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THE COMPETITION TRIBUNAL

IN THE MATTER OF the *Competition Act*, R.S.C. 1985, c. C-34;

AND IN THE MATTER OF certain conduct of Google Canada Corporation and Google LLC relating to the supply of online advertising technology services in Canada;

AND IN THE MATTER OF an Application by the Commissioner of Competition for one or more orders pursuant to section 79 of the *Competition Act*.

B E T W E E N:

COMMISSIONER OF COMPETITION

Applicant

and

GOOGLE CANADA CORPORATION AND GOOGLE LLC

Respondents

SUPPLEMENTARY MOTION RECORD

VOL 5 of 11

PUBLIC

August 22, 2025

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Exhibit 3 to the Cross-Examination of Keith Hylton

TAKING THE ERROR OUT OF "ERROR COST" ANALYSIS: WHAT'S WRONG WITH ANTITRUST'S RIGHT

JONATHAN B. BAKER*

A generation ago, conservative antitrust commentators associated with the Chicago School offered a comprehensive critique of the antitrust doctrines that then prevailed.[1] That critique helped define the Supreme Court's antitrust agenda for the decades that followed.[2] The resulting transformation of antitrust offered much to like, as the prior rules, for all their merits, likely chilled cost reductions and other efficiency enhancing business conduct.[3]

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* Professor of Law, American University Washington College of Law. The author is grateful to Harry First, Andy Gavil, Rajesh James, Barak Orbach, Eric Rasmusen, Steve Salop, and Spencer Waller.

[1] *E.g.*, ROBERT H. BORK, THE ANTITRUST PARADOX: A POLICY AT WAR WITH ITSELF (1978); RICHARD A. POSNER, ANTITRUST LAW: AN ECONOMIC PERSPECTIVE (1976). *Cf.* George L. Priest, *The Limits of Antitrust and the Chicago School Tradition,* 6 J. COMPETITION L. & ECON. 1 (2009) (emphasizing the Chicago School's political goal of seeking to constrain governmental intervention). The Chicago School of antitrust analysis, an intellectual movement of lawyers and economists loosely associated with the University of Chicago, has dominated antitrust thinking since the mid- to late-1970s. Some economists who belonged to that movement were also part of the similarly named Chicago School of industrial organization economics, which flourished until the mid-1970s. *Cf.* Richard Posner, *The Chicago School of Antitrust Analysis*, 127 U. PA. L. REV. 925 (1979) (tracing the influence of Chicago School industrial organization economists (including Ward Bowman, Aaron Director, John McGee, George Stigler, and Lester Telser) on Chicago School antitrust thinking but drawing no distinction between the economic school and the antitrust school (which also reflected important contributions from others, including Robert Bork and Richard Posner)).

[2] The transition from antitrust's structural era to the Chicago School era that began during the late 1970s is described in Jonathan B. Baker, *A Preface to Post-Chicago Antitrust*, *in* POST-CHICAGO DEVELOPMENTS IN ANTITRUST LAW 60 (Antonio Cucinotta, Roberto Pardolesi & Roger Van den Bergh eds., 2002). The Chicago School's economic critique of the prior rules complemented the Harvard School's administrability critique. *See generally* William E. Kovacic, *The Intellectual DNA of Modern U.S. Competition Law for Dominant Firm Conduct: The Chicago/Harvard Double Helix*, 2007 COLUM. BUS. L. REV. 1 (2007).

[3] Jonathan B. Baker, *Economics and Politics: Perspectives on the Goals and Future of Antitrust*, 81 FORDHAM L. REV. 2175, 2185 (2013).

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When contemporary conservatives defend this transformation and call for rule modifications that would further insulate business conduct from antitrust intervention, however, they are working from a doctrinal starting point vastly different, and far more hospitable to defendants, than the competition doctrines that prevailed during the 1970s. As discussed below, today's antitrust conservatives' advocacy of further changes to antitrust rules is based on a series of erroneous assumptions about markets and institutions. These assumptions systematically overstate the incidence and significance of false positives, understate the incidence and significance of false negatives, and understate the net benefits of various rules by overstating their costs. Collectively, these errors inappropriately tilt the application of a neutral economic tool, decision theory, against antitrust intervention.

I. THE CONSERVATIVE ANTITRUST PROGRAM AND THE ERROR COST FRAMEWORK

In *The Antitrust Paradox*, arguably the most influential and comprehensive statement of the Chicago School vision, Robert Bork asserted that antitrust law should be reformed and refocused to strike at only three classes of behavior: "naked" horizontal agreements to fix prices or divide markets,[4] horizontal mergers to duopoly or monopoly, and a limited class of exclusionary conduct (consisting primarily of predation by abuse of governmental processes).[5] A reformed and refocused antitrust would "abandon its concern with such beneficial practices as small horizontal mergers, all vertical and conglomerate mergers, vertical price maintenance and market division, tying arrangements, exclusive dealing and requirement contracts, 'predatory' price-cutting, price 'discrimination,' and the like."[6] This agenda largely targeted exclusionary conduct offenses for abandonment: when the practices that Bork identified harm competition, they often do so by excluding actual or potential rivals.[7]

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[4] Bork defined a "naked" agreement as one that is not ancillary to cooperative productive activity engaged in by the firms, BORK, *supra* note 1, at 263, and so does nothing more than eliminate competition. *Id.* at 264. Bork provided an extensive and sympathetic discussion illustrating the possible efficiencies arising from agreements among rivals to fix prices or divide markets. *Id.* at 429–40.

[5] *Id.* at 406; *see id.* at 347–64 (describing concern with abuse of process); *see also* Posner, *supra* note 1, at 933 ("By 1969 . . . an orthodox Chicago position (well represented in the writings of Robert Bork) had crystallized: only explicit price fixing and very large horizontal mergers (mergers to monopoly) were worthy of serious concern.").

[6] BORK, *supra* note 1, at 406; *see also id.* at 157 (With respect to exclusive dealing, "The real danger for the law is less that predation will be missed than that normal competitive behavior will be wrongly classified as predatory and suppressed."); *cf.* Richard A. Posner, *The Next Step in the Antitrust Treatment of Restricted Distribution: Per Se Legality*, 48 U. CHI. L. REV. 6 (1981) (calling for the abandonment of antitrust prohibitions on all restrictions on distributors imposed by manufacturers, including exclusive sales territories and resale price maintenance).

[7] Jonathan B. Baker, *Exclusion as a Core Competition Concern,* 78 ANTITRUST L.J. 527, 533–35 (2013). Bork recognized that disruption of optimal distribution patterns could, in theory,

Since the publication of *The Antitrust Paradox*, the Supreme Court has substantially reduced the antipathy that antitrust law previously held toward the practices that Judge Bork targeted.[8] The Court has done so through a series of Chicago School-influenced antitrust landmarks. These decisions, among other things, relaxed the rule governing non-price vertical restraints,[9] raised barriers to plaintiffs seeking to prove predatory pricing,[10] and overruled the nearly century-old rule declaring resale price maintenance illegal per se.[11] Although

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harm competition, but he suggested that anticompetitive outcomes were implausible. *See* BORK, *supra* note 1, at 156 (noting limits to the anticompetitive theory and a further complication). Notwithstanding Bork's general skepticism about the merits of suits challenging exclusionary conduct, including unilateral refusals to deal, *see id.* at 156, 346, he concluded that the Supreme Court had properly decided *Lorain Journal Co. v. United States*, 342 U.S. 143 (1951). BORK, *supra* note 1, at 344–46. Years after writing *The Antitrust Paradox*, Bork found another example of anticompetitive exclusionary conduct in *United States v. Microsoft Corp.*, 253 F. 3d 34 (D.C. Cir. 2001) (en banc) (per curiam), where he represented one of Microsoft's excluded rivals, Netscape. Judge Posner, writing at about the same time as Judge Bork, was more receptive to the likelihood of anticompetitive exclusion and the value of antitrust enforcement against it. *Compare, e.g.*, POSNER, *supra* note 1, at 186 (predatory pricing is not inevitably irrational), *with* BORK, *supra* note 1, at 155 (predatory pricing is "most unlikely to exist").

[8] The Court did so mainly by modifying prior antitrust rules incrementally. William H. Page, *Legal Realism and the Shaping of Modern Antitrust,* 44 EMORY L.J. 1, 51 (1995) (The Supreme Court altered doctrine primarily by formulating "subsidiary decisional rules that govern the application of the rules of liability, that define the types of harms that are compensable in private suits, and that determine the sufficiency of evidence to go to the jury"); *id.* at 70 ("The Court's hesitancy to formulate rules of per se legality based upon Chicago's theoretical insights reflects the response of legal process jurisprudence to the realist critique of judging. . . . The Court has chosen to defer to its established Sherman Act precedents, adapting the existing fabric of doctrine to current economic wisdom, but leaving sweeping legal change to Congress."); *see* Bruce H. Kobayashi & Timothy J. Muris, *Chicago, Post-Chicago, and Beyond: Time to Let Go of the 20th Century*, 78 ANTITRUST L.J. 147, 153 (2012) ("The courts have not . . . adopted rules of per se legality or broad safe harbors, as some associated with the Chicago School have advocated."). Indeed, on several occasions, the Court modified rules in small steps when the government had advocated larger ones. In *Monsanto v. Spray-Rite Service Corp.*, 465 U.S. 752 (1984), the Court declined to reconsider the per se rule against resale price maintenance, although the Solicitor General urged it to do so. *See id.* at 761 n.7. Similarly, the Court did not adopt the "no economic sense" test that the government proposed in its *Trinko* amicus brief. Brief for the United States and the Federal Trade Commission as Amici Curiae Supporting Petitioner at 15–20, Verizon Commc'ns Inc. v. Law Offices of Curtis V. Trinko, LLP, 540 U.S. 398 (2004) (No. 02-682), *available at* www.justice.gov/atr/cases/f201000/201048.pdf.

[9] Cont'l T.V., Inc. v. GTE Sylvania Inc., 433 U.S. 36 (1977).

[10] Brooke Grp. Ltd. v. Brown & Williamson Tobacco Corp., 509 U.S. 209 (1993); Matsushita Elec. Indus. Co., v. Zenith Radio Corp., 475 U.S. 574 (1986); Pac. Bell Tel. Co. v. linkLine Commc'ns, Inc., 555 U.S. 438 (2009). These Chicago-oriented decisions were also influenced by antitrust's Harvard School. Phillip Areeda & Donald F. Turner, *Predatory Pricing and Related Practices Under Section 2 of the Sherman Act*, 88 HARV. L. REV. 697 (1975).

[11] Leegin Creative Leather Prods., Inc. v. PSKS, Inc., 551 U.S. 877 (2007) (overruling *Dr. Miles Medical Co. v. John D. Park & Sons Co.*, 220 U.S. 373 (1911)). The majority opinion in *Leegin* cited Posner four times and Bork three times (and the dissent cited each twice). *See Leegin*, 551 U.S. at 889 & 897; *id.* at 913–14 (Breyer, J., dissenting). Although *Leegin* represents a doctrinal shift toward reduced antitrust enforcement, it expressly endorses one basis for antitrust enforcement that the Court's prior resale price maintenance decisions did not: *Leegin* articulates and accepts exclusionary theories of anticompetitive effect in addition to collusive theories. *Leegin*, 551 U.S. at 893–94. Other landmark Supreme Court decisions advancing the Chicago

the Court has not declared any of the practices that Bork targeted legal per se, its decisions have substantially narrowed the practical scope of potential liability for these practices.[12]

Thirty-five years after the publication of *The Antitrust Paradox*, antitrust conservatives in general continue to support Bork's program of focusing antitrust on anticompetitive horizontal price fixing and market division and horizontal mergers leading to monopoly or duopoly, while circumscribing or abandoning antitrust's concern with small horizontal mergers, price discrimination, and exclusionary conduct.[13] To defend those views, and to support their advocacy of further modifications to antitrust rules, conservatives frequently adopt a decision-theoretic framework often termed "error cost" analysis. That framework was first employed in the law and economics literature by Richard Posner during the 1970s[14] and introduced into mainstream antitrust scholarship by Paul Joskow and Alvin Klevorick in 1979.[15] Modern antitrust commentators often reference Frank Easterbrook's adoption of the framework in a widely cited article published in 1984.[16]

School antitrust program but not directly targeting the practices Judge Bork singled out include *Brunswick Corp. v. Pueblo Bowl-O-Mat, Inc.*, 429 U.S. 477, 488 (1977) (introducing the antitrust injury doctrine), and *Broadcast Music, Inc. v. CBS, Inc.*, 441 U.S. 1 (1979) (limiting the per se prohibition against horizontal price fixing to naked restraints). *See generally* Baker, *supra* note 2, at 66–67 (brief survey of Chicago-influenced doctrinal changes).

[12] Plaintiffs rarely succeed today when attacking non-price vertical restraints, alleging predatory pricing, or challenging unilateral refusals to deal by dominant firms absent a prior voluntary course of dealing. Vertical mergers are almost never challenged in court. The government largely avoids price discrimination lawsuits under the Robinson-Patman Act, though private enforcement remains active. While the practical scope of liability has narrowed in these areas, it is has not disappeared. *See, e.g.*, United States v. Dentsply Int'l, Inc., 399 F.3d 181 (3d Cir. 2005) (exclusive dealing); LePage's Inc. v. 3M, 324 F.3d 141 (3d Cir. 2003) (bundled discounts); United States v. Visa U.S.A., Inc., 344 F.3d 229 (2d Cir. 2003) (conduct tantamount to an exclusionary group boycott); *see also* Jonathan B. Baker, *Comcast/NBCU: The FCC Provides a Roadmap for Vertical Merger Analysis*, ANTITRUST, Spring 2011, at 36 (vertical merger enforcement).

[13] *Cf.* Joshua D. Wright, *Abandoning Antitrust's Chicago Obsession: The Case for Evidence-Based Antitrust*, 78 ANTITRUST L.J. 241, 242 (2012) (finding little or no practical difference between today's self-described "neo-Chicagoans" and the historical Chicago School of antitrust). As discussed in Part II.B.4 below, the antitrust conservatives on the Supreme Court have gone beyond Bork's playbook in preferring administrative regulation to antitrust.

[14] Isaac Ehrlich & Richard A. Posner, *An Economic Analysis of Legal Rulemaking*, 3 J. LEGAL STUD. 257 (1974); Richard A. Posner, *An Economic Approach to Legal Procedure and Judicial Administration*, 2 J. LEGAL STUD. 399 (1973).

[15] Paul L. Joskow & Alvin K. Klevorick, *A Framework for Analyzing Predatory Pricing Policy*, 89 YALE L.J. 213, 222–25 (1979).

[16] Frank H. Easterbrook, *The Limits of Antitrust*, 63 TEX. L. REV. 1 (1984); *see, e.g.*, David S. Evans & A. Jorge Padilla, *Designing Antitrust Rules for Assessing Unilateral Practices: A Neo-Chicago Approach*, 72 U. CHI. L. REV. 73, 74–75 & n.8 (2005) (highlighting decision-theoretic aspects of Easterbrook's article); Fred S. McChesney, *Easterbrook on Errors*, 6 J. COMPETITION L. & ECON. 11, 14–16 (2010) (same); Geoffrey A. Manne & Joshua D. Wright, *Innovation and the Limits of Antitrust*, 6 J. COMPETITION L. & ECON. 153, 158–59 (2010) (same); *cf.* Alan Devlin & Michael Jacobs, *Antitrust Error*, 52 WM. & MARY L. REV. 75, 97 (2010) (observing

The error cost perspective evaluates antitrust rules—whether considered individually or as a whole—based on whether they minimize total social costs. The relevant costs include costs of "false positives" (finding violations when the conduct did not harm competition), costs of "false negatives" (not finding violations when the conduct harmed competition), and transaction costs associated with use of legal process.[17] False positives and false negatives are harmful to the economy as a whole for reasons that go beyond the conduct in the case under review:[18] False positives and false negatives may chill benefi-

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that "Judge Easterbrook's policy views on error have been enormously influential within the United States," analyzing a range of rules, and concluding that most account appropriately for the balance of rule-specific error costs). Citing Easterbrook's "pioneer[ing]" role in using the error cost approach, Commissioner Joshua Wright describes the use of the approach within antitrust as "distinctively Chicagoan," Wright, *supra* note 13, at 247–48, without noting Joskow and Klevorick's prior use, *supra* note 15.

[17] These transaction costs go beyond the costs of litigation. They also include, for example, costs associated with information gathering by potential litigants and the institution specifying decision rules. *See* C. Frederick Beckner III & Steven C. Salop, *Decision Theory and Antitrust Rules*, 67 ANTITRUST L.J. 41, 43–52 (1999); Baker, *supra* note 7, at 574 & n.226. To the extent that uncertainty about legal rules chills beneficial conduct or means that those rules fail to deter harmful conduct, the error cost analysis should account for both of those consequences. *Cf.* Harry First & Spencer Weber Waller, *Antitrust's Democracy Deficit*, 81 FORDHAM L. REV. 2543, 2571 (2013) ("If one seeks to minimize error costs . . . without considering the accuracy benefits [predicted benefits of 'getting it right'], one inevitably gets less enforcement activity than should otherwise be the case."). Yet a recent call to restrict the enforcement of FTC Act Section 5 discusses the possible chill to beneficial conduct resulting from legal uncertainty without considering the possibility that uncertainty also reduces deterrence benefits. Joshua Wright, Comm'r, Fed. Trade Comm'n, Remarks at the Executive Committee Meeting of the New York State Bar Association's Antitrust Section: Section 5 Recast: Defining the Federal Trade Commission's Unfair Methods of Competition Authority 7–8 (June 19, 2013) (transcript available at www.ftc.gov/speeches/wright/130619section5recast.pdf).

[18] From an economic perspective, antitrust rules benefit society primarily by deterring harmful conduct. *See generally* Jonathan B. Baker, *The Case for Antitrust Enforcement*, J. ECON. PERSP., Autumn 2003, at 27; *cf.* Louis Kaplow, *Burden of Proof*, 121 YALE L.J. 738 (2012) (highlighting a tradeoff between the benefits of deterrence and costs of chilling beneficial conduct that arises when the burden of proof in adjudication is set to maximize social welfare). Accordingly, the evaluation of error costs must look to the consequences of the decision or legal rule for conduct by other firms, not simply to the incidence of the decision on the parties to the case. For example, restricting analysis to the parties before the court would yield the misimpression that draconian punishments for parking in front of a fire hydrant will eliminate error costs. The prospect of such punishments would lead to 100% compliance with the no-parking rule, so there would be no court cases, no possibility for a court erroneously to convict or acquit a defendant, and no litigation expenditures. Yet such punishments would also chill parking in front of a hydrant when its social benefits (e.g., allowing a doctor to arrive in time to save a life) would outweigh its social costs. Such punishments would also discourage socially beneficial parking *near* hydrants (by drivers who fear that an aggressive parking enforcer would wrongly conclude that the hydrant is blocked and that a court would uphold the ticket). Restricting analysis to the parties before the court would yield the same misimpression with respect to an enforcement policy taken to the opposite extreme: A complete absence of enforcement of the rule prohibiting parking in front of hydrants would also lead to no court cases, and so would generate no judicial errors and no transaction costs of litigation. Yet such a rule would not deter parking in front of hydrants when the social cost (the cost of impeding fire department access in the event of a fire discounted by the probability that a need for access would arise) would exceed the social benefit.

cial conduct by other economic actors (potentially in other industries) that must comply with the rule; these errors may also fail to deter harmful conduct by other economic actors to which the same rule would apply. False positives and false negatives do not neatly map to overdeterrence and underdeterrence, respectively, however, because the deterrence consequences of legal errors depend in part on the way that those errors affect the marginal costs and benefits of conduct undertaken in the shadow of the law.[19]

Contemporary antitrust conservatives have relied on the error cost framework to advocate various antitrust rules that would place a "thumb on the scales" in favor of permitting firms to engage in much of the conduct that Judge Bork perceived as beneficial. These rules would, among other things, find a tying violation only when the efficiency benefits offsetting plausible competitive harms are insubstantial;[20] abandon "aggressive" enforcement against vertical restraints unless the loss from false negatives is relatively large;[21] and find monopolization only if anticompetitive effects are "disproportionate" to any associated procompetitive justification.[22] These arguments

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[19] *See generally* Warren F. Schwartz, *Legal Error*, *in* 1 ENCYCLOPEDIA OF LAW AND ECONOMICS 1029 (Boudewijn Bouckaert & Gerrit De Geest eds., 2000). For example, a rule change that increases the frequency or cost (penalty) of false positives may increase deterrence, but it could also do the reverse. The latter may occur if more false positives mean that firms no longer obtain enough benefit from staying within the line separating legal and illegal behavior to justify being careful. For this reason, uncertainty about a rule or its application can reduce compliance. *See generally* Hendrik Lando, *Does Wrongful Conviction Lower Deterrence?*, 35 J. LEGAL STUD. 327, 329–30 (2006) (providing a simple technical example); Richard A. Posner, *An Economic Approach to the Law of Evidence*, 51 STAN. L. REV. 1477, 1483–84 (1999) (greater accuracy in judicial determinations increases the returns to compliance with legal rules); Steven C. Salop, *Merger Settlements and Enforcement Policy for Optimal Deterrence and Maximum Welfare,* 81 FORDHAM L. REV. 2647, 2668–69 & 2669 n.60 (2013) (a firm's incentive to comply with a rule may fall identically when the probability of either type of error increases).

[20] Evans & Padilla, *supra* note 16, at 95; *see also* Keith N. Hylton & Michael Salinger, *Tying Law and Policy: A Decision-Theoretic Approach*, 69 ANTITRUST L.J. 469, 525–26 (2001) (using a decision-theoretic framework to argue against a per se prohibition of tying).

[21] James C. Cooper, Luke M. Froeb, Dan O'Brien & Michael G. Vita, *Vertical Antitrust Policy as a Problem of Inference*, 23 INT'L J. INDUS. ORG. 639, 662 (2005). The authors also call for using natural experiments to guide enforcement policy. *Id.*

[22] U.S. DEP'T OF JUSTICE, COMPETITION AND MONOPOLY: SINGLE-FIRM CONDUCT UNDER SECTION 2 OF THE SHERMAN ACT 15–18 (2008) (endorsing error cost framework for the evaluation of Section 2 standards), *available at* www.justice.gov/atr/public/reports/236681.pdf, *withdrawn*, Press Release, U.S. Dep't of Justice, Justice Department Withdraws Report on Antitrust Monopoly Law (May 11, 2009), *available at* www.justice.gov/atr/public/press_releases/2009/245710.pdf; *id.* at 45–47 (advocating disproportionality test where a conduct-specific test would not apply); *see also* Joshua D. Wright, Comm'r, Fed. Trade Comm'n, Proposed Policy Statement Regarding Unfair Methods of Competition Under Section 5 of the Federal Trade Commission Act 9 (June 19, 2013) (proposing guidelines for FTC Section 5 enforcement that would limit use of the statute to conduct with no efficiency justification), *available at* www.ftc.gov/sites/default/files/documents/public_statements/statement-commissioner-joshua-d.wright/130619umcpolicystatement.pdf; Maureen K. Ohlhausen, Comm'r, Fed. Trade Comm'n, Remarks at the U.S. Chamber of Commerce: Section 5: Principles of Navigation 10 (July 25, 2013) (transcript available at www.ftc.gov/sites/default/files/documents/public_statements/section-5-principles-naviga-

have helped foster a contemporary rhetorical consensus that inappropriately relegates exclusion to antitrust's periphery while placing collusion at its core.[23]

II. ERRONEOUS ERROR COST ARGUMENTS

The error cost framework can be thought of as using the tools of what economists term "decision theory"[24] to evaluate whether legal rules promote "optimal deterrence" (a term used in the economics of penalties to describe economically efficient outcomes).[25] Like microeconomics generally, decision theory is a neutral tool, not an inherently conservative one.[26] In applying that tool to analyze antitrust rules, however, conservatives have made a series of erroneous assumptions, which have collectively imparted a non-interventionist bias to their conclusions.

Antitrust conservatives do not, of course, all think alike. Some would not subscribe to each of the arguments criticized here, and might dismiss some of

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tion/130725section5speech.pdf) (proposing to limit the application of FTC Act Section 5 to conduct with disproportionate anticompetitive effects). Commentators have also debated in error-cost terms conservative proposals that courts find exclusionary conduct by dominant firms anticompetitive only if the conduct would be unprofitable but for the exclusion of rivals and the resulting market power. *Compare* A. Douglas Melamed, *Exclusionary Conduct Under the Antitrust Laws: Balancing, Sacrifice, and Refusals to Deal,* 20 BERKELEY TECH. L.J. 1247 (2005) (advocating profit-sacrifice test), *with* Steven C. Salop, *Exclusionary Conduct, Effect on Consumers, and the Flawed Profit-Sacrifice Standard*, 73 ANTITRUST L.J. 311, 344 (2006) (criticizing profit-sacrifice test).

[23] *See generally* Baker, *supra* note 7.

[24] "Decision theory sets out a *process* for making factual determinations and decisions when information is costly and therefore imperfect." Beckner & Salop, *supra* note 17, at 41–42. *See generally* JOHN W. PRATT, HOWARD RAIFFA & ROBERT SCHLAIFER, INTRODUCTION TO STATISTICAL DECISION THEORY (1995); MORRIS H. DEGROOT, OPTIMAL STATISTICAL DECISIONS (1970). Although the "error cost" analysis is conducted in terms of costs, minimizing total social costs is equivalent to maximizing total social benefits, which is more likely how the analysis would be described in the language of decision theory.

[25] *See* ANDREW I. GAVIL, WILLIAM E. KOVACIC & JONATHAN B. BAKER, ANTITRUST LAW IN PERSPECTIVE: CASES, CONCEPTS AND PROBLEMS IN COMPETITION POLICY 1129–35 (2d ed. 2008) (Sidebar 9-7) (surveying the literature on the economics of penalties and its application to antitrust). The magnitude of expected penalties undoubtedly influences firm conduct, so the penalties assigned to antitrust violations necessarily affect the likelihood that antitrust rules will lead to efficient outcomes. Similarly, as discussed below in Part II.A.5, the error costs of any individual substantive antitrust rule also depend upon other rules governing firm behavior and the litigation process. This and other problems that arise in applying the error cost framework to evaluate legal rules are discussed briefly in Baker, *supra* note 3, at 2178–79. In light of these difficulties, "It is hard to be confident that any particular legal rule will minimize error costs for any of the issues antitrust commentators argue about, like bundled discounts or the unilateral competitive effects of mergers, even with the best of intentions." *Id.* at 2179.

[26] *See, e.g.*, LOUIS KAPLOW, COMPETITION POLICY AND PRICE FIXING (2013) (relying on a decision-theoretic framework to argue that antitrust should employ a broad definition of "agreement" among rivals that would encompass oligopolistic interdependence leading to higher prices); Salop, *supra* note 22, at 344 (discussing the application of decision theory to Sherman Act § 2 standards).

the claimed mistakes as caricatures of their views or as arguments that conservative antitrust commentators were more likely to employ in the past than to offer today. In addition, some of the authors cited in this article might resist the conservative label, or take non-interventionist positions only with respect to some issues.[27] Moreover, most contemporary conservative antitrust commentators accept that antitrust has some useful role to play,[28] so most are unlikely to agree with every one of the views that I describe the antitrust right as holding. (It is hard to see how someone who simultaneously accepted all of them would want to support the antitrust enterprise.) It is nevertheless useful to collect the arguments in a single place in order to show the limits to the revolution in antitrust thinking that the Chicago School commentators launched a generation ago.[29]

A. Erroneous Assumptions About Markets

1. *Markets Self-Correct Through Entry*

Antitrust conservatives often presume that markets are self-correcting: that in the event firms exercise market power, entry by new firms or expansion by existing firms will generally restore competition quickly and automatically, even in the oligopoly settings characteristic of antitrust cases. If so, the social costs of market power are limited, and an error cost analysis will generally favor permissive antitrust rules. Judge Easterbrook popularized use of the

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[27] For example, Justice Stephen Breyer endorsed the "single monopoly profit" theory criticized in Part II.A.4, below, in *Town of Concord v. Boston Edison Co.*, 915 F.2d 17, 23, 32 (1st Cir. 1990), and authored the majority opinion in *Credit Suisse Securities (USA) LLC v. Billing*, 551 U.S. 264 (2007), which is discussed in Part II.B.4. Yet, as author of the dissent in *Leegin Creative Leather Products, Inc. v. PSKS*, Inc., 551 U.S. 877 (2007), he took issue with the majority's non-interventionist approach. Justice Breyer's antitrust positions reflect concerns about the administrability of legal rules and the capacity of antitrust institutions, and so do not invariably follow the non-interventionist fault line emphasized here. *See generally* Kovacic, *supra* note 2; Leon B. Greenfield & Daniel J. Matheson, *Rules Versus Standards and the Antitrust Jurisprudence of Justice Breyer*, ANTITRUST, Summer 2009, at 87.

[28] *See* Priest, *supra* note 1, at 8 ("The Chicago School tradition sought to constrain antitrust law—chiefly by ridiculing its excesses—but accepted antitrust enforcement as an underlying background condition of market activity."). Some conservatives have called for repealing the antitrust laws, however. *E.g.*, DOMINICK T. ARMENTANO, ANTITRUST POLICY: THE CASE FOR REPEAL (1986); William F. Shughart II, *Don't Revise the Clayton Act, Scrap It!*, 6 CATO J. 925 (1987); *cf.* Thomas G. Donlan, *Who Calls the iTune? Don't Let Government Fiddle with Competition in the E-Book Market*, BARRON's, July 15, 2013, at 43 (antitrust enforcement violates firms' economic rights); Ryan Young, *Apple's Ebook Ruling and the Absurdity of Antitrust Law*, DAILY CALLER (July 11, 2013), dailycaller.com/2013/07/11/the-apple-ebook-ruling-and-the-absurdity-of-antitrust-law/ (same).

