MONOPOLY POWER: USE, PROOF AND RELATIONSHIP TO ANTICOMPETITIVE EFFECTS IN SECTION 2 CASES

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I. Introduction

Monopoly power is a key element in the analysis of single-firm conduct. The legal element for monopolization under section 2 of the Sherman Act requires that the firm possess monopoly power.[1] A dangerous probability of obtaining monopoly power is necessary for attempted monopolization.[2] Yet, while the presence (or probability) of monopoly power is required to find liability under section 2 of the Sherman Act, "[t]he mere possession of monopoly power, and the concomitant charging of monopoly prices is . . . not unlawful."[3] Section 2 prohibits improper conduct to acquire or maintain monopoly power; the statute prohibits improper conduct that has particular effects—the acquisition or maintenance of monopoly power.

Consequently, the legal requirement—the possession of monopoly power—serves multiple functions that are analytically related to, but are not explicitly part of, the Sherman Act's conduct-based prohibition. To begin with, the monopoly power requirement provides a useful screen for identifying firms capable of causing competitive harm through their single-firm conduct. It is only when the firm has sufficient market power that exclusionary conduct can have an anticompetitive effect on the market and consumers[4] by, *inter alia*, decreasing output,

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* The views expressed are those of the author and Policy Studies' staff and do not necessarily reflect the views of the Commission or any individual Commissioner. The paper derives from early drafts developed in the context of the FTC/Department of Justice Joint Hearings on Section 2 of the Sherman Act: Single-Firm Conduct as Related to Competition. Any language that overlaps with other commentaries on the hearings reflects its origin in the common drafts.

1 United States v. Grinnell Corp., 384 U.S. 563, 570–71 (1966) (identifying "the possession of monopoly power in the relevant market" as an element of the offense of monopoly).

2 Spectrum Sports, Inc. v. McQuillan, 506 U.S. 447, 456 (1993).

3 Verizon Commc'ns Inc. v. Law Offices of Curtis V. Trinko, LLP, 540 U.S. 398, 407 (2004).

4 *See* Brooke Group Ltd. v. Brown & Williamson Tobacco Corp., 509 U.S. 209, 225 (1993) (noting that if conduct "could likely produce its intended effect on the target, there is still the further question whether it would likely injure competition in the relevant market. . . . '[predators] must obtain enough market power to set higher than competitive

raising price, or reducing innovation. Stated differently, "Behavior that might otherwise not be of concern to the antitrust laws—or that might even be viewed as procompetitive—can take on exclusionary connotations when practiced by a monopolist."[5]

This screening function provides certainty to the vast majority of firms that their conduct is not unlawful under section 2. It also helps to reduce enforcement costs, keeping many meritless cases out of court and allowing others to be resolved without a trial. When it can be determined that a firm lacks monopoly power, an evaluation of the firm's conduct may be avoided.[6]

For purposes of this screening function, courts traditionally have focused on whether monopoly power is present or likely to be obtained, i.e., they have tried to assess the *level* of market power. Yet, as discussed below, precise and reliable assessment of the presence of monopoly power is often difficult, and any screening inquiry is likely to be imperfect.

A second function of the monopoly power requirement often is intertwined with the assessment of the challenged conduct's effects. When the analysis turns to assessing effects, the focus shifts to whether there is a *change* in the level of market power that results from particular conduct.[7] As a recent commentary phrases it:

> [T]he ultimate economic question in antitrust litigation is almost never whether a firm or set of firms have market power. The case almost invariably concerns an economic objection to the challenged conduct . . . that turns on whether the conduct has increased (in a retrospective case) or is likely to increase (in a

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prices, and then must sustain those prices'" (quoting Matsushita Elec. Indus. Co. v. Zenith Radio Corp., 475 U.S. 574, 590–91 (1986))); Frank H. Easterbrook, *The Limits of Antitrust*, 63 TEX. L. REV. 1, 20 (1984) ("Firms that lack [market] power cannot injure competition no matter how hard they try. They may injure a few consumers, or a few rivals, or themselves . . . by selecting 'anticompetitive' tactics. When the firms lack market power, . . . they cannot persist in deleterious practices.").

5 Eastman Kodak Co. v. Image Tech. Servs., Inc., 504 U.S. 451, 488 (1992) (Scalia, J., dissenting); *see also* United States v. Dentsply Int'l, Inc., 399 F.3d 181, 187 (3d Cir. 2005) ("Behavior that otherwise might comply with antitrust law may be impermissibly exclusionary when practiced by a monopolist.").

6 *See* Dennis W. Carlton, *Market Definition: Use & Abuse*, COMPETITION POL'Y INT'L, Spring 2007, at 3, 19 ("[I]f there is no market power after the alleged bad act, then the antitrust inquiry ends.").

7 *See id*. at 19 ("[T]he central issue in a Section 2 case is whether some alleged bad act enables additional market power to be exercised, and, if so, whether any exercise of additional market power is offset by the additional provision of valuable services made profitable as a result of the price increase.").

prospective case) market power. Accordingly the economic question is not the level of market power but the change.[8]

These functions are related, and the analytical relationships flow in both directions. In some circumstances, when a firm acquires or enhances monopoly power, competitive effects will be inferred.[9] In other circumstances, the inquiry moves in the opposite direction, in that proof of actual anticompetitive effects may support an inference that the firm possesses monopoly power.[10]

The Supreme Court has also suggested that the monopoly power requirement serves a role beyond identification of anticompetitive harm by reducing the potential for false positives and thereby holding down error costs.[11] The Court has reasoned that the screening function of monopoly power helps to avoid chilling procompetitive single-firm business activity.[12] As

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8 Jonathan B. Baker & Timothy F. Bresnahan, *Economic Evidence in Antitrust: Defining Markets & Measuring Market Power, in* HANDBOOK OF ANTITRUST ECONOMICS 1, 15 (Paolo Buccirossi ed., 2008). Similarly, in a monopoly maintenance context, the focus would be on the absence of a reduction of market power that otherwise would have occurred.

9 *See id.* ("Antitrust law at times relies upon presumptions that if the level of market power is high, various types of conduct will increase it, and if the level of market power is low, they will not. That is, in legal terms, anticompetitive effect is at times inferred from proof of market power.").

10 *See* United States v. Microsoft Corp., 253 F.3d 34, 51 (D.C. Cir. 2001) ("Where evidence indicates that a firm has in fact profitably ['cut back the market's total output and so raise[d] price'], the existence of monopoly power is clear.").

11 *See* Spectrum Sports, Inc. v. McQuillan, 506 U.S. 447, 458–59 (1993) (explaining the monopoly power requirement in terms of the difficulty of distinguishing "robust competition from conduct with long-term anticompetitive effects" and the consequent need "to avoid constructions of § 2 which might chill competition, rather than foster it"); Copperweld Corp. v. Independence Tube Corp., 467 U.S. 752, 775 (1984) (observing that "the Sherman Act . . . leaves untouched a single firm's anticompetitive conduct (short of threatened monopolization) that may be indistinguishable in economic effect from the conduct of two firms subject to § 1 liability"). *See generally* William F. Adkinson, Jr., Karen L. Grimm & Christopher N. Bryan, *Enforcement of Section 2 of the Sherman Act: Theory and Practice*, Sections IV.D., V.B. (Fed. Trade Comm'n Staff Working Paper, 2008), http://www.ftc.gov/os/sectiontwohearings/docs/section2overview.pdf (discussing error costs and concerns with chilling procompetitive single-firm activity).

12 *Copperweld*, 467 U.S. at 775 (concluding that "[s]ubjecting a single firm's every action to judicial scrutiny for reasonableness would threaten to discourage the competitive enthusiasm that the antitrust laws seek to promote").

discussed below, to the extent that courts use a variant of market power—an economic concept suitable for assessing anticompetitive effects—for purposes not directly related to that objective, analytical tension and implementation problems result.

This paper reviews relevant case law, scholarship, and presentations at the Federal Trade Commission/Department of Justice Hearings on Section 2 of the Sherman Act to examine the definition of monopoly power, evidence that demonstrates the existence of monopoly power, and conclusions that can be drawn from particular types of evidence. Section II considers the legal and economic definitions of monopoly power and the relationship between monopoly power and market power. Section III examines categories of evidence that courts have used to determine whether a firm possesses monopoly power, including market definition and market share, profitability, and direct evidence of the exercise of monopoly power. The discussion identifies the limitations of these types of evidence. Given those limitations, Sections IV and V present a framework for assessing whether a firm possesses monopoly power based on market share and the presence of anticompetitive effects. Section IV discusses the ability to draw conclusions based on a firm's market share; it suggests a rebuttable presumption that a firm with less than a 50% share of a properly defined relevant market lacks monopoly power. Section V discusses the inferences that may be supported by a demonstration of actual or likely anticompetitive effects and a causal link between the challenged conduct and anticompetitive harm; it urges recognition of the potential of such evidence to establish the presence of monopoly power. Finally, Section VI summarizes the conclusions.

II. The Definition of Monopoly Power[13]

Despite the prominent role of monopoly power in section 2 analysis, its meaning remains "open to much debate and interpretation."[14] The terms "market power" and "monopoly power" can have varied meanings, and this can generate semantic differences and disputes.

Market power is defined by economists as the ability profitably to price above marginal cost.[15] As a matter of economics, a firm possesses market power when the conditions of perfect competition are absent, so that the firm faces a downward-sloping demand curve. Firms in markets with differentiated products may face downward-sloping demand curves even if they do

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13 This section analyzes the meaning of "monopoly power." Related issues raised by the attempt offense—requiring a "dangerous probability" of obtaining monopoly power—were not addressed in the hearings and generally are not examined in this paper.

14 Alan J. Dashkin & Lawrence Wu, *Observations on the Multiple Dimensions of Market Power*, ANTITRUST, Summer 2005, at 53.

15 *See* ABA SECTION OF ANTITRUST LAW, MARKET POWER HANDBOOK 1 (2005) ("Economists define 'market power' as the ability of a firm or group of firms within a market to profitably charge prices above the competitive level for a sustained period of time.") (emphasis omitted).

not have large shares of the overall market.

Not all departures from the economic model of perfect competition are cause for concern. A small degree of market power is very common and widely understood not to warrant antitrust intervention.[16] Thus, "[m]arket power need not trouble the antitrust authorities unless it is both substantial in magnitude and durable."[17]

The antitrust concept of market power is familiar in other antitrust offenses and enforcement. For instance, the Agencies' Horizontal Merger Guidelines explain that "[t]he unifying theme of the Guidelines is that mergers should not be permitted to create or enhance market power or to facilitate its exercise. Market power to a seller is the ability profitably to maintain prices above competitive levels for a significant period of time."[18]

A. Monopoly Power Must Be Substantial

The legal requirement for section 2 of the Sherman Act, however, calls for monopoly power, not market power. Monopoly power has no specific, broadly-adopted economic

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16 *See, e.g.*, Sherman Act Section 2 Joint Hearing: Concluding Session Hr'g Tr. 55, May 8, 2007 [hereinafter May 8 Hr'g Tr.] (Sidak) (noting that firms "may have differentiated products that explain the downward slope of their firm demand curves," and observing, "I don't think that the downward sloping demand curve itself is a cause for antitrust intervention"); Sherman Act Section 2 Joint Hearing: Monopoly Power Hr'g Tr. 14, Mar. 7, 2007 [hereinafter Mar. 7 Hr'g Tr.] (Nelson) (discussing the distinction between downward-sloping demand curves and antitrust market power); Philip Nelson, Monopoly Power, Market Definition, and the *Cellophane* Fallacy 1 (Mar. 7, 2007), http://www.ftc.gov/os/sectiontwohearings/docs/0703PhilipNelsonpresentation.pdf ("not all firms with market power have sufficient market power to have 'market power' in an antitrust sense"). *But cf.* William S. Comanor, *Is There a Consensus on the Antitrust Treatment of Single-Firm Conduct?*, 2008 WIS. L. REV. 387, 391 (2008) (arguing that deviations from perfect competition often provide "[e]xisting degrees of market power . . . sufficient for exclusionary actions to be successfully employed").

17 2B PHILLIP E. AREEDA, HERBERT HOVENKAMP & JOHN L. SOLOW, ANTITRUST LAW ¶ 501, at 111 (3d ed. 2007).

