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RECOUPMENT, MARKET POWER, AND PREDATORY PRICING

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RECOUPMENT, MARKET POWER, AND PREDATORY PRICING

LOUIS KAPLOW[*]

Abstract

Recoupment inquiries play an important role in predatory pricing cases. Nevertheless, their place in antitrust analysis is unclear and potentially problematic in ways that are not fully appreciated. Does a recoupment requirement define, augment, or replace the preexisting monopoly power requirement that involves similar analysis? How can a recoupment test be inserted in sequential assessments of alleged predatory pricing when all of the steps are intertwined with the others, including those deemed to come later? Why is a plaintiff permitted to show either that recoupment was ex ante plausible or that sufficient ex post profit recovery occurred, rather than requiring one in particular, or both? This article addresses these questions by examining the underlying purposes of recoupment assessments and predatory pricing inquiries more broadly. As will become evident, much of the analysis is relevant not just to predatory pricing but to other forms of anticompetitive conduct as well.

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TABLE OF CONTENTS

I. Market Power and Recoupment
 A. Doctrine
  1. Some Puzzles
  2. Doctrinal Development
 B. Analysis
  1. The Recoupment Condition
  2. Relationship to Market Power
  3. Market Power's Relevance in Other Ways
II. Sequential Assessment
 A. Market Power
 B. Recoupment
 C. Procompetitive Explanations
III. Ex Ante versus Ex Post Recoupment
IV. Legal Institutions and Screening
V. Conclusion

The concept of recoupment is simple: if firms are presumed to undertake predation to enhance their profits, then a firm that indeed engaged in predation must have expected that the short-run profit sacrifice (from dropping its price to drive out or discipline rivals) would generate a sufficient long-run profit recovery (when it later became able to charge high prices) to render the overall strategy profitable. Restated as the contrapositive: if the firm would have expected its long-run profit enhancement to be insufficient, then it must not have engaged in predation. This latter inference has become part of U.S. antitrust law on predatory pricing and is most associated with the Supreme Court's decisions in *Brooke Group* and *Matsushita*.[1]

It is not surprising that economic analysis of exclusionary strategies has long examined their profitability through what is akin to a recoupment condition[2] and understood recoupment to be central to predatory pricing analysis in particular.[3] And even without drawing explicitly on the economics literature, long before any Supreme Court cases explicitly embraced recoupment it was always open to parties to present evidence relating to whether an alleged action could be expected to be profitable and hence plausible. One need not master rocket science or game theory to argue: "Don't believe their allegation that we were trying to do X. That strategy would have lost us millions. We're not stupid!" It is not immediately obvious what announcement of the necessity for recoupment adds, except to remind parties that common sense arguments are welcome.

Yet the relationship between predation and recoupment raises many questions, some of which are occasionally noticed but have not been resolved and others that have remained hidden. Even the simple recoupment logic is not so simple. Granting the contrapositive—that the lack of a plausible expectation of recoupment negates an explanation that presupposes recoupment—the original proposition remains: an affirmative demonstration of predation itself implies a reasonable expectation of recoupment. And those alleging predatory pricing have always had to prove their case. So why isn't any recoupment requirement automatically satisfied if a case is otherwise sufficient?

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[1]Brooke Grp. Ltd. v. Brown & Williamson Tobacco Corp., 509 U.S. 209 (1993); Matsushita Elec. Indus. Co. v. Zenith Radio Corp., 475 U.S. 574 (1986). On the doctrinal development in the United States, see Subsection I.A.2. On the different state of the law in the European Union, where recoupment analysis may be relevant but there is no recoupment requirement as such, see note .

[2]*See, e.g.*, Janusz A. Ordover & Garth Saloner, *Predation, Monopolization, and Antitrust*, *in* 1 HANDBOOK OF INDUSTRIAL ORGANIZATION 537, 552–53 (Richard Schmalensee & Robert Willig eds., 1989). It is generally referred to as an individual rationality constraint, meaning that, for an act to be undertaken, it must be rational for the individual undertaking it—and the individual actor is taken to be a profit-maximizer.

[3]*See, e.g.*, Kenneth G. Elzinga & David E. Mills, *Testing for Predation: Is Recoupment Feasible?*, 34 ANTITRUST BULL. 869, 870 (1989) ("This insight [that predatory pricing is attractive to a profit-seeking firm only where it expects to recoup] is familiar in the literature on predation."); Paul L. Joskow & Alvin K. Klevorick, *A Framework for Analyzing Predatory Pricing Policy*, 89 YALE L.J. 213, 217 (1979) ("In designing a policy toward predatory pricing, . . . an assessment [of long-run considerations] is required because the essence of predatory pricing is the alleged predator's sacrifice of short-run gains for greater long-run gains."); Janusz A. Ordover & Robert D. Willig, *An Economic Definition of Predation: Pricing and Product Innovation*, 91 YALE L.J. 8, 13 (1981) ("Thus, the relevant structural test is whether the conceivable gains from predation can outweigh the costs to the incumbent of the allegedly predatory conduct. If not, there can be no motive for predation and it is unnecessary to scrutinize allegedly predatory conduct for anticompetitive effect or intent."); *see also* Joskow & Klevorick, *supra*, at 222–23 ("Since a profit-maximizing dominant firm will depart from short-run maximizing behavior only if it expects that such a move will lead to larger long-run profits, the best way to assess whether current behavior is predatory is to evaluate its expected effects on long-run market outcomes.").

A further puzzle involves the relationship between the presence of significant market power and the need for a recoupment inquiry. After all, antitrust challenges under Sherman Act Section 2, where many predatory pricing cases fall, require proof of monopoly power or a dangerous probability thereof. In addition, inquiries into monopoly power and recoupment examine similar factors in similar ways. Furthermore, antitrust scrutiny in particular cases is conventionally understood to begin with the monopoly power requirement, so one might have thought that, if and when the predatory pricing inquiry was reached, significant recoupment would in essence have already been established. How do the monopoly power and recoupment requirements relate to each other? Does the latter repeat, refine, augment, or replace the former? If it supplants, did *Brooke Group* implicitly reverse decades of precedent, including the *Spectrum Sports* case that the Court decided just months before and cited in support of its decision?[4]

These questions and others raised below suggest that recoupment—in particular, how it fits with the broader inference process and relates to other aspects of predatory pricing analysis—is underexplored. This article examines such questions from the perspective of how liability assessments should be made in order best to deter anticompetitive behavior while minimizing the chilling of procompetitive behavior. As will be seen, we can only make sense of recoupment by integrating it with the rest of the inquiry rather than examining it in isolation, as has often been done. (As a note to the reader before proceeding, throughout this article "recoupment" is used to refer only to the adequacy of expected[5] profit recovery conditional on a defendant's strategy otherwise being successful.[6])

Part I examines market power and recoupment in light of the aforementioned monopoly power requirement and the apparent overlap in the two sorts of analysis. It begins by carefully examining the development of the recoupment requirement in the Supreme Court, with particular attention to its relationship to Sherman Act Section 2's longstanding monopoly power requirement. Then it examines the analytical relationship between the two concepts. Direct attention to the components of the recoupment condition reveals some concordance but also critical differences. Indeed, a conventional application of the monopoly power requirement can lead to rejection of challenges for reasons that actually favor liability because they imply greater anticompetitive effects that generate more long-run profit recovery. Furthermore, despite similarities in factors and analysis, market power is not a very helpful concept for recoupment analysis. Market power's relevance in other ways is also considered.

Part II addresses sequential assessments that have achieved some traction with courts and commentators. It is often suggested that the proper order of inquiry is, first, market power; then, anticompetitive effects; and, finally, procompetitive explanations. For predatory pricing cases,

[4]Spectrum Sports, Inc. v. McQuillan, 506 U.S. 447 (1993).

[5]As will be explored in Part III, there is a question of whether the recoupment requirement should be understood to refer to an alleged predator's (actual or imputed reasonable) expectations of sufficient profit recovery and/or whether recoupment (ex post) actually occurred. For most purposes, it clarifies the exposition and thinking to focus on the former, ex ante perspective (which directly relates to the logic of profit-maximizing behavior). But to avoid repetitive verbiage, sometimes the requisite reminders will be omitted.

[6]Accordingly, the term as used here does not also encompass the requirement—stated in *Brooke Group*, 509 U.S. at 224–26, and followed by some subsequent courts and commentators—that the predator's strategy be one that would successfully eliminate or otherwise discipline the target. Yet another ambiguity, "recoupment" is sometimes used to refer to the condition as a whole (that the expected recovery exceed the expected sacrifice) and sometimes just to the expected recovery (as in referring to the amount that will be "recouped," suspending the question of whether that amount will be sufficient to "recoup" the short-run sacrifice). Efforts will be made in language usage to avoid ambiguity.

Brooke Group is taken to split the middle inquiry into two steps: an inquiry into predation itself (in the form of some price-cost test), followed by an examination of recoupment—although some would reverse this order. This sort of sequential assessment, however, is contrary to a logical inference process that by its nature involves triangulation: a consideration of how various evidence on interrelated factors collectively bears on a single ultimate question. Such preordained sequencing also conflicts with practical considerations in the gathering and processing of evidence.

As Part II explains, these problems arise with respect to each of the supposedly separate components of predatory pricing analysis. Market power cannot properly be defined or assessed up front, in a vacuum, among other reasons because of its relationship to recoupment. Recoupment, as alluded to previously, is intimately related to the direct predation inquiry, in addition to overlapping with market power. Procompetitive explanations, in turn, need to be explicitly linked with the analysis of market power, predation, and recoupment. The common practice—in commentary, agency guidance, and court opinions—of conducting separate, sequenced inquiries may partly explain important shortcomings in prior efforts, including the failure even to notice some of the key challenges.

Part III turns to the distinction between ex ante and ex post recoupment. Cases and commentary are aware of the difference between inquiry into whether alleged predation should have been regarded as profitable at the time the strategy was undertaken and whether it turned out to be so after the fact. However, insufficient attention has been given to how cases should be resolved when these two recoupment inquiries seem to yield conflicting answers. In particular, ex ante profitability followed by ex post failure raises the question of whether it is optimal in this context to punish failed attempts. The lack of explicit attention to this matter is surprising given its importance and Sherman Act Section 2's explicit coverage of attempted monopolization.

Part IV turns briefly to questions about the operation of legal institutions. It is widely understood that many antitrust cases, including those involving allegations of predatory pricing, are quite challenging. The complexity of the analysis combined with significant uncertainty about the facts, along with serious concerns about false positives that may chill procompetitive activity, led first to the rise of cost-based tests and then (perhaps in part because these too proved difficult) to the addition of an explicit recoupment inquiry. This article's analysis indicates, unfortunately, that the problem is even more daunting than generally recognized. This Part offers some comments on how agencies and courts might rise to the challenge, with emphasis on the potential role of recoupment and other inquiries in screening out weak cases.

Much of the present analysis is not distinctive to recoupment or even to predatory pricing more broadly. This investigation aims to identify fruitful directions for research, inform policy-making, and guide the investigation and resolution of particular disputes regarding a wide range of potentially anticompetitive practices. Some lessons are collected in the conclusion.

I. MARKET POWER AND RECOUPMENT

It is recognized that the analysis of market power and of recoupment consider similar factors in similar ways.[7] Yet neither doctrine nor commentary on predatory pricing cleanly

[7]*See, e.g.*, 3A PHILLIP E. AREEDA & HERBERT HOVENKAMP, ANTITRUST LAW 58 (4th ed. 2015) (stating that the recoupment inquiry "resembles the 'market power' inquiry in monopolization cases or the 'dangerous probability of

identifies the relationship between these two inquiries. Section A begins by articulating some puzzles in the connection between market power and recoupment and examining the doctrinal development of the recoupment requirement in apparent disregard for the Sherman Act's monopoly power requirement in Section 2 cases. The focus here is on antitrust law in the United States; developments in the European Union's competition law have been rather different in this regard.[8]

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success' query in cases involving attempts to monopolize"). This connection seems more often to be recognized in commentary on competition law in the European Union than in discussions about U.S. antitrust law. *See DG Competition Discussion Paper on the Application of Article 82 of the Treaty to Exclusionary Abuses* ¶ 97 (Dec. 2005) [hereinafter *Discussion Paper on Article 82*], http://ec.europa.eu/competition/antitrust/art82/discpaper2005.pdf (Predatory pricing "can normally only be effective and profitable if a company has already substantial market power on the market in question. In order for predation to be abusive under Article 82 the exclusion should be instrumental in protecting or strengthening the predator's dominant position and thereby allow the predator to return to or obtain high prices afterwards. In a competitive market with many competitors the exclusion of some of them will in general not lead to a sufficient weakening of competition so as to allow the predator to recoup the 'investment'. Also in a market with only a few but strong competitors such an exclusionary strategy is unlikely to succeed."); *id.* ¶ 122 ("As dominance is already established this normally means that entry barriers are sufficiently high to presume the possibility to recoup. The Commission does therefore not consider it is necessary to provide further separate proof of recoupment in order to find an abuse."); ROBERT O'DONOGHUE & JORGE PADILLA, THE LAW AND ECONOMICS OF ARTICLE 102 TFEU, at 317 (2d ed. 2013) ("Thus, the prevailing market conditions that contribute to dominance may also offer a good indication that rivals' exclusion will lead to higher prices in [the] future, and that recoupment is therefore probable."); EKATERINA ROUSSEVA, RETHINKING EXCLUSIONARY ABUSES IN EU COMPETITION LAW 167 (2010) ("[T]he relevant considerations taken into account in determining recoupment are by their nature identical with the considerations relevant in finding dominance: the market power of the undertaking, the market power of competitors, and the presence of barriers to entry. Thus, the differences between the condition for dominance and recoupment are not of a qualitative nature. It is rather the degree of market power . . . which differentiate[s] the conditions for recoupment from dominance.").

[8]The landscape in the European Union is substantially different: the competition commission and courts have not imposed a recoupment requirement but have recognized its basic logic and potential relevance. *See* Case 62/86, AKZO Chemie BV v. Comm'n, 1991 E.C.R. I-03359, ¶ 71 ("A dominant undertaking has no interest in applying such prices except that of eliminating competitors so as to enable it subsequently to raise its prices by taking advantage of its monopolistic position . . . ."); Case 333/94, Tetra Pak International SA v. Comm'n (Tetra Pak II), 1996 E.C.R. I-05951, ¶ 44 ("Furthermore, it would not be appropriate, in the circumstances of the present case, to require in addition proof that Tetra Pak had a realistic chance of recouping its losses. It must be possible to penalize predatory pricing whenever there is a risk that competitors will be eliminated."); Case 202/07, France Télécom SA v. Comm'n, 2009 E.C.R. I-02369, ¶¶ 107–111 (invoking recoupment logic, restating that recoupment is not a necessary condition for liability, but explaining that this does not negate recoupment's possible relevance); *Communication from the Commission—Guidance on the Commission's Enforcement Priorities in Applying Article 82 of the EC Treaty to Abusive Exclusionary Conduct by Dominant Undertakings,* 2009 O.J. (C 45) 7, ¶ 71 ("This does not mean that the Commission will only intervene if the dominant undertaking would be likely to be able to increase its prices above the level persisting in the market before the conduct. It is sufficient, for instance, that the conduct would be likely to prevent or delay a decline in prices that would otherwise have occurred. Identifying consumer harm is not a mechanical calculation of profits and losses, and proof of overall profits is not required."); *id.* ¶ 71 n.6 ("More in general, as predation may turn out to be more difficult than expected at the start of the conduct, the total costs to the dominant undertaking of predating could outweigh its later profits and thus make actual recoupment impossible while it may still be rational to decide to continue with the predatory strategy that it started some time ago."); *Discussion Paper on Article 82*, *supra* note , ¶ 96 ("The company will make this sacrifice when it considers that it is likely to be able to recoup the losses or lost profits at a later stage after its actions have had the foreclosure effect."); *id.* ¶ 115 ("In case there is no direct evidence of a predatory strategy . . . the following elements will in particular be of relevance to show a plausible scheme of predation: . . . does [the dominant company] have the possibility to recoup the losses in the foreseeable future through (a return to) high prices . . . ."); *id.* ¶ 121 ("While ability to directly finance the losses incurred may be relevant, it is more important to investigate the incentive to predate and investigate whether the losses can be recouped."); *id.* ¶ 122 (in explaining how it conducts recoupment analysis, states that "[t]he Commission does therefore not consider it is necessary to provide further separate proof of recoupment in order to find an abuse"); *id.* ¶ 123 (stating that a company can rebut by showing the impossibility of recoupment). Interestingly, in

Section B—where economists less interested in doctrine may wish to start— turns to the analytical relationship between market power and recoupment. The first task is specification of the recoupment condition, a basic step that is usually skipped. Second is an assessment of the different ways that market power bears on whether recoupment is plausible, which sharpens understanding of how conventional analysis can backfire. Finally, other ways that market power may bear on whether liability should be assigned in predatory pricing cases are considered.

A. DOCTRINE

1. *Some Puzzles*

In exploring recoupment's doctrinal development, this Section focuses on its relationship with preexisting doctrinal demands regarding market power because, as mentioned, both inquiries examine similar factors in similar ways. For this very reason, a number of puzzles are presented by the doctrinal relationship (or lack thereof) between recoupment and market power—in Sherman Act Section 2 cases, monopoly power or a dangerous probability thereof.[9] Are there two legally central issues or just one? And, if there are two, what are the qualitative or quantitative differences between them? Does the recoupment requirement augment, refine, or replace the monopoly power requirement?

Answering such questions is difficult because *Brooke Group*, the Supreme Court case most associated with instantiating the recoupment requirement[10] and elaborating the prerequisites for predatory pricing cases under Sherman Act Section 2, does not explicitly relate the established blackletter law of monopolization and attempted monopolization to recoupment. This failure arises despite the Court's discussion of both the recoupment requirement and its economic character in terms that strongly suggest a connection.[11]

Possible explanations for this substantial omission will emerge in Subsection 2's elaboration of the doctrinal development. Factually, *Brooke Group* (like *Matsushita*) involved alleged predatory pricing conspiracies rather than the more familiar setting of predation by a single, dominant firm, which undoubtedly influenced the Court's focus when examining the record and may have diverted its legal eye as well. From a more doctrinal angle, one might

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this key dimension, the stance in the EU seems closer to the approach employed in Matsushita Elec. Indus. Co. v. Zenith Radio Corp., 475 U.S. 574, 588–93 (1986).