[29] For another effort with a similar goal, though focused more on the specific doctrinal rules the courts have adopted, see HOW THE CHICAGO SCHOOL OVERSHOT THE MARK: THE EFFECT OF CONSERVATIVE ECONOMIC ANALYSIS ON U.S. ANTITRUST (Robert Pitofsky ed., 2008). For conservative criticism of that book, see Joshua D. Wright, *Overshot the Mark? A Simple Explanation of the Chicago School's Influence on Antitrust*, COMPETITION POL'Y INT'L, Spring 2009, at 1.

term "self-correcting" in antitrust commentary,[30] though the concept predates him and appears, for example, in Judge Bork's book.[31]

The conservative claim that markets self-correct rests in part on an unobjectionable economic premise.[32] If entry is easy,[33] then the exercise of market power will prompt new competitors to emerge. That development would be expected to counteract any exercise of market power, and its prospect may deter the exercise of market power in the first place.[34] Proceeding to the empirical claim that, as anticompetitive conduct causes prices to rise, "new entrants will emerge to alleviate, or even eradicate, the problem," and then to the conclusion that "[l]etting the guilty go free in antitrust is generally a self-correcting problem,"[35] however, requires reliance on a second, unstated premise. The unstated premise is that entry will generally prove capable of policing market power in the oligopoly settings of greatest concern in antitrust—or at least prove capable of policing market power with a sufficient frequency, to a sufficient extent, and with sufficient speed to make false positives systematically less costly than false negatives.

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[30] Easterbrook, *supra* note 16, at 2–3 (stating that "judicial errors that tolerate baleful practices are self-correcting" because "[m]onopoly is self-destructive" given that "[m]onopoly prices eventually attract entry"); *id.* at 15 ("A monopolistic practice wrongly excused will eventually yield to competition . . . as the monopolist's higher prices attract rivalry."); *accord* Wright, *supra* note 13, at 248 ("[T]he costs of false convictions in the antitrust context are likely to be significantly larger than the costs of false acquittals, since judicial errors that wrongly excuse an anticompetitive practice may eventually be undone by competitive forces attracted by the presence of monopoly rents.").

[31] BORK, *supra* note 1, at 133 (a dominant position conferring market power will "always be eroded" if not based on superior efficiency).

[32] The possibility of market self-correction through expansion by existing rivals is addressed in Part II.A.2, below.

[33] The antitrust economics literature frequently refers to "ease" of entry and "barriers" to entry, so I have adopted the terms here. These terms mislead, however, to the extent they suggest that entry conditions can be analyzed in the abstract, without reference to a competitive concern. The relevant question for antitrust enforcement and policy is typically whether new competition will counteract or deter competitive harm from the specific business conduct at issue. The answer may vary with the nature of the conduct.

[34] Conversely, as antitrust conservatives properly recognize, if entry is not easy, the self-correcting process can work slowly, giving antitrust enforcement a role to play. Easterbrook, *supra* note 16, at 2 (The "long run may be a long time coming, with loss to society in the interim," so "[t]he central purpose of antitrust is to speed up the arrival of the long run."); Evans & Padilla, *supra* note 16, at 84 ("We are not suggesting that competition cures all anticompetitive ills—only that the forces of competition, and creative destruction, provide some limitation on the magnitude and duration of monopoly profits."); BORK, *supra* note 1, at 311 ("Antitrust is valuable because in some cases it can achieve results more rapidly than can market forces" such as entry); *cf.* Wright, *supra* note 13, at 245 ("The Chicago School neither assumes nor requires conditions of perfect competition, perfect information, or the absence of transaction costs. The Chicago School accounts for real-world frictions.").

[35] Fred S. McChesney, *Talking 'Bout My Antitrust Generation*, REGULATION, Fall 2004, at 48, 50.

Yet there is little reason to believe that entry addresses the problem of market power so frequently, effectively, and quickly as to warrant dismissal of concerns regarding false negatives. The claim that airline markets are "contestable,"[36] once pressed in support of limiting antitrust intervention in that industry, is no longer seriously maintained.[37]

David Evans and Jorge Padilla support the self-correction claim with examples of near-monopolies that eroded over time, "such as General Motors (automobiles), IBM (computers), RCA (television sets), Kodak (photographic film), Xerox (photocopiers), U.S. Steel (finished steel), and Harley-Davidson (motorcycles)"; it is noteworthy, however, that these firms' dominant positions, while not permanent, generally persisted for decades.[38] The antitrust case law supplies other examples of dominant firms that possessed durable market power.[39]

The case law also supplies examples of dominant firms and colluding firms that harmed competition by erecting entry barriers and excluding new rivals, including entrants that sought to introduce new technologies.[40] Microsoft, for example, had durable market power in computer operating systems; it main-

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[36] In what is termed a "contestable" market, the potential for rapid and inexpensive entry would deter or counteract any exercise of market power, no matter how small the number of incumbent firms. *See, e.g.*, WILLIAM J. BAUMOL, JOHN C. PANZAR & ROBERT D. WILLIG, CONTESTABLE MARKETS AND THE THEORY OF INDUSTRY STRUCTURE (rev. ed. 1988). Those suggesting application of this idea to the airline industry pointed out that aircraft were not committed to any particular route and that airlines could readily shift aircraft to new city-pairs in response to profit opportunities. *See, e.g.*, Elizabeth E. Bailey & John C. Panzar, *The Contestability of Airline Markets During the Transition to Deregulation*, LAW & CONTEMP. PROBS., Winter 1981, at 125.

[37] *See* William J. Baumol & Robert D. Willig, *Contestability: Developments Since the Book*, *in* STRATEGIC BEHAVIOUR AND INDUSTRIAL COMPETITION 9, 24–27 (Derek J. Morris et al. eds., 1986) (the "initial enthusiasm" of the authors for viewing airline markets as contestable required "[r]econsideration," as the airline "industry does not conform perfectly to the contestability model"). The reasons and evidence that airline markets are not contestable are surveyed in Jonathan B. Baker, *Mavericks, Mergers and Exclusion: Proving Coordinated Competitive Effects Under the Antitrust Laws*, 77 N.Y.U. L. REV. 135, 170–72 & n.153 (2002). Moreover, the flawed claim that competition from small rivals and potential entrants prevents competitive harm is at odds with the equally flawed argument made by some conservatives that the exclusion of inefficient entrants does not harm competition. *See* Steven C. Salop, *Economic Analysis of Exclusionary Vertical Conduct: Where Chicago Has Overshot the Mark*, *in* HOW THE CHICAGO SCHOOL OVERSHOT THE MARK, *supra* note 29, at 141, 152–55 (criticizing the equally efficient entrant standard).

[38] *Cf.* Evans & Padilla, *supra* note 16, at 84 (acknowledging that these dominant positions were "not ephemeral").

[39] *E.g.*, Standard Oil Co. v. United States, 221 U.S. 1 (1911); United States v. Dentsply Int'l, Inc., 399 F.3d 181 (3d Cir. 2005); United States v. Microsoft Corp., 253 F.3d 34 (D.C. Cir. 2001) (en banc) (per curiam); United States v. Aluminum Co. of Am. (*Alcoa*), 148 F.2d 416 (2d Cir. 1945).

[40] *See, e.g.*, Baker, *supra* note 7, at 535–36 (examples of leading antitrust decisions addressing exclusionary conduct); *id.* at 559–60 (examples of antitrust cases addressing the alleged suppression of new technologies, products, or business models).

tained that power by excluding rivals that offered new technologies (rival Internet browsers and the Java programming language) that threatened to erode the "applications barrier to entry" that protected Microsoft Windows from competition from rival operating systems.[41] The *Lorain Journal* newspaper protected its monopoly power by impeding the entry of a rival using a new technology, radio.[42] MasterCard and Visa likewise adopted rules that prohibited banks from issuing rival cards with innovative features.[43]

Similarly, cartels often last more than a decade even when antitrust enforcement cuts short their duration. A recent study of 81 international cartels convicted in the United States or European Union since 1990—most of which were terminated by an antitrust case—found they had an average duration of more than eight years.[44] Indeed, many cartels have lasted for decades.[45] The many examples of long-lasting dominant firms and cartels, along with the theoretical reasons why the exercise of monopoly power need not be transitory or corrected by new rivals attracted by supracompetitive prices,[46] make clear that the exercise of durable market power should be treated as a serious

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[41] *See generally Microsoft*, 253 F.3d 34.

[42] "Had the newspaper succeeded, and other newspapers followed suit, it is easy to imagine that few radio stations in regions with a dominant newspaper would have succeeded unless they were owned by the newspaper, slowing the growth of the radio industry." Baker, *supra* note 7, at 560 (footnote omitted).

[43] *See* United States v. Visa U.S.A., Inc., 344 F.3d 229, 241 (2d Cir. 2003); Baker, *supra* note 7, at 559–60 & n.160.

[44] Margaret C. Levenstein & Valerie Y. Suslow, *Breaking Up Is Hard to Do: Determinants of Cartel Duration,* 54 J.L. & ECON 455, 463 (2011). The standard deviation of cartel duration in the sample was nearly six years. Eighty percent of these cartels were terminated by antitrust enforcement, *id.* at 466, so many would likely have lasted considerably longer if market forces alone had constrained the exercise of market power. The median lifespan of the cartels in the sample was seven years, *id.* at 463, which was lower than the mean because the distribution of cartel duration had a long right-hand tail. Twenty-eight percent lasted at least a decade, and 10 percent lasted 17 years or more. *Id.* at 463 fig.1; *cf.* Joseph E. Harrington, Jr. & Yanhao Wei, What Can the Duration of Discovered Cartels Tell Us About the Duration of Cartels? (July 26, 2014) (unpublished working paper) (generally supporting the reliability of inferring cartel duration from data on discovered cartels), *available at* economics.sas.upenn.edu/sites/economics.sas.upenn.edu/files/14-042.pdf.

[45] *See* Margaret C. Levenstein & Valerie Y. Suslow, *What Determines Cartel Success?*, 44 J. ECON. LITERATURE 43, 53 tbl.2 (2006) (indicating that a number of cartels lasted at least 40 years).

[46] Ariel Ezrachi & David Gilo, *Are Excessive Prices Really Self-Correcting?*, 5 J. COMPETITION L. & ECON. 249 (2009) (supracompetitive prices only attract entry efforts if they signal that the post-entry price would be high or that the incumbent firms have high costs, and even then entry may not succeed in lowering those prices to competitive levels); Jonathan B. Baker, *Responding to Developments in Economics and the Courts: Entry in the Merger Guidelines*, 71 ANTITRUST L.J. 189, 194–95 (2003) (the price-depressing effects of entry may deter new competition even if a merger raises prices above competitive levels); *id.* (describing the incorporation of economic learning about strategic-entry barriers into enforcement agency merger guidance and judicial opinions); Joseph E. Stiglitz, *Technological Change, Sunk Costs, and Competition*, 1987 BROOKINGS PAPERS ON ECON. ACTIVITY 883, 886 (a very small amount of sunk costs may be sufficient to deter entry).

concern. One cannot simply presume that entry by new competitors will correct the instances of market power that antitrust courts identify.

2. *Markets Self-Correct Because Oligopolies Compete and Cartels Are Unstable*

Markets could be self-correcting even absent the threat of entry if markets with only a few participants—even as few as two or three—typically perform competitively. Judge Bork took this view, stating that "[o]ligopolistic structures probably do not lead to significant restrictions of output."[47] This claim would be defensible if firms in oligopoly settings typically respond to efforts by other participants to exercise market power by expanding output or otherwise competing more aggressively—with sufficient speed and to a sufficient extent to counteract or deter any exercise of market power. Then coordinated arrangements like cartels would break down quickly or never form in the first place.[48]

But contemporary economic scholarship does not support the assertion that oligopolies typically perform competitively. That assertion is inconsistent with the economic literatures relating market concentration to price elevation in static non-cooperative oligopoly models,[49] relating concentration to cartel stability,[50] and empirically relating market structure to the exercise of market power.[51] It is also inconsistent with the studies finding that many cartels have

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[47] BORK, *supra* note 1, at 196. The exercise of market power would be expected to lead to higher prices and reduced output industry-wide when products are homogeneous. The output standard is properly concerned with industry-wide output, not with the output of the firms alleged to have harmed competition, as firms that exercise market power by excluding rivals and raising price could increase their own output even as industry output falls. (Judge Easterbrook erroneously focuses on the output of the firms alleged to have harmed competition in *The Limits of Antitrust, supra* note 16, at 31.)

[48] *See* POSNER, *supra* note 1, at 53 ("A clandestine cartel is rife with inducements and temptations to cheating, as is confirmed by the history of actual cartels, which are usually quite unstable even when not forced underground by antitrust enforcement.").

[49] *E.g.*, Keith Cowling & Michael Waterson, *Price-Cost Margins and Market Structure*, 43 ECONOMICA 267 (1976); Robert E. Dansby & Robert D. Willig, *Industry Performance Gradient Indexes*, 69 AM. ECON. REV. 249 (1979) (relating changes in aggregate surplus to the Herfindahl-Hirschman Index (HHI) of market concentration in Cournot equilibrium); *see generally* Louis Kaplow & Carl Shapiro, *Antitrust*, *in* 2 HANDBOOK OF LAW AND ECONOMICS 1073, 1083–86 (A. Mitchell Polinsky & Steven Shavell eds., 2007); Carl Shapiro, *Theories of Oligopoly Behavior*, *in* 1 HANDBOOK OF INDUSTRIAL ORGANIZATION 329, 333–36 (Richard Schmalensee & Robert D. Willig eds., 1989).

[50] George J. Stigler, *A Theory of Oligopoly*, 72 J. POL. ECON. 44 (1964). *See generally* Jonathan B. Baker, *Market Concentration in the Antitrust Analysis of Horizontal Mergers, in* ANTITRUST LAW AND ECONOMICS 234, 238 & 238 n.20 (Keith N. Hylton ed., 2d ed. 2010) (corrected in a working paper available at ssrn.com/abstract=1092248).

[51] Richard Schmalensee, *Inter-Industry Studies of Structure and Performance*, *in* 2 HANDBOOK OF INDUSTRIAL ORGANIZATION, *supra* note 49, at 951, 988 (Stylized Fact 5.1) (empirical survey); Leonard W. Weiss, *Conclusions* (empirical survey), *in* CONCENTRATION AND PRICE 266–84 (Leonard W. Weiss ed., 1989). For other within-industry examples relating the number

been long-lasting,[52] and the experience of antitrust agencies engaged in cartel prosecution.[53] Economic theory likewise does not support the presumption sometimes advanced by advocates for merging rivals that three (or even two) firms in a market are enough for competition.[54]

3. *Markets Perform Well Because Monopolies Innovate*

Markets could also perform well if oligopolies and monopolies were typically more innovative than markets with many competitors. Justice Scalia raised this defense of monopoly in dicta in the Supreme Court's 2004 opinion in *Verizon Communications Inc. v. Law Offices of Curtis V. Trinko, LLP*.[55] The opinion suggested that monopolies are temporary, hence self-correcting, and that monopolies are not troublesome because they foster market growth.[56]

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of significant rivals or market concentration with prices, see for example, Timothy F. Bresnahan & Valerie Y. Suslow, *Oligopoly Pricing with Capacity Constraints*, ANNALES D'ECONOMIE ET DE STATISTIQUE, July–Dec. 1989, at 267, and Jonathan B. Baker, *Econometric Analysis in* FTC v. Staples, 18 J. PUB. POL'Y & MKTG. 11 (1999).

[52] *See supra* notes 44–45 and accompanying text. These studies contradict Judge Easterbrook's unsupported assertion that cartels "rarely last five years." Easterbrook, *supra* note 16, at 33.

[53] "For those who may be tempted to argue that coordination is too difficult to occur in the real world, I should not have to do more than to point to the large number of multinational cartels we've successfully prosecuted in [the] last seven years to show why such arguments will fall on deaf ears." William J. Kolasky, Deputy Assistant Att'y Gen., Antitrust Div., U.S. Dept. of Justice, Address at the ABA Section of Antitrust Law Spring Meeting: Coordinated Effects in Merger Review: From Dead Frenchmen to Beautiful Minds and Mavericks 18 (Apr. 24, 2002), *available at* www.justice.gov/atr/public//.htm.

[54] Jonathan B. Baker & Carl Shapiro, *Reinvigorating Horizontal Merger Enforcement*, *in* HOW THE CHICAGO SCHOOL OVERSHOT THE MARK, *supra* note 29, at 235, 253. Shapiro and I did not call for a return to a mechanical, concentration-based approach to merger policy. Instead, we proposed factual showings that should be sufficient, given the modern understanding of the effects of mergers on competition, to create a presumption that a proposed horizontal merger creates adverse coordinated or unilateral competitive effects. *See id.* at 258–66.

[55] 540 U.S. 398 (2004) (holding that a non-antitrust statutory scheme providing for extensive regulation aimed at promoting competition in telephony displaced private enforcement under the Sherman Act).

[56] In the relevant passage from the opinion, Justice Scalia wrote:

> The mere possession of monopoly power, and the concomitant charging of monopoly prices, is not only not unlawful; it is an important element of the free-market system. The opportunity to charge monopoly prices—at least for a short period—is what attracts "business acumen" in the first place; it induces risk taking that produces innovation and economic growth. To safeguard the incentive to innovate, the possession of monopoly power will not be found unlawful unless it is accompanied by an element of anticompetitive conduct.

Trinko, 540 U.S. at 407. Justice Scalia could have made his economic point about the role of appropriability as a spur to innovation without referencing monopolies, and he could have noted that competition also spurs innovation. By not formulating his argument this way, Justice Scalia's rhetoric appears to welcome or defend monopolies. *See* Andrew I. Gavil, *Exclusionary Distribution Strategies by Dominant Firms: Striking a Better Balance*, 72 ANTITRUST L.J. 3, 44 (2004) (arguing that Justice Scalia's "deliberate goal" in *Trinko* was "to build the case for a more tolerant monopolization standard"); *cf.* Alan Devlin, *Antitrust in an Era of Market Failure*, 33

Similarly, David Evans and Keith Hylton view antitrust's prohibition against monopolization as trading off the consumer harm from the excessive prices charged by monopolists against the benefits monopoly confers in enhancing incentives to innovate.[57]

This "dynamic competition" defense of concentrated markets, or of conduct allowing firms to create or maintain market power, is unconvincing because it ignores several important ways that greater competition enhances incentives to innovate. It does not account for the roles that pre-innovation product-market competition (which firms can seek to escape through innovation) and competition in innovation itself play in fostering innovation. The defense focuses exclusively on the incentive of firms exercising market power to invest in research and development (R&D) arising from their ability to appropriate the gains from innovation, while ignoring the potentially more significant incentive of those firms to increase R&D investment in response to greater investment by their rivals.[58] Nor does the defense account for empirical evidence that greater competition is commonly more important for enhancing innovation incentives than the greater appropriability that a monopoly could confer.[59] The defense also ignores the ability of firms exercising market power to restrict, deter, or eliminate new forms of competition through exclusionary conduct.[60] To relax antitrust rules on the rationale that one firm is enough for competition, in rapidly changing high-technology markets or otherwise, would undermine innovation incentives under the guise of protecting them.

HARV. J.L. & PUB. POL'Y 557, 572–73 & 573 n.73 (2010) ("Whereas the concentration of economic power and obstacles to economic freedom were once viewed as antithetical to a 'healthy and unimpaired competitive process,' courts no longer view these factors as inconsistent." (citing the *Trinko* opinion as the "most dramatic example")).

[57] David S. Evans & Keith N. Hylton, *The Lawful Acquisition and Exercise of Monopoly Power and Its Implications for the Objectives of Antitrust*, COMPETITION POL'Y INT'L, Autumn 2008, at 203, 220 (2008). For a critical response, see Jonathan B. Baker, *"Dynamic Competition" Does Not Excuse Monopolization,* COMPETITION POL'Y INT'L, Autumn 2008, at 243.

[58] Jonathan B. Baker, *Evaluating Appropriability Defenses for the Exclusionary Conduct of Dominant Firms in Innovative Industries*, ANTITRUST L.J. (forthcoming) *available at* papers.ssrn.com/sol3/papers.cfm?abstract_id=2523203.

[59] *See generally* Carl Shapiro, *Competition and Innovation: Did Arrow Hit the Bull's Eye?*, *in* THE RATE AND DIRECTION OF INVENTIVE ACTIVITY REVISITED 361 (Josh Lerner & Scott Stern eds., 2012); Jonathan B. Baker, *Beyond Schumpeter vs. Arrow: How Antitrust Fosters Innovation*, 74 ANTITRUST L.J. 575, 579–86 (2007). Antitrust law has long recognized a monopolist's incentive to enjoy a quiet life. United States v. Aluminum Co. of Am. (*Alcoa*), 148 F.2d 416, 427 (2d Cir. 1945).

[60] *E.g.*, United States v. Microsoft Corp., 253 F.3d 34, 76–79 (D.C. Cir. 2001) (en banc) (per curiam) (Microsoft impeded the development of a new method by which applications software could access operating systems, involving the combination of Netscape's browser and Sun's Java programming language, that had the potential to foster increased competition in personal computer operating systems.); United States v. Visa U.S.A., Inc., 344 F.3d 229, 241 (2d Cir. 2003) (Exclusionary conduct by MasterCard and Visa prevented the development of new payment card services.); Lorain Journal Co. v. United States, 342 U.S. 143 (1951) (A newspaper monopolist impeded the entry of a rival using a new technology, radio.).

4. *Monopolists Cannot Obtain More than a Single Monopoly Profit*

Judge Bork argued that antitrust should not automatically prohibit (by treating as illegal per se) certain exclusionary business practices—including vertical mergers, exclusive dealing contracts, and other restrictions on vertically related firms[61]—in part because doing so would make "the simple arithmetical error of counting the same market power twice."[62] He made a similar argument in advocating per se legality for tying.[63]

This basis for declining to challenge dominant-firm behavior is commonly referred to as the theory that there is a "single monopoly profit." Some U.S. courts have cited the single monopoly profit theory as a basis for allowing monopolists to make exclusive vertical agreements.[64] Contemporary conservatives recognize that exceptions to the theory exist; they regard these exceptions as rare and implausible,[65] however, and so effectively accept the single monopoly profit theory in practice.

The "single monopoly profit" theory inverts the claim that markets self-correct by taking the view that there is no middle ground: if a single firm somehow manages to exercise monopoly power, notwithstanding the tendency of markets to self-correct, the firm extracts all possible monopoly profits and cannot harm competition further through the exclusionary conduct

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[61] The "single monopoly profit" claim is most often made when analyzing restrictions that a dominant firm imposes on vertically related firms. *Cf.* Evans & Padilla, *supra* note 16, at 77 ("A firm with a monopoly at one level of the [vertical] chain [of production] gets all of the monopoly profit if it charges a monopoly price and everyone else in the chain charges a competitive price.").

[62] BORK, *supra* note 1, at 137–38; *see id.* at 140 ("When a court assumes that a firm forecloses its rivals without predatory intent and without creating efficiency, the court also assumes that the firm gets 'something more' without noticing it.").

[63] *Id.* at 372 (antitrust law's theory of tying "is merely another example of the discredited transfer-of-power theory"); *id.* at 380–81 (tying and reciprocal dealing should be legal per se because "we have no acceptable theory of harm," while these practices may benefit competition).

[64] E & L Consulting, Ltd. v. Doman Indus., 472 F.3d 23, 29–30 (2d Cir. 2006); G.K.A. Beverage Corp. v. Honickman, 55 F.3d 762, 767 (2d Cir. 1995); Town of Concord v. Boston Edison Co., 915 F.2d 17, 23, 32 (1st Cir. 1990) (Breyer, C.J.); *see* Jefferson Parish Hosp. Dist. No. 2 v. Hyde, 466 U.S. 2, 36–37 (1984) (O'Connor, J., concurring). The single monopoly profit argument has also been aimed at monopoly-leveraging claims, under which a monopolist would be found liable if it used its monopoly in one market to gain a competitive advantage in a second, adjacent or complementary market. Schor v. Abbott Labs., 457 F.3d 608, 611 (7th Cir. 2006) (Easterbrook, J.). The Supreme Court has ruled out the possibility that a monopolist can violate Sherman Act Section 2 through monopoly leveraging in the absence of proof that the defendant had a dangerous probability of success of obtaining monopoly power in the second market, *Trinko*, 540 U.S. at 415 n.4, but without reference to the single monopoly profit theory.

[65] *E.g.*, Daniel A. Crane & Joshua D. Wright, *Can Bundled Discounting Increase Consumer Prices Without Excluding Rivals?*, COMPETITION POL'Y INT'L, Autumn 2009, at 209, 209–10 (bundled discounts); David S. Evans, *Tying: The Poster Child for Antitrust Modernization*, *in* ANTITRUST POLICY AND VERTICAL RESTRAINTS 65 (Robert W. Hahn ed., 2006) (tying); J. Mark Ramseyer & Eric B. Rasmusen, *Exclusive Dealing: Before Bork, and Beyond*, 57 J.L. & ECON. S145 (2014).

under review.[66] If so, an error cost calculus would indicate that prohibiting the practice would bring about no social benefits, only costs. Those costs would presumably include transaction costs of litigation, the possibility that judicially ordered injunctive relief would prevent the firm from achieving efficiencies, and the chilling effect that the precedent might have on other firms' pursuit of similar efficiencies.

The single monopoly profit theory is logically valid as a matter of economic theory only in one extreme case, however. If the monopolist (or coordinating firms acting like a monopolist) has literally no rivals and faces no potential entrants, and if buyers have literally no alternative to the monopolist's products, then the monopolist may indeed be unable to increase the rents it derives from exercising market power through (further) exclusionary conduct. Outside such an exceptional circumstance, though, firms can potentially obtain, extend, or maintain their market power through exclusionary conduct that suppresses the alternatives that were just assumed away: fringe rivalry, potential entry, or buyer ability to mitigate the effects of seller market power by substituting other products.[67] Thus, a dominant firm or group of firms coordinating their strategies can exercise additional market power by excluding

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[66] Put this way, the single monopoly profit theory bears a family resemblance to an argument discussed in the literature on inferring agreement among rivals from circumstantial evidence: the claim that the fact finder should not infer an agreement among firms that are already coordinating on the ground that it would make no sense for them to risk antitrust liability to reach an agreement that would not markedly augment their profits. *See* Jonathan B. Baker, *Two Sherman Act Section 1 Dilemmas: Parallel Pricing, the Oligopoly Problem, and Contemporary Economic Theory*, 38 ANTITRUST BULL. 143, 190 & n.95 (1993); KAPLOW, *supra* note 26, at 133–45 (discussing paradox of proof). That claim is unattractive to defendants denying conspiracy, however, as it concedes coordination.

[67] *See* ANDREW I. GAVIL, WILLIAM E. KOVACIC & JONATHAN B. BAKER, *Note on "Single Monopoly Profit" Theory* (manuscript available at ssrn.com/abstract=2496932), *in* ANTITRUST LAW IN PERSPECTIVE: CASES, CONCEPTS AND PROBLEMS IN COMPETITION POLICY (3d ed. forthcoming); *see also* Salop, *supra* note 37, at 144–48; Louis Kaplow, *Extension of Monopoly Power Through Leverage,* 85 COLUM. L. REV. 515 (1985); Timothy F. Bresnahan, *Monopolization and the Fading Dominant Firm*, *in* COMPETITION LAW AND ECONOMICS: ADVANCES IN COMPETITION POLICY ENFORCEMENT IN THE EU AND NORTH AMERICA 264 (Abel M. Mateus & Teresa Moreira eds., 2010) (demonstrating that a dominant firm threatened by rivals' innovation can profit by blocking those rivals, leading to the failure of the single monopoly profit theory in the case of technologically dynamic industries); Barry J. Nalebuff, *Bundling as a Way to Leverage Monopoly* 2 (Yale Sch. of Mgmt. Working Paper No. ES-36, 2004) ("While there are some special cases in which leverage does not lead to higher profits, in the general case, a monopolist can earn higher profits by leveraging its power into a competitive market."), *available at* ssrn.com/abstract=586648; Steven C. Salop & R. Craig Romaine, *Preserving Monopoly: Economic Analysis, Legal Standards, and* Microsoft, 7 GEO. MASON. L. REV. 617, 624–30 (1999) (describing the limiting assumptions required for the single monopoly profit theory to apply and the anticompetitive harms that may otherwise result); *cf.* Daniel P. O'Brien, *The Antitrust Treatment of Vertical Restraints: Beyond the Possibility Theorems, in* THE PROS AND CONS OF VERTICAL RESTRAINTS 40, 78 (Swedish Competition Auth. 2008) (The welfare consequences of economic models of vertical agreements between an upstream monopolist and downstream oligopolists depend on assumptions about the nature of contracting, such as whether payments take the form of a linear schedule (a specified unit price), whether the seller makes offers on a take-it-or-leave-it basis,

actual or potential rivals, leveraging market power to a complementary market, or preventing buyers from economizing on products they can use in variable proportions.[68] In general, therefore, and contrary to the implicit presumption of the single monopoly profit theory, poorly performing markets can grow worse. The potential for competitive harm from exclusionary conduct by a dominant firm cannot be ruled out by appeal to economic theory.

5. *Business Practices Prevalent in Competitive Markets Cannot Harm Competition*

The conservative literature employing an error cost framework to evaluate antitrust rules often relies on biased evidence when assessing the likely competitive effects of business practices. The problematic chain of logic begins with the observation, whether derived from casual empiricism or from formal empirical studies, that some forms of business conduct (such as tying, exclusive dealing, and other vertical restraints) are prevalent in competitive markets.[69] The conservative literature mistakenly infers that firms cannot readily use these practices to harm competition, either at all or on balance after accounting for efficiencies, and concludes that antitrust rules should not prohibit such practices.[70]

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and whether the seller's offer to one distributor can be observed by the distributor's rivals.), *available at* konkurrensverket.se/t/asp/publications.asp.

[68] GAVIL ET AL., *supra* note 67 (providing examples of scenarios in which the single monopoly profit would not prevent firms from enhancing or maintaining market power through restrictive distribution practices). A dominant firm or coordinating firms can also exercise additional market power through exclusionary conduct that permits the evasion of rate regulation, *id.*, or through conduct that facilitates harmful price discrimination.