18 U.S. Dep't of Justice & Fed. Trade Comm'n, Horizontal Merger Guidelines § 0.1 (1992) [hereinafter Horizontal Merger Guidelines] (with Apr. 8, 1997 revisions to section 4 on efficiencies). *But cf.* Benjamin Klein and John Shepard Wiley, Jr., *Competitive Price Discrimination as an Antitrust Justification for Intellectual Property Refusals to Deal*, 70 ANTITRUST L.J. 599, 602, 628–33 (2003) (distinguishing as a wholly different concept, antitrust market power, which enables firms to control or influence market outcomes, from economic market power, which enables firms to set their own prices above marginal cost and is reflected by the elasticity of the firm's demand curve).

definition. Economic literature typically speaks only in terms of market power; discussions of monopoly power are generally limited to a model of a single seller or facts very close to that pure monopoly model.[19]

Legal definitions of monopoly power vary. Most legal opinions rely on the definition in *United States v. E.I. du Pont de Nemours & Co.* and find that monopoly power is "the power to control prices or exclude competition" in a relevant market.[20]

A leading antitrust treatise explains that "the Sherman Act § 2 notion of monopoly power . . . is conventionally understood to mean 'substantial' market power."[21] But no standard has been defined for determining how much market power is "substantial" enough to qualify as monopoly power.[22] Although courts of appeals sometimes have re-framed the inquiry to require

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19 *See* ABA SECTION OF ANTITRUST LAW, *supra* note 15, at 3 ("Economists often use the terms 'market power' and 'monopoly power' interchangeably . . . ."). *But cf.* DENNIS W. CARLTON & JEFFREY M. PERLOFF, MODERN INDUSTRIAL ORGANIZATION 93 (4th ed. 2005) ("One might usefully distinguish between the terms by using *monopoly power* to describe a firm that makes a profit if it sets its price optimally above its marginal cost, and *market power* to describe a firm that earns only the competitive profit when it sets its price optimally above its marginal cost."); Gregory J. Werden, *Identifying Single-Firm Exclusionary Conduct: From Vague Concepts to Administrable Rules,* 2007 FORDHAM COMP. L. INST. 557, 560 n.15 (2008) (distinguishing market power from monopoly power on the basis of the relevant time-frame: "Market power and monopoly power may be distinguished on the basis that the former is a short-run concept, while the latter is a long-run concept.").

20 United States v. E.I. du Pont de Nemours & Co., 351 U.S. 377, 391 (1956) ("*Cellophane*"); *see also id*. at 392–93 (explaining that monopoly power, like antitrust law's understanding of the term market power, requires more than that a firm sells a unique product in a differentiated product market).

21 3B PHILLIP E. AREEDA & HERBERT HOVENKAMP, ANTITRUST LAW ¶ 801, at 382 (3d ed. 2008); *see also* William M. Landes & Richard A. Posner, *Market Power in Antitrust Cases*, 94 HARV. L. REV. 937, 937 (1981) (defining monopoly power as "a high degree of market power"); Bacchus Indus., Inc. v. Arvin Indus., Inc., 939 F.2d 887, 894 (10th Cir. 1991) (stating that monopoly power "is also commonly thought of as substantial market power"); Deauville Corp. v. Federated Dep't Stores, Inc., 756 F.2d 1183, 1192 n.6 (5th Cir. 1985) (describing monopoly power as an "extreme degree of market power").

22 *See* AREEDA & HOVENKAMP, *supra* note 21, ¶ 801, at 382 ("On the question of how much power is enough to invoke § 2, there is no single or wholly satisfactory answer."); Comanor, *supra* note 16, at 392 ("[T]here is rarely much consideration given to how much market power is needed for it to indicate monopoly power. . . . The striking feature of most discussions . . . is their failure to go beyond a mere reference that substantial degrees of market power are required for it to be meaningful.").

an ability to price "substantially" above the competitive level,[23] this provides no better basis for measuring substantiality.[24]

Indeed, while commentators "readily acknowledge that market power will always be a matter of degree, none suggests that there is a meaningful, objective threshold for distinguishing 'monopoly power' from ordinary 'market power' when the evidence of market power is measured directly."[25] Consequently, analytical attempts to distinguish monopoly power and antitrust market power have not proved useful.

Although the Supreme Court has stated that monopoly power under section 2 requires "something greater" than power under section 1, it suggested no means for operationalizing that principle.[26] Requiring a higher standard for monopoly power than for market power likely reflects an effort to limit the application of section 2 because of the heightened concern in single-firm contexts with "discourag[ing] the competitive enthusiasm that the antitrust laws seek to promote."[27] This concern may be sensible in the aggregate, but on the facts of any particular case, courts have found no method to distinguish the concepts apart from market share, which permits only limited inferences regarding economic power.[28] It is not surprising that courts confronting the question typically reach the same conclusion regarding the existence or absence

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23 *See* Dickson v. Microsoft Corp., 309 F.3d 193, 199 n.1 (4th Cir. 2002) (citation omitted); United States v. Microsoft Corp., 253 F.3d 34, 51 (D.C. Cir. 2001) (en banc) (per curiam) (citation omitted); AD/SAT v. Associated Press, 181 F.3d 216, 227 (2d Cir. 1999) (citation omitted).

24 *See* Mar. 7 Hr'g Tr. at 87 (White) (stating that monopoly power is the ability profitably to charge "a price significantly above marginal cost, sustained for a sustained amount of time . . . how much and for how long, I do not know.").

25 Andrew I. Gavil, *Copperweld 2000: The Vanishing Gap Between Sections 1 and 2 of the Sherman Act*, 68 ANTITRUST L.J. 87, 102 (2000).

26 *See* Eastman Kodak Co. v. Image Technical Services, Inc., 504 U.S. 451, 481 (1992) (concluding, without elaboration that evidence that Kodak "control[led] nearly 100% of the parts market and 80 to 95% of the service market, with no readily available substitutes," was sufficient to survive summary judgment).

27 Copperweld Corp. v. Independence Tube Corp., 467 U.S. 752, 775 (1984); *see supra* notes 11 and 12 and accompanying text. *But see* George A. Hay, *Market Power in Antitrust*, 60 ANTITRUST L.J. 807, 818 (1992) (questioning—in light of the emergence of conduct-specific tests to shelter procompetitive activity such as low pricing— the need to adjust the market-power inquiry to avoid erroneously condemning beneficial single-firm conduct).

28 *See infra* Section III.B.

of both monopoly power under section 2 and market power under section 1.[29]

In sum, to the extent that market power and monopoly power address the same core policy issue—whether the firm is able profitably to maintain price above a competitive level—there is no clear means for distinguishing between the concepts.[30] To the extent that monopoly power requires "something greater," as added protection against chilling procompetitive conduct, that increment cannot be derived from competition analysis and will likely be somewhat arbitrary.

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29 *See, e.g.*, Reazin v. Blue Cross & Blue Shield of Kan., Inc., 899 F.2d 951, 967–72 (10th Cir. 1990) (finding sufficient evidence that both market and monopoly power were present); Deauville Corp. v. Federated Dep't Stores, Inc., 756 F.2d 1183, 1192 (5th Cir. 1985) (finding the evidence insufficient for either market power under section 1 or monopoly power under section 2 because there was no finding that the conduct affected competition); *cf.* U.S. Anchor Mfg., Inc. v. Rule Indus., Inc. 7 F.3d 986, 994 n.12 (11th Cir. 1993) (treating the terms "monopoly power" and "market power" as synonymous); International Distrib. Ctrs., Inc. v. Walsh Trucking, 812 F.2d 786, 791 n.3 (2d Cir. 1987) (same).

30 *See* Thomas G. Krattenmaker, Robert H. Lande & Steven C. Salop, *Monopoly Power and Market Power in Antitrust Law*, 76 GEO. L.J. 241, 247 (1987) ("Economists use both 'market power' and 'monopoly power' to refer to the power of a single firm or group of firms to price profitably above marginal cost."); Mar. 7 Hr'g Tr. at 32 (White) ("The way I was taught, it is all the same thing . . . ."); *id*. at 149–50 (Krattenmaker) (market power and monopoly power are "qualitatively the same"); CARLTON & PERLOFF, *supra* note 19, at 93 (terms monopoly power and market power typically are used to mean the ability to profitably set price above competitive levels); Hay, *supra* note 27, at 808 (equating the presence of market power with the potential for competitive harm); *cf.* Gregory J. Werden, *Demand Elasticities in Antitrust Analysis*, 66 ANTITRUST L.J. 363, 374 (1998) ("The precise distinction between 'market power' and 'monopoly power' requires an extended discussion, but the one critical point is that the courts use the term 'monopoly power' in a manner compatible with the economic concept of 'market power.'").

As discussed in Section II.B., *infra*, monopoly power invokes the additional consideration of durability. Moreover, in the context of section 1 or other areas of antitrust law, market power includes the ability of a *group* of firms to maintain price above the competitive level. Many section 1 cases address collusion, where the market power of a group of firms acting together is able to cause competitive harm. In such cases, the group jointly possesses the necessary market power; no single firm may possess sufficient market power. In contrast, under section 2, the concern is the power of a single firm. *See* Hay, *supra* note 27, at 818 n.43.

B. Monopoly Power Must Be Durable

Monopoly power must be durable as well as substantial.[31] The firm's ability profitably to maintain prices above competitive levels requires that the firm or product be insulated from competition from new entrants or expansion by existing competitors.[32] As one commentator explains, "In most industries, there is a deviation from perfect competition in that price exceeds marginal cost, yet free entry can still guarantee zero (expected) economic profit . . . [W]e [should] reserve [the monopoly power] label for the case in which price exceeds marginal cost and profits are positive . . . ."[33]

Moreover, the requirement that monopoly power be durable is consistent with the second part of the Supreme Court's definition of monopoly power in *Cellophane*, the power to exclude competition.[34] Absent natural entry barriers or some ability to exclude or limit competition by entrants or expansion by other suppliers, prices above competitive levels will erode.[35] Viewed in these terms, the "exclude competition" concern in many legal definitions of monopoly power

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31 *See* United States v. Dentsply Int'l, Inc., 399 F.3d 181, 188–89 (3d Cir. 2005) ("[I]n evaluating monopoly power, it is not market share that counts, but the ability to *maintain* market share.") (internal citation omitted); AREEDA & HOVENKAMP, *supra* note 21, ¶ 801d, at 387 ("Monopoly power must be shown to be persistent in order to warrant judicial intervention, which is always costly."); May 8 Hr'g Tr. at 48 (Pitofsky) ("If you have market power, but it only survives for a year and then is displaced by some other product that is not really market power.").

32 *See, e.g.*, Am. Prof'l Testing Serv., Inc. v. Harcourt Brace Jovanovich Legal & Prof'l Pubs., Inc., 108 F.3d 1147, 1154 (9th Cir. 1997) ("'The plaintiff must show that new rivals are barred from entering the market and show that existing competitors lack the capacity to expand their output to challenge the predator's high price.'") (citing Rebel Oil Co. v. Atl. Richfield Co., 51 F.3d 1421, 1439 (9th Cir. 1995)).

33 Carlton, *supra* note 6, at 7; Mar. 7 Hr'g Tr. at 100–01 (Gilbert) (observing that monopoly power must be durable).

34 *See* Landes & Posner, *supra* note 21, at 977 (suggesting, "The Court may just have been making the corollary point that any firm that has and exercises the power to raise price above the competitive level must also be able to exclude entrants; otherwise it would not be able to maintain the higher-than-competitive price.").

35 *See* AREEDA ET AL., *supra* note 17, ¶ 501, at 111 ("In spite of its literal imprecision, the standard formulation is essentially correct in asking whether the defendant can price monopolistically without prompt erosion from rivals' entry or expansion."); Mar. 7 Hr'g Tr. at 100–01 (Gilbert) (describing the key issue as "the ability to exclude . . . because it says something about the ability to maintain price above some measure of long-run profitability of an efficient competitor").

elaborates on the price inquiry, rather than stating a separate test for monopoly power.[36]

There is no broadly accepted standard for defining the period necessary to establish that a firm's ability to maintain price above a competitive level is durable.[37] One hearing panelist suggested that a two-year period may show sufficient durability to support a conclusion that a firm possesses monopoly power,[38] but the issue was not fully aired.

For purposes of this paper, the term "monopoly power" refers to a substantial degree of market power that enables a firm, acting unilaterally, profitably to maintain price above the competitive level or to produce other market-level effects for a significant period of time.

III. Determining the Existence of Monopoly Power

Determining the existence of monopoly power in section 2 contexts is difficult. Various methodologies and sources of evidence have been proposed to demonstrate that a firm possesses monopoly power. Yet, because of the information constraints that often are encountered, no single method of showing monopoly power can always be applied. Determining whether a firm has monopoly power requires assessing whether particular types of evidence are available; recognizing the limitations or flaws that may be inherent in that evidence; and assessing whether the available information is consistent.

Sometimes the problems can be eased. Several sources of evidence may enable a determination of whether or not a firm possesses monopoly power, and there is no advantage to a rigid, sequential order of assessment. For instance, when entry is easy, a firm's ability to influence price will not be durable, regardless of market definition or the firm's market share.[39] In such situations, no further analysis should be necessary. Similarly, the analysis should not invariably require one particular type of evidence if another approach suffices. Given the close relationship between monopoly power and anticompetitive effects, a failure of evidence regarding market definition should not lead to dismissal of a case if there is a sufficient demonstration of monopoly power based on competitive effects. Similarly, delineation of precise market boundaries should be unnecessary if anticompetitive effects are likely under any

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36 *See* Mar. 7 Hr'g Tr. at 82–83, 84–85 (Gavil).

37 *See* AREEDA & HOVENKAMP, *supra* note 21, ¶ 801a, at 383 ("Few cases have paid much attention to the length of time that market power has been held.").

38 Mar. 7 Hr'g Tr. at 87 (White). *But see* AREEDA & HOVENKAMP, *supra* note 21, ¶ 801a, at 383 (proposing a presumption that a firm possesses monopoly when it maintains a market share of more than 70 or 75 percent for a period of five years).