[9]To avoid repetition, the text will often use the term monopoly power as a shorthand for both versions of the requirement.

[10]Moreover, as will be discussed in Subsection 2, in doctrinally grounding recoupment for Sherman Act Section 2 cases (and for Robinson-Patman Act cases), *Brooke Group* drew on *Matsushita* and *Cargill*, neither of which were Section 2 cases, so the answers cannot be found simply by tracing recoupment's doctrinal roots.

[11]As will be discussed below, the Court states the recoupment requirement in a manner that mimics the attempted monopolization test, but it does not comment explicitly on the connection. Moreover, in its initial elaboration of the meaning of recoupment, the Court speaks in terms of market power: "As we have observed on a prior occasion, '[i]n order to recoup their losses, [predators] *must obtain enough market power* to set higher than competitive prices, and then must sustain those prices long enough to earn in excess profits what they earlier gave up in below-cost prices.' *Matsushita* . . . ." Brooke Grp. Ltd. v. Brown & Williamson Tobacco Corp., 509 U.S. 209, 225–26 (1993) (emphasis added); *see also id*. at 231–32 ("As we have noted, "[t]he success of any predatory scheme depends on *maintaining monopoly power for long enough* both to recoup the predator's losses and to harvest some additional gain." *Matsushita* . . . ." (emphasis added)). Yet its belief that the two economic concepts are closely linked does not lead the Court to comment on the relationship between the two corresponding doctrinal components.

attribute this failure to the fact that the Court was confronted by a predation challenge under (only) the Robinson-Patman Act, which is not associated with an independent, robust market power requirement.[12] Nevertheless, a central holding of *Brooke Group* was that the requirements under the two statutes for predation cases are similar. Moreover, in this respect *Brooke Group* is regarded to have moved (to the extent it was not there already) the standard under the Robinson-Patman Act upward, toward that understood to exist under the Sherman Act, so one might have expected more explicit attention to how its doctrinal exegesis related to the Sherman Act standard.[13]

The scope for ambiguity, if not confusion, is compounded by the murkiness surrounding both monopoly power and recoupment. Regarding the former, antitrust doctrine, agency guidance, and commentary more broadly—although routinely insisting that there be substantial market power in Section 2 cases—provide remarkably little content with respect to these pronouncements.[14] And, as will be developed further below, recoupment has been substantially underanalyzed as well.

A firm's market power is conventionally understood to refer to its ability to profitably elevate price above a competitive level.[15] The cases and discourse on recoupment often focus on

[12]However, the jury in *Brooke Group* was instructed (in somewhat conflicting ways) that market power was required. *See* Stephen Calkins, *The Supreme Court Term in Antitrust: More Objectivity than Ever*, 62 ANTITRUST L.J. 327, 380 & nn.289, 290 (1994).

[13]The text emphasizes the possible relationship between recoupment and the monopoly power requirement in monopolization cases. Keep in mind, however, that the recoupment prerequisite would typically be taken to be located somewhere in the second monopolization element, concerning the nature of the act before the tribunal. That branch of the doctrine is frequently specialized, in the sense that inquiries generally differ, say, for predatory pricing cases and exclusive dealing cases. The Department of Justice's monopolization report, for example, contains an early chapter on monopoly power followed by separate chapters on different practices. *See* U.S. DEP'T OF JUSTICE, COMPETITION AND MONOPOLY: SINGLE-FIRM CONDUCT UNDER SECTION 2 OF THE SHERMAN ACT (2008) (this report was not joined by the Federal Trade Commission, which had participated jointly in the hearings and other work leading up to the report (*see* Press Release, Fed. Trade Comm'n, FTC Commissioners React to Department of Justice Report, Competition and Monopoly: Single-Firm Conduct Under Section 2 of the Sherman Act (Sept. 8, 2008), http://www.ftc.gov/news-events/press-releases/2008/09/ftc-commissioners-react-department-justice-report-competition-and), and was withdrawn the next year when the administration changed (*see* Press Release, U.S. Dep't of Justice, Justice Department Withdraws Report on Antitrust Monopoly Law (May 11, 2009), https://www.justice.gov/opa/pr/justice-department-withdraws-report-antitrust-monopoly-law); it appears that most of the disagreement concerned the report's statement of substantive rules governing single-firm conduct in a manner that objectors regarded to be too lenient, such as being too generous in providing a safe harbor to behavior or requiring that anticompetitive effects significantly outweigh procompetitive ones, with no suggestion that the overall framework or the role of market power therein was problematic). And it locates its treatment of recoupment in the chapter on predatory pricing. *Id.* at 67–69. Interestingly, its recoupment discussion makes no reference whatsoever to market power or monopoly power (the word "power" does not appear). Likewise, the ABA Model Jury Instructions locate recoupment in its segment on the act of predatory pricing, which is separate from its monopoly power instructions. *See* ABA SECTION OF ANTITRUST LAW, MODEL JURY INSTRUCTIONS IN CIVIL ANTITRUST ACTIONS, 2005 EDITION, at C-47 to C-54 (2005) [hereinafter MODEL JURY INSTRUCTIONS]. Under this interpretation, the questions about the differences between the monopoly power and recoupment requirements are highlighted (which, if either, is higher? are any differences purely quantitative or also qualitative?), whereas if recoupment is viewed as part of, a replacement for, or an instantiation of the monopoly power requirement, the range of uncertainty regarding possible differences seems less.

[14]*See* Louis Kaplow, *On the Relevance of Market Power*, 130 HARV. L. REV. 1303 (2017) (addressing the failure to rationalize the importance attributed to market power and analyzing multiple channels of potential relevance); *infra* note (discussing how statements of the monopoly power requirement in terms of market shares fail to indicate how much market power is required).

[15]*See, e.g.*, U.S. DEP'T OF JUSTICE & FED. TRADE COMM'N, COMMENTARY ON THE HORIZONTAL MERGER GUIDELINES 1 (2006); 2B PHILLIP E. AREEDA, HERBERT HOVENKAMP & JOHN L. SOLOW, ANTITRUST LAW 109, 112 (4th ed. 2014); *see also* MODEL JURY INSTRUCTIONS, *supra* note , at C-4 ("Instruction 2: Monopoly Power Defined. Monopoly power is the

whether a successful predator will be able to earn sufficient profits during the recovery period. Examinations of both market power and recoupment ordinarily consider such factors as the firm's market share, the ease of entry, whether rivals (still) in the market can readily expand their capacity if prices were to rise, and the ability of customers to turn to substitutes.[16]

This overlap immediately raises questions about what, if any, are the differences between the two inquiries. Specifically, if substantial market power has been established, why does that not imply that expected recoupment would be substantial? And if significant market power is lacking, which would seem to cast doubt on recoupment, why hasn't the plaintiff already lost due its failure to satisfy the monopoly power requirement? Is the demand for recoupment a mere reminder that there must be substantial market power? Or does it replace the market power requirement? Or (perhaps equivalently) might it be understood as giving more precise content to the monopoly power requirement in predation cases (an appealing notion in light of the fact that the monopoly power requirement is often stated in a vacuum)? If a plaintiff can prove that a defendant's pricing was predatory, would drive out rivals, and would then lead to recoupment sufficient to render the strategy profitable, might it still lose due to a lack of monopoly power?

2. *Doctrinal Development*

Let us begin with the monopoly power requirement and its analogue in attempted monopolization cases. According to *Grinnell*: "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."[17] Attempted monopolization, under *Spectrum Sports*, requires proof of "a dangerous probability of achieving monopoly power. . . . [D]emonstrating the dangerous probability of monopolization in an attempt case . . . requires inquiry into . . . the defendant's economic power . . . ."[18]

Because *Brooke Group* (as mentioned, a Robinson-Patman Act case) held that predatory pricing cases were essentially to be judged under the standards of Sherman Act Section 2, and

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power to control prices and exclude competition in a relevant antitrust market. More precisely, a firm is a monopolist if it can profitably raise prices substantially above the competitive level for a significant period of time . . . .").

[16] *See, e.g.*, *supra* note (quoting AREEDA & HOVENKAMP); MODEL JURY INSTRUCTIONS, *supra* note , at C-51 (instructing that "To analyze whether sustained excessive pricing is likely to occur, you must consider a number of factors about the market, including the number of competitors, whether entry is easy, whether firms in the market have excess capacity or could quickly create or purchase new capacity to absorb the market share of its rivals, whether firms not in the market could shift assets to the market, and whether substitute products might be available to defeat a price increase.", which language appears in its recoupment instruction but, as is apparent, could as well be offered in connection with whether there is a dangerous probability of achieving monopoly power in an attempted monopolization instruction or, more broadly, as part of an exposition of market power or monopoly power or the definition of a relevant market). The emphasis on entry in particular will be examined in Subsection B.2.

[17] United States v. Grinnell Corp., 384 U.S. 563, 570–71 (1966). Interestingly, although *Grinnell* is the go-to citation for the elements of monopolization, that case itself offered neither discussion nor citations in announcing the now-canonical version of the rule.

[18] Spectrum Sports, Inc. v. McQuillan, 506 U.S. 447, 456, 459 (1993); *see also* U.S. DEP'T OF JUSTICE, *supra* note , at 6–7 ("The 'dangerous probability' inquiry requires consideration of 'the relevant market and the defendant's ability to lessen or destroy competition in that market' [quoting *Spectrum Sports*]. In making these assessments, lower courts have relied on the same factors used to ascertain whether a defendant charged with monopolization has monopoly power, while recognizing that a lesser quantum of market power can suffice.").

since the factual setting was framed by the Court as one involving an attempt, reference to the latter test might have been expected. Indeed, *Spectrum Sports* (which, moreover, was decided just five months earlier) is cited at two key points in *Brooke Group*.[19] Nevertheless, despite those citations—and the fact that *Spectrum Sports* (a short opinion) was entirely about the dangerous probability of monopoly element of attempted monopolization claims—*Brooke Group* does not relate that element to recoupment.[20]

Regarding recoupment itself, the now-canonical formulation from *Brooke Group* is: "The second prerequisite to holding a competitor liable under the antitrust laws for charging low prices is a demonstration that the competitor had a reasonable prospect, or, under § 2 of the Sherman Act, a dangerous probability, of recouping its investment in below-cost prices."[21] It is hard to miss the seeming connection between the recoupment requirement and the market power requirement in attempts cases when *Brooke Group*'s conscious formulation of the former refers to "a dangerous probability[] of recouping" shortly after it had quoted *Spectrum Sports*'s statement of the latter as "a dangerous probability of actual monopolization"[22]—and, moreover, the Court had also just pronounced that predatory pricing cases were to be governed by Sherman Act standards.[23] Given this choice of language for its newly announced statement of the legal rule, one might have imagined that the *Brooke Group* opinion would have articulated this connection and then explained that the need for recoupment was simply an aspect of, a corollary to, or perhaps the whole of the preexisting demand in attempted monopolization cases for

[19]One of these references is in *Brooke Group*'s declaration that the requirements under the Robinson-Patman Act and Sherman Act in predatory pricing cases are similar. *See Brooke Group*, 509 U.S. at 222 ("There are, to be sure, differences between the two statutes. For example, we interpret § 2 of the Sherman Act to condemn predatory pricing when it poses 'a dangerous probability of actual monopolization,' *Spectrum Sports*, . . . whereas the Robinson–Patman Act requires only that there be 'a reasonable possibility' of substantial injury to competition before its protections are triggered . . . . But whatever additional flexibility the Robinson–Patman Act standard may imply, the essence of the claim under either statute is the same . . . ."). The other reference emphasizes *Spectrum Sports*'s core holding that, in attempted monopolization cases, in addition to showing an exclusionary act, the challenger must demonstrate a dangerous probability of success—the monopoly power requirement in attempts cases. *See Brooke Group*, 509 U.S. at 224–25.

[20]As indicated at the end of the preceding footnote, the *Brooke Group* Court explicitly cites *Spectrum Sports* for this proposition (and, as it happens, shortly after its statement of the recoupment requirement), yet it is in a disconnected paragraph, following a quotation from *Brown Shoe* on the familiar idea that the antitrust laws protect "competition, not competitors." *See id.*

[21]*Id.* at 224. This Section, like the rest of the article (*see supra* note) sets to the side the point that the articulation of the recoupment requirement in *Brooke Group* refers not only to profit recovery (the opinion's focus) but also to success in eliminating or disciplining rivals.

[22]*See supra* note (also noting *Brooke Group*'s subsequent, disconnected quotation of *Spectrum Sports* on the issue). In all, the majority uses the phrase "dangerous probability" three times in its opinion, all in the span of a few pages; the first and third usages are the attempted monopolization standard, with reference to *Spectrum Sports*, whereas the second usage is in announcing the now widely quoted recoupment requirement, and that is the only one which does not reference *Spectrum Sports*. *See Brooke Group*, 509 U.S. at 222–25.

[23]*See supra* note (quoting *Brooke Group*). For some prior musings about the Court's choice of language for the recoupment requirement, see Jonathan B. Baker, *Predatory Pricing After* Brooke Group*: An Economic Perspective*, 62 ANTITRUST L.J. 585, 594 n.42 (1994) ("In its reference to the Sherman Act § 2 test, the Court presumably meant that plaintiff must demonstrate a dangerous probability of success in achieving monopoly power (not recoupment), and that it must show a likelihood of recoupment in order to prove a dangerous probability of achieving monopoly power."), and Calkins, *supra* note , at 399 n.384 ("The 'dangerous probability' language is out of place here. The attempt violation requires a dangerous probability of achieving monopoly power by one means or another, or a combination of means. But achieving monopoly power and achieving recoupment may be quite different things, depending on the rigor of the latter test. The Court may reasonably want to protect aggressive pricing by immunizing it absent a 'reasonable expectation' or 'prospect' of recoupment. But one 'dangerous probability' test is enough.").

demonstration of a "dangerous probability" of success. They might have written that, if there was no dangerous probability of recoupment, then the alleged predator could not be imagined to have a dangerous probability of success. But the Court did no such thing.[24]

Instead, *Brooke Group* grounded its articulation of the recoupment demand in *Matsushita*[25] and *Cargill*,[26] neither of which is a monopolization or attempted monopolization case, allowing the interpretation that there is no connection whatsoever between the monopoly power and recoupment requirements. Specifically, the *Brooke Group* Court focused on these two prior cases' insistence that conduct that is alleged to be anticompetitive must be shown to involve rational, profit-maximizing behavior in order for it to be regarded as plausible.[27] Rationality and plausibility were central to *Matsushita* (part of the Supreme Court's 1986 summary judgment trilogy), which is understood more broadly to stand for the proposition that less plausible claims require stronger proof to warrant sending a case to the factfinder.[28] This feature is important because the *Brooke Group* Court is explaining why the facts before it were insufficient to support the jury's verdict for the plaintiff.

In light of the foregoing, one might wonder whether the longstanding monopoly power demand in Section 2 cases has been eliminated, sub silentio, for predation cases. After all, *Brooke Group* announces what is required (under the Sherman Act and not just the Robinson-Patman Act), and in doing so lists "two prerequisites to recovery"—(1) "that the prices complained of are below an appropriate measure of . . . costs" and (2) recoupment (as articulated above).[29] Monopoly power, and its analogue in attempts cases, seems to have vanished.

Nevertheless, it would be highly strained to interpret the case as eliminating a longstanding and uncontroversial requirement without explicitly saying so, particularly since the issue was not before the Court. This point is also powerfully indicated by the fact that the Supreme Court had just decided *Spectrum Sports*, a case standing for the single proposition that the monopoly power analogue in attempted monopolization cases is not only central but also must be proved independently of conduct—and which opinion, as mentioned, is invoked in *Brooke Group* itself, which seemed to crib its recoupment test from there. Furthermore, lower

[24]Lower courts after *Brooke Group* have sometimes behaved similarly. *See, e.g.*, Advo, Inc. v. Phila. Newspapers, Inc., 51 F.3d 1191, 1197, 1200 (3d Cir. 1995) (citing *Spectrum Sports*' three-part test for attempted monopolization, the third being "a dangerous probability of achieving *monopoly power*," but labeling its section discussing the subject "Dangerous Probability of *Recoupment*," citing *Brooke Group* and using the language of recoupment at the start of the section (emphasis added)).

[25]Matsushita Elec. Indus. Co. v. Zenith Radio Corp., 475 U.S. 574 (1986).

[26]Cargill, Inc. v. Monfort of Colorado, Inc., 479 U.S. 104 (1986).

[27]The language following the above *Brooke Group* quotation of the recoupment requirement is: "See *Matsushita*, *supra* . . . ; *Cargill*, *supra* . . . . 'For the investment to be rational, the [predator] must have a reasonable expectation of recovering, in the form of later monopoly profits, more than the losses suffered.' *Matsushita*, *supra*, 475 U.S., at 588–589 . . . . Recoupment is the ultimate object of an unlawful predatory pricing scheme; it is the means by which a predator profits from predation." 509 U.S. at 224. The Court also cited those cases for other propositions, notably regarding the price-cost requirement in predatory pricing (both cases) and the infrequency of predatory pricing (*Matsushita*, but not *Cargill*), that are not central to the present discussion.

[28]*See Matsushita*, 475 U.S. at 587 ("It follows from these settled principles that if the factual context renders respondents' claim implausible—if the claim is one that simply makes no economic sense—respondents must come forward with more persuasive evidence to support their claim than would otherwise be necessary."). The text emphasizes *Matsushita* because discussion of predatory pricing, including recoupment, was at the core of that case whereas it receives only passing mention in *Cargill* (and many of the *Brooke Group* Court's references to *Cargill* are along with, and sometimes quoting, *Matsushita*).

[29]509 U.S. at 522–24.

courts and subsequent commentary do not suggest that any such doctrinal upheaval took place.[30] Any that is found is confined to recoupment and to the Court's statement that the requirements in predation cases under the Robinson-Patman Act and the Sherman Act "are similar."

Supposing, therefore, that Section 2's monopoly power requirement remains, let us consider how it relates to the demand for recoupment. Recall that both inquiries typically examine similar factors in similar ways. Either they are the same or there must exist quantitative or qualitative differences.

