms of exclusionary conduct. The court relied on evidence that failure to meet the loyalty targets "would jeopardize [plaintiffs'] relationships with the dominant manufacturer of transmissions in the market," *id.* at 278, which the court said made the loyalty targets in effect mandatory purchase requirements that should be evaluated as "de facto partial exclusive dealing arrangements," *id.* at 282. See also *Eisai, Inc. v. Sanofi Aventis U.S., LLC*, 821 F.3d 394, 409 (3d Cir. 2016) (ruling for the defendant on other grounds and declining to decide "when, if ever, the price-cost test applies to" "a discount that bundled incontestable and contestable demand").

127. This approach is in essence a discount attribution test, see *Cascade Health Sols. v. PeaceHealth*, 515 F.3d 883 (9th Cir. 2008), applied to a loyalty discount instead of bundling. See Competitive Impact Statement at 14-15, *United States v. United Reg'l Health Care Sys.*, No. 7:11-cv-00030 (N.D. Tex. Feb. 25, 2011) (taking this approach and noting the analogy to *Cascade Health*); 12 PHILLIP E. AREEDA & HERBERT HOVENKAMP, *ANTITRUST LAW* ¶ 2046, at 749e (3d ed. 2012); Robert H. Lande, *Should Predatory Pricing Rules Immunize Exclusionary Discounts?*, 2006 UTAH L. REV. 863, 878-80 (assessing and criticizing this approach). In Europe, it is known as the "as efficient competitor" test. See, e.g., *Case C-413/14 P, Intel Corp. v. Comm'n* (Sept. 6, 2017), <http://curia.europa.eu/juris/liste.jsf?num=C-413/14> [<http://perma.cc/EN3Y-QVYR>].

goal is to determine whether an equally efficient competitor can match the discount, the relevant discount should be entirely allocated to the contested sales.

However, allocating the discount by removing noncontestable sales gives rise to several practical problems. These include, among others, how to determine the amount of sales that are contested, how to determine the incremental costs associated with just the contestable sales, and how to determine the size of the discount (which might be especially difficult if the seller does not specify a discount but rather says, “if you buy X%, the price will be \$Y”).

The last problem suggests a more fundamental reason why a price-cost test might be unsuited to loyalty discounts. The test, as applied to predatory pricing claims, is explicitly intended to avoid false positives and promote aggressive, procompetitive price competition, even at the cost of false negatives. That caution reflects the intuition that a simple price cut benefits consumers.¹²⁸ The welfare benefit of a loyalty discount is much less clear. For one thing, a loyalty discount might not entail an actual discount from the prices that would otherwise be charged. The commercial success of a loyalty discount depends largely on the relationship between the discounted price and the undiscounted price, so in some situations, the arrangement might entail an artificially inflated undiscounted price intended to serve as a coercive lever to induce more sales at the nominally discounted price. A seller might be able to dispel the suspicion of such an arrangement if there are a substantial number of sales under comparable circumstances at the undiscounted price. However, absent such benchmarks, it might be difficult to determine what portion, if any, of the nominal discount reflects an actual discount from the price that would otherwise be charged.

Moreover, while a simple price cut expands output in the short run, a loyalty discount might have the opposite effect if it deters a customer from making incremental purchases from rivals that would not displace purchases from the dominant seller. Such incremental purchases from the rival would increase overall market output but push the percentage purchases from the dominant seller below the threshold required for the discount. And even where loyalty discounts reduce average prices, they might result in price discrimination among customers depending on what portion of their purchases are noncontestable, and some customers might wind up paying higher prices than they would in the absence of the loyalty discount.

The upshot is that a facile application of the *Brooke Group* test to loyalty discounts would be mistaken, even though loyalty discounts involve prices and “discounts,” and can thus seem similar to simple price cuts in a semantic sense.

128. Reality is more complex. Even an above-cost price cut, though it benefits productive efficiency, may harm consumers (and total welfare) by excluding competitors whose presence would keep down prices. See Louis Kaplow & Carl Shapiro, *Antitrust*, in 2 HANDBOOK OF LAW AND ECONOMICS 1073, 1199 (A. Mitchell Polinsky & Steven Shavell eds., 2007).

In devising an appropriate test, two factors seem particularly important. Identifying the harm from discounting depends on knowing, first, whether the loyalty discount diminishes the rival's ability to compete for other sales, and second, whether negative contracting externalities undercut a customer's ability to refuse offers that would harm competition to its detriment.¹²⁹ To answer these questions, a price-cost comparison provides no help.

CONCLUSION

The *Brooke Group* framework, as interpreted by cases such as *AMR* and *Spirit Airways*, leaves courts free to conduct an empirically grounded evaluation of the likelihood of recoupment under the circumstances of each individual case. Under this approach, a court is free to consider the plausibility of recoupment, without reference to *Brooke Group*'s skeptical dicta, where monopoly or a well-coordinated oligopoly is concerned. Moreover, modern theories of recoupment, such as the development of a reputation for predation, should be brought to bear when evaluating whether recoupment is likely. Courts can also use the presence of below-cost pricing as a basis for inferring recoupment, so long as it is not the sole basis for the inference.

Brooke Group also permits flexibility in making price-cost comparisons. A measure of incremental cost can be used instead of AVC where good information is available. The analysis may also account for incremental revenue, though not to the extent of including in-market inframarginal revenue sacrifice due to a low price.

Finally, there is nothing special about *Brooke Group* that suggests that its price-cost test should be extended to more complex pricing strategies like loyalty discounts. Indeed, the underlying concern with costly false positives which motivates the test is largely absent, and the practical problems seem insuperable. Sound policy analysis counsels against applying the *Brooke Group* principles to such cases.

129. See B. Douglas Bernheim & Randal Heeb, *A Framework for the Economic Analysis of Exclusionary Conduct*, in 2 OXFORD HANDBOOK OF INTERNATIONAL ANTITRUST ECONOMICS 3 (Roger D. Blair & D. Daniel Sokol eds., 2015).