39 *See* May 8 Hr'g Tr. at 41 (Eisenach) (proposing that fact-finders start the monopoly power analysis with entry, rather than market share).

of the competing market definitions.[40]

A. Market Definition and the *Cellophane* Fallacy

The existence of monopoly power is most commonly demonstrated indirectly, by defining a relevant market, showing that the firm has a dominant share of that market, and then examining entry and other structural characteristics of the market.[41] The relevant market in a section 2 case, as elsewhere in antitrust, is composed of "products that have reasonable interchangeability for the purposes for which they are produced—price, use and qualities considered."[42] Thus, the market is defined with regard to demand substitution, which focuses on buyers' views of which products are acceptable substitutes or alternatives.[43]

1. The *Cellophane* Fallacy

Particular care is required when identifying acceptable alternatives for consumers in cases alleging monopolization. "Undertaking a market definition analysis at monopolistic prices can lead one to define too broad a market and fail to identify market [and monopoly] power when it is present, which is known as the '*Cellophane* Fallacy.'"[44]

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40 *See* Mar. 7 Hr'g Tr. at 73–76 (Katz); Sherman Act Section 2 Joint Hearing: Academic Testimony Hr'g Tr. 148–50, Jan. 31, 2007 [hereinafter Jan. 31 Hr'g Tr.] (Shapiro).

41 *See* United States v. Dentsply Int'l, Inc., 399 F.3d 181, 187 (3d Cir. 2005) (citing United States v. Microsoft Corp., 253 F.3d 34, 51 (D.C. Cir. 2001) (because evidence of the ability to control prices or exclude competition is "only rarely available, courts more typically examine market structure in search of circumstantial evidence of monopoly power").

42 United States v. E.I. du Pont de Nemours & Co., 351 U.S. 377, 404 (1956) ("*Cellophane*"); *see also Microsoft*, 253 F.3d at 51–52 ("Because the ability of consumers to turn to other suppliers restrains a firm from raising prices above the competitive level, the relevant market must include all products reasonably interchangeable by consumers for the same purposes.") (internal quotations omitted); *accord* Horizontal Merger Guidelines, *supra* note 18, § 1.0 (finding that an antitrust market is defined "as a product or group of products and a geographic area in which it is produced or sold such that a hypothetical profit maximizing firm, not subject to price regulation, that was the only present and future producer or seller of those products in that area likely would impose at least a 'small but significant and nontransitory' increase in price, assuming the terms of sale of all other products are held constant.").

43 *See* Jonathan B. Baker, *Market Definition: An Analytical Overview*, 74 ANTITRUST L.J. 129, 132 (2007).

44 Nelson, *supra* note 16, at 6. *See generally* Mark A. Glick, Duncan J. Cameron & David G. Mangum, *Importing the Merger Guidelines Market Test in Section 2 Cases: Potential*

In the *Cellophane* case,[45] the issue before the Supreme Court was whether the relevant market was cellophane or flexible packaging materials. Du Pont produced over seventy percent of the cellophane in the United States.[46] Cellophane, however, "constituted less than 20% of all 'flexible packaging material' sales."[47] The Court concluded that cellophane's interchangeability with other materials made it part of a broader, flexible packaging market.

The opinion has been widely criticized because the Court mistakenly assessed the alternatives for cellophane *after* du Pont already had raised its price to the monopoly level and failed to recognize that even a monopolist faces constraints on its ability to raise price. A monopolist maximizes profits by raising its price until the increased profit from the higher price is offset by the diminished profit from the reduced quantity sold. A further price increase above that level would be unprofitable because it would induce a significant number of consumers to switch to substitutes or to cease buying the product.[48] Thus, simply observing that a firm cannot increase its price profitably from its current level allows no inference about a firm's market power.[49]

Commentators agree that by starting the analysis from the prevailing price the Court drew an incorrect conclusion about the relevant market in *Cellophane*.[50] Including alternative products that are attractive to consumers only after the monopolist already has elevated price expands the market beyond the group of substitutes that may constrain the dominant firm from increasing prices above competitive levels. The expanded market reduces the firm's market

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Benefits and Limitations, 42 ANTITRUST BULL. 121, 145–46 (1997).

45 *Cellophane*, 351 U.S. 377.

46 *Id.* at 379.

47 *Id.*

48 *See* Landes & Posner, *supra* note 21, at 961.

49 Lawrence J. White, Market Power and Market Definition in Monopolization Cases: A Paradigm is Missing 7–8 (Jan. 24, 2007), http://www.ftc.gov/os/sectiontwohearings/docs/0703LawrenceWhitepaper.pdf, *published in* 2 ABA SECTION OF ANTITRUST LAW, ISSUES IN COMPETITION LAW AND POLICY 913 (2008) ("[A]ll firms— regardless of whether they are competitive or are truly monopolists—will be found to be unable to raise price profitably from currently observed levels, since they will already have established a profit-maximizing price for themselves; and thus this 'test' will fail to separate the true monopolist that does exercise market power from the firm that does not have market power.").

50 *See, e.g.*, George W. Stocking & Willard F. Mueller, *The Cellophane Case and the New Competition*, 45 AM. ECON. REV. 29, 54–57 (1955); Landes & Posner, *supra* note 21, at 960–61.

share and incorrectly suggests an absence of monopoly power.

The *Cellophane* Fallacy presents challenges for analysis in many monopolization contexts. The Court's error in the *Cellophane* case can easily arise in a monopoly-maintenance or monopoly-acquisition case if the question posed is whether the defendant has the power profitably to raise price.[51] In fact, the most frequently used analytical approach for defining antitrust markets—described in the Agencies' Horizontal Merger Guidelines, which, as a general matter, define a relevant market by asking whether a hypothetical monopolist over various groups of products and areas would be able profitably to raise price above the *prevailing* level[52]— may repeat the error if carried over to the monopolization context absent an appropriate correction.

Although care in defining markets is warranted, the *Cellophane* Fallacy does not affect all section 2 cases. In particular, when the analysis is prospective, such as in some attempt-to-monopolize cases or other contexts in which the alleged monopolist has not yet exercised monopoly power, the *Cellophane* Fallacy is not a risk.[53] In such cases, using prevailing prices as the benchmark allows the identification of substitutes at the competitive or but-for-the-conduct price.

2. Proposed Methodologies for Addressing the *Cellophane* Fallacy

Defining a pre-conduct market. One panelist suggested using past prices that prevailed in the pre-conduct world to define the relevant market as of a time *before* the challenged conduct began.[54] The resulting market definition would be carried forward to the present to assess whether, after employing the challenged conduct, the firm achieved monopoly power in that market. According to the proponent of this approach, the *Cellophane* Fallacy need not preclude proper market definition in any monopolization case; even when monopoly power is currently being exercised, he advises, the usual market definition algorithm can be retained, provided that

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51 *See* White, *supra* note 49, at 6–7; Mar. 7 Hr'g Tr. at 35–36 (White).

52 Horizontal Merger Guidelines, *supra* note 18, § 1.11.

53 *See* Gregory J. Werden, *Market Delineation Under the Merger Guidelines: Monopoly Cases & Alternative Approaches*, 16 REV. INDUS. ORG. 211, 212 (2000) ("[T]he issue in many cases arising under Section 2 of the Sherman Act is whether ongoing or threatened conduct, if left unchecked, would create monopoly power—not whether the defendant already possesses monopoly power. Section 2 plaintiffs commonly allege that a rival has (recently) embarked on a course of conduct that constitutes an unlawful 'attempt to monopolize' because there is a 'dangerous probability' that the conduct, if not enjoined, would create monopoly power."); *see also* White, *supra* note 49, at 13.

54 Sherman Act Section 2 Joint Hearing: Section 2 Policy Issues Hr'g Tr. 160–62, May 1, 2007 [hereinafter May 1 Hr'g Tr.] (Willig).

it is applied to the pre-conduct world.[55]

To the extent that conduct is not quickly challenged, however, the exercise may require determining the availability and attractiveness of substitutes in the distant past. This may pose serious practical problems. Further, intervening new product introductions and the demise of competing products, perhaps from causes unrelated to the challenged conduct, may make the pre-conduct market anachronistic.

More important, the approach would still be subject to the *Cellophane* Fallacy if the challenged conduct was adopted to maintain pre-existing monopoly power, rather than to acquire monopoly power. In monopoly maintenance cases, using pre-conduct prices to define a pre-conduct market will build any pre-existing monopoly power into the market definition process. Consequently, it will distort an inquiry into whether the firm possessed monopoly power that it sought to shelter from erosion.

Using a more competitive benchmark price. A second approach to avoid the *Cellophane* Fallacy is to substitute a more competitive price for the prevailing price in current market circumstances. The appropriate benchmark price will vary depending upon the inquiry at issue. If the question is the one typically addressed in the case law—whether the firm possesses monopoly power—then a benchmark based on the competitive price is appropriate to identify whether alternative products will constrain the exercise of monopoly power.[56] When the goal is to examine the competitive effects of the allegedly exclusionary conduct—whether the given conduct confers or enhances the ability profitably to raise price, reduce output, or diminish quality—the appropriate benchmark is the price that would have prevailed but for the conduct.[57]

Practical problems in determining these benchmarks, however, can be severe,[58] and, for

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55 *Id.* (“mentally, we can go back to before the [conduct] and still ask [what was the share of the defendant in that market, what was the share of the excluded competitors and are there other sources of competitive discipline including entry] and there is a relevant market that’s pertinent for this analysis”).

56 *See* Nelson, *supra* note 16, at 6 (indicating that to avoid the *Cellophane* Fallacy, “market definition must be based on substitution at competitive prices, not monopoly prices”).

57 *See* Mar. 7 Hr’g Tr. at 105 (Katz) (stating that “the competitive effects analysis would look for a but-for price and would take into account a specific practice”); Werden, *supra* note 53, at 215 (“[T]he proper benchmark price for purposes of evaluating whether conduct is unlawfully exclusionary is the price that would prevail but for the challenged conduct. That price often is not the competitive price.”).

58 Nat’l Econ. Research Assocs., *The Role of Market Definition in Monopoly and Dominance Inquiries* 19 (U.K. Office of Fair Trading, Econ. Discussion Paper No. 2, July 2001), http://www.oft.gov.uk/shared_oft/reports/comp_policy/oft342.pdf. (“[I]n practice it is extremely difficult and in most cases impossible to determine the

these purposes, if "the benchmark price is not known, one cannot define the correct market."[59] In contrast, if these benchmark prices can be determined, the market definition exercise may be superfluous. If the competitive price is known, then a comparison of the prevailing market price and the competitive price will allow a direct inference about market competitiveness.[60] Similarly, if the but-for price is known, assuming other conditions such as quality and service are constant, a direct comparison with the prevailing price would provide evidence about whether the firm acquired the ability to exercise additional market power.[61]

3. Implications: The Hypothetical Monopolist Test in Section 2 Analysis

Unless a correction is available, the *Cellophane* Fallacy presents a challenge for accurately delineating markets in many section 2 contexts. Joined with other considerations discussed in this section, this suggests a need to examine alternative methods for assessing monopoly power.

As already indicated, the most frequently used analytical approach for defining antitrust markets is described in the Agencies' Horizontal Merger Guidelines, which, as a general matter, define a relevant market by asking whether a hypothetical monopolist over various groups of products and areas would be able profitably to raise price above the *prevailing* level.[62] The Horizontal Merger Guidelines themselves recognize that the prevailing price sometimes may not be appropriate for the analysis.[63] When translated to section 2 contexts, the potential problem

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competitive price level. This difficulty has profound implications for the application of the [approach]."); Carlton, *supra* note 6, at 20 ("It may sometimes be difficult to figure out the [but-for] benchmark price, though not always.").

59 Carlton, *supra* note 6, at 20 n.32.

60 *Id*. at 20 ("If one knows . . . the competitive price . . . then the market definition exercise is useless. . . . There is no need to define a market and calculate market share . . . "); Nelson, *supra* note 16, at 9 ("Why bother to define a relevant market and undertake the rest of the monopolization case market power paradigm if one already knows what the competitive price is and thus can compare it to the current price to determine if a firm has market power?"); Nat'l Econ. Research Assocs., *supra* note 58, at 19.

61 *See* Werden, *supra* note 53, at 213 ("It may be possible to measure a defendant's market power directly, by observing the extent to which price was raised after rivals were excluded.").

62 Horizontal Merger Guidelines, *supra* note 18, § 1.11; *see supra* note 42.

63 Horizontal Merger Guidelines, *supra* note 18, § 1.11 (stating that market definition analysis uses prevailing prices unless "premerger circumstances are strongly suggestive of coordinated interaction, in which case the Agency will use a price more reflective of the competitive price"); *accord* U.S. Dep't of Justice & Fed. Trade Comm'n, Antitrust

becomes more than a theoretical possibility, at least for allegations of monopoly maintenance.

Moreover, the hypothetical monopolist test may not have the optimal focus for all section 2 issues. It defines the market by considering the profitability of a hypothetical monopolist raising its own price and restricting its own output.[64] In contrast, for many Section 2 cases, the concern is that the firm tries to raise the cost and restrict the output of others; some panelists suggested that the market definition paradigm should reflect such a theory of anticompetitive effect.[65] The proposed methodologies for addressing the *Cellophane* Fallacy, notably the use of the price that would prevail but for the challenged conduct, recognize that market definition must be specific to the theory of competitive effects.

Unfortunately, there is no accepted alternative to the hypothetical monopolist methodology and no single accepted paradigm for defining relevant markets in all monopolization cases.[66] Market definition is not always difficult,[67] but, as one of the panelists

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Guidelines for Collaborations Among Competitors § 3.32(a) (2000) ("[W]hen circumstances strongly suggest that the prevailing price exceeds what likely would have prevailed absent the relevant agreement, the Agencies use a price more reflective of the price that likely would have prevailed.").