Monopoly power, perhaps because its centrality is so taken for granted, is somewhat of an enigma. It is often analyzed—in predation cases and more broadly—in a vacuum, without a clear articulation of its analytical relevance to the desirability of assigning liability to the practice under consideration.[31] It is understood to refer to a great deal of market power—and to a significant, although somewhat lesser degree in attempted monopolization cases—but quantification is never offered. (This matter is deceptive because it is routine to refer to requisite market *shares*, but it has long been familiar that quite different degrees of market power can be associated with any given market share, so the quantitative question of how much market power is required is evaded.[32]) There is also qualitative ambiguity. Of particular relevance for present purposes, it is generally regarded that a firm's market power refers to the degree to which it can profitably elevate its price above a competitive level, but it is unclear whether this refers to its power including or disregarding the effects of its allegedly exclusionary behavior. Must an

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[30]*See, e.g.*, MODEL JURY INSTRUCTIONS, *supra* note , at C-45 (states in its Instruction 1 on Predatory pricing that "[*Monopolization - General, Instructions 1 through 10, supra, should be given in conjunction with this instruction, to the extent pertinent to the case.*]"; and most of those instructions pertain to market definition and monopoly power). As an interesting illustration, Elzinga and Mills, who consulted in *Brooke Group*, state in a subsequent essay that the Court held that monopoly power is one of three requirements in predation cases (in addition to a price-cost test and recoupment), overlooking that the Court crisply listed only two, not their three, requirements in pronouncing the rule. *See* 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 219, 223–24 (John E. Kwoka, Jr. & Lawrence J. White eds., 5th ed. 2009). As a further illustration, Patrick Bolton, Joseph Brodley, and Michael Riordan advance a structured, sequential decision rule for predatory pricing that features a "facilitating market structure" as its first component and "probable recoupment" as its third. *See* Patrick Bolton, Joseph F. Brodley & Michael H. Riordan, *Predatory Pricing: Strategic Theory and Legal Policy*, 88 GEO. L.J. 2239, 2262–85 (2000). Their discussion of the latter often seems to understand it in terms of market power after predation is successful. *See, e.g.*, *id.* at 2270 ("[A] sufficiently strong showing of an increased ability to raise and maintain high prices as a result of successful predation could meet the recoupment requirement . . . .")). And their discussion of the former suggests that it is both similar and close to a traditional market power inquiry. *See, e.g.*, *id.* at 2264 ("The market structure must make predation a feasible strategy. This factor requires proof of sustainable market power—the ability to raise prices (or otherwise exploit consumers) over some significant but not necessarily unlimited period of time."); *id.* at 2265 ("These factors are proxies for market power . . . ."); *id.* at 2283 (referring to their first factor as a "market power screen"). Nevertheless, they do not connect or compare these distinct (and nonconsecutive) components of their overall test that they present as grounded in *Brooke Group*.

[31]*See* Kaplow, *supra* note .

[32]*See* Louis Kaplow, *Market Share Thresholds: On the Conflation of Empirical Assessments and Legal Policy Judgments*, 7 J. COMPETITION L. & ECON. 243, 258–65 (2011). One way to see this point is to ask which side would prevail on the monopoly power element in a case in which both sides' experts estimates of the defendant's power were precisely the same: say, that the defendant could profitably raise price 12.6%; or 29.2%; or 6.8%. What court opinion, agency guidance document, or treatise even purports to answer such a question? When they state the requirement in terms of market shares, one cannot know. This problem of using market shares rather than estimates of market power is related to the difficulties (really, incoherence) associated with market definition. *See, e.g.*, Louis Kaplow, *Why (Ever) Define Markets?*, 124 HARV. L. REV. 437 (2010). Nor is the problem assuaged by the use of vague adjectives. *See, e.g.*, U.S. DEP'T OF JUSTICE, *supra* note , at 20 & n.11 (using the phrase "substantial degree of market power" and citing cases that refer to a "substantial," "extreme," and "high" degree of market power).

alleged predator have significant power ex ante or only upon consummation of its scheme? This question is critically important in light of the potentially opposing implications of these different notions of market power regarding recoupment, as explored in Subsection B.2.[33]

Whatever might be the answers to the above questions about the monopoly power requirement, return now to the comparison with recoupment:[34]

- Does the monopoly power requirement demand more market power than enough to recoup? If so, why? And how can recoupment remain a live issue after such market power has been demonstrated?
- Does the monopoly power requirement demand less? In which event, the requirement is a fortiori satisfied if recoupment is demonstrated and hence is never decisive.[35]
- Or do the two demand the same amount of market power? That is, might we give content to the ambiguous monopoly power requirement in predation cases by deeming it to demand sufficient power to recoup, no more and no less? If so, then recoupment can be understood as a refinement or replacement of the monopoly power requirement. Either way, there is, in essence, only a single requirement.[36]

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[33]*See also infra* note (elaborating some of the surprising implications of the monopoly power dimension in monopolization and attempts cases).

[34]The discussion in the text here, combined with the analysis in the rest of this article, makes it hard to understand proposals of some commentators regarding how the apparent presence of both monopoly power and recoupment requirements should be addressed. In particular, some suggest that recoupment be abandoned in favor of monopoly power, without addressing the core doctrinal ambiguities of the monopoly power concept. *See, e.g.*, Christopher R. Leslie, *Predatory Pricing and Recoupment*, 113 COLUM. L. REV. 1695, 1746–51 (2013) ("The correct focus for section 2 analysis is on market domination, not recoupment. Yet courts in predatory pricing cases sometimes confuse the two concepts by suggesting that they necessarily go together. . . . The confusion between market power and recoupment is particularly acute in attempted monopolization jurisprudence. . . . The solution to this problem is simple: Treat predatory pricing claims like other section 2 claims. . . . [T]his analysis should take place in the evaluation of the monopoly power element, not through a convoluted recoupment requirement . . . . Proper application of the monopoly power screen should eliminate the need for the recoupment inquiry.").

[35]Some discussions of the relationship between monopoly power and recoupment treat them as qualitatively similar but contemplate that recoupment may be more demanding. *See, e.g.*, AREEDA & HOVENKAMP, *supra* note , at 58 ("[T]he recoupment requirement [under] *Brooke Group* is stricter, requiring a showing not merely that monopoly or its extension is reasonably likely but also that this monopoly will be sufficiently valuable to the defendant to justify the investment made in creating it."); Leslie, *supra* note , at 1748 ("Recoupment requires something more; it requires the ability to earn sufficient monopoly profits to make the whole venture a worthwhile expenditure of funds."). If recoupment is necessarily more (or at least as) demanding, then indeed the monopoly power requirement is rendered redundant. If recoupment is understood to be possibly but not necessarily more demanding, depending on the circumstances, then the challenger must meet the greater of the two to prevail. In cases in which monopoly power is stricter, the text's question on why that should be so is apt.

[36]An interesting illustration is offered by the decision, shortly after *Brooke Group*, in *Rebel Oil Co. v. Atl. Richfield Co.*, 51 F.3d 1421 (9th Cir. 1995), an appeal from the grant of summary judgment to a defendant on market power, after the district court had limited discovery to that issue. *See id.* at 1432. The court seemed largely to examine market power with reference to that which may have existed during the recovery phase, precisely because that bore on the defendant's ability to recoup. *See, e.g.*, *id.* at 1434 ("In order unilaterally to raise prices above competitive levels, the predator must obtain sufficient market power. . . . Without market power to increase prices above competitive levels, and sustain them for an extended period, a predator's actions do not threaten consumer welfare."). Yet it was examining monopoly power in a proceeding in which the question of predatory pricing (including recoupment) was not before the court. Nevertheless, it ultimately concluded that there was not enough market power for a Section 2 attempted monopolization claim but remanded because there may have been enough for a primary-line claim under the Robinson-Patman Act. If the requisite market power is taken to be enough, post-predation, to satisfy the recoupment condition, than that quantum is the same

These head-on comparisons implicitly assume that the only differences are quantitative. But this need not be so. As will be elaborated in Section B, the recoupment condition is not close to being one-to-one with any single or even multiple notions of market power. This suggests that, aside from whether there are any quantitative differences, there may be qualitative differences as well. If so—and for them to make sense in a manner consistent with a separate monopoly power requirement—market power must be relevant to the optimal determination of liability in other ways, a subject explored in Subsection B.3.

In any event, the mysteries identified in this Section might in part be understood in light of the aforementioned general failure to articulate how much market power is required in Section 2 cases, why that is so, and how the answers relate to the optimal assignment of liability. Perhaps any attempt to ground recoupment in the longstanding monopoly power requirement was avoided because it was appreciated how difficult it would be to build on quicksand.

But it seems more likely that *Brooke Group*'s elaboration of recoupment, including its failure to relate it to Section 2's market power requirement, reflects a number of peculiarities. *Brooke Group* and the key prior cases on recoupment (*Matsushita* and *Cargill*) arose in factual[37] and doctrinal[38] settings that were in important respects atypical. These and other features

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regardless of the statute. However, drawing on *Brooke Group*'s distinction between the "dangerous probability[] of recouping" required under the Sherman Act and the "reasonable prospect" required under the Robinson-Patman Act, Brooke Grp. Ltd. v. Brown & Williamson Tobacco Corp., 509 U.S. 209, 224 (1993); *see* 51 F.3d at 1447, one may have in mind the same degree of market power, understood in the same way, but not needing to be demonstrated with as high a level of confidence (although it is difficult to draw a clear interpretation from the court's brief, ambiguous, and somewhat conflicting remarks on the subject—in particular, referring to the lower degree of power that may be required to enforce an oligopoly). In any event, as is typical, the court at no point suggested how much market power during the recovery period was required under either statute, either by reference to the short-run profit sacrifice (which was not before the court) or in an absolute sense. Another interesting feature of the case is that the court's analysis focused heavily on entry barriers during the recovery period, *see id*. at 1439–42, without addressing (beyond a passing mention, *see id*. at 1440) the extent to which a period of successful predation might itself have discouraged entry and expansion by rivals.

[37]*Brooke Group*, like *Matsushita*, was not a straightforward predation case, but rather one involving the prospect of recoupment in an oligopoly setting, which feature figured prominently in both decisions. *See, e.g.*, Matsushita Elec. Indus. Co. v. Zenith Radio, 475 U.S. 574, 590 (1986) ("In this case, respondents allege that a large number of firms have conspired over a period of many years to charge below-market prices in order to stifle competition. Such a conspiracy is incalculably more difficult to execute than an analogous plan undertaken by a single predator."). Neither case benefited from a substantial presentation of the modern economics of predatory pricing, regarding theory or evidence. *See, e.g.*, Bolton, Brodley & Riordan, *supra* note , at 2257 (stating that "in fairness, however, the old theory was the only economic view presented to the court" in *Brooke Group*); Louis Kaplow & Carl Shapiro, *Antitrust*, *in* 2 HANDBOOK OF LAW AND ECONOMICS 1073, 1197, 1199 n.192 (A. Mitchell Polinsky & Steven Shavell eds., 2007) (discussing the article not cited by the Court, Richard O. Zerbe, Jr. & Donald S. Cooper, *An Empirical and Theoretical Comparison of Alternative Predation Rules*, 61 TEX. L. REV. 655 (1982), which considered more cases and reached different conclusions from those in the cited article, Roland H. Koller II, *The Myth of Predatory Pricing: An Empirical Study*, ANTITRUST L. & ECON. REV., Summer 1971, at 105); *id*. at 1197 (discussing more modern empirical evidence, some of which was published before *Brooke Group*). And both Courts might have been significantly concerned about allowing what they saw as highly implausible, confusing cases to be decided by juries. In this latter regard, *Brooke Group* shares similarities with *Spectrum Sports*, which, as mentioned earlier in this Subsection, was prominently cited and had been decided only months before. Furthermore, all three cases involved private suits by disgruntled competitors, which may have led the Court to be more skeptical. A further oddity regarding *Brooke Group* specifically is that the oligopoly recoupment that was central to the plaintiff's predation explanation for the defendants' conduct supposed that the plaintiff firm itself may have been involved in legally (and politically) risky oligopoly pricing that its own executives (perhaps for those reasons) denied. *See Brooke Group*, 509 U.S. at 237–38; *id*. at 255 n.15 (Stevens, J., dissenting).

[38]This dimension refers to *Brooke Group* being a Robinson-Patman Act case but articulating the law for Sherman Act Section 2 cases as well. In addition, *Brooke Group* drew heavily on *Matsushita*, a Sherman Act Section 1 case, and to a lesser degree on *Cargill*, a Clayton Act Section 7 case—which is to say that none of the Court's cases on recoupment

suggest that the rise of the recoupment requirement and the form it takes may be path-dependent[39] and reflect specific features of the framing of the questions presented and the way the cases were argued.[40] *Brooke Group* was a case in which the need to establish recoupment was uncontested—both the plaintiff and the dissent acknowledged the need for recoupment but thought that the evidence was sufficient[41]—and the focus, accordingly, was not on how

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involved Section 2, regarded to be the core provision addressed to monopolistic exclusion, including via predatory pricing. (In *Matsushita*, the appellate court found that the alleged horizontal predatory pricing conspiracy would be a per se violation of Section 1, so the question on which the Court's analysis of predatory pricing more broadly and recoupment in particular was focused was whether there was a plausible basis to infer a conspiracy in light of the seeming implausibility of the alleged scheme. *See Matsushita*, 475 U.S. at 584–85, 593.)

[39]In addition to the items mentioned in the two preceding footnotes, there is a key quantitative aspect: in *Matsushita*, which started the line of cases presenting a recoupment requirement for predation challenges, the Court understood the plaintiff to be claiming (perhaps over-claiming, ultimately to its detriment) that the defendants had incurred staggering losses, making the claim seem particularly far-fetched with regard to recoupment. This, in turn, may have helped bring recoupment to the forefront, including its being listed as a separate "prerequisite" rather than being regarded as part of a broader assessment of whether a plaintiff's theory was plausibly supported by the evidence. Also interesting in this regard is that one of the dissent's responses was that the defendants may well not have been rational profit-maximizers: "The Court, in discussing the unlikelihood of a predatory conspiracy, also consistently assumes that petitioners valued profit-maximization over growth. . . . In light of the evidence that petitioners sold their goods in this country at substantial losses over a long period of time, . . . I believe that this is an assumption that should be argued to the factfinder, not decided by the Court." *Matsushita*, 475 U.S. at 604 (White, J., dissenting). This response challenges not only the foundation of the recoupment requirement but also the basis for much antitrust analysis, and it too may have a sui generis character given the time period and that the alleged below-cost pricing involved Japanese firms. In discussing this case prior to the Supreme Court's decision, Frank Easterbrook offered an alternative interpretation of the implausibility of significant recoupment, following the logic of triangulation: "The predation recoupment story therefore does not make sense, and we are left with the more plausible inference that the Japanese firms did not sell below cost in the first place. They were just engaged in hard competition." Frank H. Easterbrook, *The Limits of Antitrust*, 63 TEX. L. REV. 1, 27 (1984). He subsequently applied a similar line of reasoning as a judge in *A.A. Poultry Farms, Inc. v. Rose Acre Farms, Inc.*, 881 F.2d 1396, 1401 (7th Cir. 1989) ("The investment must be recouped. If a monopoly price later is impossible, then the sequence is unprofitable and we may infer that the low price now is not predatory.").

[40]Stephen Calkins emphasizes that the *Brooke Group* Respondent conceded the Petitioner's preferred answers to their questions presented and that the opposing lawyers could not agree on what the disagreement was about, up through the end of the oral argument. *See* Calkins, *supra* note , at 382–83, 403. *Brooke Group* is also unusual in that, after disposing quickly of the legal question the majority deemed to be before the Court (whether the possibility of oligopoly recoupment was foreclosed as a matter of law; the Court held it was not), the core of the opinion was devoted to a de novo review of the sufficiency of the evidence (drawing criticism from the dissent). Furthermore, Calkins states that some of the Court's factual analysis of recoupment drew on material not in the appellate record and departed significantly from the defendant's argument. *See id*. at 385–90; *see also* C. Scott Hemphill & Philip J. Weiser, *Beyond* Brooke Group*: Bringing Reality to the Law of Predatory Pricing*, 127 YALE L.J.(forthcoming 2018) (drawing on Justice Blackmun's papers to expose some of the inner workings of the Court in reaching its decision in *Brooke Group*).

[41]Moreover, the dissent pointed out that the jury was instructed that it must find recoupment, which, since it returned a verdict for the plaintiff, presumably it did. *See Brooke Group*, 509 U.S. at 254 (Stevens, J., dissenting) ("[P]redatory price cutting is not unlawful unless the predator has a reasonable prospect of recouping his investment from supracompetitive profits. . . . The jury, of course, was so instructed, . . . and no one questions that proposition here."); *id*. at 244 n.2 ("The jury made its finding after being instructed that 'injury to competition' means 'the injury to consumer welfare which results when a competitor is able to raise and to maintain prices in a market or well-defined submarket above competitive levels. In order to injure competition in the cigarette market as a whole, Brown & Williamson must be able to create a real possibility of both driving out rivals by loss-creating price cutting and then holding on to that advantage *to recoup losses* by raising and maintaining prices at higher than competitive levels. You must remember that the Robinson–Patman Act was designed to protect competition rather than just competitors and, therefore, injury to competition does not mean injury to a competitor.'" (emphasis added)). However, it appears that other instructions permitted the jury to reach its conclusion through other channels, making it unclear whether the jury in fact found recoupment. *See* Calkins, *supra* note , at 379–82. The majority did not address the question (although the problem was emphasized in the Respondent's brief; *see id*. at 382),

recoupment fits into the broader landscape but on whether the facts were sufficient to find recoupment in the case at hand. Furthermore, the inherent interconnection between recoupment and other aspects of a coherent predation inquiry was obscured because only recoupment was before the court.[42] In light of all these considerations, it is less surprising that *Brooke Group* does not address pressing questions concerning how recoupment fits in with broader antitrust doctrine or sensible analysis of predatory pricing. As a consequence, the case fails to provide clear (or any) guidance on a number of features of predatory pricing analysis.