[69] Cooper et al., *supra* note 21, at 648 (Empirical studies of vertical restraints find little support for anticompetitive theories and much support for procompetitive theories.); *see* Hylton & Salinger, *supra* note 20, at 471 ("[I]n formulating a rule, the prevalence of tying for procompetitive reasons is an important consideration. Because beneficial tying is so pervasive, rules against tying could be harmful even with a small rate of falsely labeling tying as anticompetitive."). *Compare* McWane, Inc., FTC Docket No. 9351, 2014-1 Trade Cas. (CCH) ¶ 78,670, at 129,293 (Jan. 30, 2014) (Wright, Comm'r, dissenting) ("With regard to vertical restraints, it is well-accepted that the economic learning accumulated since *GTE Sylvania* has taught that such restraints, a category that includes vertical territorial restrictions, resale price maintenance, exclusive dealing, loyalty discounts, tying, and other related business practices, rarely harm competition and often benefit consumers by increasing demand and/or creating a more efficient distribution channel."), *with* Steven C. Salop, Sharis A. Pozen & John R. Seward, The Appropriate Legal Standard and Sufficient Economic Evidence for Exclusive Dealing Under Section 2: the FTC's *McWane* Case 53 (Aug. 7, 2014) (unpublished working paper) (criticizing Commissioner Wright for adopting an approach to economic analysis and the law of exclusive dealing that "would lead to excessive false negatives, under-enforcement and under-deterrence"), *available at* ssrn.com/abstract=2477448.

[70] Easterbrook, *supra* note 16, at 15 ("When most examples of a category of conduct are competitive, the rules of litigation should be 'stacked' so that they do not ensnare many of these practices just to make sure that the few anticompetitive ones are caught."); Evans & Padilla, *supra* note 16, at 81–82 ("Practices that generate efficiencies where firms lack market power logically should generate those same efficiencies where firms possess market power. . . . We

The observation that firms in competitive markets employ certain practices, however, does not preclude the possibility that firms can also use those practices to obtain or maintain market power, and that those practices harm competition on balance when employed by firms exercising market power.[71] Indeed, a recent study of a sample of convicted contemporary international cartels concludes that at least one quarter used vertical restraints to support collusion.[72] Nor does the prevalence of certain practices, particularly exclusionary practices, in competitive markets support an inference that the same practices, when challenged by antitrust enforcers, typically have an efficiency motive, which antitrust enforcement would chill.[73] Even if many or most instances of a practice benefit competition or are competitively neutral, that does not mean that the *subset* of instances challenged in court (by virtue of facts suggesting the possibility of competitive harm) typically benefit competition on balance, or even benefit competition at all.[74]

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therefore presume that these practices are procompetitive, even if practiced by firms with monopoly power, unless shown otherwise.").

[71] *See* Eastman Kodak Co. v. Image Technical Servs., Inc., 504 U.S. 451, 488 (1992) (Scalia, J., dissenting) ("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."). For example, the parallel adoption of simplified and common product definitions, of price lists, and of guarantees to buyers that they will get the best price the seller gives any buyer are each practices that firms can use to facilitate coordination; competitive firms, however, can use these same practices to achieve efficiencies. *See, e.g.*, Jonathan B. Baker & Judith A. Chevalier, *The Competitive Consequences of Most-Favored-Nation Provisions*, ANTITRUST, Spring 2013, at 20 (best-price guarantees). Yet it would be inappropriate to infer from the latter observation that rivals are unable to harm competition by fixing prices or dividing markets, or that they do so with such infrequency as to justify relaxing antitrust's concern with collusion.

[72] Margaret C. Levenstein & Valerie Y. Suslow, *How Do Cartels Use Vertical Restraints? Reflections on Bork's* The Antitrust Paradox, 57 J.L. & ECON. S33 (2014). The vertical restraints allowed the colluding firms to discourage cheating or entry while keeping their collusive horizontal agreement secret.

[73] This mistaken inference may underlie recent calls to specify antitrust rules that tilt toward non-intervention; for possible examples, see *supra* notes 20–22 and *infra* notes 87–90.

[74] The antitrust laws, as enforced today, make it difficult for plaintiffs to prevail in challenging a range of practices that have historically been of concern but that conservative antitrust commentators view as procompetitive. *See supra* note 12. Under such circumstances, only plaintiffs bringing unusually strong cases are likely to succeed; a paucity of successful challenges therefore provides little basis for identifying the incidence of procompetitive conduct—as distinct from harmful conduct, costly to consumers, that fails to clear the high bar for bringing a successful court case today. *But cf.* Pauline M. Ippolito, *Resale Price Maintenance: Empirical Evidence from Litigation*, 34 J.L. & ECON. 263 (1991) (concluding that most resale price maintenance allegations in private litigated cases during a period when the practice was illegal per se were likely weak, but not distinguishing cases in which the practice was one of the plaintiff's primary concerns from those in which it played a supporting role and noting that most government cases with similar allegations settled by consent decree). Moreover, defendants' claims about the efficiencies arising from their conduct may be overstated, particularly when the information needed to verify those claims is largely in defendants' hands. *See* U.S. Dep't of Justice & Fed. Trade Comm'n, Horizontal Merger Guidelines § 10 (2010) [hereinafter 2010 Merger Guidelines] (difficulty verifying claims of efficiencies from merger), *available at* www.justice.gov/atr/public/guidelines/hmg-2010.pdf.

In addition, the empirical evidence underlying the assertion that practices prevalent in competitive markets do not harm competition often comes from settings in which legal rules—including substantive antitrust rules prohibiting anticompetitive instances of the practices at issue—shape firm conduct.[75] Evidence that certain practices often promote competition in these settings, however, provides little information as to whether the same practices would have harmful consequences if antitrust rules constraining their use were relaxed.

To illustrate these points, consider the enforcement and policy implications of studies showing a low incidence of competitive harm arising from vertical restraints. Assuming that the studies correctly measured incidence,[76] their findings might justify an enforcer declining to target for investigation an instance of a vertical restraint that the enforcer selected at *random*. The low overall incidence, however, would not justify the enforcer declining to target instances of a vertical restraint that the enforcer selected based on *additional* information suggesting competitive harm.[77]

Furthermore, a low incidence of competitive harm in the sample would not supply a basis for supplanting the existing rule governing vertical restraints with a rule of per se legality. The low incidence would not do so because it is susceptible of two explanations: harmful conduct may be rare because firms cannot readily use vertical restraints to harm competition, or it may be rare because antitrust rules have deterred firms from using vertical restraints to harm competition.

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[75] Other relevant background institutions include, for example, antitrust rules governing burdens of proof and remedy determination, the procedural rules governing litigation, state unfair competition laws, and laws granting intellectual property rights. *See generally* Kaplow, *supra* note 18; Abraham L. Wickelgren, *Determining the Optimal Antitrust Standard: How To Think About Per Se Versus Rule of Reason*, 85 S. CAL. L. REV. POSTSCRIPT 52, 54 (2012).

[76] Procompetitive consequences may be systematically more visible than anticompetitive consequences, particularly if firms can take steps to disguise the latter. *See* Stephen W. Davies & Peter L. Ormosi, *The Impact of Competition Policy: What Are the Known Unknowns?* 5 (Ctr. for Competition Policy, Working Paper No. 13-7, 2013) (presenting a "conceptual framework for assessing the full impact of competition policy . . . [that] tak[es] into account the deterred and undetected as well as the detected"); Jonathan B. Baker, *New Horizons in Cartel Detection*, 69 GEO. WASH. L. REV. 824, 825 (2001). To similar effect, Fiona Scott Morton has observed that the firms most willing to share data with academic researchers may be those that are using the practices studied procompetitively. As a result, measurements of the frequency and magnitude of benefits and harms may be biased toward finding benefits to competition. Roundtable Discussion at the FTC and U.S. Department of Justice Workshop on Conditional Pricing Practices: Where Do We Go from Here? Open Questions and Policy Considerations 175 (June 23, 2014) (remarks of Fiona Scott Morton) (transcript available at www.ftc.gov/system/files/documents/public_events/302251/_workshop_transcript.pdf).

[77] *Cf.* Jonathan B. Baker & Timothy F. Bresnahan, *Economic Evidence in Antitrust: Defining Markets and Measuring Market Power*, *in* HANDBOOK OF ANTITRUST ECONOMICS 1, 24–29 (Paolo Buccirossi ed., 2008) (explaining that empirical economic studies of the competitive effects of specific business practices are generally more useful for evaluating conduct in industries similar to those studied than for formulating generally applicable legal rules).

Unless an empirical study compares settings with and without antitrust rules,[78] or provides some other basis for ruling out the deterrence explanation, the study cannot demonstrate (*identify* in the econometric sense) the competitive impact of the business practices that conservatives have targeted for antitrust abandonment. Studies in which all observations of the competitive effects of a practice come from settings in which antitrust rules constrain the ways in which firms employ that practice supply no information about the ways that firms would employ that practice in the absence of those rules. Hence, such studies cannot support proposals that antitrust should discard rules prohibiting that practice.

A recent unpublished study addressed this methodological issue and highlighted the role that antitrust rules play in deterring firms from using vertical restraints to harm competition.[79] The study compared states retaining per se illegality for resale price maintenance after *Leegin* (because of state law) with

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[78] *See* Baker, *supra* note 18, at 36–38 (showing prevalence of competitive harms in periods of lax antitrust enforcement).

[79] Alexander MacKay & David Aron Smith, The Empirical Effects of Minimum Resale Price Maintenance on Prices and Output (June 16, 2014) (unpublished working paper), *available at* home.uchicago.edu/~/mackay/research.html. This study responds to the call by Cooper et al., *supra* note 21, for the use of natural experiments to guide enforcement policy. Some prior studies of the consequences of resale price maintenance did not address the identification problem highlighted here, and the others did not suggest a uniform interpretation.

A review of litigated cases involving resale price maintenance claims from 1976 to 1982 found that a collusive explanation for the practice rarely appeared plausible while an efficiency explanation invariably appeared plausible. Ippolito, *supra* note 74, at 292. (Ippolito did not consider anticompetitive exclusion, though her data show that monopolization was rarely alleged in addition to vertical price fixing. *Id.* at 270.) Ippolito's study does not account for the background influence of antitrust rules on firm conduct, given that the legal prohibition on resale price maintenance did not vary over her sample period, *id.* at 266, so it does not address the identification issue.

The results of a comprehensive review of empirical studies as of 1983 were far from definitive. THOMAS R. OVERSTREET, JR., RESALE PRICE MAINTENANCE: ECONOMIC THEORIES AND EMPIRICAL EVIDENCE (FTC Bureau of Econ. Staff Report, 1983), *available at* www.ftc.gov/sites/default/files/documents/reports/resale-price-maintenance-economic-theories-and-empirical-evidence/233105.pdf. The majority of studies referenced were price surveys, which cannot discriminate between procompetitive and anticompetitive theories because they do not also study output. *Id.* at 106. Overstreet also surveyed case studies evaluating the impact of resale price maintenance on individual products. In general, the case studies he reviewed addressed the identification problem (by comparing settings with and without antitrust rules prohibiting the practice), but were limited to a single product. Overstreet found the case studies "more useful than the far more numerous 'survey' studies" in identifying probable welfare effects, but observed that they did not uniformly point in one direction. *Id.* at 129. For a critical review of the studies by Ippolito and Overstreet, see Richard M. Brunell, *Overruling* Dr. Miles*: The Supreme Trade Commission in Action*, 52 ANTITRUST BULL. 475, 508–11 (2007).

More recent empirical studies of specific industries affected by legal prohibitions on resale price maintenance also do not point in a single direction. *Compare* PAULINE M. IPPOLITO & THOMAS R. OVERSTREET, JR., RESALE PRICE MAINTENANCE: AN ECONOMIC STUDY OF THE FTC'S CASE AGAINST THE CORNING GLASS WORKS (FTC Bureau of Econ. Staff Report, 1994) (evidence favors efficiency explanations over anticompetitive theories), *with* Stanley I. Ornstein & Dominique M. Hanssens, *Resale Price Maintenance: Output Increasing or Restricting? The*

states in which that practice would be reviewed under the rule of reason.[80] The study used Nielsen consumer panel data to analyze changes in the prices and quantities sold for over 1000 categories of branded consumer products.[81] In the 15 states in which the rule of reason standard was most likely to apply, the study found that, when prices changed, they were usually higher, and output usually lower, than in the nine states in which the per se standard was most likely to apply.[82] While resale price maintenance would likely lead to higher prices whether it promoted or harmed competition, the greater reduction in output observed in the rule of reason states indicates that resale price maintenance typically harmed competition in the products studied.[83]

This study suggests that the rule of reason did not deter anticompetitive uses of resale price maintenance that the per se rule deterred.[84] The study's findings are consistent with the view that anticompetitive explanations for resale price maintenance tend to predominate over procompetitive explana-

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Case of Distilled Spirits in the United States, 36 J. INDUS. ECON. 1 (1987) (evidence of output reduction inconsistent with efficiency theories).

A survey of 12 published empirical studies of the welfare effects of privately imposed vertical restraints generally (exclusive dealing, exclusive territories, tying, resale price maintenance, and sourcing restrictions) found that most benefited consumers or at least did not harm them. Francine Lafontaine & Margaret Slade, *Exclusive Contracts and Vertical Restraints: Empirical Evidence and Public Policy*, *in* HANDBOOK OF ANTITRUST ECONOMICS, *supra* note 77, at 391, 406–08 (discussion of table 10.2). But this survey did not evaluate whether the methodologies in the referenced articles addressed the identification issue highlighted here.

[80] MacKay & Smith, *supra* note 79.

[81] *Id.* at 12–13. Product "modules" (categories) included "light beer" and "sleeping aids." *Id.* at 13.

[82] *Id.* at 15–17.

[83] Industry output is a better indicator of the competitive consequences of minimum resale price maintenance than are industry prices because the practice may raise price regardless of whether it promotes or harms competition. (Under the leading procompetitive theory, the price increase reflects higher product quality or improved service, quality-adjusted prices fall, and industry output increases.) The most likely interpretation of a price increase combined with an output reduction across the group of branded retail products analyzed is the one adopted by the study's authors: that competition was harmed on average. *Id.* at 3, 16, 17–18. It is possible, however, that total output fell, yet consumers in aggregate benefited. This could have happened, for example, if infra-marginal purchasers valued point-of-sale services induced by resale price maintenance a great deal while marginal purchasers did not value such services much.

[84] The study did not determine systematically whether manufacturers of branded consumer products employed resale price maintenance in the states where they were not necessarily prevented from doing so. Some likely did, however; the study reports anecdotal evidence to that effect and notes that a number of products in the sample were sold by manufacturers that had allegedly used resale price maintenance in the past. *Id.* at 4–5, 10, 13 & n.36. Moreover, the results reflect the combined consequences of conduct that would be treated as resale price maintenance under the Sherman Act (including finding an agreement between the manufacturer and distributor) and conduct that has a similar effect but could not have been challenged. It measures the consequences of a more permissive legal environment for all practices that may have been chilled by the per se prohibition against resale price maintenance. *Id.* at 10.

tions.[85] This conclusion is at odds with the views of conservative commentators about the likely competitive effects of vertical practices, including resale price maintenance.[86]

The contemporary conservative authors who have drawn the problematic inference that practices prevalent in competitive markets do not harm competition have deployed that inference, among other things, to oppose an "aggressive enforcement policy" attacking vertical restraints (both non-price restraints and resale price maintenance);[87] to support a rule of reason analysis that evaluates tying "in a manner that puts a high burden of proof on the plaintiff";[88] to support antitrust's use of a "hard to satisfy" test for plaintiffs in predatory pricing cases;[89] and to support per se legality for new product intro-

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[85] Hence, the study's results caution against abandoning antitrust law's concern with resale price maintenance. *But see* Joshua Wright, Comm'r, Fed. Trade Comm'n, Remarks Before the British Institute of International and Comparative Law: The Economics of Resale Price Maintenance and Implications for Competition Law and Policy 19–21 (Apr. 9, 2014) (transcript available at www.ftc.gov/public-statements/2014/04/economics-resale-price-maintenance-implications-competition-law-policy) (questioning the probative value of MacKay & Smith's study); Thomas A. Lambert & Michael Sykuta, *Why the New Evidence on Minimum Resale Price Maintenance Does Not Justify a* Per Se *or "Quick Look" Approach*, CPI ANTITRUST CHRON., Winter 2013, Vol. 11, No. 1, at 6–8 (same).

[86] *See generally* D. Daniel Sokol, *The Transformation of Vertical Restraints: Per Se Illegality, the Rule of Reason and Per Se Legality*, 79 ANTITRUST L.J. 1003, 1004 n.8 (2014). To similar effect, empirical studies of the effects of exclusive dealing in beer distribution do not uniformly favor procompetitive explanations over anticompetitive ones. One study found that exclusive dealing arrangements between certain brewers and their Chicago distributors did not raise the distribution costs of potentially foreclosed brewers. *See* John Asker, Diagnosing Foreclosure Due to Exclusive Dealing (Oct. 14, 2004) (unpublished working paper), *available at* ssrn.com/abstract=609162. Another study found that exclusive distributors sold more beer than non-exclusive distributors. *See* Tim R. Sass, *The Competitive Effects of Exclusive Dealing: Evidence from the U.S. Beer Industry*, 23 INT'L J. INDUS. ORG. 203, 219, 220 (2005). The findings of a third study suggest that exclusive dealing has harmed competition in the beer industry. The study, which addressed the identification issue by exploiting differences in rules across states and within states over time, found that beer sales were lower when rules permitted distributors to engage in exclusive dealing. *See* Jonathan Klick & Joshua D. Wright, The Effects of Vertical Restraints on Output: Evidence from the Beer Industry 20–21 (Nov. 17, 2008) (unpublished working paper), *available at* www.utexas.edu/law/wp/wp-content/uploads/centers/clbe/wright_effects_of_vertical-restraints.pdf.

[87] *See* Cooper et al., *supra* note 21, at 662 (an aggressive policy could only be justified by relatively large costs of false negatives).

[88] Hylton & Salinger, *supra* note 20, at 514. These authors further recommend that the plaintiff "be required to show (subject to a high standard of proof) that tying is profitable to the defendant only if it has an exclusionary effect, and that the cost of tying to the defendant is likely to be recouped through its exclusionary impact." *Id.* at 514 n.138. *See also* Evans & Padilla, *supra* note 16, at 95 (recommending a "structured rule of reason" approach to tying that requires plaintiffs to show that "[o]ffsetting efficiency benefits are insubstantial" in order to prevail).

[89] Kobayashi & Muris, *supra* note 8, at 153. Kobayashi and Muris observe that "little" of the post-Chicago School theoretical modeling demonstrating the possible rationality of predatory pricing has been incorporated into antitrust law, and explain that observation by applying an error cost model: "Absent specific evidence regarding the plausibility of these theories, the courts . . . properly ignore such theories." *Id.* at 166. Their argument gives no weight to recent empirical literature that finds examples of successful price predation during eras in which en-

ductions and unconditional refusals to share intellectual property.[90] These analyses together make a flawed case for downplaying the anticompetitive potential of exclusionary conduct, thereby undermining a core concern of antitrust.[91]

B. ERRONEOUS ASSUMPTIONS ABOUT INSTITUTIONS

1. *Erroneous Judicial Precedents Are More Durable than the Exercise of Market Power*

In arguing that the costs of false positives outweigh those of false negatives, antitrust conservatives often highlight the supposed durability of erroneous judicial precedents. "If the court errs by condemning a beneficial practice," Judge Easterbrook wrote, "the benefits may be lost for good" through the precedential effect of the judicial decision.[92] Judge Easterbrook was particularly concerned by erroneous Supreme Court decisions,[93] presumably because lower courts' errors of law are frequently corrected on appeal.[94]

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forcement against predatory pricing was lax (during the early 20th century or, more recently, following the Supreme Court's decisions in *Matsushita* and *Brooke Group*). *See* Malcolm R. Burns, *Predatory Pricing and the Acquisition Cost of Competitors*, 94 J. POL. ECON. 266 (1986); Kenneth G. Elzinga & David E. Mills, *Predatory Pricing in the Airline Industry:* Spirit Airlines v. Northwest Airlines *(2005)*, *in* THE ANTITRUST REVOLUTION: ECONOMICS, COMPETITION, AND POLICY 219 (John E. Kwoka, Jr. & Lawrence J. White eds., 5th ed. 2009); David Genesove & Wallace P. Mullin, *Predation and Its Rate of Return: The Sugar Industry, 1887–1914*, 37 RAND J. ECON. 47 (2006); Josh Lerner, *Pricing and Financial Resources: An Analysis of the Disk Drive Industry, 1980–88*, 77 REV. ECON. & STAT. 585 (1995); Fiona Scott Morton, *Entry and Predation: British Shipping Cartels 1879–1929*, 6 J. ECON. & MGMT. STRATEGY 679 (1997); David F. Weiman & Richard C. Levin, *Preying for Monopoly? The Case of Southern Bell Telephone Company, 1894–1912*, 102 J. POL. ECON. 103 (1994). In a literature survey, Kobayashi recognizes that four of these articles "provide evidence consistent with the use of predatory pricing," but dismisses three of the four on the ground that "we do not know whether these price wars would be unlawful under modern predation standards"—an issue not relevant to assessing their plausibility—"or whether such episodes resulted in reductions to welfare"—a rhetorical device that presumes implausibility and sets a high bar against relying on relevant evidence that suggests otherwise. Bruce H. Kobayashi, *The Law and Economics of Predatory Pricing*, *in* ANTITRUST LAW AND ECONOMICS 116, 127 (Keith N. Hylton ed., 2d ed. 2010).

[90] Manne & Wright, *supra* note 16, at 196, 200.

[91] *See* Baker, *supra* note 7, at 580–81.

[92] Easterbrook, *supra* note 16, at 2; *cf.* William H. Page, *Microsoft and the Limits of Antitrust*, 6 J. COMPETITION L. & ECON. 33, 47 (2010) ("Perhaps the most important lesson of *The Limits of Antitrust* is that markets are usually better than courts at restoring competition."). Here Easterbrook is concerned with the costs of false positives. The analogous logic applied to the costs of false negatives would have interventionist implications: market power may be slow to dissipate when the erroneous failure of courts to condemn harmful practices is not corrected quickly. Two examples in which overly non-interventionist judicial approaches took at least a decade to correct are discussed below. *See infra* notes 119–125 and accompanying text.

[93] *See* Easterbrook, *supra* note 16, at 15 ("There is no automatic way to expunge mistaken decisions of the Supreme Court.").

[94] For a recent example in which the Supreme Court corrected the erroneous decisions of multiple appellate courts, see *FTC v. Actavis, Inc.*, 133 S. Ct. 2223 (2013). *Cf.* Michael A. Car-

The claim of temporal asymmetry—that bad precedents take longer to dissipate than market power—is hard to credit.[95] Erroneous precedents may not disappear overnight, but nor do cartels or single-firm dominance. It took seven years for the Supreme Court to overrule *Appalachian Coals* implicitly,[96] and ten years for it to overrule *Schwinn* explicitly.[97] Yet these lengths of time are roughly comparable to the typical duration of cartels cut short by antitrust enforcement, and, in consequence, less than cartels' likely duration if market forces were the sole mechanism for correction.[98] Moreover, even before the Court overrules an erroneous precedent, a number of circumstances may limit its practical effect. Precedents may be undermined by lower courts,[99] abrogated by legislative action,[100] or narrowed, procedurally or substantively, by

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rier, *Why the "Scope of the Patent" Test Cannot Solve the Drug Patent Settlement Problem*, 16 STAN. TECH. L. REV. 1 (2012) (describing infirmities of the approach that prevailed for a decade until rejected in *Actavis*). Moreover, appellate courts can correct their own errors. *Compare, e.g.*, Blue Cross & Blue Shield United v. Marshfield Clinic, 65 F.3d 1406, 1415 (7th Cir. 1995) (Posner, C.J.) (assuming that a contractual most-favored-nations provision would help a firm bargain with its suppliers for low prices, and deeming the theory that the provision would discourage price cutting "an ingenious but perverse argument"), *with In re* Brand Name Prescription Drugs, 288 F.3d 1028, 1033 (7th Cir. 2002) (Posner, J.) (noting authority for prohibiting industry-wide adoption of most-favored-nations provisions, "which make discounting more costly").

[95] Today, three of the Supreme Court cases described as creating erroneous precedents in this paragraph and the accompanying notes (*Appalachian Coals, Schwinn*, and *Von's*) are widely considered wrongly decided. The merits of a fourth, *Dr. Miles*, remain controversial. *See* Dr. Miles Med. Co. v. John D. Park & Sons Co., 220 U.S. 373 (1911) (holding that resale price maintenance is illegal per se, without using per se rule terminology), *overruled by* Leegin Creative Leather Prods., Inc. v. PSKS, Inc., 551 U.S. 877 (2007).

[96] Appalachian Coals, Inc. v. United States, 288 U.S. 344 (1933), *abrogated by* United States v. Socony-Vacuum Oil Co., 310 U.S. 150, 221 (1940).

[97] United States v. Arnold, Schwinn & Co., 388 U.S. 365 (1967), *overruled by* Cont'l T.V., Inc. v. GTE Sylvania Inc., 433 U.S. 36 (1977). One could argue that *Schwinn* barely lasted at all, given the hostility with which lower courts and commentators received it. *E.g.*, Tripoli Co. v. Wella Corp., 425 F.2d 932, 936–38 (3d Cir. 1970) (en banc).

[98] *See supra* notes 44–45 and accompanying text.

[99] *See Sylvania*, 433 U.S. at 48 & 48 n.14 (describing lower court efforts to distinguish or limit the Supreme Court's questionable decision in *Schwinn*); GAVIL ET AL., *supra* note 25, at 452–55 (Sidebar 5-1) (lower courts are almost surely correct in deviating from 1960s Supreme Court horizontal merger precedents, which the Court has never revisited); Baker & Shapiro, *supra* note 54, at 238 (describing how the lower courts altered horizontal merger analysis by relying on a 1974 Supreme Court decision not thought at the time to alter the 1960s Supreme Court precedents).

[100] *See generally* Matthew R. Christiansen & William N. Eskridge, Jr., *Congressional Overrides of Supreme Court Statutory Interpretation Decisions, 1967–2011*, 92 TEX. L. REV. 1317 (2014) (identifying 275 Supreme Court decisions overridden legislatively between 1967 and 2011); *cf.* Deborah A. Widiss, *Identifying Congressional Overrides Should Not Be This Hard,* 92 TEX. L. REV. 145 (2014) (a reasonable alternative methodology would identify fewer overrides); *see also* Victoria F. Nourse, *Overrides: The Super-Study*, 92 TEX. L. REV. 205 (2014) (Congressional overrides are rare, absent issue salience and bipartisan consensus). If the historical per se prohibition on resale price maintenance, overruled in 2007, is considered an error, as today's antitrust conservatives hold, then the decision by Congress to give states the authority to permit resale price maintenance agreements in certain industries, which was in effect between 1952 and 1975, would constitute a form of legislative correction. *See* GAVIL ET AL., *supra* note 25, at 358.

the Court itself.[101] The instances in which the Supreme Court has overruled its own antitrust decisions, the range of mechanisms available for correcting bad court decisions, and the Supreme Court's thoroughgoing adoption of the Chicago School's academic critique of Court precedents that defined antitrust doctrine during the 1970s[102] all call into question Judge Easterbrook's claim that erroneous judicial precedents, even from the Supreme Court, are more permanent than monopolies and cartels, which can last for decades.[103]

2. *Antitrust Institutions Are Manipulated by Complaining Competitors*

Antitrust conservatives also claim that antitrust enforcement institutions make false positives too likely and too expensive, at least with respect to exclusionary conduct violations and cases brought on behalf of classes of consumers. If true, this claim could justify setting a higher bar for establishing those types of cases. There are three main difficulties with this claim, however: it overstates the ability of complaining rivals to manipulate antitrust institutions by alleging anticompetitive exclusion, as discussed in this section; it exhibits oddly selective skepticism about the ability of courts to distinguish

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[101] The Supreme Court's decision in *Dr. Miles*, which took nearly a century to overturn, was limited substantially after seven years by *United States v. Colgate & Co.*, 250 U.S. 300 (1919), which allowed well-counseled firms to engage in resale price maintenance by announcing a price-maintenance policy in advance and applying it without deviation to discounting dealers. Moreover, during a period when the Supreme Court likely considered the precedent treating resale price maintenance as illegal per se to be wrongly decided, but before the Court overruled that precedent, it raised the burden of proof for plaintiffs in *Monsanto Co. v. Spray-Rite Service Corp.*, 465 U.S. 752 (1984), and *Business Electronics Corp. v. Sharp Electronics Corp.*, 485 U.S. 717 (1988), and abandoned the per se rule for maximum resale price maintenance. State Oil Co. v. Khan, 522 U.S. 3 (1997). The Supreme Court has also deployed its tools for narrowing past decisions by limiting the per se rule against horizontal agreements to naked restraints, Broad. Music, Inc. v. CBS, Inc., 441 U.S. 1 (1979), and by circumscribing the impact of *Aspen Skiing*, a monopolization precedent I do not consider erroneous. *See* Verizon Commc'ns Inc. v. Law Offices of Curtis V. Trinko, LLP, 540 U.S. 398, 409 (2004) (characterizing *Aspen Skiing Co. v. Aspen Highlands Skiing Corp.*, 472 U.S. 585 (1985), as "at or near the outer boundary of § 2 liability"). If an erroneous precedent that discourages efficient conduct is construed narrowly, its adverse impact may be muted, as the affected firms may find other ways to achieve the desired efficiencies at little additional cost. *See* Devlin & Jacobs, *supra* note 16, at 98 ("[F]irms foreclosed by judicial error from adopting the very best behavior will adopt the next-best behavior, or may even discover a superior one. The loss to society is the difference in value between the best and second-best—a difference that can be very small or even positive.").

[102] Even commentators opposed generally to the Chicago School's program have conceded that the Supreme Court properly reformed prior rules to address ways in which they discouraged firms from achieving efficiencies. *E.g.*, Robert Pitofsky, *Does Antitrust Have a Future?*, 76 GEO. L.J. 321, 323–25 (1987) (finding "much wrong with the overly active antitrust enforcement policies of the 1960s" and commending the Supreme Court for moving "cautiously and thoughtfully in the direction of more lenient antitrust policies" since the mid-1970s through decisions that were "generally more solicitous toward claims of efficiency").

[103] *See supra* notes 38–46 and accompanying text; *see also* Devlin & Jacobs, *supra* note 16, at 98–99 ("[M]istaken legal rules are not irreversible" as "[b]ad [antitrust] precedents . . . have been reversed left and right" and "there are ways to avoid bad precedent without directly overruling it.").

between conduct that harms competition and conduct that benefits competition, as discussed in the next section; and it reflects a one-sided evaluation of the possible transaction costs of private litigation, as discussed in the section that follows.