64 The Horizontal Merger Guidelines examine a hypothetical monopolist's ability to raise its own price (*i.e.*, to "impose[] at least a 'small but significant and nontransitory' . . . increase in price"), on the assumption that the prices of potential rival products are held constant (*i.e.*, on the assumption that "terms of sale of all other products remain[] constant"). Horizontal Merger Guidelines, *supra* note 18, § 1.11.

65 *See* Mar. 7 Hr'g Tr. at 24–25 (Simons); *see also id*. at 63 (Gilbert) (arguing that market definition should be specific to competitive effects analysis; inquiries that explicitly account for the effects of excluded competition tie together competitive effects with market definition and thereby avoid the *Cellophane* Fallacy); Krattenmaker, Lande & Salop, *supra* note 30, at 256–57 (urging that market definition methodology be expanded to evaluate effects of conduct on rivals' costs and the effects of those costs on prices in output markets, and arguing that "this determination . . . represents the central focus of the analysis, not a threshold inquiry undertaken independently of the analysis of the defendant's conduct").

66 *See* Mar. 7 Hr'g Tr. at 127–28 (Bishop); Nelson, *supra* note 16, at 13 (for monopolization cases, "[t]here is no 'cookbook' methodology for defining markets").

67 Even without a formal algorithm or paradigm, courts often are able to delineate a relevant market based on observation of the facts and circumstances of the industry. Mar. 7 Hr'g Tr. at 67–68 (Katz) (concluding that market definition and relevant markets are often obvious); *id*. at 102–03 (Carlton) (arguing that, in many cases, "market definition is just this seat-of-the-pants thing").

has stated, "[T]he absence of a generally accepted market definition paradigm is a genuine problem for monopolization cases."[68] Another noted, "We have not mapped out . . . exactly where you could do the hypothetical monopolist test, [and] where we need to do some alternative methodology. . . . sometimes, the fact that we do not have that has become an obstacle to good decision-making . . . ."[69] Other panelists voiced similar concerns.[70]

Consequently, numerous panelists urged that the role of market definition and evidence derived from market definition, such as market shares, become less central in section 2 cases.[71]

Moreover, analysts suggest that, despite inherent limitations in many monopolization contexts, the hypothetical monopolist test and the ensuing identification of market participants appropriately focus on demand and supply substitution and thereby help to avoid *ad hoc* conclusions regarding boundaries of the market and effects of the conduct. *See* Mar. 7 Hr'g Tr. at 130 (Bishop) (stating that "even just using the SSNIP test as a thought process can actually provide a useful discipline on how to define relevant markets"); Nat'l Econ. Research Assocs., *supra* note 58, at 19 ("[D]emand and supply substitution—concepts at the heart of the [hypothetical monopolist] test—will always be key and the [hypothetical monopolist] test provides a useful framework on which to build the remainder of the competitive analysis"); Werden, *supra* note 53, at 214–15 ("[T]he Guidelines' hypothetical monopolist paradigm might still play a very useful, albeit conceptual, role . . . provid[ing] the critical insight necessary to decide the case without any need to get into the details of their application.").

68 White, *supra* note 49, at 16.

69 Mar. 7 Hr'g Tr. at 118 (Katz).

70 *See id*. at 24–25, 30 (Simons) (recognizing that the Horizontal Merger Guidelines approach to market definition may not be optimal for section 2 cases and hoping for development of a new approach that integrates theory of competitive effects); *id*. at 63 (Gilbert) ("[T]he market definition exercise puts the cart in front of the horse. We should be thinking about where are the competitive effects, how significant can the competitive effects be, and then let the market definition respond to that rather than defining where the competitive effects are.").

71 *See, e.g.*, *id*. at 114–18 (Nelson, Simons, White, Gavil, Gilbert, Katz) (advocating greater reliance on analysis of competitive effects, but recognizing that market definition may be useful in some contexts); Jan. 31 Hr'g Tr. at 150 (Shapiro) ("[W]e need to be careful not to lose sight of what may be a simple or more direct argument that can get us to [the] analysis without . . . getting tied up particularly in market definition"); *id*. at 104–05 (Bresnahan) ("I want us to . . . think about both the potential for a competitive effect . . . [and] a causal link between the alleged act and monopoly. I would bring those to the fore. Those would be my framework for thinking about a Section 2 case."); *id*. at 168–69 (Gilbert) ("I do think that the law creates a road map to make [s]ection 2 analysis unnecessarily difficult. You've got to . . . identify the market[.] . . . In all of these cases, .

One approach is to use evidence not affected by the *Cellophane* Fallacy to cross-check and confirm the relevant market and the associated inferences regarding monopoly power. For example, "[i]n some instances, cross-section data on prices (e.g., the prices for a specific good or service in different metropolitan areas) and on corresponding structural characteristics (e.g., seller concentration in those metropolitan areas) may permit the inference (e.g., through statistical/econometric techniques) that there are separate markets for that item."[72] In other instances, when changes in market structure over time provide an appropriate natural experiment, time-series analysis may enable inferences regarding market definition and the presence of monopoly power.[73] Similarly, performance data may provide additional evidence regarding monopoly power that is not dependent on market definition.[74]

Another approach is to change the sequence of analysis by deferring the market definition inquiry. It may be possible to establish the existence of monopoly power directly and to define the relevant market as a consequence of that direct evidence.[75] Market definition also may be suggested by evidence of competitive effects of the challenged conduct.[76] These topics

. . you never get to the question. . . . Does the conduct really raise prices. And most of the time that's pretty obvious . . . ."); *id*. at 174–76 (Rubinfeld) ("[C]ases often get bogged down in complex debates about issues like market definition, without really talking about competitive effects. . . . And so a process that in my view would move us more quickly to the heart of the cases would be a constructive process.").

72 White, *supra* note 49, at 8; *see also* Werden, *supra* note 53, at 217.

73 Baker & Bresnahan, *supra* note 8, at 10–11.

74 *See* Mar. 7 Hr'g Tr. at 19 (Nelson) ("[W]here it leads . . . is looking more and more at some of the performance evidence. . . . But you have got to be careful in looking at performance evidence, because as economists have shown, things like profits and accounting data are tricky."); *see also infra* Section III.C.

75 *See* AREEDA & HOVENKAMP, *supra* note 21, ¶ 801a1, at 383–84 ("When the methodology [shows antitrust market power directly by estimates of residual demand curves or by proof that prices have persistently exceeded short-run marginal cost, or that returns on investment have persistently exceeded the cost of capital] . . . market definition may be necessary only to establish that the power is individually held rather than shared among oligopolists. . . . [W]here there is rigorous independent proof of substantial power, market definition is less critical.").

76 Courts sometimes have required definition of markets notwithstanding demonstration of anticompetitive effects. *See, e.g.*, Republic Tobacco Co. v. N. Atl. Trading Co., 381 F.3d 717, 737 (7th Cir. 2004) (rejecting "direct evidence of anticompetitive effects" as a substitute for market definition; plaintiff must provide "at least a rough definition of a product and geographic market"). *But cf.* PepsiCo, Inc. v. Coca-Cola Co., 315 F.3d 101, 107–08 (2d Cir. 2002) (stating that "a relevant market definition is not a necessary

are analyzed in sections III.C. and V., respectively.

B. Market Shares

After a relevant market has been defined, market shares frequently are used as a measure of monopoly power. As in other areas of antitrust, however, courts in section 2 cases typically do not view market shares as dispositive, but rather treat them as the starting point of the analysis.[77]

1. Market Shares Provide Incomplete Information

Assuming that the relevant market has been properly defined, using market shares as a measure of monopoly power may nonetheless be misleading. "There is no [economic] model . . . where market share (or more precisely its change) is the only variable that matters in predicting the change in either price or welfare."[78] Other factors have bearing on the inquiry.[79]

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component of a monopolization claim" where there is direct evidence of monopoly power); Mar. 7 Hr'g Tr. at 73–74 (Katz) (taking the position that it would be a significant error if a legal requirement led a case involving differentiated products to be dismissed because proof of precise boundaries for one relevant market definition were insufficiently demonstrated when clear anticompetitive effects were shown within each possible definition of relevant market when alternative definitions of relevant markets are offered).

77 *E.g.*, Shoppin' Bag of Pueblo, Inc. v. Dillon Cos., 783 F.2d 159, 162 (10th Cir. 1986) ("Market share alone, however, is not enough to determine a firm's capacity to achieve monopoly.").

78 Carlton, *supra* note 6, at 12.

79 For example, in one a simple, yet common, model, when a dominant firm, in the presence of smaller, price-taking rivals, sets price to maximize profits, high market shares are correlated with the exercise of market power, but a high market share is not sufficient to prove market power. Algebraically, a firm's demand elasticity (ε_F), which reflects its ability to increase price, depends on *three* factors— the market's demand elasticity (ε_D), the firm's market share (S), and its rivals' supply elasticity (ε_R):

$$\left|\varepsilon_F\right| = \frac{\left|\varepsilon_D\right| + (1-S)\varepsilon_R}{S}.$$

See Landes & Posner, *supra* note 21, at 939–40, 944– 47 ("Although the . . . equation . . . provides an economic rationale for inferring market power from market share, it also suggests pitfalls in mechanically using market share data to measure market power."). The firm's demand elasticity, in turn, is inversely related to the Lerner index, a measure

A simple example illustrates the potential pitfalls. Suppose a large firm competes with a fringe of small rivals, all producing a homogeneous product. In this model, the large firm's market share is a determinant of its power over price. It is, however, only one determinant. Even a huge share does not guarantee substantial power over price for a significant period: if the fringe firms readily can substantially increase production from their existing plants in response to a small increase in the market price (that is, if the fringe supply is highly elastic), a large firm's output restriction would not be profitable, and hence the firm would not have market power.[80] Similarly, market shares do not take account of potential entrants' supply. Even when no current rival exists, if barriers to entry are low, an attempt to raise prices anticompetitively may lead to an influx of competitors that would make the price increase unprofitable.[81]

On the other hand, conclusions based solely on market share also may underestimate market power. If rivals' supply is unusually inelastic—such as when all capacity is already in full use—a firm with relatively modest market share may be able to exercise substantial market power.[82] Other factors, such a firm's ability to exert control over rivals through essential intellectual property holdings, may also contribute to market power beyond what would be expected from market share based on the firm's sales alone.

2. Market Shares May Provide Inaccurate Information

Obviously, market shares are dependent on market definition. The difficulties encountered in defining relevant markets must be overcome in order for market shares to be accurate and useful in evaluating monopoly power. In some settings, even apart from questions of market definition, reliance on market shares is particularly likely to yield faulty conclusions regarding monopoly power.

In markets characterized by rapid technological change, a high market share based on

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of market power, defined as the firm's price minus its marginal cost, all divided by its price. *Id.* at 939–40.

80 In addition, some models of competition (*e.g.*, Bertrand price competition with homogeneous goods) yield the competitive result with very few firms. *See* CARLTON & PERLOFF, *supra* note 19, at 174.

81 *See, e.g.*, United States v. Syufy Enters., 903 F.2d 659, 666–69 (9th Cir. 1990).

82 *See, e.g.*, Paul L. Joskow & Edward Khan, *A Quantitative Analysis of Pricing Behavior in California's Electricity Market During Summer 2000* (AEI-Brookings Joint Center for Regulatory Studies, Working Paper 01-01, Jan. 2001) (explaining that in peak power electricity markets, output reductions by firms with relatively small shares may raise price by large amounts because the supply elasticities of other firms are low).

current sales or production may be consistent with the presence of robust dynamic competition.[83] Any "power" a firm possesses in such a situation may be transient because new products might leapfrog existing products. In an extreme case, "market structure may be a series of temporary monopolies" in a "dynamically competitive" market.[84] Of course, market power may also persist.[85] The point is not that market shares necessarily will overstate market power, but rather that an accurate analysis may require consideration of the nature of innovation and other factors beyond market shares.[86]

Likewise, one panelist identified multi-sided markets as another setting in which market shares may not accurately reflect the market power or constraints facing firms.[87] Under these business models, a firm internalizes interactions between sales to two or more disparate customer groups and must maintain a balance among the groups for its strategy to succeed. For example, a software platform must appeal to applications writers as well as to consumers. Each side of the firm's operations may constrain its ability to depart from competitive price levels notwithstanding a significant market share on one side of its business.[88] In addition, the problem

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[83] Sherman Act Section 2 Joint Hearing: Monopoly Power Hr'g Tr. 11–12, Mar. 8, 2007 [hereinafter Mar. 8 Hr'g Tr.] (Schmalensee) (observing that network effects can lead to large shares, yet the market still may be subject to "vigorous Schumpeterian competition, in which the next hot product may displace the leader"); Mar. 7 Hr'g Tr. at 78–79 (Katz) (noting that "the R&D capabilities and the distribution of the assets . . . may be much more important than current market shares in terms of understanding innovation"); May 8 Hr'g Tr. at 53–54 (Rule) (stating that as the economy becomes "more dynamic and complex," it "becomes a little more difficult to use the market power and monopoly power market share screen that traditionally we have used").

[84] Michael L. Katz, Market Definition, Concentration, & Section 2, at 5 (Mar. 7, 2007), http://www.ftc.gov/os/sectiontwohearings/docs/0703KatzPresentation.pdf.

[85] *See, e.g.*, Sherman Act Section 2 Joint Hearing: Remedies Hr'g Tr. 65, Mar. 29, 2007 (Lao); May 1 Hr'g Tr. at 147–48 (Baker).