The structure of subsequent lower court opinions reflects this murky state of affairs. Consider, for example, the Sixth Circuit's decision in *Spirit Airlines, Inc. v. Northwest Airlines, Inc*.[43] The court stated the standard two-element monopolization rule at the outset of its legal analysis,[44] but later (and with no mention of the foregoing), after its discussion of monopoly power, makes reference to *Brooke Group*'s two requirements in a manner suggesting (but not stating) that the court viewed *Brooke Group*'s demands as an elaboration of the second, act requirement under the traditional monopolization test.[45] Regarding the possible overlap between the market power and recoupment inquiries, a number of points stand out. First, the court's entire legal analysis began with the question of the relevant market, as is common, including a substantial discussion of the product market, addressing a dispute on the matter without reference to how it relates to the analysis that follows.[46] The next, separate section on monopoly power presents standard legal formulations, but when it moves to the case at hand largely presents commentary in support of the plausibility of predatory pricing in the present context, which would seem more to go to the analysis of the alleged predation, at the core of the second monopolization element, which the court had not yet reached.[47] After a subsequent, extensive section relating to the price-cost test, the court follows with a section on barriers to entry,[48] which comes after its discussion of monopoly power and precedes its discussion of recoupment—that is, it is separated from both although it is commonly regarded to be part of each. It is also noteworthy that the entirety of the substantial opinion fails to address what the competing explanation(s) to the plaintiff's depiction of the defendant's pricing might be, which illustrates the problem addressed below, in Section II.C.

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instead devoting its attention to whether the facts were sufficient to support such a finding and concluding that they were not.

[42]*See Brooke Group*, 509 U.S. at 218–19. There is much to the dissent's point that a reasonable factfinder could infer from a firm's incurring substantial losses from its below-cost pricing (a fact that was taken to be true for purposes of the decision), combined with internal documents evidencing a predatory plan and the firms' historical success in oligopoly pricing, that recoupment would follow. *See id.* at 257–58 (Stevens, J., dissenting). For further discussion of the interdependence between recoupment analysis and the core predation inquiry, see Section II.B. *See also infra* note (elaborating the difference between the majority and dissent's approach to the matter in *Brooke Group*).

[43]431 F.3d 917 (6th Cir. 2005).

[44]*See id*. at 932.

[45]*See id.* at 937, 947.

[46]*See id*. at 933–35.

[47]*See id*. at 935–37.

[48]*See id*. at 946–47.

B. ANALYSIS

1. *The Recoupment Condition*

Consider the following expression—implicitly, in the confines of a simple model, the features of which will become apparent—of the statement that, in order for a predatory strategy to be profitable, the anticipated short-run profit sacrifice must be less than the discounted present value[49] of the expected boost to future profits:[50]

$\delta^{pred}\left(\pi^{accom} - \pi^{pred}\right) < \delta^{monop}\left(\pi^{monop} - \pi^{accom}\right)$. On the left side is the anticipated short-run profit sacrifice. The parenthetical term is the difference between the (expected) profits under a strategy of accommodation, π^{accom}, and under a strategy of predation, π^{pred}, each of which may be understood as corresponding to some common unit of time. (Accommodation refers to the situation that exists, for example, after an entrant arrives, characterized by lower prices and profits than had prevailed previously.) This term is weighted by the factor δ^{pred}, which might be interpreted as the (expected) duration of the predation period.

On the right side is the expected long-run profit recovery (the amount recouped). The parenthetical term here is the difference between the (expected) profits when such a strategy has succeeded, π^{monop}, and under a strategy of accommodation, π^{accom}, which increment is the per period enhancement in profits due to predation. (The use of the term monopoly, with "monop" as the shorthand superscript, is for expositional convenience, it being understood that in general we are imagining a less competitive scenario than that under accommodation.[51]) This latter term is weighted by the factor δ^{monop}, which incorporates a number of ingredients: a discount rate (the factor is lower if the firm more heavily discounts the future or if the recovery period does not commence for a longer period of time), a probability of success (the factor is higher when the probability is greater), the duration of success (the factor is higher when the enhancement is expected to last longer), and the breadth of impact (the factor is higher when a reputation will be established in more markets).

Before proceeding to the relationship between the satisfaction of this condition and market power, it will be useful for later parts of the article to offer some further reflections on this condition. Perhaps most apparent is how difficult it would be to actually determine whether it holds. On each side, we have two profit terms. In any given case, at least one of them will have to be evaluated using imputations because only one thing—say, predation or accommodation—actually occurred.[52] Not only is the other scenario counterfactual, but it will

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[49]In most of the exposition to follow, reference to discounting, expectations, and other features will be omitted, and may be taken to be implicit (so, for example, references to the magnitude of the future profit recovery can be interpreted as its expected present value).

[50]*See, e.g.*, Ordover & Saloner, *supra* note , at 552–53. This expression and the corresponding simple model are restrictive (in failing to explicitly represent, for example, uncertainty about the degree of success and changes over time in what profits would be obtained both under accommodation and in the event of success), but it will be apparent that the central points to be made would remain applicable under a more complete analysis.

[51]Such a less competitive scenario could include one in which coordinated price elevation would succeed, as the plaintiffs argued in both *Matsushita* and *Brooke Group*.

[52]This point is rarely noted. An exception is C. Scott Hemphill, Note, *The Role of Recoupment in Predatory Pricing Analyses*, 53 STAN. L. REV. 1581, 1597 (2001).

be disputed which it is: that is, the challenger will assert that predation occurred and then attempt to impute profits under accommodation, whereas the defendant will claim that accommodation occurred and accordingly purport to impute profits under predation.

Moreover, each profit term, whether involving observation or imputation, has subcomponents, namely, revenue and costs. Revenue is price time quantity (in the simplest of cases), so both will need to be imputed when a scenario is not observed. Moreover—and most strikingly given discussions of predatory pricing tests—costs must be determined. And, on the left side (the short-run profit sacrifice), to assess the difference in the profit terms it is necessary to determine the difference in costs. This difference is the incremental cost of producing the greater quantity under predation, that is, the cost that must be examined under many cost-based tests. We can immediately see the fallacy underlying suggestions that recoupment may be easier to assess than the price-cost test and, in particular, that it avoids the need to inquire into costs.

Finally, both weighting factors are difficult to evaluate. For example, from an ex ante perspective, one must predict the duration of predation and how long the profit recovery will last. Taken together, the assessment of recoupment can be quite a difficult undertaking, to a much greater degree than seems to be recognized. A conjecture is that this oversight is in part due to a remarkable feature of most writing on recoupment, whether by courts, agencies, or commentators: a failure to actually write down and examine the recoupment condition, which might naturally lead to more systematic attention to its components.

2. *Relationship to Market Power*

In examining the recoupment condition, we can see that market power as such does not appear. Nevertheless, a moment's reflection suggests that market power does bear on the profit terms. Suppose that greater market power is associated with higher profits and, moreover, that all of the profit terms rise with market power by the same proportion.[53] In this case, it is evident that the level of market power would have no effect on whether the condition held because increased market power would raise both sides of the inequality by the same factor. Hence, for market power to be relevant to whether the recoupment condition is satisfied, it must influence the profit terms differentially.[54]

One natural candidate is π^{monop}, which is most distinctively (and positively) associated with the level of market power that would exist once the allegedly predatory pricing has had its effect.[55] If market power in this sense is higher, π^{monop} alone may rise, or it may rise relatively more than the other profit terms do. As a practical matter, this level of market power may be

[53]And assume further and throughout this Subsection that market power does not bear on the two weighting factors, keeping in mind that the analysis here is meant merely to be suggestive. Some of the discussion in Subsection 3 about other ways in which market power may be relevant could be assimilated into these weights, appropriately interpreted.

[54]Note, however, that the degree to which recoupment succeeds or fails may also be relevant. For example, greater apparent recoupment may make us more confident that the condition holds whereas a greater apparent shortfall may make us more confident that it does not. Interestingly, under this hypothetical assumption, greater market power increases this magnitude when the condition holds, but, when the condition fails, it would make it fail to a greater extent, which has the opposite implication.

[55]This understanding of market or monopoly power in predatory pricing cases is consistent with *Brooke Group*'s usage in two passing mentions of these notions. *See supra* note . (Recall as well that the pertinent notion of exercised market power upon success in that case involved coordinated price elevation.)

susceptible to direct estimation primarily in cases in which the strategy has been effective,[56] but in those cases it might make more sense to estimate the resulting profits themselves (a point elaborated below)—or, indeed, if we are confident that predation has been effective, we might on that account assign liability rather than persist with a recoupment inquiry. In any event, we have a notion of market power that does bear positively on liability in this instance, supposing that the recoupment condition is diagnostic in the ordinarily assumed fashion.

Next consider π^{accom}, which is most distinctively (and positively) associated with the level of market power that would obtain in the absence of predation.[57] To the extent that accommodation does not result in perfect competition, prices would be somewhat elevated, and a firm that adopts a strategy of accommodation would tend to profit more the greater was the level of market power in that scenario. When considering an allegedly anticompetitive act prospectively (as it often might be in attempted monopolization cases involving allegations of predatory pricing), the observed level of market power would be the pertinent amount.

Note that in this case, the higher is market power, the less likely our condition is to be satisfied. There are two reasons for this. First, the greater is π^{accom} (which is implied by greater market power in this sense), ceteris paribus, the larger is the profit sacrifice (the left side of the condition). Second, the greater is π^{accom}, the smaller is the future increment to profitability from a given, achieved level of π^{monop} (the term in parentheses on the right side of our formula).[58] This perhaps initially counterintuitive result—that a higher level of market power (in this sense) cuts against liability (assuming that the recoupment condition is indeed diagnostic in the standard way)—has a straightforward intuitive basis. When the level of market power in the absence of predation's impact is higher, the firm enjoys greater profits in the absence of predation, which makes predation less attractive, all else equal. Of course, some factors (less elastic market demand) raise the other profit terms as well. Importantly, some factors bear differentially on market power with and without predation.[59]

One such factor is of particular interest in this respect. Predation may be employed in order to create what may be termed a behavioral or strategic barrier to entry. That is, rivals will exit and prospective entrants will decline to enter if a predator's conduct leads them to expect that their attempts to compete will prove to be unprofitable due to anticipated predatory pricing. Note that the erection of such a behavioral barrier to entry is especially valuable when other, preexisting entry barriers (whether technological, economic, or regulatory) are weak. And, when

[56]If the practice has not yet had its effect (or a challenge involves a practice that failed but was argued, ex ante, to be likely to have a posited anticompetitive effect), then a measurement of extant market power would tend to involve estimation of a lower level of market power, which is not the level that would be predictive of profits conditional upon success—the profit term currently under discussion. To move from that prevailing measure of market power to the level of market power conditional on success would involve ascertaining the extent to which the act, if successful, would raise market power.

[57]One might also consider π^{pred}. Here, it is familiar that a higher market share during the predation period is associated with a greater short-run sacrifice to the extent that price is below marginal cost. Interestingly, we have a familiar component of market power that, when higher, makes recoupment more difficult. Like the other cases in the text, what is relevant in this instance, as noted, is a component of market power rather than market power as such. Moreover, this component, market share, is endogenous to the alleged predator's strategy and rivals' responses. In addition, calculation of π^{pred} depends on the quantity produced, not the market share per se, making the relevance of this component of traditional market power measures even more attenuated.

[58]Observe that both forces are likely operative even though the two π^{accom} terms need not be the same (as each other, or over time), as mentioned in note .

[59]Specifically, in plausible models a lower market demand elasticity will raise π^{monop} by more than it raises π^{accom}.

that is so, it follows that there will exist a lower level of market power in the absence of predation. It is this constraint on the exercise of market power due to the insufficiency of preexisting entry barriers that makes predation likely to be profitable in the first place. Hence, it is unsurprising that, when market power before predation is lower for this reason, the recoupment condition is more, not less, likely to be satisfied.

This observation—which has a long history in the economics literature and antitrust commentary on predatory pricing[60]—is interesting but also disturbing. In attempted monopolization cases as well as some involving monopolization itself, measurement of market power may effectively involve estimating its level before (or abstracting from) the impact of the alleged predation. In that event, ordinary demands for greater market power may, with respect to recoupment, cut against liability rather than in favor of it. It is ironic that recoupment analysis is motivated to be a check on the possible irrationality of purported explanations for a defendant's behavior, yet it coexists with standard market power analysis that may take a central reason that predation may be profitable and hence rational to militate against liability.[61] As will be

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[60]This idea is often attributed to B.S. Yamey, *Predatory Price Cutting: Notes and Comments*, 15 J.L. & ECON. 129, 142 (1972): "The point is frequently made in the literature on predatory pricing that the practice makes little sense where entry into the industry or trade in question is easy. However, the Mogul [Steamship] story serves to illustrate a general point, namely, that predatory pricing, or the threat of its use, may itself operate as an effective hindrance to new entry even in situations where the conventional barriers to entry are weak or absent. In this respect predatory pricing, like certain other pricing practices, should be given a place in the analysis of barriers to entry." It has been elaborated in the manner presented in the text by David Easley, Robert T. Masson & Robert J. Reynolds, *Preying for Time*, 33 J. INDUS. ECON. 445, 456 (1985): "By simply making life tough for entrants the monopolist may intimidate future entry. By the same token, large entry barriers need not be present for predation to be an optimal strategy. Indeed relatively low entry barriers and the threat of rapid mass entry may motivate a monopolist to artificially manufacture an additional entry deterrent through predation." *See also* U.S. DEP'T OF JUSTICE, *supra* note , at 57; ALISON JONES & BRENDA SUFRIN, EU COMPETITION LAW 359 (5th ed. 2014); Bolton, Brodley & Riordan, *supra* note , at 2265 ("However, the courts have failed to see that successful past predation can itself operate as an entry and reentry barrier, particularly where reputation effects are present."); Miguel de la Mano, Renato Nazzini & Hans Zenger, *Article 102*, *in* THE EU LAW OF COMPETITION ¶¶ 4.379–4.383 (Jonathan Faull & Ali Nikpay eds., 3d ed. 2014) ("But, recoupment is not systematically related to dominance, which measures the level of market power of the predator before or during the predatory attack. . . . Moreover, the presence of a dominant firm indicates that the degree of competition is already weakened. As a result, such a dominant firm may earn limited gains from further increasing its grip on the market."); Thomas G. Krattenmaker, Robert H. Lande & Steven C. Salop, *Monopoly Power and Market Power in Antitrust Law*, 76 GEO. L.J. 241, 254–55 (1987) ("Analysis of market power often is treated as a threshold issue in antitrust litigation, to be carried out in an identical fashion irrespective of the defendant's alleged conduct. Indeed, certain antitrust standards call on courts to evaluate the market power of the defendant before any analysis of the defendant's conduct is undertaken. . . . This procedure is seriously flawed for a court concerned with the exercise of Bainian market power by a defendant engaged in exclusionary conduct. . . . It is the exclusionary conduct that creates the market power being evaluated, not the other way around.") The view that a lack of entry barriers negates predatory pricing—which is entailed by requiring monopoly power (or a dangerous probability thereof) and, moreover, demanding that such a showing include proof of entry barriers—supposes, for example, that the predation itself may succeed in driving out an existing rival (that often has already sunk some costs) but that this success would not deter the entry of future rivals (who have not yet sunk any costs). In that case—which might arise, for example, if prospective new entrants would have access to a lower-cost technology unavailable to the existing rival—no behavioral entry barrier would be erected and, as a consequence, π^{monop} would be low as well. It is also notable that the modern economics literature on predatory pricing, *see infra* note , is explicitly strategic, in a manner that makes considerations such as the present one harder to miss.

[61]The same reversal of sound logic can arise in connection with the direct and familiar suggestion (without regard to any independent market power inquiry) that successful recoupment requires entry barriers and hence a lack thereof warrants rejection of a predation claim due to the failure of recoupment. *See, e.g.*, Matsushita Elec. Indus. Co. v. Zenith Radio, 475 U.S. 574, 591 n.15 (1986) (stating that "[r]espondents offer no reason to suppose that entry into the relevant market is especially difficult, yet, without barriers to entry, it would presumably be impossible to maintain

elaborated in Part II, the tendency in some antitrust doctrine and discourse to employ sequential decision rules, under which aspects of analysis are formulated as distinct elements, can result in a siloing of analysis that hinders triangulation and can lead us astray. Unfortunately, this problem is frequently present with respect to the treatment of market power requirements.[62]

Having now considered the channels by which market power—the most recurring aspect of antitrust inquiries generally—may influence recoupment, we should further consider whether, even when one or another sense of market power is correlated with components of the recoupment condition, market power analysis is useful. The very fact that different senses of market power—here, the level with the effects of the alleged predation versus the level without these effects—have different (and potentially opposite) implications should give us pause. On closer examination, the linkage is even more jumbled, so much so that market power analysis as such is probably unhelpful. This point is striking because, at first sight, the monopoly power and recoupment requirements appear to overlap a great deal.

We have seen that, on one hand, market power does not appear directly in our recoupment condition, but, on the other hand, various senses of market power tend to be correlated with particular terms in that condition. When relevant components—like our profit terms here—are difficult to measure, it seems appealing to seek proxies for them, like market power. However, this approach makes sense only if the proxies are themselves more readily observable than are the pertinent underlying factors. This predicate is false in the present setting: one cannot simply see the level of market power but must estimate it using information on its underlying components.

Moreover, although the components feeding into the measurement of market power do influence the profit terms, the manner of influence on those profit terms is different from how they influence market power (even when considering the appropriate sense, as discussed above). Therefore, one should examine those components directly for purposes of estimating the profit terms in the recoupment condition, cutting out the "middle man" of market power. Traits of the demand curve and of a dominant firm's cost curve influence market power. And they influence the profit measures. But different basic parameters tend to influence each differently. Sometimes they have different quantitative effects: raising one parameter might, for example, have the same effect on a market power measure as raising another parameter would have, but the former may have twice the effect as the latter on the corresponding profit term. And sometimes they have different qualitative effects: raising some parameter may imply greater market power but lower profits. That is, market power is not a sufficient statistic for profits.[63]

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supracompetitive prices for an extended time," but in a context in which it was imagined that recoupment would take decades); AREEDA & HOVENKAMP, *supra* note , at 51 ("[W]e suggest . . . that the recoupment requirement demand only a showing of significant barriers to entry and sufficient output constraints on existing rivals to warrant an inference that a monopoly, if created, would be durable."). Prior commentators have noted this danger. *See* sources cited *supra* note .

[62]*See* Kaplow, *supra* note .