According to Judge Easterbrook, "The books are full of suits by rivals for the purpose, or with the effect, of reducing competition and increasing price."[104] Such suits, he wrote, impose unnecessary costs and, "given the unavoidable number of erroneous decisions in antitrust cases, the suits bring condemnation on useful conduct."[105] To address the problem, he recommended treating lawsuits brought by horizontal competitors "with the utmost suspicion"[106] and "generaliz[ing]" the antitrust injury doctrine[107] to curtail litigation by plaintiffs who would be harmed if the conduct they challenged promoted competition.[108]

Following the latter prescription, the antitrust injury doctrine has expanded over time,[109] providing courts with a basis for dismissing much of the litigation that concerned Judge Easterbrook in 1984. Suits by terminated dealers, one of Easterbrook's particular concerns,[110] have also been limited by Supreme Court decisions that circumscribed the ability of terminated dealers to challenge resale price maintenance.[111] In the judgment of Herbert Hovenkamp, a leading mainstream antitrust commentator, "while anticompetitive decisions were once relatively common, they are much less frequent today."[112]

Antitrust conservatives nevertheless continue to suggest that a disproportionate number of cases alleging exclusion, particularly those against dominant firms, lack merit. Conservatives claim that these cases are often brought by inefficient and unsuccessful rivals or, when brought by the enforcement

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[104] Easterbrook, *supra* note 16, at 34.

[105] *Id.* at 36; *cf.* Edward A. Snyder & Thomas E. Kauper, *Misuse of the Antitrust Laws: The Competitor Plaintiff*, 90 MICH. L. REV. 551 (1991) (surveying horizontal-restraint cases filed by competitor plaintiffs between 1973 and 1983 in five federal districts and claiming that, of those cases that alleged exclusionary practices, only a small minority appeared meritorious).

[106] Easterbrook, *supra* note 16, at 35.

[107] *Id.* at 36. The "antitrust injury" doctrine requires plaintiffs to prove "injury of the type the antitrust laws were intended to prevent and that flows from that which makes defendants' acts unlawful." Brunswick Corp. v. Pueblo Bowl-O-Mat, Inc., 429 U.S. 477, 489 (1977).

[108] *See* Easterbrook, *supra* note 16, at 35–39 (explaining that, while courts had, by the mid-1980s, extended the antitrust injury doctrine beyond mergers, it was "usually put as a restriction on remedies").

[109] GAVIL ET AL., *supra* note 25, at 893–904.

[110] Easterbrook, *supra* note 16, at 38–39.

[111] Monsanto Co. v. Spray-Rite Serv. Corp., 465 U.S. 752 (1984); Bus. Elecs. Corp. v. Sharp Elecs. Corp., 485 U.S. 717 (1988). The recent demise of the per se rule against vertical price fixing will likely further reduce the attractiveness of such suits. Leegin Creative Leather Prods., Inc. v. PSKS, Inc., 551 U.S. 877 (2007).

[112] HERBERT HOVENKAMP, THE ANTITRUST ENTERPRISE: PRINCIPLE AND EXECUTION 71 (2005).

agencies, instigated by such rivals.[113] The main concern is with false positives: if such suits are in fact common[114] and if complaining rivals bringing bad cases tend to have more influence over the enforcement and judicial processes than the wrongly accused defendants, then enforcers will bring unwarranted cases and courts will systematically find violations when they should not, chilling procompetitive dominant-firm conduct. In addition, conservatives could then say, if the courts do not stop such cases, even efficient rivals would have an incentive to commence baseless actions alleging exclusion to discourage vigorous competition from the competitors they name as defendants.

This concern states what is at best an implausible hypothesis.[115] There is no reason to suspect that unsuccessful rivals enjoy systematically better access to the enforcement agencies, or exert systematically greater influence on them or on the courts, than do large firm defendants.[116] Moreover, there is no reason to suspect that the agencies and courts are any less able to understand the possible biases of rivals, and to discount their testimony appropriately, than they are able to do the same for other interested parties, such as the alleged excluding firms themselves.[117] Under these circumstances, a low probability of suc-

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[113] *See, e.g.*, David J. Theroux, *Open Letter on Antitrust Protectionism,* INDEP. INST. (June 2, 1999), www.independent.org/issues/article.asp?id=483 (linking to "An Open Letter to President Clinton from 240 Economists on Antitrust Protectionism" organized by the Independent Institute suggesting that a spate of high-profile government antitrust cases responded to rival demands for government action); Easterbrook, *supra* note 16, at 34 ("Antitrust litigation is attractive as a method of raising rivals' costs because of the asymmetrical structure of incentives. . . . The books are full of suits by rivals for the purpose, or with the effect, of reducing competition and increasing price."); THOMAS J. DILORENZO, HOW CAPITALISM SAVED AMERICA 236 (2005) (the *Microsoft* case, like other antitrust cases, "was instigated not to protect consumers but at the request of less successful rivals"). *But see* WILLIAM H. PAGE & JOHN E. LOPATKA, THE MICROSOFT CASE: ANTITRUST, HIGH TECHNOLOGY, AND CONSUMER WELFARE 31–32 (2007) (Two conservative antitrust scholars conclude that government decisions to sue, in the *Microsoft* case and in general, are "based on something more than the fact that wealthy, well-organized, and politically connected interest groups have complained," and reject the contrary views of "[l]ibertarian and public choice scholars.").

[114] Government monopolization cases are infrequent: over the long term, the average is less than one per year per agency (DOJ or FTC). *See* William E. Kovacic, *The Modern Evolution of U.S. Competition Policy Enforcement Norms*, 71 ANTITRUST L.J. 377, 449 tbl.4 (2003). But the antitrust laws also allow private suits, and some "big cases" against single firm defendants—most notably, in recent years, *Microsoft*—can take on outsize importance.

[115] The assertion that the enforcement agencies are systematically manipulated by complaining rivals also inappropriately discounts or ignores internal institutional checks within agencies, including layers of internal review and the independent institutional roles of agency economists and lawyers, and discounts or ignores the external constraints imposed on agencies by the prospect of judicial review. On the role of the FTC's Bureau of Economics in "placing a cost-benefit focus on every decision," see Jonathan B. Baker, *"Continuous" Regulatory Reform at the Federal Trade Commission,* 49 ADMIN. L. REV. 859, 861 (1997).

[116] Large-firm defendants in exclusion cases tend to have the resources needed to present an effective courtroom case, make an effective public relations case, and mobilize political support.

[117] *See* 2010 Merger Guidelines, *supra* note 74, § 2.2 (describing circumstances under which individual customer and competitor interests regarding a merger among rivals would and would not be aligned with the public interest); FCC Staff Analysis and Findings ¶ 83 & n.255, *In re*

cess would deter unsuccessful rivals from bringing speculative or unfounded antitrust complaints. In addition, competitor lawsuits can enhance deterrence of anticompetitive conduct, as rivals "often . . . are in the best position to detect and prosecute many antitrust violations early, before they cause significant consumer harm."[118]

Moreover, if the courts are subject to systematic manipulation by complaining competitors, one would not expect to see them adopting legal rules that under-deter harmful practices. Yet, they have done so. For example, until the Supreme Court stepped in,[119] the lower courts consistently ruled in favor of pharmaceutical firm defendants that employed "pay for delay" settlements to prevent the entry of generic rivals,[120] and adopted legal standards that largely insulated such settlements from antitrust lawsuits.[121] In addition, some appellate courts have viewed exclusive dealing as presumptively lawful when

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Applications of AT&T, Inc. & Deutsche Telekom AG, WT Docket No. 11-65 (Nov. 29, 2011) (describing interests of merging firms and merger opponents and their possible alignment with the public interest), *available at* hraunfoss.fcc.gov/edocs_public/attachmatch/DA-11-1955A2.pdf. *Compare* Hosp. Corp. of Am. v. FTC, 807 F.2d 1381, 1391–92 (7th Cir. 1986)(Posner, J.) ("Hospital Corporation's most telling point is that the impetus for the Commission's complaint came from a competitor . . . ."), *with id.* at 1387 (the FTC could have concluded that colluding hospitals could manipulate certificate of need laws "to delay any competitive sally by a noncolluding competitor").

[118] HOVENKAMP, *supra* note 112, at 70.

[119] FTC v. Actavis, Inc., 133 S. Ct. 2223 (2013).

[120] These cases involve payments made by pharmaceutical firms selling brand-name drugs to prospective producers of generic equivalents to settle challenges by the generic producers to the validity of the brand-name firm's patents. Under the terms of the Hatch-Waxman Act, a statutory scheme regulating generic entry, such settlements delay the entry of generic competition. *See* Drug Price Competition and Patent Term Restoration Act of 1984, Pub. L. No. 98-417, 98 Stat. 1585 (1984) (codified as amended in scattered sections of 15, 21, 35, and 42 U.S.C.). The challenged settlements have been termed "reverse payment" settlements because they compensate the alleged infringer while eliminating its challenge to patent validity. According to the FTC, drug companies entered into 28 potential reverse-payment arrangements between October 2010 and September 2011 alone, and these arrangements cost consumers approximately $3.5 billion per year. *See* BUREAU OF COMPETITION, FED. TRADE COMM'N, AGREEMENTS FILED WITH THE FEDERAL TRADE COMMISSION UNDER THE MEDICARE PRESCRIPTION DRUG, IMPROVEMENT, AND MODERNIZATION ACT OF 2003: OVERVIEW OF AGREEMENTS FILED IN FY 2011 (2011), *available at* www.ftc.gov/sites/default/files/documents/reports/agreements-filed-federal-trade-commission-under-medicare-prescription-drug-improvement-modernization/1110mmaagree-2.pdf; FED. TRADE COMM'N, PAY-FOR-DELAY: HOW DRUG COMPANY PAY-OFFS COST CONSUMERS BILLIONS (2010), *available at* www.ftc.gov/sites/default/files/documents/reports/pay-delay-how-drug-company-pay-offs-cost-consumers-billions-federal-trade-commission-staff-study/100112payfordelayrpt.pdf.

[121] *E.g.*, FTC v. Watson Pharms., Inc., 677 F.3d 1298, 1312 (11th Cir. 2012) (holding that, "absent sham litigation or fraud in obtaining the patent, a reverse payment settlement is immune from antitrust attack so long as its anticompetitive effects fall within the scope of the exclusionary potential of the patent"), *rev'd sub nom. Actavis*, 133 S. Ct. 2223. The excluded, and hence potentially complaining, rival in such a case is the second generic competitor to file an application challenging the brand-name firm's patents, as the first-filer generally defends its settlement with the brand-name firm. The most sustained court challenges to these practices were not brought by complaining excluded rivals, but by the Federal Trade Commission or by classes of

contracts have short terms,[122] and perhaps when excluded firms retain alternative, albeit less efficient, means of reaching customers.[123] To the extent that courts and prospective litigants understand these presumptions as nearly impossible to rebut in practice,[124] and thus as tantamount to conclusions of law, anticompetitive conduct would again be under-deterred. This dangerous possibility appears to be receding, however, with recent appellate decisions finding that plaintiffs have established anticompetitive harm from exclusive dealing arrangements.[125]

3. *Courts Cannot Tell Whether Exclusionary Conduct Harms Competition or Promotes It*

Some antitrust conservatives question enforcement against anticompetitive conduct on the ground that courts are often unable to make the detailed factual assessments required under the Sherman Act to determine whether conduct

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buyers. *E.g.*, *Actavis*, 133 S. Ct. 2223; *In re* K-Dur Antitrust Litig., 686 F.3d 197 (3d Cir. 2012); Valley Drug Co. v. Geneva Pharm., Inc., 344 F.3d 1294 (11th Cir. 2003).

[122] Allied Orthopedic Appliances Inc. v. Tyco Health Care Grp., 592 F.3d 991, 997 (9th Cir. 2010); Concord Boat Corp. v. Brunswick Corp., 207 F.3d 1039, 1059 (8th Cir. 2000); Omega Envtl., Inc. v. Gilbarco, Inc., 127 F.3d 1157, 1163 (9th Cir. 1997); Paddock Publ'ns, Inc. v. Chi. Tribune Co., 103 F.3d 42, 47 (7th Cir. 1996); U.S. Healthcare, Inc. v. Healthsource, Inc., 986 F.2d 589, 596 (1st Cir. 1993) ("Normally an exclusivity clause terminable on 30 days' notice would be close to a de minimis constraint (*Tampa* involved a 20-year contract, and one year is sometimes taken as the trigger for close scrutiny)."); Roland Mach. Co. v. Dresser Indus., 749 F.2d 380, 395 (7th Cir. 1984).

[123] *See Allied Orthopedic*, 592 F.3d at 996–97 (questioning whether rivals were foreclosed when the challenged conduct provided an incentive as opposed to a requirement for exclusivity); *Omega Environmental*, 127 F.3d at 1163 ("If competitors can reach the ultimate consumers of the product by employing existing or potential alternative channels of distribution, it is unclear whether such restrictions foreclose from competition any part of the relevant market."). Judge Bork recognized that foreclosure could in theory (might "conceivably") occur through disruption of optimal distribution patterns, but suggested that anticompetitive outcomes were implausible. *See* BORK, *supra* note 1, at 156 (noting "limits" set by the costs that such tactics impose on the firms employing them and a "further complication" arising from the capacity of the behavior involved to create efficiencies).

[124] *Cf.* HERBERT HOVENKAMP, FEDERAL ANTITRUST POLICY: THE LAW OF COMPETITION AND ITS PRACTICE § 10.9e, at 487 n.55 (4th ed. 2011) ("[T]he trend is toward approval of shorter term exclusive dealing contracts, particularly where there are multiple contracts with different parties so contracts come up for rebidding frequently."); 1 ABA SECTION OF ANTITRUST LAW, ANTITRUST LAW DEVELOPMENTS 217 (7th ed. 2012) (listing practices found permissible "when they do not preclude competing sellers from selling to the buyers on whom the arrangements have been imposed"); GAVIL ET AL., *supra* note 25, at 851 ("today it is rare for a court to strike down" exclusive dealing).

[125] United States v. Dentsply Int'l, 399 F.3d 181, 185, 193 (3d Cir. 2005) (exclusive dealing harmed competition even though the distribution arrangements were "essentially terminable at will" and some manufacturers without distribution agreements were able to stay in business by relying on direct sales); United States v. Microsoft Corp., 253 F.3d 34, 366–67 (D.C. Cir. 2001) (en banc) (per curiam) (upholding monopolization claim when exclusive-dealing arrangements raised entry barriers by denying rivals access to the most important distribution channels, without denying rivals access to all such channels).

harms or benefits competition.[126] Yet conservatives deploy their skepticism selectively, primarily to question judicial competence in resolving monopolization claims and other exclusionary-conduct allegations.[127] If courts could not reliably determine whether exclusionary conduct is procompetitive or anticompetitive, however, they would have similar difficulty in assessing the competitive effects of collusive conduct like horizontal price fixing and market division, which also can have efficiency justifications.[128] Hence, the oddly selective conservative skepticism about the competence of courts to make factual assessments appears to reflect a reflexive hostility to exclusion cases, rather than a sober response to limits on the courts' institutional competence.[129]

Perhaps conservative skepticism about the ability of courts to apply the rule of reason should be understood instead as an argument for limiting antitrust enforcement across the board to conduct that lacks any plausible efficiency justification or creates little or no procompetitive benefit.[130] If that is the point, conservative scholars need to explain why they believe that a generation of doctrinal reform along Chicago School lines has been a failure,[131] and why a

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[126] *E.g.*, Wright, *supra* note 17, at 24 ("Where conduct plausibly produces both costs and benefits for consumers it is fundamentally difficult to identify the net competitive consequences associated with the conduct. This is particularly true if business conduct is novel or is being applied to an emerging or rapidly changing industry . . . ." (footnote omitted)).

[127] *See, e.g.*, BORK, *supra* note 1, at 49 (distinguishing between anticompetitive and procompetitive exclusionary practices is "beyond the law's economic competence"); Manne & Wright, *supra* note 16, at 157 (characterizing Easterbrook's analysis as premised in part on the view that "errors of both types are inevitable, because distinguishing procompetitive conduct from anticompetitive conduct is an inherently difficult task in the single-firm context").

[128] *See* Leegin Creative Leather Prods., Inc. v. PSKS, Inc., 551 U.S. 877, 916–17 (2007) (Breyer, J., dissenting) (noting the difficulties of assessing whether the benefits of resale price maintenance in preventing free riding outweigh the potential harm of facilitating a dealer cartel, and the difficulties judges and juries may face in evaluating market power); BORK, *supra* note 1, at 429–40 (12-page appendix cataloguing ways that that price fixing and market division among competitors could allow firms to obtain efficiencies).

[129] *See generally* Baker, *supra* note 7.

[130] *Cf. supra* note 22 (proposals for limiting enforcement of various antitrust statutes to conduct with no efficiency or with competitive harm disproportionate to procompetitive benefit). Although such an approach might seem to preserve the antitrust prohibition on naked cartels, it would effectively exempt mergers from antitrust scrutiny and therefore permit firms to collude through merger, as they did around the start of the 20th century. *See generally* NAOMI R. LAMOREAUX, THE GREAT MERGER MOVEMENT IN AMERICAN BUSINESS, 1895–1904 (1985).

[131] *Cf.* Howard A. Shelanski, *The Case for Rebalancing Antitrust and Regulation*, 109 MICH. L. REV. 683, 712 (2011) ("[A]ntitrust jurisprudence has evolved [over the past 30 years] to reduce significantly the likelihood of false positives. The assumption that even more preclusive rules against liability are necessary to protect against investment deterrence and other costs of over-enforcement requires more justification than the Court has offered in light of these developments.").

radical retrenchment of today's reformed antitrust rules—to the point of effectively abandoning antitrust altogether—is necessary.[132]

Some contemporary conservatives argue that firms subject to antitrust claims need broad safe harbors to limit uncertainty about the scope of antitrust rules, as might arise from the difficulty of distinguishing harmful from beneficial or neutral conduct. Conservatives suggest that this uncertainty imposes substantial additional compliance costs, foments fear of false positives, and chills efficiency-enhancing firm conduct.[133]

To be sure, antitrust must routinely balance the advantages and drawbacks of bright-line rules against those of less structured standards.[134] Bright-line rules tend to provide clear guidance to firms subject to those rules and to limit the transaction costs associated with enforcement, while unstructured standards tend to reduce errors (whether false positives or false negatives) by permitting a more careful assessment of business practices' competitive effects.[135] Indeed, a need to reduce false positives and to mitigate their chilling effect on efficient conduct was frequently cited as a ground for abandoning some of the per se rules that prevailed prior to the late 1970s, especially with regard to vertical restraints.[136] If some rules now provide insufficient guidance and predictability, an appropriate response is not to abandon antitrust enforcement by adopting broad safe harbors; after all, restoring per se illegality

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[132] I discuss the economic benefits of antitrust in Baker, *supra* note 18, the political context of antitrust in Baker, *supra* note 3, and the political costs of abandoning antitrust in Jonathan B. Baker, *Competition Policy as a Political Bargain*, 73 ANTITRUST L.J. 483 (2006).

[133] *See* WRIGHT, *supra* note 22, at 8 (arguing for limiting FTC Act Section 5 challenges to harmful conduct with no efficiency justification, in part because uncertainty "about whether the conduct [firms] wish to engage in will trigger a Commission investigation or worse . . . inevitably results in the chilling of some legitimate business conduct that would otherwise have enhanced consumer welfare but for the firm's fear that the Commission might intervene"); *cf.* Ohlhausen, *supra* note 22, at 1–2, 7–8 (emphasizing that a "sea of uncertainty" surrounding the application of FTC Act Section 5 has been troublesome for some businesses and members of the legal community and proposing to limit challenges under that statute to conduct with competitive harm disproportionate to its benefits).

[134] Bright-line rules condition liability on a limited set of readily observed factors, while unstructured standards condition liability on the full set of factors potentially relevant to evaluating the competitive consequences of firm conduct.

[135] *See* GAVIL ET AL., *supra* note 25, at 206; *id.* at 103–06 (discussing benefits and costs of per se condemnation). *But see* Wickelgren, *supra* note 75, at 54 (noting that, in some settings, more evidence may not improve judicial accuracy, and improved accuracy may not improve firm behavior). To balance these considerations, courts may craft doctrinal rules that fall between the poles of bright-line rules and unstructured standards. *See* FTC v. Actavis, Inc., 133 S. Ct. 2223, 2238 (2013).

[136] *See, e.g.,* Richard A. Posner, *Antitrust Policy and the Supreme Court: An Analysis of the Restricted Distribution, Horizontal Merger and Potential Competition Decisions*, 75 COLUM. L. REV. 282, 283–99 (1975) (discussion of restricted-distribution cases). During the 1960s, the strong presumption of harm to competition from horizontal mergers from high and increasing market concentration was questioned on similar grounds. *E.g.*, United States v. Von's Grocery Co., 384 U.S. 270, 287–88 (1966) (Stewart, J., dissenting).

would provide equally clear guidance.[137] Instead, an appropriate response might be to impart more structure to the rules in question by, for example, developing quick-look approaches.[138]

4. *Courts Cannot Control the Costs of Private Litigation*

Private antitrust enforcement in the United States allows successful plaintiffs to recover treble damages, thereby augmenting the deterrent effect of public enforcement (and providing compensation to victims).[139] Class actions avoid the high social costs of re-litigating common issues in many individual actions, give plaintiffs economies of scale in pursuing their claims when collective action would otherwise be impractical, and confer deterrence benefits by making private enforcement feasible when individual damages are small relative to the transaction costs of litigation.[140]

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[137] For example, Areeda and Turner argued that a dominant firm's below-cost pricing should create an irrebuttable presumption of monopolization. Areeda & Turner, *supra* note 10, at 712 ("[A] monopolist pricing below marginal cost should be presumed to have engaged in a predatory or exclusionary practice" unless "the price, though below marginal cost, is at or above average cost."); *see* Pac. Eng'g & Prod. Co. v. Kerr-McGee Corp., 551 F.2d 790, 797 (10th Cir. 1977) (describing Areeda and Turner's 1975 article as advocating that price below marginal cost, or in the alternative, below average variable cost, "should be conclusively presumed unlawful"). In addition, during antitrust's structural era, some advocated approaches for breaking up large firms without need to prove anticompetitive conduct. *See* William E. Kovacic, *Failed Expectations: The Troubled Past and Uncertain Future of the Sherman Act as a Tool for Deconcentration*, 74 IOWA L. REV. 1105, 1137 & 1137 n.202 (1989) (noting proposals for applying "no-fault" theories of monopolization liability).

[138] *Cf. Actavis*, 133 S. Ct. at 2238 (encouraging lower courts to "structure antitrust litigation so as to avoid, on the one hand, the use of antitrust theories too abbreviated to permit proper analysis, and, on the other, consideration of every possible fact or theory irrespective of the minimal light it may shed on the basic question—that of the presence of significant unjustified anticompetitive consequences").

[139] Robert H. Lande & Joshua P. Davis, *Benefits from Private Antitrust Enforcement: An Analysis of Forty Cases,* 42 U.S.F. L. REV. 879, 880 (2008) ("[P]rivate litigation probably does more to deter antitrust violations than all the fines and incarceration imposed as a result of criminal enforcement by the DOJ."). A substantial fraction of the private cases studied did not follow federal, state, or EU government enforcement actions, and others had a mixed public/private origin. *Id.* at 897. For criticisms of the Lande and Davis study, and the authors' responses to those criticisms, see Gregory J. Werden, Scott D. Hammond & Belinda A. Barnett, *Deterrence and Detection of Cartels: Using All the Tools and Sanctions*, 56 ANTITRUST BULL. 207, 227–33 (2011); DANIEL A. CRANE, THE INSTITUTIONAL STRUCTURE OF ANTITRUST ENFORCEMENT 168–72 (2011); and Joshua P. Davis & Robert H. Lande, *Toward an Empirical and Theoretical Assessment of Private Antitrust Enforcement*, 36 SEATTLE U. L. REV. 1269 (2013).

The private damages remedy has a deterrent effect only to the extent that violators do not anticipate that they will be required to pay antitrust damages in the future. Otherwise, they will pass through the expected damages payment to buyers in advance, in the form of higher prices. *See generally* Jonathan B. Baker, *Private Information and the Deterrent Effect of Antitrust Damage Remedies*, 4 J.L. ECON. & ORG. 385 (1988). For a discussion of whether private damages are too low or too high to achieve optimal deterrence from an economic-efficiency perspective, see GAVIL ET AL., *supra* note 25, at 1129–35 (Sidebar 9-7).

[140] *See generally* ROBERT G. BONE, CIVIL PROCEDURE: THE ECONOMICS OF CIVIL PROCEDURE 259–91 (2003) (surveying benefits and costs of class actions).

Notwithstanding these well-known social benefits of private enforcement, the Supreme Court has questioned the efficiency of private antitrust rights of action. A number of recent Supreme Court antitrust decisions evince a concern with the transaction costs of private antitrust litigation, particularly class actions.[141] These decisions have circumscribed private antitrust plaintiffs' access to the courts, and some have even required that antitrust disputes be resolved outside the courts, by regulators or arbitrators.[142] Yet the Court adopted these measures with little evidence that lower courts are unable to manage private litigation,[143] and without attempting to show that the benefits, if any, that society derives from reduced transaction costs exceed the social costs of restricting both private and public (federal and state) antitrust enforcement.

The two decisions that shift antitrust disputes from courts to administrative agencies, *Trinko* and *Credit Suisse*, are the most surprising, because they are inconsistent with Judge Bork's decided preference for antitrust over regula-

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[141] Verizon Commc'ns Inc. v. Law Offices of Curtis V. Trinko, LLP, 540 U.S. 398 (2004) (upholding dismissal of proposed class action because a separate statutory scheme providing for extensive regulation aimed at promoting competition in telephony had displaced private enforcement under the Sherman Act); Credit Suisse Secs. (USA) LLC v. Billing, 551 U.S. 264 (2007) (upholding dismissal of proposed class action because the securities laws implicitly precluded the application of the antitrust laws to the alleged conduct); Bell Atl. Corp v. Twombly, 550 U.S. 544 (2007) (proposed class action complaint alleging market division dismissed for failure to state a claim when allegations were not plausible); Comcast Corp. v. Behrend, 133 S. Ct. 1426 (2013) (reversing certification of plaintiff class for failure to show that damages were capable of measurement on a classwide basis); Am. Express Co. v. Italian Colors Rest., 133 S. Ct. 2304 (2013) (class action alleging antitrust violations dismissed when plaintiffs were contractually obligated to arbitrate all disputes individually, notwithstanding that the prohibitive costs of individual arbitration effectively insulated the defendant from antitrust liability). These decisions are reasonably described as conservative with respect to antitrust because they restrict antitrust plaintiffs' access to court. *Cf. Comcast*, 133 S. Ct. at 1435–36 (Ginsburg & Breyer, JJ., dissenting) (contending that the majority reached beyond the question it had instructed the parties to brief to decide a question that it should have declined to review). *See generally* CRANE, *supra* note 139, at 62–63 (citing a "backlash against private litigation" as a "major . . . cause" of the "retrenchment of antitrust liability norms that began in the late 1970s and has largely carried forward to this day"); David Freeman Engstrom, *Agencies as Litigation Gatekeepers*, 123 YALE L.J. 616, 619 (2013) ("Critics . . . cast private enforcement as overzealous, uncoordinated, and democratically unaccountable.").

[142] *Trinko* and *Credit Suisse* required regulatory resolution of antitrust disputes; *American Express* relegated antitrust disputes to individual arbitration.

[143] The Court also did not consider whether a wholly different remedial approach of restricting the litigation tactics available to large-firm defendants would address the social costs of private litigation more effectively than the approach it chose, of restricting private plaintiffs' access to the courts. *But cf. Twombly*, 550 U.S. at 560 n.6 (questioning whether judicial case management can address the problem of abusive discovery). For a review of empirical studies of the costs associated with pre-trial civil litigation and the costs of class action litigation, see Daniel P. Kessler & Daniel L. Rubinfeld, *Empirical Study of the Civil Justice System*, *in* 1 HANDBOOK OF LAW AND ECONOMICS, *supra* note 49, at 343, 378–81, 390.

tion.[144] They represent a new direction for the Court[145] and reverse a judicial trend in recent decades toward finding concurrent antitrust jurisdiction in settings where regulators formerly had exclusive jurisdiction.[146] The limitations on access to the courts are less surprising, because the Supreme Court previously took other procedural steps in the same direction;[147] those steps have

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[144] Bork's concern about the threat government poses to industrial competition did not extend, for the most part, to antitrust institutions. He recognized that the firms may misuse courts to impose costs on rivals, but saw the courts as operating effectively as institutions; he also urged the enforcement agencies to bring enlightenment about competition to the rest of government. *See* BORK, *supra* note 1, at 407 (supporting competition advocacy by antitrust agencies to discourage regulators from permitting cartelization); *id.* at 360–64 (expressing concern that administrative decisions could stifle competition, but expressing no concern that judicial decisions would do so outside of sham litigation).

[145] Andrew I. Gavil, *Antitrust Bookends: The 2006 Supreme Court Term in Historical Context*, ANTITRUST, Fall 2007, at 21, 24 ("[W]ho would have predicted such a lovefest between Justices Scalia and Breyer—whose fingerprints are evident in both *Trinko* and *Credit Suisse*—and the federal regulatory agencies?"). *Eastman Kodak Co. v. Image Technical Services, Inc.*, 504 U.S. 451 (1992), also suggested a new direction, beyond Chicago, but its concern with the role of imperfect information in creating market power—a potential justification for increased antitrust intervention—was not built on by the Supreme Court's and lower courts' later decisions.