[86] *See* Richard Schmalensee, Diagnosing Monopoly Power in Markets with Rapid Technological Change (RTC Markets) 4 (Mar. 8, 2007), http://www.ftc.gov/os/sectiontwohearings/docs/0703RichardSchmalensee.pdf ("Need to be thoughtfully skeptical to avoid two errors: [1] Ignoring disruptive innovations under serious development[;] [2] Assuming all sexy new technologies will actually disrupt").

[87] *See* Mar. 8 Hr'g Tr. at 18–19 (Schmalensee); Schmalensee, *supra* note 86, at 7.

[88] Mar. 8 Hr'g Tr. at 18–19 (Schmalensee) (arguing that "the need to balance means competition on either side can dissipate profits"); Carlton, *supra* note 6, at 26 (stating that if one ignores the competitive effort on one side of the market to attract customers on the other side, "one could find market power when in fact there is none"); Dennis L. Weisman, *Assessing Market Power: The Trade-Off Between Market Concentration &*

of identifying the correct price on one side of the market when the price on the other side affects the attractiveness of the product "will make market definition in two sided markets more difficult than in the typical case and will therefore further limit reliability of market definition and market shares."[89]

Panelists also have identified settings where market share evidence may fail to identify monopoly power. Market shares do not directly indicate whether a firm is able to raise prices by excluding or raising the costs of others or raising entry barriers.[90] That is, market shares do not directly reflect "exclusionary market power," although relative shares may provide important information on whether counter-strategies by rivals are likely to be effective or regarding the expense a firm is likely to be willing to undertake to employ an exclusionary strategy.[91] Conduct that excludes competitors and results in future power over price does not require current market dominance; as one panelist noted, "Current share of [the firm is] not always relevant if [the challenged] practice threatens to harm rivals going forward."[92]

The hearings also revealed problems with determining accurate market shares in technology markets, that is, markets in which licenses to technology are traded.[93] In technology markets, licenses often cover packages of technologies, so that it is difficult to determine the royalty attributable to any particular technology. In addition, many licenses involve royalty-free exchanges of rights, again leaving no measurable indicator that can be used for computing market shares. In such circumstances, meaningful market shares often cannot be determined,[94]

Multi-Market Participation, 1 J. COMPETITION L. & ECON. 339, 346–47 (2005) (discussing potential bias of concentration measures under conditions of multi-market participation and demand interdependence, with application to merger analysis).

89 Carlton, *supra* note 6, at 26.

90 *See* Krattenmaker, Lande & Salop, *supra* note 30, at 255 ("It is the exclusionary conduct that creates the market power being evaluated, not the other way around. . . . [Pre-existing] market power is not a prerequisite for a successful exclusionary strategy.").

91 *See id*. at 259–60 ("[T]he use of market share for gauging the degree of [exclusionary] market power to exclude competitors profitably by raising their costs is somewhat different than its role in detecting classical . . . market power . . . . The greater the disparity in market shares between the firm seeking to raise its rivals' costs and the rivals, the greater the firm's anticipated reward for achieving a higher price for its output. Hence, such a firm would be willing to spend more in attempting to exclude rivals to gain power over price.").

92 Katz, *supra* note 84, at 4 (emphasis omitted).

93 *See* Mar. 8 Hr'g Tr. at 22–27 (Williams).

94 *Id.* at 23–24.

and a fact-finder's insistence that a plaintiff demonstrate accurate market shares may result in rejecting liability even when a firm possesses monopoly power. At the same time, difficulties in assigning market shares might cause the analysis to omit, or assign small shares to, important competing technologies and thus to incorrectly conclude that a firm possesses monopoly power.

One panelist argued that imperfect information may limit consumers' ability to assess costs, prices, or other market circumstances, and that deception or an opportunistic manipulation of imperfect or asymmetric information may confer market power.[95] In such situations, it is possible that limited information may enable a firm to influence price at lower market shares than if information were more perfect.[96]

C. Identifying Monopoly Power Through Performance Evidence

In addition to a firm's market share, other measures have been identified that may help to determine whether a firm possesses monopoly power. In some instances, however, no one method may provide reliable and sufficient results.

1. Profitability

Market power and monopoly power are described as a firm's ability *profitably* to maintain price above the competitive level. These descriptions implicitly reference economic models in which the firm earns higher than normal profits, compared to a firm constrained by competition. Consequently, "[t]hrough the 1970s, profit data were a standard part of the plaintiff's efforts to show that the defendant possessed market power . . . . Indeed, one could argue that the examination of profit rates was *the paradigm* used for the determination of market power . . . prior to the 1980s."[97]

Whether profitability is assessed based on total profit or on price-cost margins, which evaluates whether price exceeds average cost or marginal cost, respectively, accounting measures of profit often bear little relation to the underlying economic concepts pertinent to

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95 *See id*. at 41 (Lande) ("Market power in antitrust cases can also come . . . from significantly imperfect information, deception, asymmetric information, or other sources of market failure that are more commonly associated with consumer protection violations.").

96 *Id.* (arguing that when these factors are present, "market power can [arise] even if no firm has a market share large enough for a finding of traditional market share-based market power"). *But cf.* Carl Shapiro, *Aftermarkets and Consumer Welfare: Making Sense of* Kodak, 63 ANTITRUST L.J. 483, 488–89 (1995) (noting that poorly informed buyers may in effect be protected by informed buyers, whose presence constrains any exercise of monopoly power).

97 White, *supra* note 48, at 9.

market power.[98] Consequently, profitability measures typically receive significantly less weight today as bases for inferences about monopoly power.[99]

Substantial care is required when using profit levels to conclude that a firm has monopoly power. For purposes of this inquiry, the appropriate measure of cost is economic cost, which typically differs from accounting cost. Accounting conventions often reflect historical prices, spread costs over time, and adjust asset values for depreciation in ways that do not correspond to economic concepts.

Moreover, economic cost includes opportunity cost. The opportunity cost of applying an input to any particular use is measured by the value of the other opportunities for that input. The accounting cost, however, is determined by what was paid when the input was purchased and by inventory conventions.

In addition, economic, but not accounting, cost includes the cost of capital and reflects attendant risks. Similarly, economic cost, in contrast to its accounting counterpart, includes economic "rents" that are earned when the firm has access to specialized resources that enables it to produce at lower cost than other firms or to produce output that has higher value to consumers. Thus, the high accounting profits that a firm with unique access to a high-quality ore deposit earns may reflect nothing more than the economic rent on that deposit, that is, the money

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98 *See* George J. Benston, *Accounting Numbers and Economic Values*, 27 ANTITRUST BULL. 161 (1982); Franklin M. Fisher & John J. McGowan, *On the Misuse of Accounting Rates of Return to Infer Monopoly Profits*, 73 AMER. ECON. REV. 82 (1983); *see also* White, *supra* note 48, at 9 n.22.

99 *See* Nelson, *supra* note 16, at 17 ("Economists have come to recognize that accounting data often are flawed, which argues against relying exclusively on price-cost margins or rates of return as indicia of market power."); Jonathan B. Baker & Timothy F. Bresnahan, *Empirical Methods of Identifying and Measuring Market Power*, 61 ANTITRUST L.J. 3, 5 (1992) (noting that problems with accounting profits "loom so large that antitrust today does not rely heavily on profitability measures in making inferences about market power"); *see also* U.S. Football League v. Nat'l Football League, 842 F.2d 1335, 1362 (2d Cir. 1988) ("Absent market share data, definite evidence of monopoly power is needed lest profitability alone provide a basis for antitrust liability.").

This is not to suggest that financial data lack value for the economic analysis of competition. *See* White, *supra* note 49, at 13 n.29 ("[A]s arguably occurred in the *Microsoft* case, the defendant's consistently large accounting profits may override any hesitations concerning the acceptability of accounting data in helping ascertain that the defendant has market power."); Nelson, *supra* note 16, at 17 ("[F]inancial data when used carefully can inform economists about such things as the importance of particular firm activities, why prices are set at particular levels, and why they change over time.").

the firm could have made if it had simply sold the ore on the open market.[100] Finally, there are additional difficulties with allocating costs and profitability among products for firms that produce multiple goods or services.

Assuming that these issues are properly resolved, and true economic profits are determined, a firm that earns an economic profit in the long run has monopoly power.[101] Even then, the total profit data provide no clear indication of the degree of monopoly power that a firm possesses. There is no standard that would translate a particular amount of profitability into a specific degree of monopoly power.

Problems also arise if monopoly power is assessed by examining price-cost margins, *i.e.*, price-marginal cost differentials. First, marginal cost, particularly long-run marginal cost, is difficult to determine.[102] Second, the monopoly power inference based on price-cost margin may provide a faulty conclusion. On one hand, even when price exceeds short-run marginal cost, a firm may not cover its fixed costs. In such circumstances, this measure would attribute monopoly power to a firm that is incurring losses. Panelists cautioned that a firm should not be identified as possessing monopoly power unless it earns an economic profit.[103] On the other

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[100] *See* Franklin M. Fisher, *Diagnosing Monopoly*, 19 Q. REV. ECON. & BUS., Summer 1979, at 7, 22 (noting that "a firm with an advantageous location ought to be thought of as making its extra money as a return on that location—a true 'rent' which the firm pays to itself as a landlord).

[101] *See* CARLTON & PERLOFF, *supra* note 19, at 93 (a firm that makes a profit when it sets its price optimally above its marginal cost has monopoly power).

[102] *See* Phillip Areeda & Donald F. Turner, *Predatory Pricing and Related Practices Under Section 2 of the Sherman Act*, 88 HARV. L. REV. 697, 716 (1975) (noting that marginal cost "cannot readily be inferred from conventional business accounts"); Diane P. Wood, *"Unfair" Trade Injury: A Competition-Based Approach*, 41 STANFORD L. REV. 1153, 1181 n.96 (1989) (noting that marginal cost figures "are extremely difficult to calculate in practice"); *see also* United States v. AMR Corp., 355 F.3d 1109, 1116 (10th Cir.2003) (describing marginal cost as "notoriously difficult to measure").

[103] *See* Mar. 7 Hr'g Tr. at 97–98 (Carlton) ("The distinction . . . between price above marginal cost and then whether . . . the price is above average cost [or] the rate of return is above the anticipated return, is exactly the distinction that I made between market power and monopoly power."); *id*. at 97 (Katz) (stating that the two conditions for monopoly power are that price is "significantly above marginal cost" and that "price is above average cost, [i.e.,] whether or not there are profits"); *see also* Werden, *supra* note 30, at 372–73 (suggesting use of long run marginal cost in calculating the price-cost margin, in recognition of the need to cover fixed costs). *But cf.* Mar. 7 Hr'g Tr. at 97 (Katz) (acknowledging that a requirement that price exceed marginal and average cost will miss a competitive problem when a firm is not earning an economic profit but

hand, even a monopolist exercising substantial market power may incur losses in the short run, such as when an unexpected reduction in demand results in excess capacity. Finally, similar to an assessment of total profit, there is no objective standard for determining whether the amount by which price exceeds marginal cost is significant.[104]

2. Demand Elasticity

The elasticity of a firm's demand curve may provide information about the firm's market power—at an extreme, in a perfectly competitive model, each firm faces a horizontal demand curve, which is infinitely elastic. In addition, a firm's demand elasticity is equal to the inverse of the firm's price-cost margin, which, as previously discussed, has also been suggested as a measure of market power.

Estimates of demand elasticity, however, generally do not provide clear evidence of monopoly power. Sufficient data for applying the relevant econometric techniques often are unavailable. Even when the necessary data are present, estimated demand elasticities do not distinguish between a firm with monopoly power and a firm that sells a differentiated product in a market with free entry.[105] The analysis might show that demand is not perfectly elastic, which implies that price exceeds short-run marginal cost, but it would not identify the source of the price-cost margin.[106] Finally, although demand elasticities may provide useful general insights regarding the likelihood of monopoly power, there is no defined standard calibrating the relationship between a particular elasticity of demand and a corresponding likelihood of

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excludes more efficient rivals).

[104] Dennis W. Carlton, *Does Antitrust Need to be Modernized?*, J. ECON. PERSPECTIVES, Summer 2007, at 155, 164 ("[P]resumably the deviation between price and marginal cost . . . should be significant if it is to expose the firm to antitrust scrutiny. But no consensus exists in the courts or among economists as to how large this deviation should be."); Mar. 7 Hr'g Tr. at 87 (White) (agreeing that a price exceeding marginal cost by 10 percent may be a proper threshold, "but I have just picked [that] out of the air, and I do not have any further basis").

[105] *See* Mar. 7 Hr'g Tr. at 38 (White); *see also* May 8 Hr'g Tr. at 56 (Muris) ("[I]t is difficult to have simple uses of Lerner indexes and downward sloping demand as measures of anything meaningful.").

[106] *See generally* Werden, *supra* note 30, at 382 (stating that "a firm's measured elasticity of demand permits a reasonable inference of the extent to which it is pricing in excess of short-run marginal cost, but says nothing about pricing in relation to long-run marginal cost or about the durability of market power").

monopoly power.[107]

3. Direct Observation that Prices are Above Competitive Levels

In some circumstances, an exercise of monopoly power may be directly observed by comparing an alleged monopolist's price to a competitive benchmark. If an exercise of monopoly power is observed, then one may conclude that the firm has monopoly power.