[63]If a given measure of market power was a sufficient statistic for a given measure of profit, then the ratio of any pair of derivatives of the market power measure with respect to each of two underlying parameters would be the same as the ratio of the corresponding derivatives of the profit measure. If this were not so, then when we change the two pertinent parameters in a way that keeps market power constant, profits will change, so the same level of market power could be associated with a wide range of profit levels. And conversely. To assess whether this property holds, consider the standard model of a dominant firm that supplies a homogeneous good and is constrained by a competitive fringe of rival firms. *See, e.g.*, Kaplow & Shapiro, *supra* note , at 1081; William M. Landes & Richard A. Posner, *Market Power in Antitrust Cases*, 94 HARV. L. REV. 937, 944 (1981). Simplify further by assuming that the dominant firm has constant

In addition to these analytical points, one should keep in mind that it is not possible in most instances simply to "observe" market power, either that which presently exists or that which might exist under various hypothetical conditions. Hence, with respect to assessing recoupment, there is no point in combining all of the (imprecisely estimated) parameters in one way, to measure market power, for the purpose of then using that intermediate measurement to make an (additionally noisy) inference about the profit terms in our recoupment condition. Rather one should use the estimates of the parameters directly to draw the best inferences one can about the profit terms and hence about recoupment. However imperfect that direct inference might be, interposing market power as an intermediate step in the process leads to a worse inference because the pertinent information is scrambled along the way.

3. *Market Power's Relevance in Other Ways*

The demand for monopoly power or a dangerous probability thereof, despite its routine invocation in monopolization and attempted monopolization cases, often is examined in a vacuum rather than integrated with the analysis of the allegedly exclusionary practice. Accordingly, the true potential relevance of market power in particular settings is often obscure. Predatory pricing is no different. Subsection 2 addresses recoupment in particular because it and market power are each understood by reference to similar factors. This Subsection considers whether market power may be relevant in other ways, which seems natural to examine because, as discussed in Section A, the monopoly power requirement was well established long before any explicit attention was paid to recoupment.[64] In the course of the discussion to follow, it is important to keep in mind the caveat that, even when market power does appear to be relevant in one way or another, it is necessary to inquire further whether it is market power as such that matters or whether instead one or more factors that bear on market power are themselves the pertinent determinants.[65]

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marginal cost and faces linear market demand and a linear aggregate supply function for the rivals. Define the market power of the dominant firm by the Lerner index, and now compare that formula to one for the dominant firm's profits. The assumption of constant marginal cost (and no fixed cost) means that the firm's profits equal the Lerner index times firm revenue (because the Lerner index indicates, in this special case, the fraction of revenue that is profit). To assess our property for market power to be a sufficient statistic, we can take derivatives of the Lerner index and of the expression for profits with respect to each of the five underlying parameters: two slopes (of the demand curve and of rivals' supply curve), two intercepts (of the same two curves), and the dominant firm's marginal cost. Each of these three sets of derivatives involves substantially different terms for the Lerner index and for revenue, and hence for the Lerner index and for the dominant firm's profits. That is, in our simple, standard, and in various respects favorable special case, the requisite conditions for market power to be a sufficient statistic for profits are sharply violated.

[64]It is possible, however, that the unarticulated relevance of market power lies primarily in the manner in which it may illuminate the recoupment condition, keeping in mind that the recoupment notion is generic in that any explanation (whether anti- or procompetitive) for a rational profit-maximizing firm's behavior that involves incurring some cost in the short run implies that the firm should expect to recover its investment in the long run. Moreover, some of the points in this Subsection regarding the potential relevance of market power may, in a related fashion, influence the recoupment condition, such as through the two weighting factors (which were not assessed in Subsection 2; *see supra* note).

[65]*See, e.g.*, Thomas G. Krattenmaker & Steven C. Salop, *Anticompetitive Exclusion: Raising Rivals' Costs to Achieve Power over Price*, 96 YALE L.J. 209, 271 (1986) ("[S]uccessful exclusion is more likely when the predator is large and the excluded rivals are small. The gains and losses from exclusion depend on the bidders' relative market shares as well as on the price received. For this purpose, then, market share is significant for its own sake, not simply as a proxy for traditional market power.").

The proper way to examine market power's potential relevance to the optimal determination of liability is to examine how it bears on characterization—whether the alleged practice is anti- or procompetitive—and on the magnitudes of harm and benefit conditional on the corresponding characterization.[66] Without considering all motivations for a monopoly power requirement[67] or all the ways that market power might be relevant in predation cases, it is useful to examine some particulars.

First, it might be thought that market power bears on the likelihood that, and speed with which, predatory prices would discipline or dispose of rivals.[68] The modern literature on predatory pricing identifies settings in which the practice might be effective.[69] Relevant factors variously include entrants' uncertainty about the dominant firm's cost structure, the nature of sunk costs, and asymmetries in access to capital. Although some of these factors may some of the time relate to some aspects of market power in one or another sense—for example, conditions of entry relate to market power—it does not appear that market power in toto, as conventionally defined, is a particularly informative way to combine information to assess these factors.[70]

Regarding classification, market power might also illuminate the applicability of various price-cost tests for predation. It is typically assumed that price is observable but that cost is hard to determine. As is well known from decades of literature in industrial organization economics, there is a relationship between price, cost, and market power. Indeed, with the standard Lerner index measure of market power (the portion of price that is in excess of marginal cost), this is so as a matter of definition.[71] It would, however, be circular to use cost (along with price) to determine market power, in order to then use that to determine cost. There are other empirical strategies by which to attempt to measure market power, but they typically either make assumptions about cost or involve the empirical estimation of cost.[72] Accordingly, it may be that methods used to measure market power might sometimes be closely related to methods that one would use to infer cost. But, again, a separate effort to measure market power does not appear to be particularly helpful for measuring cost.

[66]*See* Kaplow, *supra* note , at 1322–54.

[67]Screening is a commonly advanced function that is not considered directly here, although to a substantial extent the proper use of market power as a screen should itself be understood substantially with respect to the various ways that market power is relevant to optimal liability determinations. *See also infra* Part IV (on the use of recoupment analysis to screen cases).

[68]As a matter of taxonomy, recall from note that this article generally uses recoupment to refer to whether successful predation would be profitable and not to include whether predation would effectively deal with rivals in the first place (although *Brooke Group* and some subsequent courts use the term to refer to both components).

[69]For surveys, see Bolton, Brodley & Riordan, *supra* note , at 2247–50, 2285–2321; Kaplow & Shapiro, *supra* note , at 1195–96; Paul Milgrom & John Roberts, *New Theories of Predatory Pricing*, *in* INDUSTRIAL STRUCTURE IN THE NEW INDUSTRIAL ECONOMICS 112 (Giacomo Bonanno & Dario Brandolini eds., 1990); Ordover & Saloner, *supra* note , at 545–62.

[70]This conclusion is further suggested by the fact that the modern economics literature on predatory pricing does not pay much attention to market power. Indeed, this inattention pervades the industrial organization literature on exclusionary practices.

[71]*See, e.g.*, AREEDA, HOVENKAMP & SOLOW, *supra* note , at 118–20; Kaplow & Shapiro, *supra* note , at 1080; Landes & Posner, *supra* note , at 939–41.

[72]*See, e.g.*, Jonathan B. Baker & Timothy F. Bresnahan, *Empirical Methods of Identifying and Measuring Market Power*, 61 ANTITRUST L.J. 3 (1992) (surveying techniques).

Consider next the relationship between market power and the potential magnitude of anticompetitive harm if indeed the defendant's behavior was predatory. As mentioned in the preceding Subsection, greater long-run profit recovery is associated with a higher level of market power conditional on predation's success, and that in turn is positively related to the anticompetitive harm that would result. More precisely, the degree to which predation increases market power is substantially relevant, but note that this increment refers not to the *level* of market power (with or without the effects of the predation taken into account) but rather to the *difference* between the level of market power when predation is successful and the level of market power without predation. By contrast, most traditional market power inquiries in monopolization cases look at the level of market power.

Nevertheless, the level of market power has further relevance, depending on whether the concern is with total welfare or just consumer welfare.[73] Total welfare in a simple setting—confining attention here to the exercise of market power in the recovery period[74]—depends on how high the price was that a firm is seeking to raise. When a price is increased slightly from a perfectly competitive level (marginal cost), there is essentially no deadweight loss, and the level of deadweight loss rises at an increasing rate as price rises ever further. (The core intuition is that the deadweight loss from a one unit reduction in output is price, which represents the consumer's valuation, minus cost; hence, the higher the price at which the quantity is lost, the greater the welfare loss.) Therefore, the greater is the level of market power, the greater tends to be the deadweight loss from a given increase in price.

By contrast, consumer surplus does not have this feature. For every dollar increase in price, consumers who continue to purchase the good lose one dollar, however high the price was to begin with. Actually, because a higher initial price indicates a lower initial quantity, a higher initial price is associated with a smaller reduction in consumer surplus for a given price increment. So a higher level of market power is associated with less harm in this sense. However, one can determine the loss in consumer surplus from a given price increase by knowing the quantity without knowing cost (unlike with deadweight loss), so neither market power (which, as explained, reflects the difference between price and cost) nor cost itself needs to be measured for this purpose.

Finally, we can ask how market power may bear on the magnitude of the cost of mistakenly finding liability. Although the cost of false positives is a central consideration in antitrust law and has been a major factor in formulating predatory pricing rules,[75] refinement of just what those chilling costs are and how they may relate to market power is a neglected

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[73]*See* Louis Kaplow, *On the Choice of Welfare Standards in Competition Law*, *in* THE GOALS OF COMPETITION LAW 3, 18–25 (Daniel Zimmer ed., 2012).

[74]During the predation period, the deadweight loss will again reflect the price-cost difference, but for below-cost pricing this will reflect the quantity increase rather than decrease. For consumer surplus, since only price matters, the analysis is qualitatively the same.

[75]*See, e.g.*, Brooke Grp. Ltd. v. Brown & Williamson Tobacco Corp., 509 U.S. 209, 226–27 (1993) ("[T]he costs of an erroneous finding of liability are high. '[T]he mechanism by which a firm engages in predatory pricing—lowering prices—is the same mechanism by which a firm stimulates competition; because "cutting prices in order to increase business often is the very essence of competition . . . [,] mistaken inferences . . . are especially costly, because they chill the very conduct the antitrust laws are designed to protect."' *Cargill* . . . (quoting *Matsushita* . . .). It would be ironic indeed if the standards for predatory pricing liability were so low that antitrust suits themselves became a tool for keeping prices high.").

subject.[76] The manner in which market power may be relevant to the costs of false positives depends, importantly, on the nature of the false positive—that is, on what is the procompetitive activity that might be mistaken for predation and hence subject to liability. The variety of procompetitive explanations will be elaborated in Section II.C. One possibility is that apparent predation actually involves a procompetitive investment, perhaps in product promotion or moving down a firm's learning curve so as to reduce future costs. In this case, the greater is the value that will be generated, the more post-investment market power these investments will tend to create. Hence, in a manner similar to how market power bears on the costs of actual predation, it may be indicative of the magnitude of the benefits of procompetitive behavior (although market power is not itself the measure of such benefits). Regarding the costs of chilling price cuts that merely involve accommodation, the cost of false positives may be greater when market power is higher because in such cases the incumbent, dominant firm's price cuts tend to be all the more important. To the extent that a false positive involves legal predation (that is, the defendant engaged in socially costly predation, but of a type that is deemed legal, such as under some price-cost tests), the analysis is more like that already presented for illegal predation (keeping in mind that chilling legal predation may well be beneficial, akin to deterring illegal predation).

II. SEQUENTIAL ASSESSMENT

In many areas of antitrust law, sequential decision rules are advanced that do not closely align with an optimal framework for the assignment of liability. In monopolization cases under Sherman Act Section 2, it is suggested that, first, it should be determined whether monopoly power exists; if and only if it does, second, the plaintiff's anticompetitive explanation should be assessed; and, if and only if it is sufficient, third, the defendant should be permitted to justify its behavior on procompetitive grounds.[77] In predatory pricing cases, it is now typically stated that the second step, pertaining to the predation explanation for the defendant's actions, is to be further divided into an inquiry into whether price is below cost and, if it is, whether there would

[76] *See* Louis Kaplow, *Recoupment and Predatory Pricing Analysis*, 10 J. LEG. ANALYSIS (forthcoming 2018) (analyzing related topics that are not considered in depth in the present article).

[77] This formulation is illustrated by the structure in MODEL JURY INSTRUCTIONS, *supra* note , and is reflected in the presentation of exclusionary practices, including predation, in U.S. DEP'T OF JUSTICE, *supra* note . Also instructive is *Spirit Airlines, Inc. v. Northwest Airlines, Inc.*, 431 F.3d 917, 931–51 (6th Cir. 2005), wherein the headings in the "Legal Analysis" section of the opinion were, in order: "Relevant Markets," "Monopoly Power," "The Appropriate Measure of Costs," "Significant Barriers to Entry," and "Recoupment."

Even if the rules themselves do not demand a sequential, siloed approach, commentary and agency guidance often proceed in this fashion and offer it as a model of how analysis should be conducted. Consider, for example, the illustrative analysis for predatory pricing cases offered in JORDI GUAL ET AL., REPORT BY THE EAGCP: AN ECONOMIC APPROACH TO ARTICLE 82, at 51–53 (2005), which generally advocates an approach that attends to economic effects rather than legal formalism. Almost the entirety of their illustrative analysis focuses on the anticompetitive explanation for the alleged predation. In this regard, the authors emphasize the importance of clear specification of the alleged predation story. *See id.* at 53 n.40. Only in the section's final sentence do they suggest: "If [the agency has made certain that these key facts are present] and if the evidence of predatory pricing is sufficiently strong, the burden of proof for a convincing efficiency defense of its conduct should switch to the defendant." *Id.* There is no previous mention of competing explanations when examining the anticompetitive story, although their discussion of predatory pricing (before the illustrative application) had emphasized the centrality of possible procompetitive explanations in framing agencies' challenge in addressing predatory pricing cases. *See id.* at 50–51.

be (or was) recoupment.[78] These two components are, of course, associated with *Brooke Group*'s holding. And describing them as separate from the first, monopoly power step presumes, as suggested in Subsection I.A.2, that this requirement survives *Brooke Group*. Further specification and variation (such as suggestions to reverse the order of the price-cost test and recoupment inquiry) are postponed for the moment.

The core difficulty with sequential assessment is that it isolates particular issues from each other when they are highly interdependent. Moreover, the issues they identify do not correspond directly to the fundamental determinants of whether the assignment of liability is desirable. Stated in simple terms, whether liability should be assigned depends on the relative likelihood that the alleged predatory act is in fact anticompetitive or instead is procompetitive and on the magnitudes of the anticompetitive harm or procompetitive benefit that will be eliminated if liability is imposed.[79] Separate, sequential analysis of market power, price-cost tests (or any other legal test for predation), recoupment, and procompetitive explanations for the alleged predation is counterproductive.[80] This Part focuses on characterization and, in particular, on how analysis of whether illegal predation occurred (such as under a price-cost test) is intimately related to the other three inquiries (although there are other interrelationships as well).

A. MARKET POWER

Stating market power (in Section 2 cases, monopoly power or a reasonable prospect thereof) as an initial, separate element generally makes no sense. Market power has different meanings and senses, and its implications for whether liabiity should be assigned depend on its relationship with particular, other features that sequential procedures defer until after the market power inquiry.[81]

Regarding predatory pricing in particular, these points were elaborated in Section I.B. There it was explained that market power considers similar factors to those examined in recoupment inquiries, and often in similar ways. How, then, can it make sense to separate the two assessments from each other—indeed, typically placing the price-cost test in between? We also saw that the sequential separation is dangerous. Not only is it strange to assess market power in a vacuum: How are we to determine the relevant sense of market power, or how much should be required? Worse, we saw that one way of conceiving of market power—the level of

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[78] *See also* Bolton, Brodley & Riordan, *supra* note , at 2262–85 (proposing a sequential rule to govern predatory pricing cases); Calkins, *supra* note , at 384 & n.303 (suggesting that, prior to *Brooke Group*, "[c]ourts were increasingly considering recoupment issues" but that evaluating "recoupment as a separate element of the offense was exceptional").

[79] For elaboration on the optimal formulation of liability decisions that emphasizes the tradeoff of deterrence and chilling effects (and how this analysis differs from more familiar formulations, like those employed in the text for ease of exposition), see Louis Kaplow, *Burden of Proof*, 121 YALE L.J. 738 (2012); Louis Kaplow, *Likelihood Ratio Tests and Legal Decision Rules*, 16 AM. L. & ECON. REV. 1 (2014); Louis Kaplow, *On the Optimal Burden of Proof*, 119 J. POL. ECON. 1104 (2011). For general criticism of sequential, siloed analysis, see Kaplow, *supra* note , and Louis Kaplow, *On the Design of Legal Rules: Balancing Versus Structured Decision Procedures*, HARV. L. REV. (forthcoming 2019) [hereinafter, *Design of Legal Rules*].

[80] To the extent that the components of existing and proposed tests are little more than a checklist of items to cover, these rules are not that problematic. However, commentary, agency guidance, and court opinions to a substantial degree in fact proceed in a sequenced, siloed fashion, thereby examining subjects in a vacuum when that makes no sense, ignoring interdependencies, and encouraging mistakes.

[81] *See* Kaplow, *supra* note , at 1322–54.

market power before the alleged predation has had its effects—can have implications for liability that are opposite to what makes sense. Specifically, when market power is low due to a lack of entry barriers in cases in which the purpose of the alleged predation is to erect such barriers, the plausibility of anticompetitive predation is enhanced, not attenuated.

We further learned that market power may be relevant to liability for reasons independent of recoupment. Each of these possible linkages, however, pertains to aspects of the inquiry that come *after* market power under standard sequential protocols. Once again, sound analysis is undermined.

B. RECOUPMENT

Under sequential assessment, recoupment analysis is not only separated from market power inquiries, as just discussed, but also from the core predation inquiry, understood to involve some sort of price-cost test. *Brooke Group*'s suggestion—at least as the case is often interpreted—that the price-cost inquiry and recoupment inquiries are distinct involves a core confusion. To see the problem, we need to examine the familiar logic of the recoupment requirement more closely.[82]

Firms are taken to be rational profit-maximizers. If they intend to undertake predation, which involves a short-run profit sacrifice, it must be because they expect to recover greater profits in the future (properly discounted). The contrapositive is that, if a firm could not have anticipated that it would recover sufficient profits in the future, it would not have engaged in predation. Therefore, evidence negating recoupment negates predation.

This simple logic is correct, but it overlooks the direct implication that predation itself implies recoupment. Because in the ordinary sequencing (and in *Brooke Group* itself), predation must be established before even reaching the recoupment inquiry, it would seem that recoupment would automatically be satisfied: predation implies recoupment; predation is established; hence, recoupment follows. Why is it that the logic of recoupment is permitted to negate predation when recoupment seems to fail, but the same logic does not allow a decision-maker to infer recoupment when predation seems to have occurred (as suggested, for example, by the dissenting opinion in *Brooke Group*)?[83]

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[82]*See* Kaplow, *supra* note .