[146] Justin (Gus) Hurwitz, *Administrative Antitrust*, 21 GEO. MASON L. REV. 1191 (explaining that courts increasingly reject concurrent jurisdiction in favor of ceding jurisdiction over antitrust issues to administrative agencies, for reasons connected with separation of powers and political accountability concerns of modern administrative law); *see* 1A PHILLIP E. AREEDA & HERBERT HOVENKAMP, ANTITRUST LAW: AN ANALYSIS OF ANTITRUST PRINCIPLES AND THEIR APPLICATION ¶ 241c, at 321–22 (4th ed. 2013) ("As a general matter the effect of deregulation is to enlarge the domain of antitrust by removing or narrowing antitrust immunities that had existed before."); Shelanski, *supra* note 131, at 708 ("The *Credit Suisse* analysis is important because it marks the first time in the line of implied-immunity cases that the Court has found regulation to imply immunity from legitimate and nonrepugnant antitrust claims."); *cf.* HOVENKAMP, *supra* note 124, § 19.3b, at 775 ("In the last thirty years the Supreme Court has become much more critical of agency regulation, and much less inclined to see it as a panacea for all the difficulties of the traditional court system. . . . The best explanation [for the broad immunity grant in *Credit Suisse*] is that while the Court is more skeptical about agency regulation than it was in the 1970s, its skepticism about the use of private antitrust litigation is even greater."); Barak Orbach, *The Implied Antitrust Immunity* (Ariz. Legal Studies Discussion Paper No. 14-16, July 1, 2014) (describing an evolution of the antitrust immunity doctrine toward precluding antitrust law). *But cf.* Oneok, Inc. v. Learjet Inc., 2015 WL 1780926 (U.S. Apr. 21, 2015) (federal regulation of wholesale natural gas does not preempt private claims under state antitrust laws alleging anticompetitive conduct affecting retail natural gas sales).

[147] *See generally* CRANE, *supra* note 139, at 59–60; *cf.* Engstrom, *supra* note 141 (evaluating calls to vest administrative agencies with litigation gatekeeper authority, in order to limit nonmeritorious private enforcement). The Class Action Fairness Act of 2005, Pub. L. No. 109-2, 119 Stat. 4 (codified as amended in scattered sections of 28 U.S.C.), required, in part, greater judicial scrutiny of "coupon settlements," such as settlements awarding consumers discounts on new purchases from defendant firms. This requirement addressed an agency problem: a concern about the incentive of plaintiffs' attorneys to reach settlements that awarded attorneys' fees that were generous relative to the compensation awarded class members. *See In re* HP Inkjet Printer Litig., 716 F.3d 1173, 1177–78 (9th Cir. 2013); *see generally* Sarah S. Vance, *A Primer on the Class Action Fairness Act of 2005*, 80 TULANE L. REV. 1617 (2006). That incentive could lead counsel to bring non-meritorious suits and settle meritorious cases too cheaply from an optimal-deterrence perspective. *Cf.* BONE, *supra* note 140, at 275–80 (discussing "sweetheart settlements").

included introducing the antitrust injury requirement,[148] raising the standard that a dealer must satisfy to prove that its termination was pursuant to a resale price maintenance agreement between a manufacturer and other dealers,[149] restricting damages claims by indirect purchasers,[150] and elevating the burden that plaintiffs must meet to survive a motion for summary judgment.[151]

These initiatives raise several concerns. Decisions that limit the access of private antitrust plaintiffs to the courts will necessarily discourage some meritorious lawsuits, and reduce antitrust's deterrent effect. Decisions that shift competition enforcement from the courts to regulatory agencies will likely lead to outcomes that prioritize regulatory objectives at antitrust's expense. Moreover, both types of decisions create hurdles for government enforcers seeking to vindicate antitrust principles in the courts,[152] notwithstanding the trust that antitrust conservatives place in the ability of courts and government enforcement agencies to perform effectively when attacking cartels.[153]

Some of the recent Supreme Court decisions, particularly *Twombly*, cite the social costs of private litigation. The majority opinion in that case views private antitrust enforcement, particularly consumer class action lawsuits, as an invitation for plaintiffs with non-meritorious claims to use the threat of expensive litigation to extract wasteful settlements.[154] In addition, the majority opin-

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[148] *See supra* notes 109–112 and accompanying text.

[149] Monsanto Co. v. Spray-Rite Serv. Corp., 465 U.S. 752 (1984); Bus. Elecs. Corp. v. Sharp Elecs. Corp., 485 U.S. 717 (1988). The Supreme Court has not revisited *Monsanto* or *Sharp* since it overruled the per se prohibition against resale price maintenance. That change in the substantive rule, however, reduces the apparent benefits of *Monsanto*'s and *Sharp*'s procedural rules and calls into question whether those rules' benefits continue to exceed the costs of the limits that those rules place on terminated dealers' access to courts. *Cf.* Stephen Calkins, *Summary Judgment, Motions to Dismiss, and Other Examples of Equilibrating Tendencies in the Antitrust System*, 74 GEO. L.J. 1065, 1127–39 (1986) (describing the interplay among substantive and procedural rules in antitrust).

[150] Ill. Brick Co. v. Illinois, 431 U.S. 720 (1977).

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

[152] *See* CRANE, *supra* note 139, at 63–67; *see* Shelanski, *supra* note 131, at 714 ("Although the rationales of *Credit Suisse* and *Trinko* apply more to private suits than public enforcement, their precedent could have a preclusive effect on both."); Steven C. Salop, *What Consensus? Ideology, Politics and Elections Still Matter*, 79 ANTITRUST L.J. 601, 635–36 (2014) (describing how *Sharp*, intended to make it more difficult for plaintiffs to prove anticompetitive vertical price-fixing agreements, also had the effect of making it more difficult for plaintiffs to prove anticompetitive horizontal price-fixing agreements).

[153] *See* Michael E. DeBow, *What's Wrong with Price Fixing: Responding to the New Critics of Antitrust*, REGULATION, Summer 1988, at 44 (antitrust law's prohibition against horizontal price fixing is defended by leading Chicago School commentators, and questioned only by Austrian or libertarian commentators to the right of the Chicago School); *cf.* Robert D. Hershey, Jr., *Courts Assailed by Antitrust Chief*, N.Y. TIMES, Nov. 9, 1985 (conservative antitrust official calling for judges to increase sentences for criminal price-fixing convictions).

[154] *See* Bell Atl. Corp v. Twombly, 550 U.S. 544, 559 (2007) (expressing concern over "the potentially enormous expense of discovery" in cases with no reasonably founded hope that discovery will reveal relevant evidence to support plaintiffs' claim) (consumer class action lawsuit).

ion in *Credit Suisse* views private antitrust litigation as imposing added social costs by bringing confusion to the law.[155] Yet the Court has cut back on the litigation of private antitrust claims with little analysis of the magnitude of these costs,[156] without comparing these costs to the social benefits of private antitrust litigation,[157] and without even acknowledging that private antitrust litigation can serve the aims of competition policy by increasing deterrence.

The benefits of antitrust enforcement as a whole almost surely exceed the costs by a wide margin,[158] creating a strong presumption in favor of robust enforcement. To justify continued retrenchment of private antitrust enforcement, therefore, the Court must make one of two showings. First, it could show that private enforcement as a whole is radically less effective than public enforcement—so much less effective at deterring anticompetitive conduct, so much more harmful in chilling beneficial conduct, and so much more costly than public enforcement as to rebut this presumption. In the alternative, the Court could show that the specific ways in which it would curtail private enforcement would reduce social costs by more than they reduce social benefits. Yet, in their hostility to private antitrust enforcement, the recent Supreme Court decisions have only mentioned costs, ignoring benefits. The Court has not even attempted to make either showing.

III. BEYOND ERROR COSTS

Thirty-five years after the Chicago School era began,[159] antitrust's rules as a whole look much more like those that Chicago School commentators like

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[155] Credit Suisse Secs. (USA) LLC v. Billing, 551 U.S. 264, 281–82 (2007) (expressing concern with the risk of inconsistent court results when "antitrust plaintiffs may bring lawsuits throughout the Nation in dozens of different courts with different nonexpert judges and different nonexpert juries" and with the possibility that courts would make "unusually serious mistakes" in resolving challenges to activity "outside the narrow bounds" of the conduct that was the subject of the instant litigation) (investor class action lawsuit).

[156] *See* Gavil, *supra* note 145, at 25 (Given the costs that extensive discovery imposes on plaintiffs, "few wild-eyed plaintiffs' lawyers could easily and consistently strike gold today bringing truly 'frivolous' cases," calling into question whether "significant numbers of frivolous strike suits are being filed and used to extract unwarranted settlements.").

[157] The argument between the majority and dissent in *Twombly* was over the extent to which case-management tools allow judges to control discovery costs; thus, the argument concerned the magnitude of the costs of private litigation, not the relative magnitudes of its costs and benefits. *See id.* at 25 ("[T]he Federal Rules of Civil Procedure have been systematically amended to enhance the management powers of district courts when it comes to discovery and every other phase of case development—a fact that was handily dismissed by the majority in *Twombly* with little regard for the experience, skill, and savvy of today's federal district court judges."). Similarly, some have questioned whether the antitrust injury doctrine unnecessarily restricts access to the courts. *See* GAVIL ET AL., *supra* note 25, at 903.

[158] *See* Baker, *supra* note 18, at 42–45 (suggesting that the benefits are, at a minimum, 50 times the costs).

[159] Baker, *supra* note 2, at 66 (describing antitrust's Chicago School revolution as beginning in the Supreme Court and the circuit courts in the mid-1970s).

Robert Bork, Frank Easterbrook, and Richard Posner advocated than those they criticized. The Chicago School's antitrust program is now largely complete. Yet today's antitrust conservatives call for substantial additional reforms to limit the application of antitrust rules—sounding at times as though neither antitrust law nor antitrust economics has changed since the late 1970s[160]—and they often justify their proposals by invoking error cost analysis.[161]

In applying decision theory, a neutral economic tool, to the analysis of antitrust rules, contemporary conservatives have made a series of erroneous assumptions, which collectively impart a non-interventionist bias to their conclusions. These assumptions systematically overstate the incidence and significance of false positives, understate the incidence and significance of false negatives, and understate the net benefits of various rules by overstating their costs.

Given the receptivity of the Supreme Court to conservative antitrust arguments, the continued misapplication of error cost analysis will likely encourage the Court to push today's antitrust rules in a less interventionist direction, even when the costs of each rule change—mainly the social cost from reduced deterrence of anticompetitive conduct—would exceed the benefits. Even worse, pushing antitrust in a less interventionist direction from a starting point of what are likely the most favorable rules for antitrust defendants in at least seven decades[162] could, over time, threaten the legitimacy and success of the antitrust system as a whole—and thereby threaten the efficiency benefits that society captures by fostering and protecting competitive markets.[163] To protect a robust, effective, and socially beneficial competition

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[160] For example, this article has pointed out instances where conservatives have ignored or improperly downplayed the modern empirical economic studies demonstrating the potential for anticompetitive predatory pricing to succeed, *supra* note 89, the modern economic literature contradicting the "single monopoly profit" theory, *supra* note 67 and accompanying text, and the way that changes in legal rules have greatly reduced the potential for competitors to bring non-meritorious antitrust lawsuits, *supra* notes 109–112 and accompanying text.

[161] *See, e.g.*, Devlin & Jacobs, *supra* note 16, at 86 (arguing that the error cost framework is particularly suited to antitrust, because "[m]ore than any other area of civil law, antitrust is error-prone"); *see generally* Aaron Director, *The Parity of the Economic Market Place*, 7 J.L. & ECON. 1, 2 (1964) ("Laissez faire has never been more than a slogan in defense of the proposition that every extension of state activity should be examined under a presumption of error.").

[162] Gavil, *supra* note 145, at 21. Professor Gavil suggests that today's rules may even be the most favorable for defendants "in all of U.S. antitrust's history." *Id.* There is no reason to think that, as a group, the Chicago School-influenced modifications to antitrust's rules simultaneously relaxed average deterrence but increased marginal deterrence, notwithstanding the theoretical possibility discussed in note 19, above.

[163] Baker, *supra* note 3, at 2185–86. *See generally* Baker, *supra* note 132; Jonathan B. Baker, *Preserving a Political Bargain: The Political Economy of the Non-Interventionist Challenge to Monopolization Enforcement*, 76 ANTITRUST L.J. 605 (2010). A serious challenge to the legitimacy of the antitrust laws based on the error cost arguments questioned here would likely require

policy, antitrust policy must avoid the erroneous application of error cost analysis.

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a broad national political realignment, however. A quarter century ago, Joseph Brodley made a similar observation about what he characterized as Judge Bork's "laissez-faire" approach to antitrust reform:

> The trouble with Judge Bork's laissez-faire doctrine is that it is suitable for fair weather sailing only. It may work tolerably well during good economic times (although even then it is not optimal . . .), but in an economic downturn or depression, when confidence in laissez-faire policies is likely to collapse, the antitrust principle upholding interfirm rivalry would no longer be available to shield business or the economy from pervasive regulation. In a time of increased calls for trade barriers and the protection of United States markets from effective competition, the danger in abandoning the interfirm rivalry principle is more than academic.

Joseph F. Brodley, *The Economic Goals of Antitrust: Efficiency, Consumer Welfare, and Technological Progress,* 62 N.Y.U. L. REV. 1020, 1023 n.11 (1987).

Exhibit 4 to the Cross-Examination of Keith Hylton



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"Dynamic Competition" Does Not Excuse Monopolization

*Jonathan B. Baker**

I. Introduction

In the 2004 *Trinko* decision,[1] Justice Antonin Scalia, writing for the Supreme Court, depicted "monopoly power, and the concomitant charging of monopoly prices" as "an important element of the free-market system."[2] Scalia argued that "[t]he opportunity to charge monopoly prices—at least for a short period . . . induces risk taking that produces innovation and economic growth."[3] According to Scalia, this benefit of monopoly explains a long-standing element of the antitrust prohibition against monopolization: "To safeguard the incentive to innovate, the possession of monopoly power will not be found unlawful unless it is accompanied by an element of anticompetitive *conduct*."[4]

1. Verizon Commc'ns Inc. v. Law Office of Curtis V. Trinko, 540 U.S. 398 (2004). *Trinko* held that a regulated telephone company's alleged refusal to share its network with rivals, as required by the regulatory scheme for the telecommunications industry, did not state an antitrust claim for monopolization where the regulatory framework provided for a non-antitrust means of deterring and remedying harm to competition. In a more recent decision, the Court expanded the antitrust immunity implied by the presence of a parallel regulatory scheme. Credit Suisse Sec. (USA) LLC v. Billing, 127 S.Ct. 2383 (2007).

2. *Trinko*, 540 U.S. at 407.

3. *Id.*

4. *Id.* This observation was unnecessary to reach the decision in the case.

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In that brief passage, Justice Scalia made two controversial claims, one about economics and the other about antitrust law. He argued first that the prospect of achieving monopoly fosters innovation, and, second, that this economic proposition explains one important aspect of antitrust doctrine. The provocative new article by David S. Evans and Keith N. Hylton offers a detailed justification for Scalia's claims (though, surprisingly, without reference to Scalia's views).[5]

Neither Justice Scalia nor Professors Evans and Hylton draw out the implication of these claims for antitrust policy.[6] Indeed, it is difficult for Evans and Hylton to say more about how they would change antitrust law while simultaneously relying on the "revealed preferences" of policy-makers to infer the goals of antitrust, as that method subtly equates "is" with "ought."[7]

But it is evident that the argument will in practice be deployed to justify, on innovation-promoting grounds, the exercise of market power, and, consequently, to call for a relaxation in antitrust enforcement, particularly against monopolization.[8]

This implication was drawn by Assistant Attorney General Thomas Barnett, the current head of the Justice Department's Antitrust Division ("DOJ"). In a recent article on antitrust and innovation, Barnett endorsed Scalia's economic argument from *Trinko*, stating that "the ability to charge monopoly prices, at least for a short while, can be what induces firms to take the risks that produce inno-

5. David S. Evans & Keith N. Hylton, *The Lawful Acquisition and Exercise of Monopoly Power and Its Implications for the Objectives of Antitrust*, 4(2) Competition Pol'y Int'l (2008) [hereinafter Evans & Hylton]. Professors Evans and Hylton do not limit their antitrust law discussion to the Sherman Act §2 rules prohibiting anticompetitive single firm conduct. But the rules regarding monopolization are the focus of much of their article and are emphasized here.

6. *See* Evans & Hylton, at 236 ("We are not advocating lower scrutiny for any particular practice.")

7. The revealed preference approach is predicated either on the dubious assumption that the existing body of law—the product of the past choices of Congress, the enforcement agencies and the courts—successfully implements throughout the economic principles currently accepted by those policy-makers, or on the related and suspect claim that legal and political institutions evolve to capture efficiencies. For criticism of the efficiency view of political institutions, *see, e.g.,* Douglass C. North, Institutions, Institutional Change and Economic Performance 7 (1990) (explaining that North abandoned the efficiency view of institutions when he recognized that rulers devised property rights in their own interests and that transactions costs typically resulted in typically inefficient property rights prevailing); Daron Acemoglu, *Why Not a Political Coase Theorem? Social Conflict, Commitment and Politics*, 31 J. Comp. Econ. 620 (2003); *cf.* Richard E. Wagner, *Common Law, Statute Law and Economic Efficiency*, *in* 1 The New Palgrave Dictionary of Economics and the Law 313 (Peter Newman ed. 1998) (reviewing arguments for and against the efficiency of the common law and statutes); Jürgen G. Backhaus, *Efficient Statute Law*, *in* 2 The New Palgrave Dictionary of Economics and the Law 24 (Peter Newman ed. 1998) (same).

8. *See* Andrew I. Gavil, *Exclusionary Distribution Strategies by Dominant Firms: Striking a Better Balance*, 72 Antitrust L.J. 3, 44 (2004) (arguing that Justice Scalia's "deliberate goal" in *Trinko* was "to build the case for a more tolerant monopolization standard"). It is hard to reconcile the recent concern about the impact of monopolization standards on innovation with the lack of evidence of successful Sherman Act §2 challenges directed at innovative dominant firm conduct.

vation and other efficiencies, which ultimately benefits consumers."[9] Barnett saw that argument as a reason to call for "appropriate caution in enforcement of the antitrust laws against single firm conduct."[10] Consistent with his views, the DOJ has brought no monopolization cases during the George W. Bush administration.[11]

TO THE CONTRARY: NOTHING IS MORE IMPORTANT TO ECONOMIC WELFARE THAN INNOVATION AND GROWTH, AND COMPETITION AND ANTITRUST ENFORCEMENT ARE ESSENTIAL FOR FOSTERING THEM.

This comment critically evaluates Evans and Hylton's defense of Justice Scalia's legal and economic claims, and the policy implication drawn by Assistant Attorney General Barnett. It shows, first, that the legal claim is at best only partially correct, as the conduct requirement for the monopolization offense was importantly prompted by concerns other than for innovation. Second, it shows that the economic claim misleads unless qualified by the observation that the push of competition generally spurs innovation more than the pull of monopoly. Third, it explains why greater attention to fostering innovation does not call for relaxing antitrust enforcement, contrary to the policy implication.

As Evans and Hylton emphasize, innovation is important, and an appropriate concern of antitrust policy. But considerations of "dynamic competition" do not argue against antitrust enforcement. To the contrary: nothing is more important to economic welfare than innovation and growth, and competition and antitrust enforcement are essential for fostering them.

9. Thomas O. Barnett, *Maximizing Welfare Through Technological Innovation*, 15 GEO. MASON L. REV. 1191, 1201 (2008). Barnett prefaced this aspect of his article with an explanation of how competition encourages innovation.

10. *Id*. Others favoring relaxation of antitrust's concern with market power and monopoly argue for less intervention on the ground that markets are self-correcting. *See* Frank Easterbrook, *The Limits of Antitrust*, 63 TEXAS L. REV. 1, 15 (1984) (making self-correction argument). For criticism of this argument, see Ariel Ezrachi & David Gilo, *Are Excessive Prices Really Self-Correcting?*, J. COMP. L. & ECON (forthcoming 2008) *available at* http://ssrn.com/abstract=1237802) (working paper).

11. Although the Justice Department's workload statistics list one monopolization case brought in 2002, that figure appears to be an error. *See* Antitrust Division Workload Statistics, FY 1998-2007 *available at* http://www.usdoj.gov/atr/public/workstats.htm) (last consulted Oct. 13, 2008). In 2007, one West Virginia newspaper's acquisition of its rival and joint venture partner was challenged under the statutes prohibiting anticompetitive mergers and agreements (Clayton Act §7 and Sherman Act §1), along with a Sherman Act §2 count. *U.S. v. Daily Gazette Co.*, No. 2:070329 (S.D. W.Va. filed May 22, 2007). But this is only a technical monopolization case: the monopolization claim is not the gravamen of the violation; the Justice Department's press release emphasizes the acquisition frame for the case, and the Antitrust Division's workload statistics for 2007 do not record it (or any other case) as a monopolization filing. By contrast, the Justice Department brought at least seven monopolization cases during the Clinton administration. William E. Kovacic, *The Modern Evolution of U.S. Competition Policy Enforcement Norms*, 71 ANTITRUST L.J. 377, 449 (2003), reports seven cases and the Antitrust Division's workload statistics as of mid-2001 record eleven Sherman §2 cases filed in district court between 1994 and 2000. *See* Antitrust Division Workload Statistics, FY 1991-2000 *available at* http://web.archive.org/web/20010101000000-20011231235959/http://www.usdoj.gov/atr/public/7344.htm.

II. Why Monopolization Is Not a Status Offense

Professors Evans and Hylton correctly observe that antitrust law does not make mere monopoly pricing illegal. Monopolization is a conduct offense, not a status offense: the monopolization prohibition applies only if the monopolist has also inappropriately obtained or maintained its monopoly power. This doctrinal point was made clear during antitrust's structural era.[12] It was suggested in the seminal monopolization decision, *Alcoa*,[13] and confirmed by the Supreme Court in the still-cited elaboration of monopolization doctrine in *Grinnell*.[14]

Evans and Hylton follow Justice Scalia's *Trinko* dictum in explaining why mere monopoly power is insufficient to prove a Sherman Act §2 violation: they interpret this aspect of the longstanding doctrinal rule as proof that antitrust accepts monopoly when doing so provides incentives for innovation.[15] This interpretation of the mid-twentieth century case law is incomplete. While *Alcoa* recognized the potential for adverse incentive effects of a rule condemning monopoly pricing, it did not articulate clearly what those incentive concerns would be. It is hard to say whether the *Alcoa* court was more concerned that a sleepy monopolist would fail to minimize costs or that the monopolist would fail to pursue the development of new products and processes.[16] Moreover, the no-fault deconcentration proposals of antitrust's structural era—a mainstream idea during the 1970s (though ultimately not adopted by Congress or the courts)—suggest more of a concern with production efficiency than innovation incentives, as those proposals generally

12. Antitrust's "structural era" lasted from the 1940s through the late 1970s. *See generally* Jonathan B. Baker, *A Preface to Post-Chicago Antitrust, in* Post Chicago Developments in Antitrust Analysis 60, 63-64 (Roger van den Bergh, Roberto Pardolesi & Antonio Cucinotta, eds., 2002). Monopolization had previously been recognized as a conduct offense rather than a standard offense in *United States v. Standard Oil Co.*, 221 U.S. 1, 62 (1911) (noting "the omission of any direct prohibition against monopoly in the concrete" from the Sherman Act).

13. United States v. Aluminum Co. Of America, 148 F.2d 416, 430 (2d Cir. 1945) (*Alcoa*) (monopoly power not objectionable when acquired through "superior skill, foresight, and industry"). Ironically, *Alcoa* may have been the structural era monopolization decision that came the closest toward making monopolization a status offense, through an expansive definition of exclusionary conduct. *Cf. In re* E.I. DuPont de Nemours & Co. (TiO_2), 96 F.T.C. 653 (1980) (declining to find monopolization with conduct similar to the basis for a violation in *Alcoa*).

14. United States v. Grinnell Corp., 384 U.S. 563, 570-71 (1966) (distinguishing unlawful conduct from "growth or development as a consequence of a superior product, business acumen, or historic accident").

15. *See* Evans & Hylton, at 220.

16. *Alcoa*, 148 F.2d at 427 ("Many people believe that possession of unchallenged economic power deadens initiative, discourages thrift and depresses energy; that immunity from competition is a narcotic . . . that the spur of constant stress is necessary to counteract an inevitable disposition to leave well enough alone."); *see* Berkey Photo, Inc. v. Eastman Kodak Co., 603 F.2d 263, 273 (2d Cir. 1979) (recognizing that if monopolies were deemed unlawful *per se*, the antitrust laws would "compel the very sloth they were intended to prevent").

exempted large firms benefiting from substantial economies of scale without explicitly exempting firms in industries experiencing rapid innovation.[17]

Evans and Hylton neglect another reason for the acceptance of a conduct predicate for the monopolization offense during the structural era that has nothing to do with incentives to innovate: if mere monopoly pricing were deemed a violation of the antitrust laws, the possible judicial remedies—divestiture and price regulation—would be unattractive, particularly in a private case.[18] Price regulation is particularly troublesome, as courts are ill-suited for determining a reasonable price in the first instance, and, of equal importance, poorly-equipped to adjust the price over time as costs and other market conditions change.[19]

Evans and Hylton's explanation for why monopolization law historically insisted on anticompetitive conduct along with monopoly power—their claim that antitrust law values monopolies for their role in promoting innovation—is far from

17. *See* WHITE HOUSE TASK FORCE REPORT ON ANTITRUST POLICY, *reprinted in* 2 ANTITRUST L. & ECON. REV. 11 (1968-69) (Neal Task Force Report) (proposed "Concentrated Industries Act"); Industrial Reorganization Act, S. 1167, 93rd Cong. (1973) (Hart bill), *reprinted in* INDUSTRIAL CONCENTRATION: THE NEW LEARNING 444 (Harvey J. Goldschmid et. al, eds., 1974); Oliver E. Williamson, *Dominant Firms and the Monopoly Problem: Market Failure Considerations*, 85 HARV. L. REV. 1512, 1525 (1972) (persistent dominance should be presumptively unlawful under Sherman Act §2, rebuttable only by a showing of scale economies, an unexpired patent, or absolute managerial superiority). *But see* CARL KAYSEN & DONALD T. TURNER, ANTITRUST POLICY: AN ECONOMIC AND LEGAL ANALYSIS 111-13 (1959) (recommending deconcentration legislation, but allowing dominant firms to rebut a presumption of unreasonableness by showing that their market power flowed from scale economies or the introduction of new products or processes). *See generally* Harlan M. Blake, *Legislative Proposals for Industrial Concentration*, in INDUSTRIAL CONCENTRATION: THE NEW LEARNING 340 (Harvey J. Goldschmid et. al, eds., 1974); William E. Kovacic, *Failed Expectations: The Troubled Past and Uncertain Future of the Sherman Act as a Tool for Deconcentration*, 74 IOWA L. REV. 1105, 1137 (1989).

18. This concern was highlighted by Donald Turner, one of the most influential antitrust commentators during that period. *See* Donald F. Turner, *The Scope of Antitrust and Other Economic Regulatory Policies*, 82 HARV. L. REV. 1207, 1223-24 (1969). Turner saw no bar to a government monopolization case "based solely on the fact that the monopoly has been retained for a substantial period of time," *id. at 1223*, but emphasized that "there is no public interest" in such a government case "unless an effective remedy is available," *id.* at 1223. He saw restructuring through divestiture or dissolution as the best remedy, *see id.* at 1213-17, and preferred public to private actions against monopolists in part because private plaintiffs, which can seek damages, *id.* at 1223, "may well be biased toward relief" that impaired the efficiency of the surviving firms," *id.* at 1224. Turner was skeptical about the utility of direct regulation of prices and entry, even when conducted by an expert administrative agency rather than a court. *Id.* at 1231. Moreover, Turner had previously rejected the idea that the Sherman Act could go farther, and simply make unlawful "the charging of a monopoly price by a monopolist" on the primary ground that Congress could not possibly have "intended the courts, under the Sherman Act, to act as price regulators," Donald F. Turner, *The Definition of Agreement Under the Sherman Act: Conscious Parallelism and Refusals to Deal*, 75 HARV. L. REV. 655, 669-70 (1962) (stating that "the practical problems imposed on a court would of course be immense").

19. These problems may well be particularly acute in rapidly changing markets where innovation is important, as the reasonable price will turn in part on an assessment that may frustrate judicial determination: identifying the economic cost of investments in research and development, including the competitive return on such investments in the industry at issue after accounting for their risk. But that is a different point from Evans and Hylton's incentive claim.

the only serious candidate. In consequence, Evans and Hylton must argue for their view of appropriate antitrust policy on economic rather than legal grounds.

III. Monopolization Discourages Innovation

Evans and Hylton view antitrust prohibitions as chosen by courts to balance the harms from the exercise of market power against the benefits to innovation that they expect market power to confer.[20] In their view, the exercise of market power creates both a social benefit, in the form of enhanced incentives to innovate, and a social harm, in the form of the cost to consumers resulting from the reduction of output and increase in price within the market.[21] After making that tradeoff, they say, monopolization that may seem harmful when looking only to its effects on price and output within a relevant market might turn out on balance to be beneficial.[22]

The idea that monopoly could be beneficial on innovation-promoting grounds has limited policy relevance for two reasons. First, in practice, even the most aggressive antitrust enforcement regime would not remove entirely the ability of firms, whether dominant or not, to profit from their new ideas, and thus would not completely destroy incentives to innovate. There are in general many important sources of appropriability for innovating firms—including first-mover advantages, intellectual property rights, brand reputation, and the sale of complementary products and services—and it is unlikely that enforcement against monopolization would subvert them all. Even when appropriability is weak, innovation incentives may be strong.[23] With other important sources of appropriability, moreover, the monopolist's incremental incentive to innovate arising from the challenged conduct may be small or even non-existent; one cannot simply assume it is substantial relative to the other welfare losses the same conduct creates.

Second, the economic analysis proffered by Evans and Hylton ignores the possibility—indeed, the likelihood—that the exercise of market power harms aggregate innovation incentives rather than enhancing them. In the particular case of monopolization, if a dominant firm finds a way to raise its expected reward from successful innovation, that conduct may increase the dominant firm's incentive to

20. Evans & Hylton, at 220. They contend that the antitrust laws, like the intellectual property laws, are based on a "fundamental recognition that profits from securing significant market power serve as a reward for expending effort on things that will ultimately benefit society and that securing this effort is worth the price of deviations from the static competitive outcome." Evans & Hylton, at 226.

21. Evans & Hylton, at 220.

22. *See* Evans & Hylton, at 236 (arguing that the optimal penalty for monopolization could turn out to require no penalty at all, or even a subsidy, if the monopolist creates a new product or invests to expand a market).