For example, it may be possible to compare an alleged monopolist's price with prices in other geographic markets that appear structurally to be more competitive.[108] Such cross-sectional price differences, so long as not cost-based, may provide direct evidence that the firm possesses monopoly power in particular markets. One challenge in applying this approach is that it may be difficult to hold constant all determinants of price other than market concentration.

Similarly, time series analysis that shows output, price, or profitability "changes over time can provide insights into the extent to which a firm is insulated from competition in certain situations."[109] Such natural experiments that show the alleged monopolist's response to cost shocks, entry, exit, and shifts in demand or supply can provide evidence that the firm possesses monopoly power or is constrained by competition.[110]

IV. Threshold Market Shares that Support Inferences of Monopoly Power or the Absence of Monopoly Power

While acknowledging that market share is only one step in the analysis and requiring sufficient indicia of durability, courts have nonetheless treated particular market shares as supporting inferences regarding the presence or absence of monopoly power. Most cases

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107 *See generally* Mar. 7 Hr'g Tr. at 62 (Gilbert) (noting the difficulty of drawing precise conclusions from demand elasticities); *id*. at 90 (Gilbert) (indicating that low and high demand elasticities, respectively might suggest, in general terms that "we should" or "shouldn't be worried").

108 *See* White, *supra* note 49, at 8; Werden, *supra* note 53, at 217; Baker & Bresnahan, *supra* note 8, at 10–11; *cf*. FTC v. Staples, Inc., 970 F. Supp. 1066 (D.D.C. 1997) (in a merger case, prices charged by Staples were lower in cities where Staples competed with other office superstores).

109 *See* Nelson, *supra* note 16, at 18.

110 Such analyses often use fixed-effect regression models and panel data to estimate the effect of market structure on prices. *See, e.g.*, *In re* Evanston Northwestern Healthcare Corp., No. 9315, at 27–35 (F.T.C. Aug. 3, 2007), *available at* http://www.ftc.gov/os/adjpro/d9315/070806opinion.pdf (Commission opinion discussing fixed-effects analysis in a merger case).

ultimately cite to *United States v. Aluminum Co. of America ("Alcoa")*, which stated that while a "percentage [over ninety] is enough to constitute a monopoly; it is doubtful whether sixty or sixty-four percent would be enough; and certainly thirty-three [percent] is not."[111]

Yet, given the fact-specific nature of antitrust, and the many factors that may affect analysis of any particular industry, some have questioned whether *Alcoa* was ever meant to state rules of broad application: "It seems unlikely that Judge Hand was doubting that any defendant with a 60–64 % share of any market, regardless of its structure, could ever be found to possess monopoly power. Even if his doubts ranged beyond the case he was considering, it is significant that he expressed a doubt, not a rule of preclusion."[112] Consequently, a thorough exploration of market share thresholds should include review of the relevant economic learning.

Economics, however, offers neither theoretical nor empirical support for the particular levels of market share used by courts to infer the presence or absence of monopoly power. As discussed above in section III.B.1., even simple economic models demonstrate that a high market share alone is not sufficient to prove monopoly power. At a minimum, the elasticity of industry demand and the elasticity of supply for existing rivals and entrants are essential to link a given market share to conclusions about a firm's market power.

Similarly, "[e]mpirical data are not particularly helpful on this question [regarding a presumption of monopoly power from a particular market share], which is fundamentally one of policy . . . ."[113] A sustained empirical effort that lasted until the 1970s examined the connection between market concentration and firm or industry market power. The so-called "structure-conduct-performance" approach failed to establish presumptions that would reliably identify market power based on easily observed indicia, such as market shares.[114]

> [I]nstead of measuring only market power and barriers to entry, structure-conduct-performance methods also left open the possibility of another interpretation. . . .

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[111] United States v. Aluminum Co. of Am., 148 F.2d 416, 424 (2d Cir. 1945) (Hand, L., J.).

[112] Broadway Delivery Corp. v. United Parcel Serv. of Am., Inc., 651 F.2d 122, 127 (2d Cir. 1981); Mar. 7 Hr'g Tr. at 48–49 (Gavil) ("all Judge Hand did was . . . survey[] the previous cases and look[] at winners and losers . . . [and] synthesize them and [he] came up with this benchmark").

[113] AREEDA & HOVENKAMP, *supra* note 21, ¶ 801a1, at 385.

[114] *See generally* Richard Schmalensee, *Inter-Industry Studies of Structure and Performance*, *in* 2 HANDBOOK OF INDUSTRIAL ORGANIZATION 951 (Richard Schmalensee & Robert D. Willig, eds., 1989); Baker & Bresnahan, *supra* note 8, at 24 (structure-conduct-performance hypothesis that "attempted to connect firm or industry market power reliably with market concentration . . . was not convincingly demonstrated"); Adkinson et al., *supra* note 11, at Sections IV.A., IV.B.

Firms could have large market shares and be profitable because they had achieved low costs or other efficiencies, rather than because they exploited market power. The Chicago identification argument has carried the day, and structure-conduct-performance empirical methods have largely been discarded in economics.[115]

A. An Indication that a Firm Possesses Monopoly Power Based on a High Market Share

Section 2 case law typically relies on a market share threshold that is near the 60–64 percent level described in *Alcoa* to establish the presence of monopoly power. "A market share in excess of 70 percent generally establishes a prima facie case of monopoly power," at least when accompanied by evidence of barriers to entry and expansion; "[t]he greatest uncertainty exists when market shares are between 50 percent and 70 percent.[116] For instance, in *Dentsply,*[117] the Third Circuit said that "a share significantly larger than 55% has been required to establish prima facie market power"[118] and that Dentsply's 75–80 percent share of the relevant market for sales of artificial teeth in the United States was "more than adequate to establish a prima facie case of power."[119]

However, "market share is only a starting point for determining whether monopoly power exists, and the inference of monopoly power does not automatically follow from the possession of a commanding market share."[120] Rather, a "court will draw an inference of monopoly power only after full consideration of the relationship between market share and other relevant market

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115 Baker & Bresnahan, *supra* note 8, at 24.

116 1 ABA SECTION OF ANTITRUST LAW, ANTITRUST LAW DEVELOPMENTS 231–32 (6th ed. 2007) (collecting cases).

117 United States v. Dentsply Int'l, Inc., 399 F.3d 181 (3d Cir. 2005).

118 *Id.* at 187.

119 *Id.* at 188.

120 Am. Council of Certified Podiatric Physicians & Surgeons v. Am. Bd. of Podiatric Surgery, Inc., 185 F.3d 606, 623 (6th Cir. 1999).

characteristics."[121] The plaintiff must show that the monopoly power is durable,[122] and that analysis usually begins with an examination of entry conditions.[123] A leading treatise finds it "reasonable to presume the existence of [monopoly power] from a showing that the defendant's share of a well-defined market protected by sufficient entry barriers has exceeded 70 or 75 percent for the five years preceding the complaint,"[124] and a recent report issued by the Department of Justice states a "rebuttable presumption" of monopoly power if a firm has "maintained a market share excess of two-thirds for a significant period" and that share is "unlikely to be eroded in the near future."[125]

B. An Indication that a Firm Lacks Monopoly Power Based on a Low Market Share

Courts are unlikely to find monopoly power when a firm's market share is less than 50 percent.[126] Indeed, courts often speak in terms of requirements ranging from 50 to 70 percent,[127]

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[121] Tops Mkts., Inc. v. Quality Mkts., Inc., 142 F.3d 90, 98 (2d Cir. 1998); *see also* Baker & Bresnahan, *supra* note 99, at 4 ("In a properly defined market, a firm with a high market share is often thought to have market power[.] . . . Because antitrust recognizes these problems with inferring market power from market concentration, the analysis of market power under the traditional approach does not stop with market share.").

[122] *See, e.g.,* W. Parcel Express v. United Parcel Serv. of Am., Inc., 190 F.3d 974, 975 (9th Cir. 1999) (refusing to find monopoly power because the plaintiff failed to demonstrate "significant barriers to entry or expansion").

[123] *See, e.g.*, United States v. Microsoft Corp., 253 F.3d 34, 82 (D.C. Cir. 2001) (per curiam) (en banc) (stating that "a firm cannot possess monopoly power in a market unless that market is also protected by significant barriers to entry"); *Tops Mkts.*, 142 F.3d at 99 (finding that successful entry refuted "any inference of the existence of monopoly power that might be drawn" from the defendant's market share of over 70 percent).

[124] AREEDA AND HOVENKAMP, *supra* note 21, ¶ 801a, at 383.

[125] U.S. Dep't of Justice, Competition and Monopoly: Single-Firm Conduct Under Section 2 of the Sherman Act (2008), *available at* http://www.usdoj.gov/atr/public/reports/236681.pdf.

[126] *See* 1 ABA SECTION OF ANTITRUST LAW, *supra* note 116, at 231–32 ("[C]ourts virtually never find monopoly power when market share is less than about 50 percent."); U.S. Dep't of Justice, *supra* note 125, at 22 (stating that "The Department is not aware . . . of any court that has found that a defendant possessed monopoly power when its market share was less than fifty percent," citing U.S. Anchor Mfg., Inc. v. Rule Indus., Inc., 7 F.3d 986, 1000 (11th Cir. 1993)); *cf.* AREEDA ET AL., *supra* note 17, ¶ 532c, at 250 (stating that "it would be rare indeed to find that a firm with half of a market could

sometimes even higher,[128] although many of these cases discuss the market share needed in order to infer monopoly power or to establish a prima facie case of monopoly power, rather than the market share required to sustain a case buttressed by additional evidence of monopoly power.[129] Consequently, in practical terms, courts have been presuming an absence of monopoly power unless market share is at least fifty percent.[130] Given the screening rationale for the monopoly power element, there is significant value in an appropriate market-share-based presumption that is consonant with both the utility and the limitations of analysis premised on market shares.[131]

Numerous panelists expressed a wish for greater clarity regarding potential antitrust

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individually control price over any significant period").

[127] *See, e.g.*, Bailey v. Allgas, Inc., 284 F.3d 1237, 1250 (11th Cir. 2002) ("A market share at or less than 50% is inadequate as a matter of law to constitute monopoly power."); Exxon Corp. v. Berwick Bay Real Estates Partners, 748 F.2d 937, 940 (5th Cir. 1984) ("monopolization is rarely found when the defendant's share of the relevant market is below 70%"); *cf*. Hunt-Wesson Foods, Inc. v. Ragu Foods, Inc., 627 F.2d 919, 924–25 (9th Cir. 1980) (stating that "market shares on the order of 60 per cent to 70 per cent have supported findings of monopoly power").

[128] *See, e.g.*, Colo. Interstate Gas Co. v. Natural Gas Pipeline Co. of Am., 885 F.2d 683, 694 n.18 (10th Cir. 1989) (noting, in dictum, that "lower courts generally require a minimum market share of between 70% and 80%," but not adopting a firm market-share requirement).

[129] *See, e.g.*, United States v. Dentsply Int'l, Inc., 399 F.3d 181, 187 (3d Cir. 2005) ("Absent other pertinent factors, a share significantly larger than 55% has been required to establish prima facie market power," but, "[a] less than predominant share of the market combined with other relevant factors may suffice to demonstrate monopoly power."); Blue Cross & Blue Shield United of Wis. v. Marshfield Clinic, 65 F.3d 1406, 1411–12 (7th Cir. 1995) (noting that "[f]ifty percent is below any accepted benchmark for inferring monopoly power from market share" but then proceeding to consider possible inferences from direct evidence).

[130] Rebel Oil Co. v. Atl. Richfield Co., 51 F.3d 1421, 1434, 1438 (9th Cir. 1995) (stating that "numerous cases" have found market shares below 50 percent are "presumptively insufficient to establish market power" through "circumstantial," market-share evidence, but recognizing that the market power needed for section 2 analysis may also be established through "direct evidence").

[131] *See* Carlton, *supra* note 6, at 27 ("Despite their limitations, when [market shares] can be used to eliminate frivolous antitrust cases, that use can contribute enormous value to society.").

exposure for single-firm practices.[132] In particular, several voiced support for market-share-based safe harbors or conclusive presumptions that would immunize firms from section 2 liability.[133] Others, however, questioned the need for, or utility of, that approach, observing that there already is significant clarity in this area,[134] that market-share safe harbors might not add much certainty,[135] or that simple, bright-line rules could shelter some anticompetitive conduct without providing significant benefit.[136]

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132 *See* Adkinson et al., *supra* note 11, at Section V.A.

133 *See, e.g.*, May 8 Hr'g Tr. at 41–42 (Rill) (stating that "[as] a starting point" a market-share safe harbor set at "70 percent sounds reasonable, . . . maybe a little higher" and noting that such a safe harbor could be coupled with a conduct-based, "operational safe harbor[s]"); *id*. at 41 (Eisenach) (stating "I'm not opposed in any way to a 75 percent safe harbor or a 70 percent safe harbor," but adding "surely we can do better than share of the top firm as a metric"); Mar. 7 Hr'g Tr. at 216, 218–21 (Bishop) (discussing market share safe harbors in the context of European case law); *id*. at 216, 219–21 (de la Mano) (same); *id*. at 216 (Sims) (stating that he might be "very comfortable" with a "70 percent or an 80 percent number"). *But cf*. *id*. at 169–75 (Sims) (warning that the fact-specific nature of section 2 analysis means clear rules will be rare and uncertainty of outcomes in particular cases inevitable; cautioning that demands for clarity are likely to lead to restrictive rules that perhaps would be harmful; and concluding that "the chances of finding consensus bright lines that really do advance the public interest are pretty low").