[83]*See* Brooke Grp. Ltd. v. Brown & Williamson Tobacco Corp., 509 U.S. 209, 258 (1993) (Stevens, J., dissenting); *cf.* Barry Wright Corp. v. ITT Grinnell Corp., 724 F.2d 227, 232 (1st Cir. 1983) (Breyer, J.) (explaining that the intuitive idea behind the price-cost test is that, absent other explanations, one can infer that the firm plans to raise the price in the future). Part of the dissent's argument in *Brooke Group* was that courts and juries can reasonably trust the defendant firm's views on such matters and hence they can reasonably conclude that the long-run expected profit recovery was plausibly sufficient after all. *See* 509 U.S. at 257–58 (Stevens, J., dissenting) ("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. In any event, the jury was surely entitled to infer that at the time of the price war itself, B & W reasonably believed that it could signal its intentions to its fellow oligopolists, see App. 61, assuring their continued cooperation."); *id.* at 257 n.18 ("Judge Easterbrook has made the same point: 'Wisdom lags far behind the market[.] [L]awyers know less about the business than the people they represent. . . . The judge knows even less about the business than the lawyers.' Easterbrook, The Limits of Antitrust, 63 Texas L. Rev. 1, 5 (1984)."); *see also* Janusz A. Ordover, *Predatory Pricing*, *in* THE NEW PALGRAVE DICTIONARY OF ECONOMICS AND THE LAW 77, 82 (Peter Newman ed., 1998) ("[E]vidence that a price is below the pertinent floor should obviate the need to inquire whether recoupment is feasible or not: the firm's conduct reveals its belief that recoupment is possible. In that sense, the recoupment test substitutes the court's assessment of the likelihood of

To make sense of this conundrum, it is necessary to recognize the frequent presence of significant uncertainty surrounding these inquiries and accordingly to appreciate the need to undertake triangulation. We should inquire into recoupment precisely because it may seem that predation occurred, but we are not sure. If the recoupment inquiry confidently indicates that it would be implausible, then we would resolve our uncertainty about predation in the negative. Conversely, if we are uncertain about recoupment—perhaps it is even doubtful—high confidence that predation occurred should resolve those doubts in the affirmative. The analysis of predation itself (say, the price-cost test) and of whether the recoupment condition is satisfied are inherently an interdependent inquiry. Hence, examining each in isolation (in either order) makes no sense.

This conclusion is in many respects more powerful than it first appears because neither predation nor satisfaction of the recoupment condition are directly observed by a decision-maker. Rather, each must be inferred from underlying evidence. Moreover, important sets of evidence are simultaneously relevant to both considerations, so disputes about particular evidence will often influence how one should think about both considerations.

Perhaps the most obvious illustration involves the alleged predator's costs. They are obviously central to application of a price-cost test for predation. What is usually ignored, however, is that they are also central to recoupment analysis. Recall our recoupment condition, presented in Subsection I.B.1. As explained, on each side we have a pair of profit terms. Profits are defined by the difference between revenue and costs; hence, costs are at the core of this condition.[84] To put the point even more sharply, the short-run profit sacrifice (on the left side of the recoupment condition) depends on the difference in profits under predation and under accommodation, and part of that profit difference will be the difference in the cost of producing the predation and accommodation quantities—the very incremental cost difference that is at the heart of many price-cost tests.[85]

As a matter of logic and assessment of the facts in a particular case, the predation and recoupment inquiries are intimately intertwined. They simply cannot sensibly be assessed separately. A further implication is that suggestions that the recoupment inquiry may be easier

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success for the independent business judgement of the alleged predator."). One might have expected the majority to respond by arguing that their confidence in negligible profit recovery cast in serious (fatal) doubt whether the defendant's price was predatory in the first place. But it took that fact to be established for purposes of the appeal—deeming there to be sufficient evidence from which the jury could have found below-cost pricing—which made this route appear to be unavailable. *See* 509 U.S. at 231. The failure to triangulate renders the majority opinion obscure.

[84]This simple observation is itself an understatement because the profit terms must be predicted or inferred (consider that one of the two scenarios, either predation or accommodation in the basic case, is counterfactual). If what happened was in fact accommodation, one must infer what prices would have been charged, what quantities would have been sold, and so forth if instead the firm had engaged in predation. (And likewise for the converse.) To make these inferences for a profit-maximizing firm, one must use underlying information about demand and about the firm's costs. Hence, even components like counterfactual prices, which are relevant to the revenue component of profits, require an understanding of the firm's costs to predict.

[85]Leading proponents of the recoupment requirement conclude their post-*Brooke Group* article with the acknowledgment: "Assessing the plausibility of recoupment, as the Court indicates in *Brooke Group*, is . . . accomplished by a fact-intensive examination of the market's structure, including the factors mentioned earlier. [T]he Court went on to say that prices in the recoupment stage must 'be sufficient to compensate for the amounts expended on the predation, including the time value of the money invested in it.' Sufficiency of this kind requires calculation to refute or establish. At the very least, it requires quantitative estimates akin to a firm's capital budgeting forecasts. Meticulous recoupment analysis can be attempted. But it is an undertaking that invites complexity matching if not exceeding that of estimating average variable costs from business accounting data." Kenneth G. Elzinga & David E. Mills, *Trumping the Areeda-Turner Test: The Recoupment Standard in* Brooke Group, 62 ANTITRUST L.J. 559, 584 (1994).

than the price-cost inquiry—which some argue favors placing it first—and, specifically, that it can be undertaken without the difficult inquiry into costs,[86] seem to reflect wishful thinking, perhaps enabled by the complete failure to examine what the recoupment condition actually is. Regarding the latter, a surprising shortcoming of most prior assessment of recoupment is, indeed, that the actual condition is not explicitly stated.

In light of these conclusions, if the recoupment requirement (called a "prerequisite" to liability by the Court in *Brooke Group*[87]) is understood as a stand-alone element, and likewise for the price-cost test (also deemed a "prerequisite"[88]), then the doctrine is illogical.[89] By contrast, if one instead follows the Court's emphasis on rationality, which Subsection I.A.2 indicates is at the root of the Court's introduction and development of the recoupment notion in predatory pricing cases (including in particular in *Matsushita*), then the Court's two "prerequisites" might best be interpreted as interrelated aspects of a properly conducted triangulation process.[90] Under this interpretation, *Brooke Group* is not inconsistent with, and indeed may be regarded as requiring, the appropriate analysis.

C. Procompetitive Explanations

Relegating procompetitive explanations for alleged predation to the end of the analysis also constitutes a serious mistake.[91] Regarding characterization, the focus here,[92] this separation

[86]Reversing the two is a central feature of the approach advanced by Bolton, Brodley & Riordan, *supra* note , at 2267–74. *See also* A.A. Poultry Farms, Inc. v. Rose Acre Farms, Inc., 881 F.2d 1396, 1401 (7th Cir. 1989) ("It is much easier to determine from the structure of the market that recoupment is improbable than it is to find the cost a particular producer experiences in the short, middle, or long run (whichever proves pertinent). Market structure offers a way to cut the inquiry off at the pass, to avoid the imponderable questions that have made antitrust cases among the most [drawn out] and expensive types of litigation. Only if market structure makes recoupment feasible need a court inquire into the relation between price and cost."); Model Jury Instructions, *supra* note , at C-52 (explaining in a note that "[a]lthough recoupment is generally thought of as the second element of a predatory pricing claim, after proof of below-cost pricing, we have placed this instruction before the instructions relating to below-cost pricing because the recoupment analysis is often more straightforward than the pricing analysis, and is often dispositive"); Herbert Hovenkamp, *The Areeda-Turner Test for Exclusionary Pricing: A Critical Journal*, 46 Rev. Indus. Org. 209, 210 (2015) ("[T]he sequence is not important, and most decisions focus on whichever element is disputed or easier to resolve . . . .").

[87]509 U.S. at 224.

[88]*Id*. at 222.

[89]*See supra* notes & (explaining how seeming illogic in the majority's analysis, which was criticized by the dissent, but not explicitly on these grounds, may help to explain the disagreement and some of the ships-passing-in-the-night character of the opinions in *Brooke Group*). An alternative understanding of the majority opinion is grounded less in the logic of firms' rationality and an effort to properly incorporate recoupment logic into the analysis, and more in the desire to erect an additional hurdle in predatory pricing cases in light of its belief that true predation is rare (*see Brooke Group*, 509 U.S. at 227) whereas that juries cannot be trusted to appreciate this fact. As a matter of legal system design, however, concerns for false positives are better addressed by heightening the burden of proof rather than adding an independent element, even when that element is positively correlated with the relevant central question. *See* Louis Kaplow, *Multistage Adjudication*, 126 Harv. L. Rev. 1179, 1129–35 (2013).

[90]This approach toward reconciliation of doctrinal statements and basic principles of logic and inference might likewise be offered for other components of various legal tests for predatory pricing.

[91]*See* Kaplow, *supra* note .

[92]Failure to specify procompetitive explanations can also lead one astray by failing to appreciate differences across settings in the likely magnitudes of procompetitive effects. Regarding the particular procompetitive explanations considered in this Section, note that (compared to a benchmark of accommodation), chilling procompetitive investment may be especially costly whereas chilling what is in fact legal predation may not be very costly and may even be socially desirable.

constitutes a blatant logical error. After all, the question whether an action under examination constitutes predation is only meaningful if it might instead involve *something else*. In the simple case in which there are two, mutually exclusive explanations, it is impossible to raise or lower the likelihood of one of them (say, predation) without lowering or raising the likelihood of the other—indeed, by precisely the same amount. Moreover, one cannot in principle determine what evidence is relevant or how without identifying the *differences* between the competing explanations, which in turn requires knowing (often with some specificity) what those two explanations are.

To make these points more concrete, return to the most straightforward competing explanation for alleged predation: that it did not occur. Put affirmatively, the alleged predator's prices were merely the accommodating (short-run profit-maximizing) response to, say, the emergence of a new entrant. Considering these two competing explanations side by side—which, remarkably, is not ordinarily done[93]—let us return to the recoupment condition.

For recoupment to fail means that the prospective long-run profit recovery is exceeded by the short-run profit sacrifice. Note further that serious cases involve at least some prospect of some profit recovery, and this point is accentuated by the fact that significant market power must already have been demonstrated under the ordinarily postulated sequencing. In such cases, a failure of recoupment entails that the short-run profit sacrifice must be even larger. But that possibility directly contradicts the posited procompetitive explanation of accommodation, which by definition entails no short-run sacrifice whatsoever. Put differently, the very fact of a significant short-run profit sacrifice directly rules out accommodation, so if that is the only serious alternative explanation, then the implication is that predation indeed occurred. Perhaps due to the regular practice of separate, sequenced analysis, few have noticed this core tension.[94]

The foregoing discussion assumes that the competing, procompetitive explanation for the defendant's alleged predation was that the pricing involved mere accommodation. Suppose instead that the defendant claims that its pricing was part of a procompetitive investment, such as in product promotion, market penetration, or moving more quickly down its learning curve so as to reduce its future costs.[95] (Consider Wal-Mart and Uber, whose actions have prompted predation suits.[96]) Note that, by their nature, such investments—like all of what is ordinarily understood as constituting investment—involve incurring up-front costs that are expended only when there is a prospect of earning more in the future. These sorts of investments generate profit recoveries to the extent that the firm's future margins are larger (or that otherwise positive

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[93]As an illustration, Bolton, Brodley, and Riordan advance a sequential decision rule for predatory pricing. *See* Bolton, Brodley & Riordan, *supra* note , at 2262–85. Its fifth and final component is business justification, and the first such justification that the defendant might attempt to demonstrate at this stage is that its price reduction was defensive, involving "a price that maximizes the incumbent's immediate or short-run profit even though its rival remains in the market"—what in the present article is referred to as accommodation. *See id.* at 2274–76. This formulation sharply raises the question of what could have been the implicit competing hypothesis when implementing the first four steps in their framework.

[94]An exception is Hemphill, *supra* note , at 1592–93.

[95]For present purposes, it is simply assumed that such behaviors are regarded to be procompetitive, although this need not always be the case.

[96]*See, e.g.*, Wal-Mart Stores, Inc. v. American Drugs, Inc., 891 S.W.2d 30 (Ark. 1995); Desoto Cab Co. v. Uber Tech. Inc., 3:16-cv-06383 (N.D. Cal. 2016) (complaint filed). No suggestion is made here concerning the merits of these cases. The point simply is that the sorts of potentially procompetitive investments discussed in the text could well be important alternative explanations to predation in actual cases.

margins are earned on a larger sales base). That is, for these procompetitive investments to be profitable, there must be recoupment.

Hence, at an earlier step in the sequenced protocol, one might be struggling with whether recoupment is possible, only to later discover that the defendant's explanation likewise requires recoupment. Again, sequencing will have led the analysis astray. Indeed, the problem can be worse because the requisite profit recovery could well be greater under the procompetitive explanation. For example, developing a new market or moving far down a learning curve could take a long time: consider some now-profitable tech companies that incurred losses for years. By contrast, some predation might be expected to succeed quickly (an incumbent airline might induce a new entrant to exit in months). In such cases, doubts about the magnitude of the prospective profit recovery may well favor the predation explanation over the procompetitive one.

Finally, consider the alternative (not necessarily procompetitive) explanation of *legal* predation, that is, economic predation involving a short-run profit sacrifice designed to discipline or destroy rivals that does not entail pricing below the legally relevant measure of cost. Legal predation, like illegal predation, presupposes recoupment, so once again, elaborate analysis of recoupment at an earlier step may lead one astray: recoupment may not be diagnostic and, when it is, its relevance is subtle and intimately intertwined with the cost inquiry, as already explained.

In all, even focusing primarily on recoupment itself, we can see that the analysis of predation cannot properly be separated from the analysis of competing explanations for the behavior under scrutiny. More broadly, as stated at the outset of this Section, sequential, separate analysis of anti- and procompetitive explanations is illogical and, relatedly, interferes even with identifying what evidence may be relevant. Therefore, with regard to every component of existing or proposed sequential decision rules for predation cases, the protocols make no sense. Nor can one remedy the problem by reordering some of the steps because it is the separation itself that is the source of the problem.

That said, it can sometimes be useful to have checklists with distinct items or to spend time analyzing subsets of potentially relevant information organized by issues that may not themselves be distinct. But how this is best done, and for how long before one returns to the other pieces, is impossible to say without first identifying the actual interrelationships among the components and using that understanding to guide both evidence collection and analysis.

III. EX ANTE VERSUS EX POST RECOUPMENT

The demand for recoupment is ordinarily understood to be satisfied if the recoupment condition holds either ex ante or ex post—that is, if the alleged predator's expected profit recovery exceeds its expected short-run profit sacrifice or if the actual recovery exceeds the actual short-run sacrifice. *Brooke Group* states:

> Based on Liggett's theory of the case and the record it created, there are two means by which one might infer that Brown & Williamson had a reasonable prospect of producing sustained supracompetitive pricing in the generic segment adequate to recoup its predatory losses: first, if generic output or price information indicates that oligopolistic price coordination in fact produced

> supracompetitive prices in the generic segment; or second, if evidence about the market and Brown & Williamson's conduct indicate that the alleged scheme was likely to have brought about tacit coordination and oligopoly pricing in the generic segment, even if it did not actually do so.[97]

One might also associate the ex ante view with attempted monopolization (a predatory act motivated by a reasonable prospect of success) and the ex post view with monopolization (a predatory act that proved to be successful), although with recoupment the success refers to profitability rather than the prospective or actual anticompetitive effect itself.

In any event, little attention has been devoted to whether one or the other should suffice rather than requiring one in particular or insisting on both.[98] Perhaps requiring ex ante recoupment is thought to be correct, but, because it is difficult to ascertain in litigation, a challenger's demonstration that ex post recoupment in fact occurred permits or requires an inference that recoupment was plausible ex ante. Regardless, the matter should be examined explicitly, with attention to problems of proof and matters of policy.

Assessment of different ways of proving recoupment, whether ex ante versus ex post or any other, is necessarily subordinate to the prior question of recoupment's appropriate role in the optimal determination of liability. Confining attention to classification, Section II.B emphasized that appropriate analysis does not involve a separate decision regarding recoupment in any event. Rather, recoupment's relevance arises from how it helps us triangulate on the proper characterization of a defendant's alleged predation. Hence, the appropriate weight to put on evidence that bears on ex ante or ex post recoupment should be derived from how either or both sheds light on this ultimate question. That said, it is sometimes helpful as a heuristic to consider recoupment, and the difference between ex ante and ex post recoupment, as such. It also eases exposition here to discuss them as if they were distinct questions, all the while keeping in mind that in this central respect they are not.[99]

In considering these two types of evidence in the triangulation process, it is important to keep in mind differences among anticompetitive predation strategies. For example, when it appears that an alleged predator may be trying to establish a reputation for toughness that will be valuable in multiple markets, it might not rationally expect to recover its short-run profit sacrifice primarily in the market at hand but rather mostly in the other markets. In that situation,

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[97]Brooke Grp. Ltd. v. Brown & Williamson Tobacco Corp., 509 U.S. 209, 232–33 (1993); *see id*. at 238 ("Not only does the evidence fail to show actual supracompetitive pricing in the generic segment, it also does not demonstrate its likelihood."); *see also* Calkins, *supra* note , at 399–401 (discussing what the *Brooke Group* Court meant in this regard).

[98]It seems to be taken for granted that a party challenging alleged predatory pricing enjoys an option: to demonstrate recoupment ex ante or ex post, either being sufficient. On its face, this option makes it easier to find liability in comparison to insisting that ex ante recoupment be demonstrated, or demanding that ex post recoupment be demonstrated, or requiring both. However, as the discussion throughout this Part should make clear, any such comparison depends on the confidence with which any of these conditions must be demonstrated under the different imagined regimes. (For example, one could insist on the demonstration of ex ante recoupment but more readily find the condition satisfied.) Optimal liability assessment, involving triangulation, would consider either or both—or neither—depending on the nature of the available evidence on each and on all of the other pertinent evidence.