23. Jonathan B. Baker, *Beyond Schumpeter Vs. Arrow: How Antitrust Fosters Innovation*, 74 ANTITRUST L.J. 575, 580-81 & 581 n.14 (2007).

invest in research and development ("R&D"). But as a guide to antitrust policy, this proposition is incomplete. Whether total industry R&D and the aggregate likelihood of innovation success rise depends on the magnitude of the effect and on the extent to which the dominant firm's conduct simultaneously reduces the incentive of rival firms to invest in R&D. The available empirical evidence resolves the question in favor of competition by showing that as a general rule, greater product market competition strongly encourages innovation and productivity, its close cousin.[24] Hence, even if antitrust is concerned solely with innovation—even if antitrust enforcement is undertaken without regard for the static welfare losses that Evans and Hylton point to as antitrust's justification—antitrust law should still be concerned with monopolization and other exercises of market power.

Antitrust enforcement against monopolization most obviously benefits innovation when it targets "cheap exclusion"—exclusionary practices by a dominant firm that are inexpensive for the dominant firm to implement and have no efficiency justification.[25] When such conduct impedes rival innovation, as by limiting the rival's access to key inputs or the post-innovation market, it reduces the aggregate industry probability of innovation success. The government cases against Microsoft[26] and Rambus,[27] for example, can be understood as challenging cheap exclusion.[28]

ACCORDINGLY, ANTITRUST ENFORCEMENT ATTACKING CHEAP EXCLUSION INCREASES THE AGGREGATE PROBABILITY OF INDUSTRY INNOVATION.

Cheap exclusion benefits an innovative dominant firm by increasing the reward to that firm from its own success in developing new products or processes. But that greater reward makes no difference to the probability of successful dominant firm innovation; it is simply the by-product of conduct that impedes rival innovation with no countervailing efficiency benefit. Accordingly, antitrust enforcement attacking cheap exclusion increases the aggregate probability of industry innovation.[29]

24. *See generally id.* at 583-86 (2007) (surveying literature). Additional empirical work on this topic would be useful. *Cf.* Evans & Hylton, at 240 (encouraging academic economists working on antitrust-related issues to pay more attention to dynamic competition).

25. Susan A. Creighton, D. Bruce Hoffman, Thomas G. Krattenmaker & Ernest A. Nagata, *Cheap Exclusion*, 72 ANTITRUST L.J. 975 (2005).

26. *See* United States v. Microsoft Corp., 253 F. 3d 34 (D.C. Cir. 2004).

27. Rambus Inc., 2007-1 Trade Cas. (CCH) ¶75,585 (2006), *rev'd Rambus Inc. v. FTC*, 522 F.3d 456 (D.C. Cir. 2008).

28. *See* Baker, *supra* note 23, at 592-93.

29. For a technical statement of this argument, see Jonathan B. Baker, *"Dynamic Competition" Does Not Excuse Monopolization* 13-15 (Oct. 15, 2008), *available at* http://ssrn.com/abstract=1285223.

Suppose instead that the greater reward to the dominant firm from its successful innovation raises the incentive of the dominant firm to invest in research and development, consistent with the dynamic Justice Scalia and Professors Evans and Hylton emphasize. Antitrust enforcement can still lead to greater industry innovation, notwithstanding some reduction in the dominant firm's incentive to invest in R&D, because enforcement may simultaneously increase the R&D investment incentives of the dominant firm's rivals.[30]

Even if enforcement reduces a dominant firm's reward from innovation substantially, moreover, the marginal benefit of that firm's R&D investments need not decline markedly, so enforcement may not greatly lessen the dominant firm's likelihood of innovation success.[31] This idea may explain why antitrust enforcers have paid attention to monopolization allegations in "winner take all" (or "winner take most") markets, such as operating system software or microprocessors.[32] In those markets, the "prize" for successful innovation by the dominant firm is likely to remain large even after a monopolization case, so antitrust enforcement is likely to make little difference to the dominant firm's incentive to innovate.[33]

At the same time, the increased product market competition that results from antitrust enforcement may provide strong encouragement to R&D by the dominant firm's rivals, and consequently generate a substantial increase in rival prospects for innovation success. If so, the greater competition resulting from antitrust enforcement against monopolization would increase the aggregate odds of innovation success in the market as a whole.[34] This outcome would be contrary to what Evans and Hylton suppose, but it is consistent with the empirical evidence that competition spurs innovation.

30. Increased product market competition, as may result from antitrust enforcement, affects every firm's incentives to innovate in two ways: greater pre-innovation competition encourages innovation by feeding each firm's desire to escape product market competition, but it also discourages innovation by increasing firm fears that post-innovation competition will limit the profits from investment in R&D. The latter force is emphasized by Justice Scalia and Professors Evans and Hylton, but the desire to escape competition is often more important. *See generally* Baker, *supra* note 23. Antitrust enforcement may also encourage innovation by protecting competition in innovation markets (that is, by fostering competition in innovation itself). *Id.*

31. *Cf.* Gavil, *supra* note 8, at 43 (most innovation is encouraged by the prospect of profits rather than the prospect of monopoly profits). Similarly, the granting of intellectual property rights does not equate to the award of monopoly profits. It is now well established in antitrust, for example, that patents do not necessarily confer monopoly power.

32. *See, e.g.* United States v. Microsoft Corp., 253 F. 3d 34 (D.C. Cir. 2004) (exclusionary conduct by dominant firm in operating system software); In the Matter of Intel Corp. 128 F.T.C. 213 (1999) (exclusionary conduct by dominant firm in microprocessors).

33. *See* Baker, *supra* note 23, at 593-94.

34. For a technical statement of this argument, see Jonathan B. Baker, *"Dynamic Competition" Does Not Excuse Monopolization* 15-21 (Oct. 15, 2008), *available at* http://ssrn.com/abstract=1285223.

IV. Conclusion

Justice Scalia, supported by Professors Evans and Hylton, essentially argues that monopolization cases are brought in spite of their deleterious effects on incentives to innovate. That argument reflects an incomplete view of antitrust history, economic theory and the empirical literature. It takes one side of an old debate between Schumpeter and Arrow that today's antitrust policy can and should go beyond.[35]

GREATER ATTENTION TO "DYNAMIC COMPETITION," AS PROFESSORS EVANS AND HYLTON RECOMMEND, PROVIDES NO JUSTIFICATION FOR RELAXING ANTITRUST'S LONGSTANDING CONCERN WITH MONOPOLIZATION.

As a general matter, current antitrust rules target conduct and industries where antitrust intervention will tend to encourage innovation—as by attacking cheap exclusion, for example, or monopolization in winner-take-all markets.[36] Greater attention to "dynamic competition," as Professors Evans and Hylton recommend, provides no justification for relaxing antitrust's longstanding concern with monopolization.

35. *See generally* Baker, *supra* note 23.

36. *See generally id.* at 588-600. *Cf.* Dennis W. Carlton & Ken Heyer, *Appropriate Antitrust Policy Towards Single-Firm Conduct* (U.S. Department of Justice, Economic Analysis Group Discussion Paper EAG 08-2 March 2008) (arguing that current U.S. antitrust policy toward monopolization properly allows dominant firms to extract monopoly rents so long as those firms do not impair the competitive constraints imposed by rivals) *available at* http://www.usdoj.gov/atr/public/eag/231610.pdf.

Exhibit 5 to the Cross-Examination of Keith Hylton

CANADA

CONSOLIDATION

CODIFICATION

Competition Act

Loi sur la concurrence

R.S.C., 1985, c. C-34

L.R.C. (1985), ch. C-34

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When persons deemed to be affiliated

(6) For the purposes of subsection (4) in its application to market restriction, where there is an agreement whereby one person (the "first" person) supplies or causes to be supplied to another person (the "second" person) an ingredient or ingredients that the second person processes by the addition of labour and material into an article of food or drink that he then sells in association with a trademark that the first person owns or in respect of which the first person is a registered user, the first person and the second person are deemed, in respect of the agreement, to be affiliated.

Inferences

(7) In considering an application by a person granted leave under section 103.1, the Tribunal may not draw any inference from the fact that the Commissioner has or has not taken any action in respect of the matter raised by the application.

R.S., 1985, c. C-34, s. 77; R.S., 1985, c. 19 (2nd Supp.), s. 45; 1999, c. 2, ss. 23, 37, c. 31, s. 52(F); 2002, c. 16, ss. 11.2, 11.3; 2014, c. 20, s. 366(E); 2018, c. 8, s. 113; 2024, c. 15, s. 246.

Cas où les personnes sont réputées être affiliées

(6) Pour l'application du paragraphe (4) en ce qui concerne la limitation du marché, dans le cadre de tout accord par lequel une personne (la « première » personne) fournit ou fait fournir à une autre personne (la « seconde » personne) un ou des ingrédients que cette dernière transforme, après apport de travail et de matériaux, en aliments ou boissons qu'elle vend sous une marque de commerce appartenant à la première personne ou dont cette dernière est l'usager inscrit, ces deux personnes sont, à l'égard de cet accord, réputées être affiliées.

Application

(7) Le Tribunal saisi d'une demande présentée par une personne autorisée en vertu de l'article 103.1 ne peut tirer quelque conclusion que ce soit du fait que le commissaire a accompli un geste ou non à l'égard de l'objet de la demande.

L.R. (1985), ch. C-34, art. 77; L.R. (1985), ch. 19 (2e suppl.), art. 45; 1999, ch. 2, art. 23 et 37, ch. 31, art. 52(F); 2002, ch. 16, art. 11.2 et 11.3; 2014, ch. 20, art. 366(A); 2018, ch. 8, art. 113; 2024, ch. 15, art. 246.

Abuse of Dominant Position

Definition of *anti-competitive act*

78 (1) For the purposes of section 79, ***anti-competitive act*** means any act intended to have a predatory, exclusionary or disciplinary negative effect on a competitor, or to have an adverse effect on competition, and includes any of the following acts:

(a) squeezing, by a vertically integrated supplier, of the margin available to an unintegrated customer who competes with the supplier, for the purpose of impeding or preventing the customer's entry into, or expansion in, a market;

(b) acquisition by a supplier of a customer who would otherwise be available to a competitor of the supplier, or acquisition by a customer of a supplier who would otherwise be available to a competitor of the customer, for the purpose of impeding or preventing the competitor's entry into, or eliminating the competitor from, a market;

(c) freight equalization on the plant of a competitor for the purpose of impeding or preventing the competitor's entry into, or eliminating the competitor from, a market;

(d) use of fighting brands introduced selectively on a temporary basis to discipline or eliminate a competitor;

Abus de position dominante

Définition de *agissement anti-concurrentiel*

78 (1) Pour l'application de l'article 79, ***agissement anti-concurrentiel*** s'entend de tout agissement destiné à avoir un effet négatif visant l'exclusion, l'éviction ou la mise au pas d'un concurrent, ou à nuire à la concurrence, notamment les agissements suivants :

a) la compression, par un fournisseur intégré verticalement, de la marge bénéficiaire accessible à un client non intégré qui est en concurrence avec ce fournisseur, dans les cas où cette compression a pour but d'empêcher l'entrée ou la participation accrue du client dans un marché ou encore de faire obstacle à cette entrée ou à cette participation accrue;

b) l'acquisition par un fournisseur d'un client qui serait par ailleurs accessible à un concurrent du fournisseur, ou l'acquisition par un client d'un fournisseur qui serait par ailleurs accessible à un concurrent du client, dans le but d'empêcher ce concurrent d'entrer dans un marché, dans le but de faire obstacle à cette entrée ou encore dans le but de l'éliminer d'un marché;

c) la péréquation du fret en utilisant comme base l'établissement d'un concurrent dans le but d'empêcher son entrée dans un marché ou d'y faire obstacle ou encore de l'éliminer d'un marché;

(e) pre-emption of scarce facilities or resources required by a competitor for the operation of a business, with the object of withholding the facilities or resources from a market;

(f) buying up of products to prevent the erosion of existing price levels;

(g) adoption of product specifications that are incompatible with products produced by any other person and are designed to prevent his entry into, or to eliminate him from, a market;

(h) requiring or inducing a supplier to sell only or primarily to certain customers, or to refrain from selling to a competitor, with the object of preventing a competitor's entry into, or expansion in, a market;

(i) selling articles at a price lower than the acquisition cost for the purpose of disciplining or eliminating a competitor;

(j) a selective or discriminatory response to an actual or potential competitor for the purpose of impeding or preventing the competitor's entry into, or expansion in, a market or eliminating the competitor from a market; and

(k) directly or indirectly imposing excessive and unfair selling prices.

(2) [Repealed, 2009, c. 2, s. 427]

R.S., 1985, c. 19 (2nd Supp.), s. 45; 2000, c. 15, s. 13; 2009, c. 2, s. 427; 2022, c. 10, s. 261; 2023, c. 31, s. 7.1.

d) l'utilisation sélective et temporaire de marques de combat destinées à mettre au pas ou à éliminer un concurrent;

e) la préemption d'installations ou de ressources rares nécessaires à un concurrent pour l'exploitation d'une entreprise, dans le but de retenir ces installations ou ces ressources hors d'un marché;

f) l'achat de produits dans le but d'empêcher l'érosion des structures de prix existantes;

g) l'adoption, pour des produits, de normes incompatibles avec les produits fabriqués par une autre personne et destinées à empêcher l'entrée de cette dernière dans un marché ou à l'éliminer d'un marché;

h) le fait d'inciter un fournisseur à ne vendre uniquement ou principalement qu'à certains clients, ou à ne pas vendre à un concurrent ou encore le fait d'exiger l'une ou l'autre de ces attitudes de la part de ce fournisseur, afin d'empêcher l'entrée ou la participation accrue d'un concurrent dans un marché;

i) le fait de vendre des articles à un prix inférieur au coût d'acquisition de ces articles dans le but de discipliner ou d'éliminer un concurrent;

j) la réponse sélective ou discriminatoire à un concurrent actuel ou potentiel, visant à entraver ou à empêcher l'entrée ou l'expansion d'un concurrent sur un marché ou à l'éliminer du marché;

k) l'imposition directe ou indirecte de prix de vente excessifs et injustes.

(2) [Abrogé, 2009, ch. 2, art. 427]

L.R. (1985), ch. 19 (2e suppl.), art. 45; 2000, ch. 15, art. 13; 2009, ch. 2, art. 427; 2022, ch. 10, art. 261; 2023, ch. 31, art. 7.1.

Prohibition if abuse of dominant position

79 (1) On application by the Commissioner or a person granted leave under section 103.1, if the Tribunal finds that one or more persons substantially or completely control a class or species of business throughout Canada or any area of Canada, it may make an order prohibiting the person or persons from engaging in a practice or conduct if it finds that the person or persons have engaged in or are engaging in

(a) a practice of anti-competitive acts; or

(b) conduct

(i) that had, is having or is likely to have the effect of preventing or lessening competition substantially

Ordonnance d'interdiction : abus de position dominante

79 (1) Lorsque, à la suite d'une demande du commissaire ou d'une personne autorisée en vertu de l'article 103.1, il conclut qu'une ou plusieurs personnes contrôlent sensiblement ou complètement une catégorie ou espèce d'entreprises à la grandeur du Canada ou d'une de ses régions et adoptent ou ont adopté une pratique ou un comportement ci-après, le Tribunal peut rendre une ordonnance leur interdisant d'adopter la pratique ou le comportement :

a) une pratique d'agissements anti-concurrentiels;

b) un comportement qui a, a eu ou aura vraisemblablement pour effet d'empêcher ou de diminuer sensiblement la concurrence dans un marché dans lequel la

in a market in which the person or persons have a plausible competitive interest, and

(ii) the effect is not a result of superior competitive performance.

Additional or alternative order

(2) If, on an application under subsection (1), the Tribunal finds that a practice of anti-competitive acts amounts to conduct that has had or is having the effect of preventing or lessening competition substantially in a market in which the person or persons have a plausible competitive interest and that an order under subsection (1) is not likely to restore competition in that market, the Tribunal may, in addition to or in lieu of making an order under subsection (1), make an order directing any or all persons against whom an order is sought to take actions, including the divestiture of assets or shares, that are reasonable and necessary to overcome the effects of the practice in that market.

Limitation

(3) In making an order under subsection (2), the Tribunal shall make the order in such terms as will in its opinion interfere with the rights of any person to whom the order is directed or any other person affected by it only to the extent necessary to achieve the purpose of the order.

Administrative monetary penalty

(3.1) If the Tribunal finds that a person has engaged in or is engaging in a practice of anti-competitive acts that amounts to conduct that has had or is having the effect of preventing or lessening competition substantially in a market in which the person has a plausible competitive interest and it makes an order against the person under subsection (1) or (2), it may also order them to pay, in any manner that it specifies, an administrative monetary penalty in an amount not exceeding the greater of

(a) $25,000,000 and, for each subsequent order under either of those subsections, an amount not exceeding $35,000,000, and

(b) three times the value of the benefit derived from the anti-competitive practice, or, if that amount cannot be reasonably determined, 3% of the person's annual worldwide gross revenues.

personne ou les personnes ont un intérêt concurrentiel valable, cet effet ne résultant pas d'un rendement concurrentiel supérieur.

Ordonnance supplémentaire ou substitutive

(2) Dans les cas où, à la suite de la demande visée au paragraphe (1), il conclut qu'une pratique d'agissements anti-concurrentiels constitue un comportement qui a eu ou a pour effet d'empêcher ou de diminuer sensiblement la concurrence dans un marché dans lequel la personne a un intérêt concurrentiel valable et qu'une ordonnance rendue aux termes du paragraphe (1) n'aura vraisemblablement pas pour effet de rétablir la concurrence dans ce marché, le Tribunal peut, en sus ou au lieu de rendre l'ordonnance prévue au paragraphe (1), rendre une ordonnance enjoignant à l'une ou l'autre ou à l'ensemble des personnes visées par la demande d'ordonnance de prendre des mesures raisonnables et nécessaires dans le but d'enrayer les effets de la pratique sur le marché en question et, notamment, de se départir d'éléments d'actif ou d'actions.

Restriction

(3) Lorsque le Tribunal rend une ordonnance en application du paragraphe (2), il le fait aux conditions qui, à son avis, ne porteront atteinte aux droits de la personne visée par cette ordonnance ou à ceux des autres personnes touchées par cette ordonnance que dans la mesure de ce qui est nécessaire à la réalisation de l'objet de l'ordonnance.

Sanction administrative pécuniaire

(3.1) S'il conclut qu'une personne adopte ou a adopté une pratique d'agissements anti-concurrentiels constituant un comportement qui a eu ou a pour effet d'empêcher ou de diminuer sensiblement la concurrence dans un marché dans lequel la personne a un intérêt concurrentiel valable et rend une ordonnance en vertu de l'un des paragraphes (1) ou (2) contre la personne, le Tribunal peut aussi lui ordonner de payer, selon les modalités qu'il peut préciser, une sanction administrative pécuniaire maximale qui ne peut dépasser le plus élevé des montants suivants :

a) 25 000 000 $ et, pour toute ordonnance subséquente rendue en vertu de l'un de ces paragraphes, 35 000 000 $;

b) trois fois la valeur du bénéfice sur lequel la pratique a eu une incidence ou, si ce montant ne peut pas être déterminé raisonnablement, trois pour cent des recettes globales brutes annuelles de cette personne.

Aggravating or mitigating factors

(3.2) In determining the amount of an administrative monetary penalty, the Tribunal shall take into account any evidence of the following:

(a) the effect on competition in the relevant market;

(b) the gross revenue from sales affected by the practice;

(c) any actual or anticipated profits affected by the practice;

(d) the financial position of the person against whom the order is made;

(d.1) the amount that the person against whom the order is made is required to pay under an order made under subsection (4.1);

(e) the history of compliance with this Act by the person against whom the order is made; and

(f) any other relevant factor.

Purpose of order

(3.3) The purpose of an order made against a person under subsection (3.1) is to promote practices by that person that are in conformity with the purposes of this section and not to punish that person.

Factors to be considered

(4) In determining, for the purposes of subsections (1) and (2), whether conduct has had, is having or is likely to have the effect of preventing or lessening competition substantially in a market, the Tribunal may consider

(a) the effect of the conduct on barriers to entry in the market, including network effects;

(b) the effect of the conduct on price or non-price competition, including quality, choice or consumer privacy;

(c) the nature and extent of change and innovation in a relevant market; and

(d) any other factor that is relevant to competition in the market that is or would be affected by the conduct.

Additional order — person granted leave

(4.1) If, as the result of an application by a person granted leave under section 103.1, the Tribunal finds that a

Facteurs à prendre en compte

(3.2) Pour la détermination du montant de la sanction administrative pécuniaire, il est tenu compte des éléments suivants :

a) l'effet sur la concurrence dans le marché pertinent;

b) le revenu brut provenant des ventes sur lesquelles la pratique a eu une incidence;

c) les bénéfices réels ou prévus sur lesquels la pratique a eu une incidence;

d) la situation financière de la personne visée par l'ordonnance;

d.1) la somme que la personne visée par l'ordonnance est tenue de payer au titre d'une ordonnance rendue en vertu du paragraphe (4.1);

e) le comportement antérieur de la personne visée par l'ordonnance en ce qui a trait au respect de la présente loi;

f) tout autre élément pertinent.

But de la sanction

(3.3) La sanction prévue au paragraphe (3.1) vise à encourager la personne visée par l'ordonnance à adopter des pratiques compatibles avec les objectifs du présent article et non pas à la punir.

Facteurs à considérer

(4) Pour l'application des paragraphes (1) et (2), lorsqu'il décide de la question de savoir si un comportement a eu, a ou aura vraisemblablement pour effet d'empêcher ou de diminuer sensiblement la concurrence dans un marché, le Tribunal peut tenir compte des facteurs suivants :

a) les entraves à l'accès au marché, y compris les effets de réseau;

b) tout effet du comportement sur la concurrence hors prix ou par les prix, notamment la qualité, le choix ou la vie privée des consommateurs;

c) la nature et la portée des changements et des innovations dans tout marché pertinent;

d) tout autre facteur qui est relatif à la concurrence dans le marché et qui est ou serait touché par le comportement.

Ordonnance additionnelle — personne autorisée

(4.1) Si, à la suite d'une demande présentée par une personne autorisée en vertu de l'article 103.1, il conclut

person has engaged in or is engaging in a practice of anti-competitive acts that amounts to conduct that has had or is having the effect of preventing or lessening competition substantially in a market in which the person has a plausible competitive interest and it makes an order under subsection (1) or (2) against the person, it may also order the person against whom the order is made to pay an amount, not exceeding the value of the benefit derived from the conduct that is the subject of the order, to be distributed among the applicant and any other person affected by the conduct, in any manner that the Tribunal considers appropriate.

Implementation of the order

(4.2) The Tribunal may specify in an order made under subsection (4.1) any term that it considers necessary for the order's implementation, including any term referred to in any of paragraphs 75(1.3)(a) to (g).

Exception

(5) For the purpose of this section, an act engaged in pursuant only to the exercise of any right or enjoyment of any interest derived under the *Copyright Act*, *Industrial Design Act*, *Integrated Circuit Topography Act*, *Patent Act*, *Trademarks Act* or any other Act of Parliament pertaining to intellectual or industrial property is not an anti-competitive act.

Limitation period

(6) No application may be made under this section in respect of a practice of anti-competitive acts or conduct more than three years after the practice or conduct has ceased.

Where proceedings commenced under section 45, 49, 76, 90.1 or 92

(7) No application may be made under this section against a person on the basis of facts that are the same or substantially the same as the facts on the basis of which

(a) proceedings have been commenced against that person under section 45 or 49; or

(b) an order against that person has been made under section 76, 90.1 or 92.

Inferences

(8) In considering an application by a person granted leave under section 103.1, the Tribunal may not draw any inference from the fact that the Commissioner has or has

qu'une personne adopte ou a adopté une pratique d'agissements anti-concurrentiels constituant un comportement qui a eu ou a pour effet d'empêcher ou de diminuer sensiblement la concurrence dans un marché dans lequel la personne a un intérêt concurrentiel valable et rend une ordonnance en vertu des paragraphes (1) ou (2) contre la personne, le Tribunal peut également lui ordonner de payer une somme — ne pouvant excéder la valeur du bénéfice tiré du comportement visé par l'ordonnance — devant être répartie, de la manière qu'il estime indiquée, entre le demandeur et toute autre personne touchée par le comportement.

Exécution de l'ordonnance

(4.2) Le Tribunal peut, dans l'ordonnance rendue en vertu du paragraphe (4.1), préciser les conditions qu'il estime nécessaires à son exécution, notamment tout élément prévu à l'un des alinéas 75(1.3)a) à g).

Exception

(5) Pour l'application du présent article, un agissement résultant du seul fait de l'exercice de quelque droit ou de la jouissance de quelque intérêt découlant de la *Loi sur les brevets*, de la *Loi sur les dessins industriels*, de la *Loi sur le droit d'auteur*, de la *Loi sur les marques de commerce*, de la *Loi sur les topographies de circuits intégrés* ou de toute autre loi fédérale relative à la propriété intellectuelle ou industrielle ne constitue pas un agissement anti-concurrentiel.

Prescription

(6) Aucune demande ne peut être présentée en vertu du présent article à l'égard d'une pratique d'agissements anti-concurrentiels ou d'un comportement, si la pratique ou le comportement en question a cessé depuis plus de trois ans.

Procédures en vertu des articles 45, 49, 76, 90.1 ou 92

(7) Aucune demande à l'endroit d'une personne ne peut être présentée au titre du présent article si les faits au soutien de la demande sont les mêmes ou essentiellement les mêmes que ceux qui ont été allégués au soutien :

a) d'une procédure engagée à l'endroit de cette personne en vertu des articles 45 ou 49;

b) d'une ordonnance rendue contre cette personne en vertu des articles 76, 90.1 ou 92.

Application

(8) Le Tribunal saisi d'une demande présentée par une personne autorisée en vertu de l'article 103.1 ne peut tirer quelque conclusion que ce soit du fait que le commissaire

not taken any action in respect of the matter raised by the application.

R.S., 1985, c. 19 (2nd Supp.), s. 45; 1990, c. 37, s. 31; 1999, c. 2, s. 37; 2002, c. 16, s. 11.4; 2009, c. 2, s. 428; 2014, c. 20, s. 366(E); 2022, c. 10, s. 262; 2023, c. 31, s. 7.2; 2023, c. 31, s. 12.1; 2024, c. 15, s. 247.

a accompli un geste ou non à l'égard de l'objet de la demande.

L.R. (1985), ch. 19 (2e suppl.), art. 45; 1990, ch. 37, art. 31; 1999, ch. 2, art. 37; 2002, ch. 16, art. 11.4; 2009, ch. 2, art. 428; 2014, ch. 20, art. 366(A); 2022, ch. 10, art. 262; 2023, ch. 31, art. 7.2; 2023, ch. 31, art. 12.1; 2024, ch. 15, art. 247.

Unpaid monetary penalty

79.1 The amount of an administrative monetary penalty imposed on a person under subsection 79(3.1) is a debt due to Her Majesty in right of Canada and may be recovered as such from that person in a court of competent jurisdiction.

2002, c. 16, s. 11.5; 2018, c. 8, s. 114(E).

Sanctions administratives pécuniaires impayées

79.1 Les sanctions administratives pécuniaires imposées au titre du paragraphe 79(3.1) constituent des créances de Sa Majesté du chef du Canada, dont le recouvrement peut être poursuivi à ce titre devant tout tribunal compétent.

2002, ch. 16, art. 11.5; 2018, ch. 8, art. 114(A).

Delivered Pricing

Prix à la livraison

Definition of *delivered pricing*

80 (1) For the purposes of section 81, ***delivered pricing*** means the practice of refusing a customer, or a person seeking to become a customer, delivery of an article at any place in which the supplier engages in a practice of making delivery of the article to any other of the supplier's customers on the same trade terms that would be available to the first-mentioned customer if his place of business were located in that place.

Définition de *prix à la livraison*

80 (1) Aux fins de l'article 81, ***prix à la livraison*** s'entend de la pratique de refuser à un client, ou à une personne qui cherche à devenir un client, la livraison d'un article en un endroit où le fournisseur s'adonne à une pratique d'effectuer la livraison de cet article à l'un quelconque de ses autres clients aux conditions de commerce qui seraient accessibles au client qui fait l'objet du refus si son entreprise était située à cet endroit.

Definition of *trade terms*

(2) For the purposes of subsection (1), the expression ***trade terms*** means terms in respect of payment, units of purchase and reasonable technical and servicing requirements.

R.S., 1985, c. 19 (2nd Supp.), s. 45.

Définition de *conditions de commerce*

(2) Pour l'application du paragraphe (1), ***conditions de commerce*** s'entend des conditions relatives au paiement, aux quantités unitaires d'achat et aux exigences raisonnables d'ordre technique ou d'entretien.

L.R. (1985), ch. 19 (2e suppl.), art. 45.

Delivered pricing

81 (1) Where, on application by the Commissioner, the Tribunal finds that delivered pricing is engaged in by a major supplier of an article in a market or is widespread in a market with the result that a customer, or a person seeking to become a customer, is denied an advantage that would otherwise be available to him in the market, the Tribunal may make an order prohibiting all or any of such suppliers from engaging in delivered pricing.

Prix à la livraison

81 (1) Dans les cas où, à la suite d'une demande du commissaire, le Tribunal conclut que le prix à la livraison est appliqué par un fournisseur important d'un article dans un marché ou qu'il est très répandu dans un marché avec la conséquence qu'un client, ou une personne désirant devenir un client, se voit refuser un avantage qui lui serait autrement accessible dans ce marché, il peut rendre une ordonnance interdisant à l'ensemble ou à l'un quelconque de ces fournisseurs d'appliquer le prix à la livraison.

Exception where significant capital investment needed

(2) No order shall be made against a supplier under this section where the Tribunal finds that the supplier could not accommodate any additional customers at a locality without making significant capital investment at that locality.

Exception : nécessité d'investissement en capital

(2) Le Tribunal ne rend pas d'ordonnance contre un fournisseur en application du présent article s'il conclut que ce fournisseur ne pouvait pas servir de clients supplémentaires en un lieu donné sans pour cela y engager un investissement en capital relativement important.

Exhibit 6 to the Cross-Examination of Keith Hylton

Abuse of Dominance Enforcement Guidelines



Enforcement guidelines

March 7, 2019

Changes to the *Competition Act*

Following recent changes to the *Competition Act*, the Competition Bureau is reviewing its guidelines and will update them to ensure clarity and transparency for Canadians.