134 *See* Sherman Act Section 2 Joint Hearing: Business Testimony Hr'g Tr. 52–53, Feb. 13, 2007 (Stern) (observing that the United States already has a "pretty helpful screen" and that "[i]f you have less than a 50 percent share under the U.S. case law, it's very unlikely that you have to worry about whether your conduct could be categorized as exclusionary"); *id*. at 83 (Sheller) (finding sufficient clarity in the United States regarding thresholds for monopoly power).

135 *See* May 8 Hr'g Tr. at 44–45 (Melamed) ("From my experience in counseling, market share-type screens are of limited value because market share depends on market definition . . . [Guidelines] that enable the defendant to look at his conduct are much more valuable as safe harbors than those that require him to analyze the market.").

136 *See, e.g.*, Mar. 7 Hr'g Tr. at 217 (Stelzer); *id*. at 216, 218 (Krattenmaker) (indicating that separate safe harbors would be needed depending on whether the defendant is decreasing its own output or forcing others to decrease their output); Mar. 8 Hr'g Tr. at 49 (Lande) (market share-based safe harbor would shelter conduct and market power that the Supreme Court was unwilling to dismiss in Eastman Kodak Co. v. Image Tech. Servs., Inc., 504 U.S. 451 (1992)); *cf*. Mar. 7 Hr'g Tr. at 46 (Gavil) (" . . . in terms of safe harbors, I do not think you can rely just on market shares alone. It has to be market shares plus certain other factors . . . .").

A rebuttable presumption that a firm with less than a 50 percent market share lacks monopoly power seems best to accommodate both the desire for clarity and certainty and the limitations on market-share-based inferences suggested by the underlying economics.[137] Such a presumption would leave room for facts of greater weight to overcome any inference drawn from market shares.[138] Although this stops short of a definitive, safe harbor, the hearings did not demonstrate a need for that level of certainty,[139] and limitations on the utility and precision of market share analysis, combined with historical enforcement experience, make the case for rebuttability.

As discussed above, the hearings identified numerous settings where market shares may not accurately reflect the ability to maintain prices above competitive levels.[140] When, in addition, the *Cellophane* Fallacy is an issue, it introduces a bias that tends to define markets too broadly and consequently, to understate the purported monopolist's market share[141] and to over-extend safe-harbor protections. This potential bias, and the absence of any ready corrective mechanism, counsel against rigid reliance on market-share calculations in the monopolization context. Under these circumstances, many panelists and commentators have found value in flexibility.[142]

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137 For a similar conclusion, *see* Reazin v. Blue Cross & Blue Shield of Kan., Inc., 899 F.2d 951, 968 (10th Cir. 1990) ("We prefer the view that market share percentages may give rise to presumptions, but will rarely conclusively establish or eliminate market or monopoly power."); *see also* Broadway Delivery Corp. v. United Parcel Service of Am., 651 F.2d 122, 128–30 (2nd Cir. 1981) (concluding that courts should "give only weight and not conclusiveness to market share evidence" rather than determining conclusively that monopoly power is absent when market share is below 50 percent).

138 *See Broadway Delivery*, 651 F.2d at 128 (noting that "the true significance of market share data can be determined only after careful analysis of the particular market"),

139 *See supra* note 134 and accompanying text.

140 *See supra* Section III.B.

141 *See supra* Section III.A.

142 AREEDA & HOVENKAMP, *supra* note 21, at ¶ 801 at 383 ("[W]hile more or less definite tests for substantial power can be formulated, they are inevitably arbitrary to varying degrees and can serve only as presumptive benchmarks. . . . Thus, the courts . . . must necessarily have at least some latitude to depart from strict adherence to any precise tests."); May 8 Hr'g Tr. at 49 (Pitofsky) ("I'm not comfortable with safe harbors. I like rebuttable presumptions because there are too many quirky situations."); *cf.* May 8 Hr'g Tr. at 27, 41 (Eisenach) (stating that although not opposing a market share presumption, he finds it "inexplicable that 40 years after we began departing from the structure conduct performance paradigm, we are back at a point where the share of the number one

Moreover, a rebuttable presumption reflects enforcement experience regarding a firm's ability unilaterally to exercise market power. In the context of merger analysis, challenges based on unilateral effects involving firms with less than a 50 percent market share have been unusual, but they do occur. The enforcement agencies' 2006 Commentary on the Horizontal Merger Guidelines identified a challenge to a merger involving firms with combined market shares of 36 percent[143] and two challenges, based on an auction model, in which the merger decreased the number of participants from four to three,[144] along with numerous challenges involving combined market shares of at least 50 percent.[145] Establishing a presumption that monopoly power is absent when market share is below 50 percent reflects the relative infrequency of unilateral anticompetitive effects below that level, while making the presumption rebuttable recognizes that exceptions exist and leaves room for bringing section 2 cases when an unusual fact pattern supports enforcement.

Triggering the presumption at a 50 percent market share, rather than at the 35 percent level that signals elevated concern under the Horizontal Merger Guidelines,[146] reflects the different policy considerations governing monopolization and merger enforcement. It heeds the Supreme Court's caution that monopoly power requires "something greater" than the market power that could generate anticompetitive effects. Establishing the presumption at a level somewhat above the market share that might support competitive harm recognizes the Court's concern with discouraging potentially beneficial behavior.[147] Moreover, merger analysis

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firm is somehow the proposed safe harbor in the first step of a market power test").

143 Fed. Trade Comm'n & U.S. Dep't of Justice, Commentary on the Horizontal Merger Guidelines 27 (2006), *available at* http://www.ftc.gov/os/2006/03/CommentaryontheHorizontalMergerGuidelinesMarch2006.pdf. (stating that the investigation of Georgia-Pacific Corporation's proposed acquisition of Fort James Corp. revealed that the away-from-home tissue products industry was operating at nearly full capacity and demand was inelastic, so that the combined firm with a 36% market share likely would restrict production and increase prices).

144 *See id*. at 31–33 (discussing mergers of Cargill, Inc. and Akzo Nobel, N.V., and of Flowserve Corp. and Dresser Pump Co.).

145 *Id.*, at 26–29.

146 The Horizontal Merger Guidelines suggest elevated concerns that a firm unilaterally may find it profitable to raise price and suppress output when a merger would create a combined firm with a 35 percent market share. Horizontal Merger Guidelines, *supra* note 18, § 2.2.

147 *See supra* notes 11–12 and 26–27. *See generally* Adkinson et al., *supra* note 11, at 3, 26–34 (discussing concerns that section 2 enforcement efforts might chill procompetitive

traditionally has incorporated an incipiency standard, which may be reflected in its use of market-share thresholds.[148]

Two caveats are appropriate. First, a presumption that a firm with less than a 50 percent market share lacks monopoly power only addresses the screening function of monopoly power, *i.e.*, it only addresses the firm's ability profitably to maintain price above the competitive level. Market share evidence may also be important when analyzing the conduct element of section 2 offenses. For particular types of conduct and fact patterns, market shares above 50 percent may be necessary for viable theories of anticompetitive harm.[149] Indeed,

> a high market share also has independent economic relevance [beyond serving as "an imperfect proxy for an ability to raise prices above competitive levels"] because it bears on the ability of the defendant to persuade buyers to agree to exclusionary schemes, the likelihood that those schemes will impair rival efficiency, the profitability to the defendant of impairing rival efficiency, and the relevance of any economies of share the defendant may enjoy from the scheme.[150]

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conduct); Karen L. Grimm, *General Standards for Exclusionary Conduct* 8–13, FTC Staff Working Paper, *available at* http://www.ftc.gov/os/section2hearings/index.shtm (same).

148 *See, e.g.*, United States v. Penn-Olin Chem. Co., 378 U.S. 158, 170–71 (1964) (design of section 7 of Clayton Act "was to arrest incipient threats to competition . . . [so] that actual restraints need not be proved").

149 *See* Mar. 7 Hr'g Tr. at 69–71 (Katz) ("[Y]ou want to look at concentration[] to understand the potential for harm to competition" because for an offense such as exclusive dealing, share can be important to explain dealer incentives and choices; "concentration would be relevant as a screen or a way to think about what is going to happen but through a much more complex chain of reasoning than to just say, well, they have a high market share; therefore they must have market power"); HERBERT HOVENKAMP, FEDERAL ANTITRUST POLICY: THE LAW OF COMPETITION AND ITS PRACTICE 82 (1994) ("[M]any monopolization cases involve 'exclusionary' practices that are plausible only because the defendant occupies a large part of the relevant market . . . . [For] predatory pricing, where the relative costs of predation are a function of the predator's market share[, . . .and] the various 'foreclosure' offenses . . . the claimed harm to competition results, not from the defendant's ability to raise price above marginal cost, but rather from its ability to cut rivals off from sources of supply, distribution outlets and the like. The real 'power' basis of the offense, then, is market share, not market power as such.").

150 Einer Elhauge, *Defining Better Monopolization Standards*, 56 STAN. L. REV. 253, 336 (2003); *accord* May 8 Hr'g Tr. at 46 (Creighton) ("the percentage of the market that you control actually can be helpful as direct evidence regarding how profitable is it likely to

Assessment of market share's contribution to specific competitive effects requires analysis of the challenged conduct in a specific case, rather than an across-the-board rule. For instance, the market share necessary to create sufficient incentives for dealers to agree to exclusive dealing contracts is likely to be different from the market share that renders plausible a predatory pricing scheme based on the cost of the price reduction and the likelihood of successful recoupment.[151]

Second, neither a presumption nor a safe harbor regarding monopoly power based on a firm's *pre-conduct* market share is warranted. Panelists explained that a firm need not have a large current market share to engage in exclusionary conduct that leads to monopoly power.[152] This conclusion is supported by commentators[153] and reflected by case law regarding the acquisition of monopoly power and attempted monopolization.[154] Nonetheless, pre-conduct

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be to you and both your incentives and your ability to enter into some kind of exclusionary conduct").

151 *See, e.g.*, May 8 Hr'g Tr. at 49–50 (Pitofsky) ("[T]he safe harbor is going to vary according to the behavior you are dealing with. We have safe harbors for exclusive dealing. We have safe harbors for tie-in sales in terms of the market power of the seller instituting that program . . . .").

152 *See, e.g.*, Mar. 7 Hr'g Tr. at 70 (Katz) ("You are not worried about their share now. You are worried about what their share is going to become or what the state of competition will become going forward."); *id*. at 154 (Krattenmaker) ("Exclusionary behavior can create the market power. You do not necessarily need to already control a market in order to be able to engage in exclusionary behavior that winds up creating effective market power."); May 8 Hr'g Tr. at 46 (Creighton) (expressing concern about using pre-conduct market shares as a screen because pre-conduct share does not necessarily dictate whether exclusionary conduct will be successful).

153 *See* AREEDA & HOVENKAMP, *supra* note 21, ¶ 807e, at 446 ("Courts sometimes say that the 'dangerous probability' requirement must be assessed as of the time that the challenged activity occurred. But the all-important point is that the conduct, viewed from the time it occurred, must be capable of creating the feared monopoly."); *id.* ¶ 807e2, at 448 ("Where the defendant's market share rises substantially during the course of the challenged behavior, the later higher number is the one most relevant for determining the existence of a dangerous probability of success. Thus the *Fiberglass* [*Insulators v. Dupuy*, 1986-2 Trade Cas. (CCH) ¶ 67,316 (D.S.C. 1986)] court was correct in focusing on the defendant's 51 percent market share during the period of alleged misbehavior rather than on its 5 percent share at the outset."); Krattenmaker, Lande & Salop, *supra* note 30, at 255 (noting that a large market share is not necessary for a successful exclusionary strategy).

154 *See, e.g.*, Broadcom Corp. v. Qualcomm Inc., 501 F.3d 297, 315 (3d Cir. 2007) (explaining that the relevant time for assessing monopoly power allegedly acquired by

market shares can inform the analysis of the likely competitive impact of many forms of single-firm conduct and may provide insights regarding whether the conduct was undertaken for reasons other than its possible anticompetitive effects.

V. Anticompetitive Effects as Indicia of Monopoly Power

As previously discussed, courts typically examine whether a firm possesses monopoly power as a threshold matter, often using that inquiry as a screen to avoid difficult issues regarding the competitive effects and business justification of the alleged conduct. Yet, there sometimes is no good method of defining markets, and there was substantial agreement at the hearings that market shares should play a smaller role in the analysis of monopolization.[155] In fact, to the extent that many section 2 cases examine past or continuing conduct, reliance solely on the indirect evidence provided by market shares may ignore observable information about the conduct's actual effect.

An assessment of whether there are substantial anticompetitive effects arising from the alleged conduct sometimes may be the preferred initial inquiry. In some circumstances, the implausibility of anticompetitive effects or causation may serve as an effective screen that enables courts or enforcement officials to conclude a case is not viable without tackling difficult market definition and monopoly power inquiries.[156] For example, one panelist would bring horizontal competitive effects "to the forefront" by asking whether it is possible that greater competition is possible and that the challenged conduct "works to move the market" from monopoly to more competitive results.[157] Similarly, if the cost of the conduct to the alleged monopolist exceeds the likely benefit of increased prices, then the implausibility of an

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deceiving a standard-setting organization is post-conduct, rather than pre-conduct); Multistate Legal Studies, Inc. v. Harcourt Brace Jovanovich Legal & Prof'l Pubs., Inc., 63 F.3d 1540, 1554 (10th Cir. 1995) (concluding that for assessing an attempted monopolization claim, the relevant market share is the defendant's share "at the time of litigation or the largest share he possessed during the period of the alleged offense").