[99]The direct question of relevance concerns how assigning liability rather than no liability influences the deterrence of harmful predation relative to the chilling of procompetitive behavior when there is, on one hand, slightly stronger evidence on the ex ante prospect of recoupment versus, on the other hand, slightly stronger evidence on whether recoupment in fact occurred.

a failure of ex post recoupment, narrowly viewed, would not be particularly probative, whereas a failure to keep out entrants in the other markets would be. And in some models of predation, a predator is uncertain about prospective entrants' costs, so ex ante profitability need not imply ex post success.[100] In such a case, there arises a distinct policy question of whether it is optimal to punish ex ante profitable attempts that fail, a matter taken up later in this Part.

Another important consideration bearing on the appropriate weight to give to evidence on ex ante and ex post recoupment concerns the reliability of each. Subsection I.B.1, which states the recoupment condition and elaborates its components, indicates how difficult it may be to determine whether the inequality is satisfied. For ex ante recoupment, one must identify the contours of alternative scenarios: predation versus accommodation in the short run, and monopoly versus accommodation in the long run. Each requires information about demand, the firm's cost structure, and other matters, much of which will be difficult to extract, in order to impute the pertinent behavior so that one can then compute the relevant profit terms. Moreover, the weighting factors require determination of such matters as how long the predation period would, ex ante, have been expected to last and how long any accretion to market power would have been expected to continue. It is challenging to estimate all of these components in order to assess whether the ex ante condition was met through a battle of experts in subsequent litigation. It may be easier, or at least a useful supplement, to consider a defendant's internal documents regarding its strategic calculations and other matters, although it is familiar that this too can be misleading. In sum, determining ex ante recoupment will often be quite difficult in serious cases, which is a significant reason that often recoupment analysis may not optimally be given great importance in the triangulation process—all depending on what one learns from other relevant evidence.

Determination of whether ex post recoupment occurred—to the extent relevant, as discussed above—may sometimes be more feasible. We have the advantage that we may be able to observe what happened (assuming that, at the time of adjudication, the entire process has run its course; if not, only factors bearing on the short-run profit sacrifice may be observable). We should recall from Subsection I.B.1, however, that each side of the recoupment condition involves the difference between two situations, at least one of which is counterfactual. Moreover, since it will be disputed which situation occurred, it may well be unclear which of the two we did in fact observe. (And, if we did know, we would already have an answer to whether predation occurred.) Hence, many of the challenges in determining ex ante recoupment carry over to the assessment of ex post recoupment. Moreover, if one is examining ex post recoupment primarily to illuminate whether the ex ante recoupment condition was likely to have held, there are obvious dangers of hindsight, notably, as mentioned, when ex ante recoupment is consistent with ex post failure due to uncertainty. (This is not to deny that, in less serious cases, the result may be obvious, and disposing of such cases is extremely important both in its own right and because it helps to discourage the filing of weak cases, as discussed in Part IV.)

There is another potential problem with significant reliance on ex post recoupment: it can create perverse incentives for targeted rivals to flop. Put simply, if a targeted firm folds immediately, the short-run profit sacrifice will be negligible, virtually guaranteeing that the

[100]*See* sources cited *supra* note .

recoupment condition, viewed ex post, will hold.[101] Relatedly, if it strategically holds back on reentering, the alleged predator will enjoy greater profit recovery as well. One can make the same point by considering the converse: the harder a target firm fights, and the more aggressively it tries to reenter, the greater will be the realized short-run profit sacrifice and the smaller will be the realized long-run profit recovery, and hence the more likely its subsequent predation lawsuit would fail due to a lack of ex post recoupment.[102]

Accordingly, proper analysis of how much weight to give to ex post recoupment must take such incentives into account.[103] This point also illustrates more broadly the need for the economic analysis of predation to be integrated with different enforcement regimes in order to inform predatory pricing policy. Theories of predation recognize the game-theoretic setting involving strategic interaction between firms—in the simplest case, between a dominant firm and a single rival. The policy-relevant question is how different legal regimes will influence ex ante behavior. This article has largely focused on the ex ante behavior of alleged predators, regarding the deterrence of actual predation and the chilling of other conduct. But a complete analysis of predation, and thus of enforcement, necessarily includes the behavior of rivals. Predation by dominant firms is specifically motivated to influence rivals' behavior: their entry and exit, or perhaps their pricing (when the predation aims to discipline rather than eviscerate the competition). Enforcement is designed to alter firms' strategic behavior, and the behavior of all firms must be taken into account. Usually, that involves attention to how deterring predators will empower rivals, but here we must consider as well possible perverse incentives that some legal rules might generate for rivals.[104]

Consider now some additional questions of legal policy. First, it is useful to reflect on the reasons it may be optimal to assign liability when there is ex ante but not ex post recoupment—that is, when as best we can tell a defendant was engaged in actual predation[105] that turned out to fail. In essence, the argument for liability in such situations is a species of that for punishing failed attempts more generally. It is well known that acts that would be crimes if successful are usually punished (although often less harshly) when the attempt to commit such

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[101]In this regard, it is interesting to ponder whether Spirit Airlines' quick exit, *see* Spirit Airlines, Inc. v. Northwest Airlines, Inc., 431 F.3d 917 (6th Cir. 2005), was in part motivated by the advice of counsel that, if they attempted to stay and fight, they would be undermining a potential predatory pricing case (which they won, at the stage on appeal, in part because the recoupment analysis was quite favorable). In subsequent policy hearings, Kenneth Elzinga, a plaintiff expert in *Spirit Airlines*, remarked that "one key to the success for Northwest was simply how quickly Spirit exited." Joint Hearings, U.S. Dep't of Justice & Fed. Trade Comm'n, Understanding Single-Firm Behavior: Conduct as Related to Competition 15 (June 22, 2006) (statement of Kenneth G. Elzinga) [hereinafter DOJ/FTC Hearings].

[102]Note further that similar analysis may influence decisions of a rival's funders. Another aspect of predatory pricing analysis concerns whether an alleged predator's strategy is likely to be effective in disciplining or eliminating rivals. In this respect as well, flopping rather than fighting would strengthen a rival's case.

[103]This observation is applicable even when the relevance of ex post recoupment is limited to the manner in which it illuminates ex ante recoupment: it will be difficult for a defendant to argue that recoupment was ex ante implausible because of the anticipated large short-run profit sacrifice and limited potential for long-run profit recovery when in fact the duration was brief and the rival stayed out of the market.

[104]Concerns for flopping tend to favor allowing only suits by the government, with no damages recovery to rivals in the event of liability (but with some substitute, such as fines, paid to the government to maintain deterrence). Pushing the point further, the purpose of predatory pricing enforcement is to deter predation, which in turn will induce more beneficial entry, but the prospect of liability might also induce entry that is undesirable but made attractive either by chilling effects or the prospect of collecting damages.

[105]To simplify matters, assume in this discussion, following most of this article, that the actual predation under discussion would be regarded to be illegal if it had been successful.

acts is unsuccessful. It is surprising how little attention has been given in the antitrust literature to the logic of punishing attempts as such—all the more so with monopolization because Sherman Act Section 2 explicitly proscribes attempted monopolization and *Brooke Group* itself addressed the framing of attempted monopolization.[106]

[106]*See supra* Subsection I.A.2; *cf.* Leslie, *supra* note , at 1762 ("Failure to profit should not be a defense to section 2 liability. This is particularly true with attempted monopolization claims because, by definition, the predator has not succeeded."). This situation contrasts with that in other jurisdictions. Notably, TFEU Article 102—the analogue to Sherman Act Section 2—punishes the abuse of dominance but does not cover attempts. *See, e.g.*, DAMIEN GERADIN, ANNE LAYNE-FARRAR & NICOLAS PETIT, EU COMPETITION LAW AND ECONOMICS 175 (2012) ("Similarly, Article 102 applies only to firms that already hold a dominant position. Unlike in US antitrust law, . . . the acquisition of monopoly power through anti-competitive means[] is not an offence under EU competition law."); ROBERT O'DONOGHUE & JORGE PADILLA, *supra* note , at 141 ("However, if dominance is not proven, no abuse can be made out, regardless of the anticompetitive effects of the conduct in question. This is an important point of distinction from other legal regimes that sanction unilateral conduct" such as the United States.).

The prohibition on attempted monopolization—and that on monopolization—are themselves puzzling in some respects. First, what is one to make of the requirement in attempted monopolization cases that there be a "dangerous" probability of success? *See, e.g.* Spectrum Sports, Inc. v. McQuillan, 506 U.S. 447, 456 (1993). At first glance, it may seem that "dangerous" is an odd sort of adjective to attach to the noun "probability" since it refers not to the level of the probability (high or low) but to some admixture involving the impact of success. As an analogy, reflect on what would count as a "dangerous" probability with regard to moving near the edge of a cliff to get a better view, with some likelihood of falling to one's death. Here, a mere one percent chance would be a dangerous probability; indeed, most would regard one in ten thousand as dangerously high. By analogy, we can ask what is the minimally sufficient probability to enter the danger zone when the harmful outcome is monopolization. It is hardly obvious a priori that this probability is particularly large, although depending on how one assesses the likelihood and consequences of different errors, it could optimally be quite high. Note that an act may be certainly anticompetitive and have only a minuscule, if any, probability of resulting in monopoly, or be highly dubious as to whether it is anticompetitive at all but, conditional on its being anticompetitive, have a significant chance of generating monopoly. That is, uncertainty about whether monopoly would result and about whether the act is anticompetitive to begin with are qualitatively different things.

To examine another puzzling feature of the proscription on monopolization and attempted monopolization, consider a continuum in which 0 corresponds to perfect competition and 100 is (just barely) the point that the law designates as "monopoly" for purposes of Section 2 (or "dominance" under Article 102). A firm at 99 is permitted to engage in any unilateral anticompetitive acts to stay at 99, rather than having its score fall, even all the way to 0, as long as those acts to not involve a dangerous probability of raising its score to 100. Moreover, a firm at 0 is permitted to engage in any unilateral anticompetitive acts to reach 99, as long as it is clear that it will stop short of 100 (perhaps it agrees to abstain once it hits 99), for there is no dangerous probability of monopoly (100). However, an anticompetitive act that moves a firm from 99 to 101 would constitute monopolization, and an anticompetitive act with a dangerous probability of moving a firm from 99 to 101 would constitute attempted monopolization. Although there is substantial justification for circumscribing the liability of dominant firms for so-called unilateral acts due to such acts' ubiquity and often their ambiguity (with regard to whether they are truly anticompetitive rather than procompetitive), it is hard to make sense of this particular structure for the law, the implications of which do not seem to be appreciated. Among other considerations, it seems unlikely that we would often be more confident that assigning liability was optimal with respect to an act with an apparent anticompetitive effect of moving the needle from 99 to 101 than for one with an effect of moving it from 0 to 99, or anything close to such a swing. *See also* Louis Kaplow, *The Meaning of Vertical Agreement and the Structure of Competition Law*, 80 ANTITRUST L.J. 563 (2016) (challenging conventional understandings of the meaning of unilateral action and raising questions about the relationship between Sections 1 and 2 of the Sherman Act). Of course, it is possible that the law—despite a consensus regarding its content, which translates literally in the manner just described—is not applied in anything approximating what is depicted here. And the insistence on some substantial market power may serve important screening functions, particularly if it is thought difficult for tribunals to accurately determine which acts are anticompetitive (supposing greater confidence in market power assessment, including in attempts cases, the present subject—where it is sufficient to demonstrate that the alleged anticompetitive acts will generate significant market power). *See* Kaplow, *supra* note , at 1355–62.

The core argument for punishing attempts concerns deterrence.[107] Because deterrence can also be augmented in other ways, such as by raising the penalty for success or boosting the probability with which successful attempts result in the imposition of sanctions, the analysis is a comparative one. Here, the central concern is the tradeoff between the deterrence of actual predation and the chilling of procompetitive behavior when stiffening different dimensions of enforcement.

Note further that, for various alternative enforcement strategies, this tradeoff will depend on the strength of the evidence. Notably, some attempts may be clearly established despite their lack of success, making them attractive targets for liability, and some cases of apparent success may be poor targets for liability because of uncertainties about whether they involved true predation rather than some other, beneficial behavior. Subjecting attempts to liability tends to be particularly precarious when the failure itself casts significant doubt on the classification, the analogue here being when a failure of ex post recoupment in some situation makes the predation explanation particularly implausible.[108] On the other hand, when a defendant's action almost surely involved predation—rather than procompetitive investment or accommodation—but success is very difficult to prove, it tends to be desirable to assign liability even if the act might involve a failed attempt. Accordingly, liability is likely to be optimal for some attempts that failed or whose success is uncertain, but not others.

Second, and really the flip side of the foregoing, it may sometimes make sense to place heavy reliance on ex post success and, relatedly, on ex post recoupment. As already explained, as difficult as this may be to determine, analyzing the matter ex ante may be even more challenging. In such cases, it may be optimal to demand ex post recoupment or other indications of success, such as whether a rival was actually extinguished or disciplined. A corollary is that, in such instances, it may be necessary to limit challenges to fully consummated predation, for otherwise it may be impossible to gauge success.[109] Observe that, to this extent, one would essentially be eliminating liability for attempts in these situations. In addition, one would be eschewing the opportunity to stop the predation before it could have its anticompetitive impact, relying entirely on deterrence—and in that regard, without the deterrence supplement provided by the punishment of attempts.

IV. LEGAL INSTITUTIONS AND SCREENING

Although the present investigation is not centrally about legal practice, this Part offers a few observations. The discussion thus far indicates that the analysis of recoupment and

[107]*See* Steven Shavell, *Deterrence and the Punishment of Attempts*, 19 J. LEG. STUDIES 435 (1990). Deterrence is not the only reason to punish failed attempts. With attempted murder, for example, incapacitation may be favored because there may be a significant revealed risk that the unsuccessful perpetrator would try again.

[108]Another argument against liability for attempts or, conditional on assigning liability, in favor of reduced sanctions, is that some attempts may, as a consequence of their failure, reveal themselves to be less dangerous and hence less in need of deterrence. In the present setting, some factors militating against recoupment also suggest that the successful predation (if indeed that is what occurred) would be less harmful.

[109]*See also infra* note (explaining limitations of such an approach for screening out weak cases). A related idea is the suggestion in Frank H. Easterbrook, *Predatory Strategies and Counterstrategies*, 48 U. CHI. L. REV. 263, 331–33 (1981), of eliminating suits by competitors. If only customers can sue, and if their damages are contingent on the extent of price elevation in the recovery period, then as a practical matter suits are limited to predation that is at least partly successful (although customers could still sue, prospectively, seeking an injunction).

predatory pricing more broadly is notably more complex than is recognized, a concerning proposition in light of the fact that most already regard it to be highly challenging.

Enforcement agencies—important in the United States and even more central in other jurisdictions—are in the best position to capitalize on this article's lessons, both in organizing their information gathering in individual cases and in undertaking the requisite triangulation that economic logic demands. Moreover, agencies issue guidance that can help private actors understand what to expect and educate courts.

Courts themselves—and juries, in the United States—face a more imposing task.[110] The modern economics of predatory pricing has the virtue of being more sound and realistic, but it is also more varied and subtle, often highlighting the relevance of facts that may be difficult to discern. Over time, price-cost tests and then a recoupment requirement have been advanced in significant part to simplify decision-making. This goal has proved partly elusive for the former, a familiar point that serves as a motivation for adding a recoupment requirement.[111] As demonstrated throughout, however, assessment of recoupment may be harder still. Most obviously, this is because the recoupment condition depends in part on the alleged predator's cost structure, and in many ways.[112] Moreover, the recoupment requirement's relevance is often highly subtle and varies with the competing explanation under consideration. In addition, the structure of litigation in U.S. courts is not obviously conducive to organizing the gathering of facts and their assessment in a manner that economizes on effort and sharpens decision-making. In this respect, however, federal courts do have substantial power, if they wish to exercise it—for example, in structuring discovery, using magistrates, and employing court-appointed experts.[113]

An imperative for both agencies and courts is to screen out weak cases as quickly and cheaply as possible, without also eliminating meritorious ones.[114] Agencies' flexibility is particularly helpful in this regard, and the analyses of triangulation and of the comparisons between different alternative explanations for alleged predation clarify how this might better be

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[110]This institutional difference might help to explain why recoupment is usually described as a requirement in the United States but a consideration in the European Union. *See supra* note .

[111]In particular, it may well be that a significant motivation for the emergence of recoupment was to keep complex and possibly weak cases from juries: *Matsushita* held that the defendant was entitled to summary judgment (on a massive record), and *Brooke Group* decided that the defendant was entitled to a judgment as a matter of law, after a (taken to be properly instructed) jury had found for the plaintiff. Moreover, as explained in Subsection I.A.2, *Brooke Group* did so on the heels of *Spectrum Sports*, where the Supreme Court acted similarly—there, in overturning a jury's decision, insisting on an independent monopoly power requirement that could not be satisfied by logical inference from other facts in the case. In both *Matsushita* and *Brooke Group*, the Court examined the facts in detail in reaching the conclusion that they were insufficient for a reasonable factfinder to impose liability. These cases do not appear to be isolated; rather, federal courts over the past decades seem increasingly willing to dispose of complex antitrust and other cases that the tribunal deems to be weak. *See* Kaplow, *supra* note , at 1556–67 & n.120.

[112]*See also supra* note (quoting Elzinga and Mills, regarded to be the requirement's leading proponents, on other respects in which recoupment assessments are factually challenging).

[113]*See generally* AMERICAN BAR ASSOCIATION SECTION OF ANTITRUST LAW, PRESIDENTIAL TRANSITION REPORT: THE STATE OF ANTITRUST ENFORCEMENT 17–19 (Jan. 2017) (proposing consideration of litigation restructuring in the antitrust context); Kaplow, *supra* note , at 1121–29 (on the optimal structuring and sequencing of adjudication); Kaplow, *Design of Legal Rules*, *supra* note .

[114]The exposition in this Part, like some other Parts of the article, simplifies by focusing on classification. As mentioned briefly below, however, magnitudes—of both anticompetitive harm and the costs of chilling procompetitive behavior—matter greatly and, where possible, they should also play a role in screening decisions. Notably, when potential harm is likely to be modest at most or the chilling costs would be unusually large, a decision-maker should be more inclined to dispose of marginal cases, and conversely.

done. U.S. courts rely on a combination of standards for motions to dismiss[115] and for summary judgment[116] and, in antitrust, particularized substantive rules designed to ease sorting.