For more information on the changes, please consult our guides:

- **Guide to the June 2024 amendments to the *Competition Act***
- **Guide to the December 2023 amendments to the *Competition Act***
- **Guide to the 2022 amendments to the *Competition Act***

Preface

The Competition Bureau (the "Bureau"), as an independent law enforcement agency, ensures that Canadian businesses and consumers prosper in a competitive and innovative marketplace. Headed by the Commissioner of

Competition (the "Commissioner"), the Bureau investigates anti-competitive practices and promotes compliance with the laws under its jurisdiction, including the *Competition Act* (the "Act"). [1]

Competition among firms underpins a robust economy, incentivizing the creation of value and rewarding entrepreneurship and innovation. When firms compete on the merits, market forces generally deliver the most efficient and beneficial economic outcomes for society.

In some cases, however, dominant firms can frustrate this process by engaging in conduct that undermines competitive market forces, leading to inefficient outcomes. In these rare circumstances, the Bureau may rely upon the abuse of dominance (and other) provisions of the Act to address specific conduct and restore the competitive process.

These guidelines describe the Bureau's general approach to enforcing the abuse of dominance provisions (sections 78 and 79 of the Act). They supersede all previous guidelines and statements of the Commissioner or other Bureau officials regarding the administration and enforcement of the Act's abuse of dominance provisions.

The Abuse of Dominance Enforcement Guidelines do not replace the advice of legal counsel and are not intended to restate the law or to constitute a binding statement of how the Commissioner will proceed in specific matters. The decisions of the Commissioner and the ultimate resolution of issues will depend on the particular circumstances of the matter in question.

Throughout these guidelines, judicial decisions are referenced by abbreviations. Full citations may be found at the end of the document. Any reference to jurisprudence represents the Bureau's interpretation of the law.

Final interpretation of the law is the responsibility of the Competition Tribunal (the "Tribunal") and the courts.

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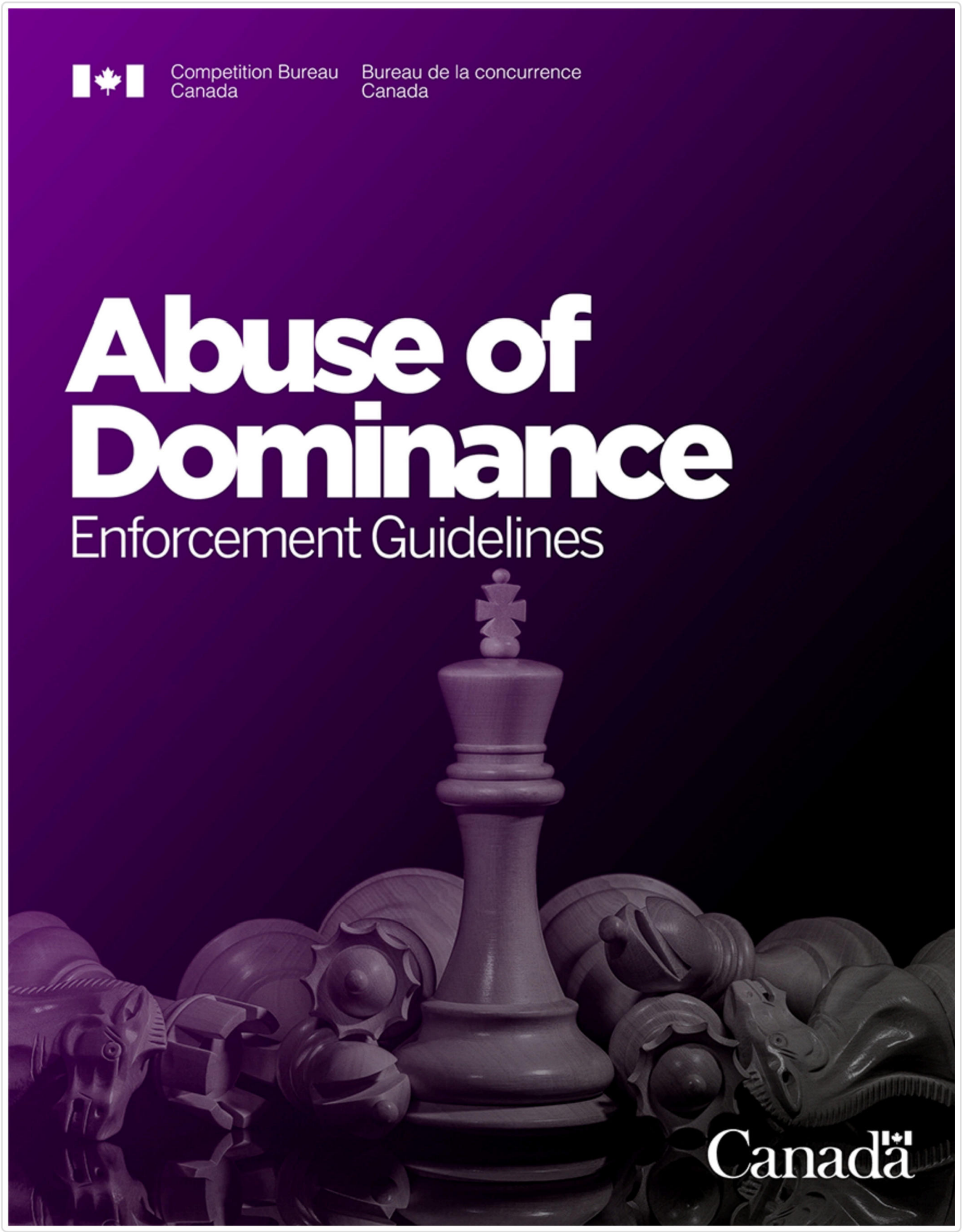
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Executive Summary

i. Abuse of a dominant position occurs when a dominant firm or a dominant group of firms engages in a practice of anti-competitive acts, with the result that competition has been, is, or is likely to be prevented or lessened substantially in a market. Simply being a dominant firm, or even a monopoly, does not in and of itself engage the abuse of dominance provisions of the Act.

ii. Three elements must be established to constitute an abuse of dominance under section 79 of the Act:

- one or more persons must substantially or completely control a class or species of business throughout Canada or any area thereof;
- that person or those persons must have engaged in (within the previous three years) or be engaging in a practice of anti-competitive acts; and
- the practice must have had, be having or be likely to have the effect of preventing or lessening competition substantially in a market.

iii. To evaluate the first element, dominance, the Bureau generally first defines a market(s), and then evaluates whether the allegedly dominant firm (or firms) substantially or completely controls that market, i.e., has a substantial degree of market power within that market. In this context, markets are defined in reference to both a product and geographic

dimension, based on demand substitution in the absence of alleged anti-competitive conduct. The Bureau then considers evidence of the existence and magnitude of market power, such as market shares and barriers to entry.

iv. The second element considers the purpose of the impugned acts: whether the dominant firm (or firms) has engaged in a practice of conduct intended to have a predatory, exclusionary or disciplinary negative effect on a competitor. Exclusionary acts may make current or potential competitors less effective, for example by increasing their costs. Predatory acts involve a firm deliberately setting the price of a product(s) below an appropriate measure of its own cost to eliminate, discipline, or deter entry or expansion of a competitor. Disciplinary acts involve actions intended to dissuade an actual or potential competitor from competing vigorously, or otherwise disrupting the status quo in a market.

v. When evaluating the purpose of an act, the Bureau considers both subjective evidence of intent (for example, business documents describing the purpose of an act) as well as objective evidence in the form of the reasonably foreseeable consequences of an act. The Bureau will weigh any evidence of anti-competitive intent against evidence that the act was engaged in pursuant to a legitimate business justification, that is, evidence that indicates the purpose of the act was efficiency-enhancing or pro-competitive.

vi. The final element involves an analysis of whether competition – on prices, quality, innovation, or any other dimension of competition [2] – would be substantially greater in a market in the absence of the anti-competitive conduct. This assessment is a relative one, comparing the level of competition in a market with and without the alleged anti-competitive conduct, rather than an assessment of whether the absolute

level of competition in a market is sufficient. The Bureau considers effects on both static competition (e.g., short-run prices and output), as well as dynamic competition (e.g., rivalry driven by product or process innovation).

vii. On application to the Tribunal, the Bureau must establish each element of section 79 on the balance of probabilities. To this end, when evaluating conduct under section 79, the Bureau considers whether clear, convincing, and cogent evidence exists in support of each element. The Bureau evaluates the body of evidence on the whole, and may consider the same evidence in reference to more than one element. As a result, the Bureau's analysis of different elements is often interconnected.

viii. Where all three elements of section 79 are present, the Tribunal may prohibit the person (or persons) who engaged in the conduct from continuing to do so. In addition, or alternatively, if the Tribunal concludes that a prohibition order is not likely to restore competition, it may make an order directing the person (or persons) who engaged in the conduct to take any action that is reasonable and necessary to overcome the anti-competitive effects of the practice, including the divestiture of assets or shares. Finally, if the Tribunal issues a remedial order, it may also order the respondent to pay an administrative monetary penalty of up to $10 million (or $15 million for each subsequent order) to promote practices by that person (or persons) that are in conformity with the purposes of section 79.

ix. When enforcing section 79, a significant consideration for the Bureau is to avoid chilling or deterring pro-competitive or efficiency-enhancing conduct. The Bureau recognizes that it is often challenging to distinguish anti-competitive conduct from aggressive competition on the merits, as in many cases the goal of aggressive competition is to marginalize rivals

or eliminate them from a market. The Bureau recognizes that firms may acquire a dominant position by simply out-competing their rivals, for example, by offering higher quality products to consumers at a lower price. In these cases, sanctioning firms for simply being dominant would undermine incentives to innovate, outperform rivals and engage in vigorous competition. Such vigorous competition is the sort of competitive dynamic that the Act is designed to preserve and, where possible, enhance, as it ultimately leads to a more efficient allocation of resources.

x. In considering enforcement action under section 79 of the Act, the Bureau carefully evaluates allegations of abuse of dominance on a case-by-case basis, in the context of structural and other market-specific characteristics. In the course of an examination or inquiry, the Bureau will typically afford parties the opportunity to respond to the Bureau's concerns regarding alleged contraventions of section 79 and discuss an appropriate resolution to address them.

1. Dominance

1. Paragraph 79(1)(a) of the Act requires an assessment of whether "one or more persons substantially or completely control, throughout Canada or any area thereof, a class or species of business." In other words, this first element of the Act's abuse of dominance provision requires a finding of "dominance".

2. Four factors are relevant to assessing dominance:

    i. a "class or species of business" – generally, a product market;

    ii. "in Canada or any area thereof" – generally, a geographic market;

    iii. "control" – a substantial degree of market power; and

iv. "one or more persons" – joint dominance. [3]

3. Market definition in abuse of dominance cases is an analytical tool that may assist with the determination of whether a firm is dominant. [4] The Tribunal has recognized that often it is neither possible nor necessary to precisely define a market (or markets) in proceedings under section 79. [5] In some cases, it may be clear that a firm is dominant under all plausible market definitions.

4. While the following discussion contemplates defining markets in the context of selling goods or services, a similar exercise can be conducted when defining input markets from the perspective of a dominant buyer.

A. "Class or Species of Business": Product Market

5. For the purposes of paragraph 79(1)(a), the Tribunal has held that a "class or species of business" is synonymous with a product market(s). [6]

6. Defining product markets usually begins by examining the product in respect of which the alleged abuse of dominance has occurred or is occurring, and determining whether close substitutes exist for that product, focusing on demand responses. [7]

7. The "hypothetical monopolist test" provides a useful framework to conceptualize substitutability between products – an analytical framework the Tribunal has recognized can be helpful in cases under section 79. [8] The Bureau considers whether a profit-maximizing hypothetical monopolist would impose and sustain a small but significant and non-transitory price increase for a candidate set of products above a given benchmark. In general, the smallest set of products in which the price increase would be sustained, including the product in respect of which the alleged abuse of dominance has occurred or is occurring, is defined as the product market.

8. Typically, the initial candidate market considered is a product in respect of which the alleged abuse of dominance has occurred or is occurring and its closest substitute. If a hypothetical monopolist could not impose a small but significant and non-transitory price increase above the benchmark, assuming the terms of sale of all other products remained constant, the candidate market is expanded to include the next-best substitute (which could include the products of other firms). The analysis is repeated until the point at which the hypothetical monopolist would profitably impose and sustain such a price increase over the candidate market.

9. For purposes of the hypothetical monopolist test, the Bureau generally considers a 5 percent price increase above the price level that would prevail absent the alleged anti-competitive act(s) to be significant and a one-year period to be non-transitory. Market characteristics may support using a different price increase or time period.

10. It is important to note that, in the context of abuse of dominance cases, the current price may not be the appropriate benchmark to use when defining the market, as some products that appear to be good substitutes at that price level might not be considered substitutes at price levels that would have prevailed in the absence of the alleged anti-competitive act(s). [9] Inclusion of these products could lead to an overly broad product market definition because these products do not discipline the market power of the dominant firm, but rather are only considered substitutes for products in the market at price levels where market power has already been exercised.

11. Direct evidence of buyer switching (i.e., changes in quantities purchased) in response to relative price changes can demonstrate substitutability for the purposes of market definition. [10] However, in practice, such direct evidence may be difficult to obtain.

12. For the above reasons, market definition for the purposes of section 79 will often focus on indicators of substitutability. Such indicators include:

Views, strategies, behaviours and identity of buyers:
Whether buyers have substituted between products in the past, and whether they plan to do so in the future, can indicate whether a price increase in a candidate market is sustainable. Industry surveys, industry participants and industry experts may also provide helpful information with respect to products that may be substitutable. Documents prepared by the firm in question in the ordinary course of business may also prove useful in this regard.

End-use and physical characteristics:
Functional interchangeability between two products is generally a necessary, but not sufficient, condition to warrant inclusion in the same market. In general, as buyers place greater value on the actual or perceived unique physical or technical characteristics of a product, the more likely it is that the product will fall within a distinct market.

Switching costs:
Transaction costs that buyers would have to incur to, among other things, retool, repackage, adapt their marketing, breach a supply contract or learn new procedures may render product substitution an unlikely response to a small but significant and non-transitory price increase.

Price relationships and relative price levels:
The presence of a strong correlation in price movement between two or more products over a significant period of time may suggest that the products fall within the same market.

13. The Bureau may consider it appropriate to define markets in reference to particular types of purchasers in certain circumstances, such as where sellers engage in price discrimination between different sets of buyers. For example, the Bureau may define two separate markets if a seller is

able to effectively price discriminate between commercial customers and individual consumers. Similarly, the Bureau may define markets in reference to a particular level of a supply chain: for example, when assessing if a manufacturer is dominant in an industry where manufacturers sell through retailers, the Bureau may define a market as sales to retailers.

14. In some cases the Bureau may consider it appropriate to analyse several different (or potentially different) product markets together for the purposes of market definition. This could occur when evidence indicates that there may be more than one product market but that competitive conditions are sufficiently similar in each market such that analyzing them together does not affect the assessment of dominance. Where appropriate, the Bureau may analyse several geographic markets (discussed below) together in the same manner.

15. The Bureau may define a market as a group of diverse products that are not themselves substitutes for each other in cases where a sole, profit maximizing seller would increase the price of the group of the products because a sufficient number of buyers would not respond to the price increase by purchasing individual products from different sellers. This may occur, for example, where there are sufficiently large transaction costs associated with dealing with multiple sellers.

16. Special considerations arise when applying the hypothetical monopolist test to "multi-sided" platforms. For a multi-sided platform, demand for one "side" depends on use of another; one example would be an advertising service that matches buyers and sellers of a product, where greater buyer use increases the attractiveness to sellers, and greater seller use increases the attractiveness to buyers. Depending on the facts of a case, the Bureau may define a product market as one side of a multi-sided platform (i.e., consider the effects of a price increase on one side of

the platform). However, when considering if a hypothetical monopolist would find it profit maximizing to impose that price increase, it may be necessary to account for the interdependence of demand, feedback effects, and changes in profit on all sides of the platform. [11] In other cases, the Bureau may view it appropriate to define a market to include multiple sides of the platform.

17. Additionally, challenges may arise in the application of the hypothetical monopolist test where services are offered at a zero-monetary price (for instance, where services are offered for free to attract users to a multi-sided platform that depends on advertisers for monetization). In such cases, firms may compete on dimensions other than monetary price, such as product quality. Although the Bureau may seek to analyze whether a hypothetical monopolist would find it profit maximizing to decrease a relevant non-price dimension of competition by a small but significant amount for a non-transitory period of time, this may not be feasible in practise. As a result, the Bureau's analysis may focus on qualitative indicators of substitutability. This analysis will generally be similar to assessing substitutability based on qualitative indicators in other cases, as discussed above.

B. "Throughout Canada or any Area Thereof": Geographic Market

18. The Tribunal has held that the phrase "throughout Canada or any area thereof" is synonymous with a geographic market(s). [12]

19. A geographic market consists of all locations or supply points regarded as close substitutes by buyers. From a buyer perspective, a geographic market may include territory outside of Canada. Similar to product market definition, the Bureau will generally apply the hypothetical monopolist test to examine the dimensions of buyer switching, from suppliers in one location to suppliers in another, in response to a small

but significant and non-transitory price increase. A geographic market will consist of all locations or supply points that would have to be included for such a price increase to be profitable. As with product market definition, the geographic parameters of the market may be overstated if they include areas that would not be included at the price level that would prevail absent the alleged anti-competitive act(s).

20. The Bureau may consider if the area in which the allegedly dominant firm operates constitutes a geographic market. However, the Bureau may ultimately define geographic markets more broadly or more narrowly. In the latter case, where an allegedly dominant firm operates in more than one geographic market, the Bureau will seek to assess if competitive conditions materially vary across those markets. If competitive conditions are similar in several geographic markets, the Bureau may consider them together for analytical purposes.

21. The Bureau will also consider indirect evidence of substitutability between locations or supply points when defining geographic markets, such as:

    Views, strategies, behaviours and identity of buyers: Considerations relating to convenience or the particular characteristics of the product (e.g., fragility, perishability) may influence a buyer's choice of supplier in the event of a price increase. The Bureau will examine past and potential future behaviour of buyers as new options are made available, through, for instance, advances in technology, which may impact the geographic dimension of a buyer's purchases. Third parties who are familiar with the industry in question may provide information regarding past and potential future industry developments that helps to define the geographic market. The extent to which distant supply locations are taken into account in business plans, marketing strategies and other documentation of the firm in question and of other sellers may also be useful indicators of geographic market definition.

Switching costs:

Transaction costs that buyers would have to incur to adapt their business to obtain the product from another source may render substitution to sources of supply from other geographic areas an unlikely response to a small but significant and non-transitory price increase.

Transportation costs, price levels, and shipment patterns:

In general, where prices in a distant area have historically exceeded or been lower than prices in the candidate geographic market by more than transportation costs, this may indicate that the distant area constitutes a separate market, for reasons that go beyond transportation costs. Conversely, if significant shipments of the product from a distant area in response to a price increase are likely, this may suggest that the distant area falls within the geographic market. In either case, the Bureau will assess whether a small but significant and non-transitory price increase in the candidate geographic market would change any locational pricing differential to the point where purchases from distant sellers may be able to constrain a price increase.

22. While the principles above apply equally to domestic and international sources of competition, other considerations, such as tariffs, duties, quotas, regulatory impediments, government procurement policies, intellectual property laws, exchange rate fluctuations and international product standardization may be relevant when considering whether supply points located outside Canada should be included in the geographic market.

C. "Substantially or completely control": Market Power

23. The Tribunal has held that the phrase "substantially or completely control" contemplates a substantial degree of market power. [13] The Supreme Court of Canada has defined "market power" as "the ability to ‘profitably influence price, quality, variety, service, advertising, innovation or other dimensions of competition'"; [14] the Tribunal has characterized a

substantial degree of market power as one that "confers upon an entity considerable latitude to determine or influence price or non-price dimensions of competition in a market, including the terms upon which it or others carry on business in the market". [15] Market power may be reflected in an ability to restrict the output of other existing or potential market participants, and thereby profitably influence price (the "power to exclude"). [16]

24. When assessing if a firm holds a substantial degree of market power, the Bureau considers the body of relevant information and/or documents on the whole in order to determine the extent to which a firm has the ability to influence the market. The exact nature of the Bureau's analysis and the weight accorded to any particular piece of information or document will depend on the circumstances of the case.

25. Market power can be measured directly or indirectly. Direct indicators of market power, such as evidence of supra-competitive profitability or pricing, are not always conclusive or indeed possible to assess; practical difficulties can arise in defining the "competitive" price level and the appropriate measure of cost to which prices should be compared. [17]

26. In many cases the Bureau examines a number of indirect indicators, both qualitative and quantitative, in conducting its analysis of market power, such as structural characteristics of a market (including market shares and any barriers to entry), the extent of technological change, the effects of a practice of anti-competitive acts, and customer or supplier countervailing power. The Bureau's analytical approach to the assessment of these indicators is discussed in greater detail below.

27. A firm that does not compete in a market may nonetheless substantially or completely control that market. [18] When assessing if a firm holds a substantial degree of market power in a market in which it does not compete the power to exclude current or potential competitors will often

be the focus of the Bureau's analysis. Conversely, indicators of market power such as market shares or supra-competitive profits may not be relevant in such circumstances, whereas they may be central to assessing market power where the allegedly dominant firm does compete in the market.

28. In the context of paragraph 79(1)(a), the relevant level of market power includes not only a firm's pre-existing market power (i.e., any market power held by the firm notwithstanding any alleged anti-competitive conduct), but also market power derived from any alleged anti-competitive conduct. [19]

i. Market Shares and Barriers to Entry

29. Jurisprudence has often relied on a combination of high market shares and barriers to entry as evidence of market power. While there is no definitive numeric threshold, the Bureau is of the view that high market share is usually a necessary, but not sufficient, condition to establish the existence of a substantial degree of market power. [20]

30. All other things being equal, the larger the share of the market held by competitors, the less likely it is that the firm in question would be capable of exercising a substantial degree of market power. The ability of customers to switch to competitors if a firm attempts to increase price may be demonstrated by a large market presence of those competitors. In such cases, switching by a significant portion of a firm's customer base may be enough to render any increase in price unprofitable. However, the ability to switch may depend on various factors such as the speed and ease with which rival firms are able to accommodate increased demand for their products as the prices of rival suppliers increase, or any switching costs.

31. In addition to considering the market shares of current sellers of relevant products, the Bureau may also consider the shares of potential sellers that would participate in the market through a supply response if prices rose by a small but significant and non-transitory amount. In such a case, a firm could be considered a participant in the market if significant sunk investments are not required to enter, and it could rapidly and profitably divert existing sales or capacity to begin supplying the market in response to such a price increase. For those firms that would participate in the market through a supply response, market share calculations will include only the output or capacity that would likely become available to the market without incurring significant investment.

32. Market shares can be measured in terms of revenues (dollar sales), demand units (unit sales), capacity (to produce or sell) or, in certain natural resource industries, reserves. If products in the market are homogeneous and firms are operating at capacity, relative market shares should be similar regardless of the unit of measurement. If firms have excess capacity, market shares based on capacity may best reflect their relative market position if they can easily increase supply in response to an increase in price. In the case of differentiated products, market shares based on dollar sales, demand units and/or capacity can lead to varying inferences with respect to firms' relative competitive positions, and shares based on revenues or demand units may be more probative in this regard. When calculating market shares, the Bureau will use the measurement that it considers best reflects the current and future competitive significance of competitors.

33. In contested abuse of dominance cases to date, market shares of those firms found to have abused their dominant position were very high, suggesting that, in those instances, customers were left with too few

alternatives to discipline a price increase or other conduct by the firm that substantially lessened or prevented competition. [21]

34. In many cases, the Bureau uses market shares as an initial screening mechanism to assess allegations of abuse of dominance. The Bureau's general approach is as follows:
    - A market share below 50 percent will generally only prompt further examination if other evidence indicates the firm possesses a substantial degree of market power, or that it appears the firm is likely to realize the ability to exercise a substantial degree of market power through the alleged anti-competitive conduct within a reasonable period of time while that conduct is ongoing;
    - A market share of 50 percent or more will generally prompt further examination; and
    - In the case of a group of firms alleged to be jointly dominant, a combined market share equal to or exceeding 65 percent will generally prompt further examination.
35. In circumstances where the Bureau has not reached a final conclusion regarding the boundaries of the market, several plausible market definitions may present themselves. Where at least one plausible market definition exists that indicates an allegedly dominant firm possesses a substantial degree of market power, the Bureau may investigate further.
36. The Bureau will also examine the durability of market shares in a particular market. If market shares have fluctuated significantly among competitors over time (for example, because firms regularly develop new technologies to "leapfrog" their competitors), a current high market share may be less indicative of a substantial degree of market power.

37. Market shares are not the only factor the Bureau considers, and where other evidence provides sufficient indication that a firm may be dominant regardless of a relatively low market share the Bureau may investigate further. [22] The types of evidence that may prompt the Bureau to investigate further include:

Direct evidence of market power:
Where available, evidence of supra-competitive pricing;

Significant Commercial Leverage:
Market or demand characteristics may provide the allegedly dominant firm sufficient commercial leverage over upstream or downstream firms such that it may exercise a substantial degree of market power, for example, through the ability to affect a supplier's dealings with other customers;

Effects of the Anti-Competitive Acts:
An ability to cause prices to be higher in the market than would exist in the absence of the firm's conduct may be evidence of the existence and or/magnitude of market power on the part of that firm; [23] and

Other evidence of influence:
where a firm has otherwise demonstrated "considerable latitude" [24] to determine or influence a relevant dimension of competition.

38. The Bureau anticipates that, all else equal, these types of evidence are less likely to exist if the market share of the potentially dominant firm is small. However, there may be circumstances where market shares do not factor into the Bureau's analysis, for instance, where a firm controls a market through the ability to exclude, as discussed below.

39. A high market share is not itself sufficient to establish a substantial degree of market power. A firm's attempt to exercise market power may be thwarted by expansion or entry of existing and/or potential competitors on a sufficient scale and scope if expansion and/or entry are

expected to be profitable. As a result, the Bureau considers the extent to which barriers to entry or expansion may limit the ability of rivals to respond to any exercise of market power. Barriers to entry or expansion can take many forms, including:

Sunk costs of entry or expansion:
Costs are sunk when they cannot be recovered if the firm exits a market. Sunk costs may pose a barrier to entry or expansion where the anticipated rewards to entry or expansion are anticipated to be less than the associated sunk costs, or there is sufficient risk that this will be the case as to have a deterrent effect;

Regulatory barriers:
In addition to their relevance to geographic market definition, regulatory controls relating to entry, tariff and non-tariff barriers to international or domestic trade may impede entry or expansion by competitors;

Economies of scale and scope:
Economies of scale occur when the average cost of producing a product declines the more of a product is produced, whereas economies of scope occur where the average costs of producing a product decline with the production of other products. Instances where such economies can be barriers to entry or expansion include when economies of scale prevent viable entry on a small scale or require entry to be on a sufficiently large scale to depress market prices, or where economies of scope require that a viable entrant must begin production of various products at once;

Market maturity:
Where market demand is not expected to increase, entry or expansion may be more difficult as any additional business must be converted from incumbents, rather than growth in market demand. Similarly, it may be easier to enter a market when it is young or growing, or less attractive to invest in assets that may be stranded due to decline in market demand;

Network effects:

Network effects occur when demand for a product depends on use of that product by others, and can be direct or indirect. Direct network effects occur when the demand for a product or service directly increases with more users, such as how the value of a communications network for an individual may increase with the number of other users of the network. In contrast, indirect network effects occur where greater use of a product or service by members of one group creates value for members of another group, potentially causing feedback effects. For example, in the case of a website that matches buyers and sellers of various products, the website becomes more valuable to buyers the more sellers use the website, and vice versa. All else equal a buyer may be indifferent to the number of other buyers that use the website, but if additional buyers attract additional sellers, a buyer indirectly benefits from greater use of the website by other buyers. Network effects may provide significant advantages to incumbent firms, making entry or expansion more difficult; and

Access to scarce or non-duplicable inputs:
An inability to access significant inputs that are required to be a viable competitor in a market may prevent entry or expansion.

40. The Bureau will examine the nature of any barriers to entry, including those created by the alleged practice of anti-competitive acts, [25] to assess whether entry would be timely, likely, and sufficient in scale and scope to make the exercise of a substantial degree of market power unsustainable. "Timely" means that entry will occur within a reasonable period of time; "likely" refers to the expectation that entry will occur; and "sufficient" means that entry would occur on a sufficient scale to prevent or deter firms from exercising a substantial degree of market power. When assessing if entry will satisfy these criteria, the Bureau will generally seek to determine if the threat of entry or expansion has an appreciable effect on the allegedly dominant firm's conduct.

ii. The Ability to Exclude

41. As noted above, the Tribunal has recognized that the ability to exclude – the ability to restrict the output of other actual or potential market participants, and thereby profitably influence price – constitutes market power. [26] Where through the impugned conduct assessed under paragraphs 79(1)(b) and 79(1)(c) a firm has demonstrated its ability to exclude rivals, this provides evidence that it has market power. [27]

42. Assessing the existence and degree of market power through the ability to exclude is particularly relevant when a firm does not compete in a market in which the alleged anti-competitive effects are alleged to be occurring. A firm that does not compete in a particular market may nonetheless control it, for example, through control of a significant input to competitors in a market, or the ability to make rules that effectively control the business conduct of those competitors. [28] The Bureau does not view these two mechanisms as mutually exclusive: for example, a firm may leverage control of a significant input in order to impose and enforce rules that affect the business conduct of competitors in a market.

43. When assessing whether a firm controls a significant input in a market in which it does not compete (e.g., a downstream market), the Tribunal has indicated it is not necessary to define and establish dominance in an additional market defined around that input (e.g., an upstream market). [29] However, for the purposes of assessing if control of that input provides the ability to exclude, the Bureau will consider the extent to which substitutes exist to the input provided by the allegedly dominant firm, as well as the extent to which that input is necessary to compete. In the absence of acceptable substitutes, and if competitors in the market are unable to effectively compete without access to the input, the Bureau will conclude the allegedly dominant firm has a substantial

degree of market power in that market (in the examples above, in the downstream market).