155 *See supra* note 71.

156 *See* Timothy F. Bresnahan, The Economics of Monopolization: A Simple (as possible) Antitrust Analysis 3 (Jan. 31, 2007), http://www.ftc.gov/os/sectiontwohearings/docs/bresnahan_section2_hearings.pdf ("Much can be gained by thinking carefully about the competitive effects and causation arguments first").

157 *See* Jan. 31 Hr'g Tr. at 93–95 (Bresnahan) (stating that analysis is able to screen out many cases by "thinking about the anticompetitive theory . . . [and asking] is it possible that there could be less competition and also there could be more competition in this industry?").

anticompetitive rationale may be demonstrated.[158]

In other circumstances, when anticompetitive effects are considered first and are demonstrated, the question regarding the existence of monopoly power may be answered as well. If the conduct has caused substantial anticompetitive effects—not merely harm to a competitor—then it may be inferred, at least initially, that the firm possesses monopoly power.[159] As with other forms of economic evidence, the demonstration is necessarily imprecise; competitive effects directly demonstrate *market* power, with no clear method for calibrating any increment necessary to meet the legal requirement of *monopoly* power.[160] When viewed from the perspective of competitive effects, insistence on such an additional increment to establish monopoly power appears particularly problematic; it equates to a willingness to accept and shelter demonstrated competitive harm.[161]

Judicial and adjudicative opinions have accepted direct evidence of anticompetitive effects, such as reduced output, higher prices, or diminished quality, as proof of market power in section 1 cases, without requiring proof of market definition and market shares.[162] Similarly,

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158 *See* Mar. 7 Hr'g Tr. at 27–29 (Simons) (making the argument that comparing the costs of an exclusionary strategy, including any reduced sales, with the added revenues anticipated from the ensuing price increase may provide information about profitability of the strategy and plausibility of any anticompetitive effects).

159 *See id*. at 45 (Gavil) ("Well, power is the condition precedent of [anticompetitive] effects. If you have the effects, the power is there."); *id* at 28 (Simons) (suggesting that, having concluded that "the single firm was able to engage in this alleged conduct and get the price up," and one "could reasonably say, 'Well, we don't really need a market share threshold'").

160 *See supra* Section II.A. Some analysts have operationalized the concept of substantial market power as an ability to price "significantly" above marginal cost, while acknowledging that that requirement is imprecise. *See* Mar. 7 Hr'g Tr. at 97 (Katz) (urging the further requirement that the price be profitable). *See generally id*. at 98–99 (Gavil) (tracing the attempt to distinguish market power and monopoly power to an era that relied heavily on market-share analysis and observing that the distinction becomes attenuated outside that framework).

161 *But cf*. Copperweld Corp. v. Independence Tube Corp., 467 U.S. 752, 774–75 (1984) (structure of Sherman Act's proscriptions "leaves a 'gap' . . . [that] leaves untouched a single firm's anticompetitive conduct (short of threatened monopolization) that may be indistinguishable in economic effect from the conduct of two firms subject to § 1 liability").

162 *See, e.g.*, FTC v. Ind. Fed'n of Dentists, 476 U.S. 447, 460–61 (1986) ("Since the purpose of the inquiries into market definition and market power is to determine whether

courts have accepted such evidence as a basis for finding monopoly power[163] or acknowledged a willingness to accept an inference of monopoly power based on evidence of competitive effects.[164] Of course, contrary evidence, such as a demonstration that market shares are relatively low, would also be considered and could cause reassessment of any initial inference. A thoughtful conclusion would give appropriate weight to all relevant evidence.

Panelists also stated that monopoly power can be inferred from a demonstration of likely, rather than observed, anticompetitive effects.[165] Such an analysis may be useful evidence of monopoly power in settings where anticompetitive conduct prevented price from falling to a more competitive level. This type of analysis sometimes may avoid the need to define a relevant

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an arrangement has the potential for genuine adverse effects on competition, 'proof of actual detrimental effects, such as reduction of output,' can obviate the need for an inquiry into market power, which is but a 'surrogate for detrimental effects.'"); Toys "R" Us, Inc. v. FTC, 221 F.3d 928, 937 (7th Cir. 2000) ("[T]he share a firm has in a properly defined relevant market is only a way of estimating market power, which is the ultimate consideration. The Supreme Court has made it clear that there are two ways of proving market power. One is through direct evidence of anticompetitive effects.") (citations omitted); *In re* Schering-Plough Corp., 136 F.T.C. 956, 974–75 (2003) (stating that for purposes of determining whether an agreement is a prohibited restraint of trade, "it is not necessary to rely on indirect proof that Schering has a monopoly share in a relevant market when the competitive effects of the 'restraint' can be shown directly"), *rev'd on other grounds,* Schering-Plough Corp. v. FTC, 402 F.3d 1056 (11th Cir. 2005).

163 *See* Re/Max Int'l Inc. v. Realty One, Inc., 173 F.3d 995, 1018 (6th Cir. 1999) (citing Byars v. Bluff City News Co., 609 F.2d 843, 850 (6th Cir. 1979)) ("[T]he simplest way of showing monopoly power is to marshal evidence showing the exercise of actual control over prices or the actual exclusion of competitors.").

164 *See* Broadcom Corp. v. Qualcomm Inc., 501 F.3d 297, 307 (3d Cir. 2007) ("The existence of monopoly power may be proven through direct evidence of supracompetitive prices and restricted output."); PepsiCo, Inc. v. Coca-Cola Co., 315 F.3d 101, 107–08 (2d Cir. 2002); Conwood Co., L.P. v. U.S. Tobacco Co., 290 F.3d 768, 783 n.2 (6th Cir. 2002) (noting that monopoly power "may be proven directly by evidence of the control of prices or the exclusion of competition" (quoting Tops Markets, Inc. v. Quality Markets, 142 F.3d 90, 97–98 (2d Cir. 1998))); Coastal Fuels of P.R., Inc. v. Caribbean Petroleum Corp., 79 F.3d 182, 196–97 (1st Cir. 1996); Rebel Oil Co. v. Atl. Richfield Co., 51 F.3d 1421, 1434 (9th Cir. 1995).

165 *See* Mar. 7 Hr'g Tr. at 25–26 (Simons) (arguing that a possible first condition for analysis could be whether the conduct would be reasonably likely to significantly raise price or reduce quality); *id*. at 39–40 (White) (proposing that analysis of alleged exclusion compare existing market, with exclusion, to hypothetical consequences absent exclusion).

market first and may be particularly useful for identifying monopoly power when no clear market-definition methodology is available.[166]

Two commentators propose examining likely anticompetitive effects by adapting the Merger Guidelines framework to ask whether the continued presence of the allegedly excluded competitors would have led to a small but significant and nontransitory *decrease* in price.[167] They propose a 2-stage procedure. In the first stage, they estimate the excluded firms' "but-for" output, assuming that the defendant did not engage in the challenged practice.[168] In the second stage, the analysis considers whether the additional "but-for" output would have led to a "small but significant nontransitory *decrease* in the price" that the dominant firm would have charged.[169]

The proposal has not been implemented and often would be difficult. Estimating the excluded competitors' output and its effect on the market may be problematic because predicting how markets would have evolved may be a complex task. Moreover, as the commentators acknowledge, the analysis requires caution to interpret whether the alleged monopolist was responding to general market conditions rather than taking actions targeted at a particular entrant or rival.[170] In addition, even if anticompetitive effects appear likely, efficiencies associated with the conduct also would have to be considered.[171]

For any analysis based on competitive effects, four caveats warrant emphasis. First, a

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166 *See id*. at 62 (Gilbert) (stating that the focus on "additional competition and whether it lowers the [price] I do believe can get around the Cellophane Fallacy").

167 Philip B. Nelson & Lawrence J. White, *Market Definition and the Identification of Market Power in Monopolization Cases: A Critique & a Proposal* (NYU Center for Law & Business, Working Paper Series CLB-03-022, Nov. 17, 2003).

168 *Id.* at 22 n.59 (arguing that the estimated "but-for" output would include plaintiff's output and that of similarly situated firms affected by the defendant's actions and would consider long-run output to account for a nascent rival's maturation into a significant competitor).

169 *Id.* at 22.

170 *See id.* at 23–24; *cf*. Mar. 7 Hr'g Tr. at 28–29 (Simons) (arguing that insufficient price effects, when compared to the conduct's cost to the monopolist, may demonstrate that conduct was not undertaken for purpose of exclusion).

171 *See* Nelson & White, *supra* note 167, at 23 n.62; *cf*. Carlton, *supra* note 6, at 8–9 ("The conceptual difficulty is that the alleged [conduct] may have some efficiency justification, but price must typically rise in order to create the incentives to generate the efficiency. Indeed, an increase in market power may be desirable if it enables the firm to provide a higher quality product.").

finding of anticompetitive effects must rest on harm to competition and consumers, not just to competitors. Mere exclusion of a competitor is insufficient basis for inferring the existence of monopoly power.[172] Even a firm operating in a competitive market will seek to obtain the business of its rivals, and winning that business may only demonstrate vigorous competition.[173] To demonstrate harm to competition, the evidence must show market-level effects such as reduced output, higher prices, diminished quality, or reduced innovation.

Second, the evidence must show causation. Absent evidence of a sufficient causal link between the conduct and the anticompetitive effects, there is a risk that the inquiry would falsely establish liability.

Third, proof of substantial anticompetitive effects at most may demonstrate that the firm possesses monopoly power. This alone does not establish section 2 liability. Any business justification for the alleged conduct still must be evaluated and taken into account.[174]

Finally, allowing an inference of monopoly power by demonstrating anticompetitive effects does not mean that direct evidence of monopoly power is a required mode of analysis or an added evidentiary burden for all plaintiffs.[175] Monopoly power may still be shown by market

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172 Consequently, market definition still may be required to demonstrate effects at the market level, rather than only showing harm to a competitor. *But cf.* Jan 31 Hr'g Tr. at 146–51 (Shapiro) (taking the position that when conduct causes obvious increase in market power and anticompetitive effects, it may be possible to shortcut market definition).

173 *See, e.g.*, Ball Mem'l Hosp., Inc. v. Mutual Hosp. Ins., Inc., 784 F.2d 1325, 1338 (7th Cir. 1986) ("Competition is a ruthless process. A firm that reduces cost and expands sales injures rivals—sometimes fatally. . . . These injuries to rivals are byproducts of vigorous competition, and the antitrust laws are not balm for rivals' wounds. The antitrust laws are for the benefit of competition, not competitors.").

174 *See* Grimm, *supra* note 147.

175 Indeed, direct evidence of actual anticompetitive effects will not be available when the alleged monopolist has not exercised its market power, yet exercise of monopoly power is not a requirement for liability under section 2. *See* Am. Tobacco Co. v. United States, 328 U.S. 781, 811 (1946) ("[T]he material consideration in determining whether a monopoly exists is not that prices are raised and that competition actually is excluded but that power exists to raise prices or to exclude competition when it is desired to do so."); *cf.* United States v. Microsoft Corp., 253 F.3d 34, 57 (D.C. Cir. 2001) (rejecting argument that relatively low price of product was evidence that firm lacked monopoly power). Such cases are likely to be unusual; when found, they raise questions as to why the alleged monopolist has not exercised available monopoly power that may yield a deeper understanding of the workings of the relevant market.

definition, market shares, and elasticities of demand and supply.

VI. Conclusion

Although possession of, or a dangerous probability of obtaining, monopoly power is one legal element of a section 2 violation, the Sherman Act prohibits neither the possession nor the exercise of monopoly power. The static, legal element—the existence of monopoly power—is not, in itself, the focus of the statute's prohibitions. Rather, section 2 proscribes improper conduct that contributes to the acquisition or maintenance of monopoly power. The monopoly power inquiry, consequently, is intertwined with issues of competitive effects, such as whether the firm has sufficient market power that exclusionary conduct can have a substantial anticompetitive effect and whether the challenged conduct will enable the firm to exercise or prevent the erosion of substantial market power.

Courts established, and traditionally have used, the monopoly power element as a screen to dispose of meritless cases with minimum cost or effort. Such a screen provides valuable guidance to firms contemplating business strategies. In keeping with this objective, this paper suggests a rebuttable presumption that a firm with less than a 50 percent market share in a properly defined relevant market lacks monopoly power.

Modern antitrust analysis, however, no longer views market share or firm profitability as conclusive evidence of monopoly power or its absence. This suggests a need for flexible approaches in examining issues of monopoly power and for consideration of appropriate inferences based on the analysis of competitive effects in conjunction with other available, relevant data. Indeed, as the United States encourages internationally, the analysis of single-firm conduct does not end with a determination that the firm possesses monopoly power; it is necessary to consider the competitive effects of the challenged conduct. Such inquiries are not easy, but the analysis of competitive effects may yield valuable inferences regarding the presence of monopoly power. For any analysis based on competitive effects, a proper assessment requires demonstration of harm to market-level competition, not merely harm to a competitor; an adequate causal link between the challenged conduct and the anticompetitive effects; and consideration of any associated efficiencies.