This article emphasizes how the rules for predation cases, and recoupment in particular, may be more difficult to apply in serious cases than it is to examine directly the core question that they are designed to illuminate. In this respect, it is important to consider whether internal evidence—interpreted carefully, through the lens of modern analysis and with a better understanding of competing explanations—might be more useful than is often assumed.[117] Granting the familiar limitations, it is essential to compare the alternative: an ex post battle of paid experts in litigation, when many of the facts they need to employ are difficult to observe, extract, infer, or impute.

The central screening concern, however, is not the prompt removal of a handful of seemingly serious cases that would, upon analysis, prove to be weak. Instead, the problem is the possibly large number of much weaker cases that, if rules were too lax, would be filed in the hope of extracting settlements or hitting the jackpot with an inexperienced and readily confused factfinder.[118] Given the complexity of recoupment inquiries—how they vary with the competing explanation for the alleged predator's conduct, their surprising subtlety, and that they do not avoid the need to inquire into the defendant's cost structure—it is unclear how much recoupment

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[115]*See, e.g.*, Bell Atl. Corp. v. Twombly, 550 U.S. 544, 556 (2007).

[116]*See, e.g.*, Matsushita Elec. Indus. Co. v. Zenith Radio, 475 U.S. 574 (1986).

[117]Justice Brandeis famously endorsed the relevance of inquiries into firms' intent, not because it is of direct relevance but rather because it may illuminate actual effects.

> The history of the restraint, the evil believed to exist, the reason for adopting the particular remedy, the purpose or end sought to be attained, are all relevant facts. This is not because a good intention will save an otherwise objectionable regulation, or the reverse, but because knowledge of intent may help the court to interpret facts and to predict consequences.

Chi. Bd. of Trade v. United States, 246 U.S. 231, 238 (1918). Justice Breyer, when a circuit court judge, expressed skepticism about such inquiries in a predatory pricing opinion:

> But "intent to harm" without more offers too vague a standard in a world where executives may think no further than "Let's get more business" . . . . Moreover, if the search for intent means a search for documents or statements specifically reciting the likelihood of anticompetitive consequences or subsequent opportunities to inflate prices, the knowledgeable firm will simply refrain from overt description. If it is meant to refer to a set of objective economic conditions that allow the court to "infer" improper intent, . . . then, using Occam's razor, we can slice "intent" away. Thus, most courts now find their standard, not in intent, but in the relation of the suspect price to the firm's costs.

Barry Wright Corp. v. ITT Grinnell Corp., 724 F.2d 227, 232 (1st Cir. 1983). A more favorable view is offered in the European Union's *Discussion Paper on Article 82*, *supra* note , ¶¶ 113–14 (footnote omitted):

> Direct evidence of a predatory strategy can consist of documents from the dominant company, such as a detailed plan demonstrating the use of predatory prices to exclude a rival, to prevent entry or to pre-empt the emergence of a market, or evidence of concrete threats of predatory action. Such evidence needs to be clear cut about the predatory strategy and for instance indicate the specific steps the dominant company is taking and not just concern company internal general talk that the dominant company "will crush the competition." In case of such direct evidence it does not need to be shown that also other elements point towards predation. It may be assumed that the dominant company, as it has devised a clear strategy to predate, also has the means to predate and that its pricing behaviour does or will eliminate or discipline the rival in question and thereby have a negative effect on (the growth of) competition in the market.

[118]Consider the rather different approach noted in Part III of limiting predation claims to episodes that have run their course and been successful. Because myriad entrants in a wide range of industries fail, and often their entry will have provoked price reductions, such an approach standing alone seems insufficient to screen out many potentially weak cases.

analysis can aid in this endeavor. With some cases that are in fact very weak,[119] the inability to recoup may often be obvious.[120] The important question is whether that is so in an important subclass of cases in which other screens would fail—notably, when a monopoly power requirement has been satisfied[121] and a price-cost test (or whatever other substantive requirement might be imposed) is plausibly met.[122] It is mysterious how often significant monopoly power (including with respect to duration[123]) would plausibly be established but the prospect of any long-run profit recovery would nevertheless be obviously absent.[124]

Adding recoupment to the mix may nevertheless be helpful because there is little sense of how much monopoly power is understood to be required. Here, we can say: at least enough to plausibly recoup. But we also must remember that knowing how much is enough requires estimation of the short-run profit sacrifice (arguably, from an ex ante perspective), itself a

[119]Note that cases with a negligible prospect of recoupment are weak in two senses: true predation rather than accommodation would be unlikely, and even if there is real predation, the small profit recovery (even though it exceeds the smaller profit sacrifice) will be associated with a small anticompetitive harm, so the social cost of failing to deter such behavior will not be great.

[120]*See, e.g.*, Brooke Grp. Ltd. v. Brown & Williamson Tobacco Corp., 509 U.S. 209, 226 (1993) (explaining that "[d]etermining whether recoupment of predatory losses is likely requires an estimate of the cost of the alleged predation and a close analysis of both the scheme alleged by the plaintiff and the structure and conditions of the relevant market," but noting that "[i]n certain situations—for example, where the market is highly diffuse and competitive, or where new entry is easy, or the defendant lacks adequate excess capacity to absorb the market shares of his rivals and cannot quickly create or purchase new capacity—summary disposition of the case is appropriate"); U.S. DEP'T OF JUSTICE, *supra* note , at 69 ("The Department believes that the recoupment requirement, when properly applied, serves as a valuable screening device to identify implausible predatory-pricing claims. In many instances, the *obvious* inability of a firm to recoup *any* losses may obviate the more difficult task of determining whether prices were below cost." (emphasis added)); DOJ/FTC Hearings, *supra* note , at 70 (statement of Janusz A. Ordover) (stating that sometimes "there is no need to somehow construct this potentially complicated analytics" because industry structure is such that "you know, quick as a bunny, somebody else is going to show up who may be [an] even more competitively advantaged rival"). Another aspect of triangulation would note that, if the maximal recovery is small, placing a cap on the short-run sacrifice (continuing to assume rational profit-maximization by the defendant), then perhaps such a modest price cut relative to accommodation would be unlikely to drive out or discipline rivals.

[121]Perhaps because of *Brooke Group*'s failure to restate the monopoly power requirement, as discussed in Section I.A, it is easier to forget that, under the standard doctrinal framework, this must be established, meaning that cases in which it is obvious that the maximum possible long-run profit recovery is trivial will fail the monopoly power requirement anyhow. If the recoupment requirement were seen as replacing the monopoly power requirement, however, then such ready disposals of weak cases would naturally be described as involving a failure of recoupment.

[122]The meaning of the other requirements being "met" would depend on the procedural stage. For example, to survive summary judgment, a plaintiff would have had to offer sufficient evidence on these issues to require resolution by the factfinder. Keep in mind also, from Subsection I.B.2, that it makes a great deal of difference whether monopoly power refers to the power before engaging in predation or after predation is successful, the latter being the notion that makes the recoupment condition more likely to be satisfied (the former militating against its satisfaction).

[123]*See, e.g.*, U.S. DEP'T OF JUSTICE, *supra* note , at 20 (making clear in its early chapter on monopoly power that "the power in question is generally required to be much more than merely fleeting; that is, it must also be durable").

[124]As discussed in Subsection I.B.2, perhaps a benefit of thinking about recoupment is that it highlights the need to distinguish between the level of market power without the effects of the alleged predation (a higher level implying greater profits under accommodation, which makes the recoupment condition harder to satisfy) and the level of market power with the effects of successful predation (a higher level raising the long-run profit recovery, helping to satisfy the recoupment condition). Recall, however, that there is a potential difficulty raised by the commonly offered reason, the ease of future entry, *see, e.g.*, *supra* note (quoting Ordover), that the latter notion of market power would clearly be low and hence the recoupment condition would obviously fail to be satisfied: if it is plausibly argued that the defendant's predation would itself erect a strategic entry barrier, scaring future entrants away, then it is no longer obvious that the defendant would be unable to recoup, which is to say that it is no longer clear that market power, taking into account the effect of successful predation, would be low.

difficult undertaking (that, in principle, requires an assessment of the defendant's costs) and one that, if a significant estimate is produced, creates a serious tension with a defendant's claim that its pricing involved accommodation and hence no short-run sacrifice. It is worth asking how well courts can screen cases with a recoupment requirement that is poorly understood in terms of both its content and import. The alternative is to try to focus directly on the pertinent anticompetitive strategy (which a challenger might be required to articulate and prove more sharply) and the defendant's proffered competing explanation (which also could be elaborated and proved, rather than left murky or ignored altogether).[125]

In thinking about screening, whether by agencies or courts, it is also useful to revisit Part II's criticism of sequential assessment, which taken literally requires market power to be measured against the appropriate standard before turning to other considerations, which are themselves to be examined in a particular order. The illogic of this approach as a matter of proper analysis likewise suggests infirmities as a template for screening. Because we are primarily concerned with the fairly rapid elimination of weak cases, it makes sense to have all of the relevant components in view and then to zero in on whichever links might be the weakest, individually or in combination. Accordingly, if recoupment obviously is implausible, it would indeed be sensible to eliminate the case even if one has not yet figured out whether the price was below cost. If instead the only proffered procompetitive explanation seems inconsistent with some of the apparent facts, this suggests that liability is plausible even before a careful examination of the earlier-sequenced factors, making the case a bad candidate for screening. Another possibility—which has not been a focus in the present article—is that it may sometimes be readily apparent that the potential anticompetitive harm would be small even if it is unclear whether predation occurred; this possibility might arise when the prospective profit recovery seems minimal even if it might nevertheless exceed an even smaller profit sacrifice.[126]

In any event, a prerequisite to effective screening is a clearer appreciation of the logic underlying recoupment and predatory pricing analysis more broadly. The best ways to screen, after all, are parasitic on the proper way to make ultimate decisions.

Shortcomings of sequential assessment pertain not only to screening but to the broader process of collecting and interpreting information, both by agencies and by courts. As explained in Section II.C, even basic questions regarding what counts as relevant evidence on classification necessitate articulating explicit competing explanations and typically require that one proceed in an interdependent fashion. In addition, evidence often naturally clumps not by topic but rather by source. Key documents, internal emails, fact witnesses (typically, firms' decision-makers and analysts upon whom they relied), and experts hired by either side in litigation may be distinct from each other but each may supply information on any or all of the key factors (which is

[125]For example, one of the *Brooke Group* majority's strongest arguments was that the defendant also offered price reductions to wholesalers in markets not served by the plaintiff and in other ways behaved inconsistently with a firm bent on predation. *See* Brooke Grp. Ltd. v. Brown & Williamson Tobacco Corp., 509 U.S. 209, 241–42 (1993). This point goes directly to which explanation is more likely and does not bear in an obvious manner on the recoupment condition, the purported focus of the Court's discussion. In this respect, the decision was an exercise in triangulation, although without much guidance on how that should be undertaken.

[126]Relatedly, if chilling costs associated with the erroneous assignment of liability would be large, a case is a stronger candidate for screening. In this respect, it is worth noting that the ease of entry (despite entrants' fears of subsequent predation) may not only suggest that profit recovery and anticompetitive harm would be small but also that the chilling costs, notably associated with moderating accommodating price costs, might for the same reason be modest.

necessarily true for factors that are not logically separate to begin with). An important and familiar example involves the defendant's internal documents. To resolve ambiguities, one must simultaneously consider competing possibilities; it is hard to see how one can ask if a document really carries one interpretation without even imagining what else it might possibly mean.

Nor is such sequential structuring a good description of how litigation is or ought to be conducted. Some argument advancing sequential decision rules proceeds as if[127] there would be, say, a preliminary round of discovery, including review of emails and depositions of a defendant's key decision-makers, and exchanges of expert reports with further depositions, on the question of market power, followed by a summary judgment decision and possibly a trial on just that issue. Then, if the plaintiff prevailed, there would be a second round of email review, depositions, and export reports on price versus cost, followed by summary judgment and trial; then, if the case is still alive, a third round on recoupment; and, finally, a round on the defendant's proffered justification for its pricing.[128] To the extent, however, that one takes sequential decision rules more as check-lists that offer suggestions for how some weak cases may readily be removed from the legal system, then they do have some value.

V. CONCLUSION

The proper role of recoupment inquiries in predatory pricing analysis is notably more subtle than meets the eye. Recoupment logic—that rational predation implies an expectation of recoupment, so the implausibility of recoupment negates predation—is deceptively simple. The most obvious complexity—the mere recognition that both clauses are true, and that the first suggests that recoupment inquiries are unnecessary when predation is already established—only scratches the surface. More fundamentally, proper predatory pricing analysis involves triangulation among interdependent components, a feature that is at odds with common statements of existing doctrine and proposed protocols.

[127]Interestingly, although sequential decision rules are often advanced in antitrust without addressing such matters, some commentators have specifically raised the possibility of bifurcation in predatory pricing cases. *See, e.g.*, AREEDA & HOVENKAMP, *supra* note , at 53–57 (examining bifurcation of pretrial proceedings, presenting several challenges, and noting its limited use); Joskow & Klevorick, *supra* note , at 260–61 (proposing bifurcation, allowing first for discovery and a trial on "issues of structural monopoly" and then, if the plaintiff prevailed, another round on remaining issues). Rather different on the practical side would be an agency—or a court proceeding more in the style of some continental legal systems—proceeding sequentially. *See, e.g.*, Rebel Oil Co. v. Atl. Richfield Co., 133 F.R.D. 41, 44 (D. Nev. 1990) (limiting initial discovery in a predation case to market power, after which summary judgment was granted for the defendant on that issue); *see generally* Kaplow, *Design of Legal Rules*, *supra* note . However, as the analysis here suggests, the optimal way to proceed would be quite different from that embodied in typical sequential decision rules and associated bifurcation proposals. Instead, one would look first to whatever sources of evidence seemed likely to be most probative (in any manner) relative to the cost of gathering the evidence, and proceed accordingly, pausing along the way to see whether, based on the information accumulated so far, it made sense to enter a finding of liability, to decide that there is no liability, or to gather yet additional information. *See generally* Kaplow, *supra* note ; Louis Kaplow, *Optimal Multistage Adjudication*, 33 J.L. ECON. & ORG. 613 (2017). Relatedly, bifurcation by issue raises the problem that how evidence on that issue should be interpreted and what is its ultimate import often depend on interactions with other (subsequent) issues.

[128]Even if one confines attention solely to how trials are conducted—which massively reduces the impact since this omits agency investigations along with the large portion of civil litigation that transpires before trial—the imagined sequential approach is substantially misleading. Trials are not in fact ordinarily sequenced in the contemplated fashion, with the factfinder rendering a decision on each component along the way. The primary exception is that defendants often move for a judgment as a matter of law at the close of a plaintiff's case, and these motions are sometimes granted.

This article first considers the relationship between market power and recoupment. Why is it that we seem to have two distinct legal requirements given the overlap in what is regarded to be the pertinent information and analysis? Does insistence, at the outset, on a demonstration of monopoly power under Sherman Act Section 2 (or dominance under TFEU Article 102) render recoupment redundant? Or does the recoupment requirement define, augment, or replace the preexisting monopoly power requirement? The doctrinal evolution of recoupment does not address these questions. But analytical answers can be derived upon direct inspection of the recoupment condition itself. A higher level of market power after predation's effects are realized suggests a greater long-run profit recovery, helping to satisfy the recoupment condition. But a higher level of market power in the absence of predation actually hurts recoupment by implying that the short-run profit sacrifice is larger and the incremental boost to long-run profits is smaller. Hence, conventional market power requirements can misfire—as can recoupment analysis that emphasizes the need for high entry barriers while ignoring those potentially created by the predation itself.

Another problem is the apparent emergence of sequential assessment, wherein agencies and courts are first to inquire into market power, then whether predation occurred (usually understood as involving a price-cost test), then recoupment, and finally possible procompetitive explanations for a defendant's alleged predatory pricing. This sequential siloing of interdependent components is highly problematic. Market power's relevance (including determination of the relevant sense of market power and the requisite magnitude) depends on the later steps, including recoupment. Predation and recoupment inquiries are inextricably intertwined, requiring triangulation. Procompetitive explanations need to be stated at the outset rather than deferred to the end, among other reasons because much of the analysis is expressly comparative. Indeed, the relevance of recoupment—including whether easier recoupment favors or disfavors liability—depends on which procompetitive explanation is relevant in a given case.

Insufficient attention has also been given to why a challenger may show either that recoupment seemed plausible ex ante or that sufficient profit recovery actually occurred ex post. Why allow the choice rather than insisting on one in particular? Or, perhaps, should both be required? The right answer is indirect because recoupment is of derivative relevance and, as just emphasized, is interrelated with other aspects of the inquiry. This particular feature of recoupment is closely related to whether and when unsuccessful attempts should give rise to liability (where an ex ante recoupment condition may be satisfied but not an ex post one).

This article's analysis offers guidance for agencies and courts and provides directions for future research on predation and other anticompetitive practices. The lessons include:

- Concepts must be defined and understood. By contrast, most writing by courts and commentators about recoupment neither precisely states the recoupment condition nor examines its constituent parts (which include the alleged predator's incremental costs).
- Components (sometimes stated as legal "elements") of tests or analyses must be related to the underlying objectives of deterring anticompetitive conduct and avoiding the chilling of procompetitive behavior, not examined in isolation and permitted to take on lives of their own.

- Recoupment in particular should not be considered in a vacuum, separated from the core predation inquiry as well as from market power and procompetitive explanations. Instead, triangulation is required.
- Market power needs to be defined, assessed, and applied based on its relevance to the pertinent anti- and procompetitive explanations for the conduct under consideration. Market power has multiple, conflicting, and largely indirect relationships to recoupment. Conventional market power analysis can backfire in that certain limitations on market power can sometimes favor liability.
- Competing (anti- and procompetitive) explanations must both be articulated, with some specificity, at the outset. Comparison is confounded when only one is in view or either is vague. Nor can one assess the magnitudes of anti- and procompetitive effects without identifying what they are in the first place.
- Recoupment and predation analysis quite broadly are even more challenging than is appreciated.
- Ex post battles of experts in litigation may not be a very effective way to reach sound judgments, particularly as litigation is currently conducted.
- Agencies have significant advantages over courts; court-appointed experts, specialist magistrates, or other adjustments may prove helpful in litigation; and greater reliance on internal evidence of firms' strategic plans (recognizing the ambiguities and dangers) may usefully supplement expert reconstruction of events.
- Screening out weak cases (by agencies or courts) requires a multidimensional approach that appreciates the key interdependencies and ordinarily requires some analysis of the facts.