44. When assessing if a firm has the ability to impose rules that govern the conduct of competitors, the Bureau may consider the extent to which any rules are adhered to, or could be enforced by the allegedly dominant firm. If such rules are not adhered to or enforced, the Bureau is not likely to conclude the allegedly dominant firm has a substantial degree of market power on that basis.

iii. Other Factors

45. The Bureau may examine other potentially relevant indicators when assessing the existence and/or magnitude of market power, including:

    Countervailing power:
    A customer or supplier may have the ability and incentive to constrain a firm's attempt to exercise a substantial degree of market power, such as by vertically integrating its own operations; refusing to buy or sell other products or in other geographic markets from the firm; or encouraging expansion or entry of existing or potential competitors; and

    Technological change and innovation:
    Evidence of a rapid pace of technological change and the prospect of firms being able to "innovate around" or "leapfrog" an apparently entrenched position of an incumbent firm could be an important consideration, along with change and innovation in relation to distribution, service, sales, marketing, packaging, buyer tastes, purchase patterns, firm structure and the regulatory environment.

D. "One or more persons": Joint Dominance

46. Section 79 contemplates that a group of firms may jointly substantially or completely control a market, satisfying paragraph 79(1)(a). The Bureau's analytical framework for assessing joint dominance is similar to

that employed in examining single-firm dominance, and likewise focusses on the existence of a substantial degree of market power. Similar to single-firm dominance, the Bureau considers the ability of a firm or firms to exercise a substantial degree of market power, taking into account market shares, barriers to entry and expansion and any other relevant factors. However, in the case of joint dominance, this exercise also requires an assessment of whether those firms that are alleged to be engaged in a practice of anti-competitive acts jointly control a class or species of business such that they hold a substantial degree of market power together.

47. As with single-firm dominance, the Bureau will assess the extent to which competition from existing rivals and from potential rivals (i.e., entrants) outside the allegedly jointly dominant group is likely to defeat the profitability of a price increase by the firms that are alleged to be jointly dominant. If these two sources of competition are not likely to constrain a price increase, the Bureau will then consider the nature of competition within the allegedly jointly dominant group.

48. In the absence of a sufficient competitive constraint from outside an allegedly jointly dominant group, if competition among group members is also insufficient to constrain prices to the competitive level, members of that group will be able to jointly exercise a substantial degree of market power. As a result, when assessing joint dominance, the Bureau may accord significant weight to how vigorously the allegedly jointly dominant firms compete with each other. [30] In the absence of vigorous competition the Bureau may conclude that the lack of mutual competitive constraint permits them to exercise a substantial degree of market power.

49. Similar or parallel conduct by firms is insufficient, on its own, for the Bureau to consider those firms to hold a jointly dominant position.

Further, evidence of coordinated behaviour by firms in the allegedly jointly dominant group may be probative insofar as it may explain why members of the allegedly dominant group are not vigorously competing. However, the Bureau does not consider such evidence as necessary to establish that a group is jointly dominant, if there is other evidence that competition among members of the allegedly dominant group is not sufficient to discipline their exercise of a substantial degree of market power.

50. As with single-firm dominance, the ability to exercise a substantial degree of market power on a collective basis is not in and of itself sufficient to raise an issue under the abuse provisions of the Act. While a group of firms may collectively be able to exercise a substantial degree of market power, it is still necessary to establish that these firms' conduct constitutes a practice of anti-competitive acts that is preventing or lessening competition substantially. It may, however, be the case that a practice of anti-competitive acts facilitates joint dominance. For example, joint dominance may be enabled or reinforced through disciplinary conduct, as discussed below.

2. Anti-competitive Acts

51. Paragraph 79(1)(b) requires that a firm or firms "have engaged in or are engaging in a practice of anti-competitive acts". This element consists of two factors, the Bureau's approach to which is discussed below:

    i. a "practice"; and

    ii. anti-competitive acts.

A. A "Practice"

52. While a "practice" normally involves more than one isolated act, the Bureau considers that this element may be satisfied by a single act that is sustained and systemic, or that has had or is having a lasting impact in a market. [31] For example, a long-term exclusionary contract may effectively prevent the entry or expansion of competitors despite the fact that the contract itself could be viewed as a single act.

B. Anti-competitive Acts

53. Section 78 of the Act enumerates a non-exhaustive list of acts that are deemed to be anti-competitive in applying section 79. [32] An anti-competitive act is defined by reference to its purpose, and the requisite anti-competitive purpose is an intended negative effect on a competitor that is predatory, exclusionary, or disciplinary. [33] While many types of anti-competitive conduct may be intended to harm competitors, the Bureau considers that certain acts not specifically directed at competitors could still be considered to have a predatory, exclusionary, disciplinary, or some other anti-competitive purpose. [34] On the latter, by way of example, conduct aimed at undermining the competitive process and the vigour with which other firms may compete may be considered as having the requisite anti-competitive purpose.

54. When assessing whether an act is anti-competitive, the purpose of an act may be established directly by evidence of subjective intent, inferred from the reasonably foreseeable consequences of the conduct, or both. Although verbal or written statements of a firm's personnel may assist in establishing subjective intent, evidence of subjective intent is neither strictly necessary nor completely determinative. [35] In most cases, the purpose of the act can be inferred from the circumstances, and persons

are assumed to intend the reasonably foreseeable consequences of their acts. [36]

55. In some cases, when evaluating the overall character of a practice, evidence that the conduct was motivated by a legitimate business justification can outweigh evidence of anti-competitive purpose when the two are balanced against each other. The role of business justifications in evaluating the purpose of conduct is discussed further below.

56. For the purposes of paragraph 79(1)(b), a competitor is a person who competes in a market, and need not be a competitor of the allegedly dominant firm. [37] Thus, a firm that does not compete in a market may nonetheless engage in a practice of anti-competitive acts directed toward competitors in that market.

57. Where a firm that does not compete in a market is alleged to have engaged in a practice of anti-competitive acts, the Tribunal has indicated that it must be satisfied that the firm has a "plausible competitive interest" in adversely impacting competition in that market. [38] As noted above, the Federal Court of Appeal has characterized anti-competitive acts as those that have an intended negative effect on a competitor that is predatory, exclusionary, or disciplinary. Although the Bureau will typically consider the incentives of a dominant firm to limit competition, the Bureau may conclude that a firm that does not compete in a market has engaged in a practice of anti-competitive acts where an exclusionary, predatory, disciplinary, or other anti-competitive purpose can be demonstrated.

58. In assessing whether a particular act is likely to be anti-competitive, the Bureau is of the view that anti-competitive conduct generally falls into three broad categories:

i. predatory conduct;

ii. exclusionary conduct; and

iii. disciplinary conduct.

i. Predatory Conduct

59. Predatory conduct involves a firm deliberately setting the price of a product(s) below an appropriate measure of its own cost to incur losses on the sale of product(s) in the market(s) for a period of time sufficient to eliminate, discipline, or deter entry or expansion of a competitor, in the expectation that the firm will thereafter recoup its losses by charging higher prices than would have prevailed in the absence of the impugned conduct. [39] Predatory pricing may be implicit (through discounts or rebates, for example), or explicit.

60. The Bureau considers that average avoidable cost is the most appropriate cost standard to use when determining if a dominant firm's prices are below cost. [40] Avoidable costs refer to all costs that could have been avoided by a firm had it chosen not to sell the product(s) in question. Whether a cost is avoidable depends in part on the duration of the alleged predation as, in general, more costs become avoidable over time. Where the firm's pricing of the product(s) does not cover its own average avoidable costs, the Bureau will consider the pricing to be predatory in the absence of evidence that the overriding purpose of the conduct was in furtherance of a credible efficiency or pro-competitive rationale. For example, it may be reasonable for a firm to sell excess, obsolete or perishable products at below-cost prices. Similarly, companies may use below-cost promotional pricing to induce customers to try a new product.

61. There are difficulties inherent in applying a price-cost test to identify predatory pricing, all other things being equal. The Bureau generally

uses various "screens" prior to conducting an avoidable cost analysis. Specifically, the Bureau will examine whether the alleged predatory price can be matched by competitors without incurring losses (suggesting that discipline or exclusion, and subsequent recoupment, is unlikely to occur), as well as whether the alleged predatory price is in fact merely meeting competition by reacting to match a competitor's price.

ii. Exclusionary Conduct

62. In general, the Bureau is not concerned with conduct that forces competitors to be more effective, but rather with conduct that makes it more difficult for competitors to be effective. Vigorous competition on the merits (e.g., offering superior services at a lower price) may force competitors to be more effective or result in their exit from a market, but does not engage the abuse of dominance provisions. In contrast, exclusionary conduct is designed to make current and/or potential rivals less effective, to prevent them from entering the market, or to eliminate them from the market entirely. Such conduct often does so by raising rivals' costs or reducing rival's revenues.

63. In a non-exhaustive list, section 78 describes various means by which a firm may engage in exclusionary conduct. These include: margin squeezing of a downstream competitor by a vertically-integrated supplier; vertical acquisitions; pre-empting scarce facilities or resources; adopting incompatible product specifications; and exclusive dealing. Other exclusionary strategies can include tying and bundling, and conduct that increases customer switching costs. All such activities can, in certain circumstances, serve to increase a rival's costs and/or reduce their revenues, which may make it more difficult for the rival to compete or result in its exclusion from the market.

64. The following is a brief discussion of three types of exclusionary conduct that may raise issues under the abuse of dominance provisions: exclusive dealing, tying and bundling, and refusals to supply. These are not the only categories of exclusionary conduct, nor are they mutually exclusive. Indeed, in the Bureau's experience, individual anti-competitive acts may be viewed as part of more than one category, or otherwise blur the lines between them. For instance, the implementation of a tie can have the effect of inducing a firm's customers to exclusively purchase a tied product from that firm.

Exclusive Dealing

65. Exclusive dealing occurs when a firm supplies its product or products to a customer on the condition that the customer or supplier buy and/or sell only those versions of the product(s). In addition or alternatively, exclusive dealing may also occur when a firm requires that customers (or suppliers) do not buy (and/or sell) products of competitors. Exclusive dealing can also take the form of a firm requiring or inducing its own suppliers to deal only with the firm itself and not with that firm's competitors. Exclusivity may be mandated explicitly, or induced through other methods, such as technological incompatibilities, requirements contracts, meet-or-release clauses, most-favoured-nation (MFN) clauses, or other contractual practices.

66. Exclusive dealing is not necessarily anti-competitive, and is often engaged in for reasons other than to exclude competitors. For example, exclusive dealing may solve "free rider" problems where a firm supplying a product to a downstream retailer also provides some service component, technological information, or aftermarket support that improves the product for consumers. If the retailer can use this information to improve the products of rival suppliers as well, the firm, without contractual protection, will have little incentive to provide this

support. In such a case, exclusive dealing may preserve such an incentive to offer these services, which is generally to the benefit of consumers.

67. However, by inducing exclusivity from a sufficient quantity of suppliers or customers, a dominant firm may raise barriers to entry or expansion by raising rivals costs. Examples of how this may be achieved include denying rivals sufficient business to achieve economies of scale, preventing rivals from accessing necessary inputs, forcing rivals to compensate customers for the penalties incurred for switching, or inducing rivals to inefficiently vertically integrate.

Tying and Bundling

68. Tying occurs when, as a condition of obtaining or using one product (the "tying" product), a firm requires or induces a customer to purchase another product as well (the "tied" product). Closely related, bundling typically refers to situations whereby products are sold together in fixed proportions. Tying and bundling are ubiquitous in many industries, as many items for sale can be viewed as distinct tied products or a bundle of different components. In many cases there are often strong cost efficiencies that motivate tying and bundling.

69. However, to the extent a tying or bundling strategy excludes, predates, or disciplines a competitor it may raise concerns under the abuse of dominance provisions of the Act. In particular, the Bureau will consider whether the tie excludes competitors in whole or in part by increasing their costs or reducing their revenue. For instance, a tie may result in a firm with a substantial degree of market power in one market creating, enhancing or maintaining its market power in a second market. Like exclusive dealing, tying may increase switching costs for consumers, deny rivals economies of scale or scope necessary for efficient production, or induce inefficient production choices by rivals.

70. Before concluding that a firm is engaging in tying, the Bureau will seek to determine whether the alleged tying and tied products are in fact separate products. A central question in the inquiry is the extent to which separate customer demand exists for the tying and tied products. The Bureau may also consider efficiencies that arise from a tie; if, for example, implementing a tie gives rise to efficiencies such that it is not commercially viable to offer the products separately, the Bureau would not conclude the tying and tied products to be separate products notwithstanding consumer demand.

Refusals to Supply

71. As a general matter, there is no obligation on any business to supply to, or buy a product from, another business. However, in some exceptional circumstances, refusals to supply may engage the abuse of dominance provisions.

72. In some cases, a firm may explicitly refuse to supply a product. However, concerns may also arise in relation to "constructive" refusals, where a firm agrees to supply on terms that are sufficiently onerous as to have the same effect as an explicit denial (e.g., charging a prohibitively high price).

73. For the Bureau to conclude that a refusal to supply is an anti-competitive act, it must be the case that the product or service being denied is both competitively significant and cannot otherwise be feasibly obtained (for example, from other suppliers or through self-supply). Where this is the case, the Bureau may conclude that it was reasonably foreseeable that the purpose of a refusal was to exclude a competitor, in the absence of a legitimate business justification.

74. When exercising its enforcement discretion in relation to refusals to supply, the Bureau is aware that competitively significant inputs are

often the result of significant and costly investment and innovation, and forcing firms to supply may undermine incentives for firms to develop new and beneficial products and services.

iii. Disciplinary Conduct

75. The Bureau considers that a dominant firm engages in disciplinary conduct where it undertakes actions intended to dissuade an actual or potential competitor from competing more vigorously, or otherwise disrupting the status quo in a market. Such conduct may not have a predatory or exclusionary purpose, but rather, be intended to soften competition. Section 78 provides two examples of potentially disciplinary conduct: paragraph 78(1)(d) contemplates the use of fighting brands to discipline a competitor, and paragraph 78(1)(i) refers to discipline through selling articles at a price lower than their acquisition cost.

76. Disciplinary conduct may play a role in facilitating, maintaining, or inducing coordination among firms. In many cases when firms engage in coordinated conduct, each participant faces an incentive to deviate from the coordinated outcome. For example, where firms coordinate in order to raise prices in a market, each participant in the coordination may have the incentive to lower its own prices in order to win additional sales from the other participants at the elevated prices. As a result, one of the requirements for coordinated behaviour to likely be sustainable is the ability to respond to any deviations from the terms of coordination through credible deterrent mechanisms. Disciplinary conduct may provide such a mechanism: by engaging in disciplinary conduct, a dominant firm can induce or preserve coordination by punishing – or credibly threatening to punish – deviations from a coordinated outcome.

77. Disciplinary conduct may also include actions that do not directly punish rivals, but rather, facilitate punishments or increase the credibility of

threats to punish rivals. For example, if a firm adopts contractual terms with its customers that provide the firm with more information about the extent to which rivals are deviating from supra-competitive pricing, thereby increasing the likelihood discipline will occur, the Bureau may consider the contractual terms to be disciplinary conduct.

78. In assessing whether the purpose of a practice is disciplinary, the Bureau may be more likely to rely on subjective evidence of intent than when assessing other types of anti-competitive acts, particularly where the alleged disciplinary conduct consists of pricing behaviour alone. Because such disciplinary acts may be particularly difficult to distinguish from vigorous competition on the merits, the Bureau may be hesitant to conclude that an act has a disciplinary purpose based solely on its reasonably foreseeable consequences. [41] When evaluating evidence of subjective intent, the Bureau will typically look for evidence of "something more" than the typical intent of a firm to best its competition. For example, where evidence indicates that a firm engaged in an aggressive competitive response not to meet (or beat) competition from a rival, but instead to induce that rival to compete less vigorously, the Bureau may conclude that "something more" is present.

79. Given the above, the Bureau anticipates that it would investigate allegedly disciplinary conduct in limited circumstances, and that it would generally have to be satisfied that the alleged conduct is disciplinary on its face. [42]

iv. Business Justifications

80. An additional factor in the determination of whether an act is anti-competitive is whether it was in furtherance of a legitimate business objective. A business justification is not a defence to an allegation that a firm has engaged in anti-competitive conduct, but rather, an alternative

explanation for the overriding purpose of that conduct. Proof of the existence of **some** legitimate business purpose underlying the conduct is not sufficient. Rather, the Federal Court of Appeal has said that "a business justification must be a credible efficiency or pro-competitive rationale for the conduct in question, attributable to the respondent, which relates to and counterbalances the anti-competitive effects and/or subjective intent of the acts." [43] Depending on the circumstances, this could include, for example, reducing the firm's costs of production or operation, or improvements in technology or production processes that result in innovative new products or improvements in product quality or service. [44] Compliance with a statutory or regulatory requirement may also constitute a business justification, where an act is required to comply with that statutory or regulatory requirement. [45]

81. Although the Bureau will consider any business justifications posited by the allegedly dominant firm, as the courts have recognized, where an allegedly dominant firm asserts a business justification it ultimately bears the burden of proof to establish it. [46]

82. In assessing the overriding purpose of an alleged anti-competitive act, the Bureau will examine the credibility of any efficiency or pro-competitive claims raised by the allegedly dominant firm, their link to the alleged anti-competitive act, and the likelihood of these claims being achieved. In this assessment, the Bureau may seek evidence as to the role the asserted efficiency or pro-competitive justification played in the allegedly dominant firm's decision-making. In the absence of contemporaneous evidence that the asserted business justification rationally motivated the allegedly dominant firm, the Bureau will be less likely to conclude that the business justification is credible.

83. Additionally, after finding evidence in support of both an anti-competitive purpose and a claimed business justification, when

assessing the overall character of a practice the Bureau may consider whether the claimed efficiency or pro-competitive benefits could have been achieved by credible alternate means that would have had a lesser impact on competitors, where appropriate. In conducting this analysis the Bureau would typically only consider alternative methods to achieve a business objective where either subjective evidence establishes the allegedly dominant firm considered those alternatives or there is clear objective evidence that it would be unreasonable for that firm to not have considered those alternatives (e.g., if a firm changes the manner in which it pursues a business objective, the Bureau would generally presume the firm considered maintaining its previous course of action).

84. Consistent with an approach noted by the Tribunal, when assessing the overall character of a practice the Bureau may consider if the alleged anti-competitive acts made no economic sense but for their anti-competitive effect on a competitor. [47] Conduct that makes no reasonably foreseeable economic sense but for an anti-competitive effect is likely to have an overarching anti-competitive purpose. However, circumstances may arise where the Bureau finds a practice satisfies paragraph 79(1)(b) even when, evaluating its reasonably foreseeable consequences, it may make economic sense without an anti-competitive effect on a competitor. Such cases may include where evidence of subjective intent establishes an anti-competitive purpose, or where the reasonably foreseeable economic benefits resulting from exclusion are sufficiently large compared to the other profits derived from the practice to make it clear that the overarching purpose was an anti-competitive effect on a competitor. [48]

85. Business justifications are relevant to the assessment of anti-competitive purpose and do not directly bear on the analysis of competitive effects pursuant to paragraph 79(1)(c). [49] The Bureau is not required to quantify

any efficiencies resulting from a practice of anti-competitive acts, but will consider any such efficiencies within the purpose-focussed assessment of paragraph 79(1)(b). [50]

3. Competitive Effects

86. Paragraph 79(1)(c) requires that the conduct in question "has had, is having or is likely to have the effect of preventing or lessening competition substantially in a market". In other words, having determined that the firm is dominant and has engaged in a practice of anti-competitive acts, it remains necessary to determine whether this practice has resulted or is likely to result in substantial harm to competition in one or more markets. [51] Generally speaking, a substantial lessening or prevention of competition occurs when an impugned practice causes a materially greater degree of market power to exist than in the absence of the practice.

87. Demonstrating a substantial lessening or prevention of competition does not entail an assessment of whether the absolute level of competition in a market is substantial or sufficient, but is instead a relative assessment of the level of competitiveness in the presence and absence of the impugned practice. In carrying out this assessment, the Bureau's general approach is to ask whether, but for the practice in question, there would likely be substantially greater competition in the market in the past, present, or future. [52]

88. To satisfy paragraph 79(1)(c), conduct can either **lessen** or **prevent** competition. The Tribunal has recognized that the general analytical approach is similar in either case, but important differences exist. Conduct that lessens competition typically permits the exercise of new or increased market power through lessening the constraint posed by current or potential competitors. Conduct that prevents competition, in

contrast, typically preserves existing market power by preventing new competition that would have materialized in the absence of the impugned practice. [53]

89. In many cases, a substantial lessening or prevention of competition is accomplished by erecting or strengthening barriers to entry or expansion. Through increased barriers to entry or expansion, competitors or potential competitors are inhibited or deterred from competing as vigorously as they otherwise would, thereby disciplining the exercise of market power. [54] In examining anti-competitive acts and their effects on barriers to entry or expansion, the Bureau focuses its analysis on determining the state of competition in the market in the absence of these acts. If, for example, it can be demonstrated that, but for the anti-competitive acts, an effective competitor or group of competitors would likely emerge within a reasonable period of time to challenge the exercise of market power, the Bureau will conclude that the acts in question result in a substantial lessening or prevention of competition. [55]

90. Although the Bureau's conceptual approach focusses on increased barriers to entry or expansion, the Bureau may also assess the effects of a practice of anti-competitive acts on various indicators of the intensity of competition. Such indicators include whether, in the absence of the practice of anti-competitive acts, the extent to which:

    - monetary prices would be lower;
    - product quality, service, innovation, or choice would be greater; or
    - switching between products or suppliers would be more frequent.

91. Whether any lessening or prevention of competition is substantial is assessed in terms of its degree, duration, and the extent to which it extends throughout the market. There is no definitive threshold past

which a given lessening or prevention qualifies as substantial. Rather, substantiality is assessed based on market specific factors, including the market power of the allegedly dominant firm. As the Tribunal has confirmed, "where a firm with a high degree of market power is found to have engaged in anti-competitive conduct, smaller impacts on competition resulting from that conduct will meet the test of being "substantial" than where the market situation was less uncompetitive to begin with." [56]

92. When assessing whether a practice of anti-competitive acts gives rise to a substantial lessening or prevention of competition, the Bureau may rely on either qualitative (e.g., business documents, views of industry participants, etc.) or quantitative evidence (e.g., econometric studies). [57] The Bureau seeks to evaluate the causal impact of the practice of anti-competitive acts by comparing the state of competition in the market to a counter-factual scenario where the practice did not take place. In conducting this assessment, the Bureau may seek evidence that directly speaks to the counter-factual scenario (e.g., the views of market participants), as well as evidence from natural experiments in the market at issue or in other markets.

93. Natural experiments are often useful to assess a counterfactual by examining historical events that link changes in competitive conditions (e.g., entry or exit of firms, presence of certain competitors, products, services, or contractual practices) to changes in observable effects. In appropriate circumstances, the study of events and their impact on competition in one market can be very informative to an assessment of likely effects in another market. For example, the Bureau may seek evidence on how competitive outcomes differ in similar markets where the impugned conduct did not take place, or examine evidence relating to the state of competition in the market before and after a practice of

anti-competitive acts (or other events, such as the exit of a competitor) to determine its causal effect.

94. When assessing the impact of a practice of anti-competitive acts, the Bureau may consider effects on both static competition (e.g., the impact on prices and output) and dynamic competition (e.g., rivalry driven by product or process innovation). Indeed, conduct that creates or enhances barriers that reduce dynamic competition, such as innovation, which the Tribunal has characterized as "the most important form of competition", [58] is of particular concern to the Bureau. However, due to its forward-looking and uncertain nature, effects on dynamic competition are often more challenging to assess than effects on static competition. In such cases, natural experiments from other markets (where available) may assist in establishing competitive effects.

95. The potential for enforcement action to chill dynamic competition in favour of increased static competition is an important consideration for the Bureau in determining whether to pursue an enforcement action, or even what remedy to pursue if enforcement action is warranted. Healthy dynamic competition may result in sequential "winner take all" competition for a market based on product quality or innovation, with the result that the successful firm acquires market power. Often, it is the prospect of market power that provides the incentive for firms to engage in dynamic competition. Focussing enforcement on static outcomes may result in longer term harm as it may undermine the incentives for firms to engage in beneficial dynamic competition, and caution must be exercised when intervening in fast-moving markets. However, this potential result does not give dominant firms a license to lessen or prevent competition. In particular, where a dominant firm raises barriers that prevent more (or potentially more) innovative rivals from

challenging its position, the Bureau will not hesitate to take action where appropriate.

4. Remedies

96. The Bureau considers potential remedies early in any investigation or inquiry under section 79 in order to determine the nature, scope, and the means by which a remedy may be implemented. Where the Bureau is satisfied that the evidence supports a conclusion that section 79 is engaged, a number of avenues to remedy the situation are available.

A. Consensual Resolutions

97. Generally speaking, in using the range of enforcement tools available, the Bureau encourages and facilitates voluntary compliance and will often attempt to achieve a negotiated settlement in response to a breach of section 79. [59]

98. Where the Bureau has concluded section 79 is engaged, in most circumstances the Bureau will require that any proposed remedy agreed upon be formalized in a consent agreement and registered with the Tribunal pursuant to section 105 of the Act. [60] Consent agreements entered into by the Bureau and a respondent must be based on terms that could be the subject of an order of the Tribunal. Upon registration, consent agreements have the same force and effect as orders of the Tribunal.

B. Orders of the Competition Tribunal

99. Where the Bureau is satisfied that the evidence supports an application to the Tribunal under section 79 and the Bureau cannot resolve a case on a consensual basis, or where a consensual remedy is not considered

appropriate in the circumstances, the Bureau may make an application to the Tribunal for a remedial order. [61]

100. Where the Tribunal finds that the elements of section 79 are met, the Act grants the Tribunal broad discretionary remedial powers to address the anti-competitive conduct in question. This includes the ability to impose both behavioral and structural remedies, varying from prohibition orders (subsection 79(1)), prescriptive orders requiring that certain corrective action be taken (subsection 79(2)) and the imposition of administrative monetary penalties (subsection 79(3.1)).

i. Prohibition and Prescriptive Orders

101. Pursuant to subsection 79(1), the Tribunal may issue an order prohibiting a respondent from engaging in the impugned practice of anti-competitive acts. In addition or alternatively, if the Tribunal finds that an order prohibiting the practice is not likely to restore competition in the affected market, subsection 79(2) provides that the Tribunal may issue an order directing the respondent to take any such actions as are reasonable and necessary to overcome the effects of the practice of anti-competitive acts, including the divestiture of assets or shares. [62] Other actions may include, for instance, changes to contractual terms, or the establishment of a corporate compliance program. The Bureau typically views prohibition and prescriptive orders as complementary and, where appropriate, may seek orders that both prohibit the anti-competitive conduct and direct the respondent to take positive steps or actions as are necessary to restore competition in the market.

102. Failure to comply with an order rendered under section 79 (other than subsection 79(3.1)) or a consent agreement registered with the Tribunal under section 105 is a criminal offence. [63]

ii. Administrative Monetary Penalties

103. Where the Tribunal issues an order pursuant to subsections 79(1) and/or 79(2) of the Act, it may also, pursuant to subsection 79(3.1), order the respondent to pay an administrative monetary penalty ("AMP"). Such a penalty may not exceed $10 million for the first order, or $15 million for each subsequent order. The purpose of an AMP in an abuse of dominance case is to promote practices by the person from whom an AMP is sought that are in conformity with the purposes of section 79, not to punish the respondent for the anti-competitive conduct. [64] Failure to pay an AMP by a respondent may be enforced civilly as a debt due to the Crown. [65]

104. The Bureau generally considers AMPs as a complement to other remedies available under section 79 that are designed to restore competition. Given their purpose to promote practices by the dominant firm that are in conformity with the purposes of section 79 the Bureau's decision to seek AMPs and their amounts will depend to a great extent on the facts specific to each case.

105. When assessing whether an AMP is appropriate, the Bureau will consider factors such as:

    i. the respondent's willingness to collaborate in a timely manner with the Bureau in the context of the investigation or inquiry, including to immediately cease the impugned conduct when the Bureau raises competition concerns;

    ii. the respondent's history of compliance with the Act; and

    iii. whether the evidence suggests the respondent intended not to comply with the Act, or showed a wanton or reckless disregard for the Act.

106. When the Bureau determines that an AMP is warranted in the circumstances, the determination of its amount will be guided by the

aggravating and mitigating factors set out in subsection 79(3.2) of the Act:

- The effect on competition in the market;
- The gross revenue from sales affected by the practice;
- Any actual or anticipated profits affected by the practice;
- The financial position of the person against whom the order is made;
- The history of compliance with the Act by the person against whom the order is being made; and
- Any other relevant factor.

107. The amount of an AMP is to be determined based on the totality of the relevant considerations in the circumstances; no single factor is determinative.

108. In cases where an AMP is sought, the Bureau will be mindful to seek AMPs of the quantum necessary to ensure that AMPs do not merely become the "cost of doing business" for a dominant firm engaging in anti-competitive conduct, within the statutory limits, while also ensuring that they are not excessive or disproportionate in the circumstances and serve their statutory purpose, i.e., to promote conduct that is in compliance with the purposes of the abuse of dominance provisions.

109. The Bureau is guided by similar considerations and factors when determining whether to include an AMP in consent agreements in respect of abuse of dominance and in establishing the amount.

5. Illustrative Examples

110. The following examples are designed to illustrate the analytical framework that may be applied by the Bureau in the enforcement of section 79. These examples are not intended to provide an exhaustive catalogue of all conduct that may raise issues under section 79, and depending on the facts of any individual case the Bureau may depart from the analytical approach set out below. As with these Guidelines generally, the Bureau's discussion of the examples below does not replace the advice of legal counsel and is not intended to restate the law or to constitute a binding statement of how the Commissioner will exercise discretion in a particular situation. The enforcement decisions of the Commissioner and the ultimate resolution of issues will depend on the particular circumstances of the matter in question.

Example 1 – Mere Exercise of Market Power

111. HO3 and SANTA are firms that compete in respect of the supply of Santa hats in Canada. These two firms are the most important players in the market with market shares of 65 percent and 20 percent for HO3 and SANTA respectively. High barriers to entry make it difficult for a new entrant to enter the market. Recently, HO3 unilaterally raised the prices for the Santa hats it sells in Canada by over 250 percent. The Bureau has received complaints that HO3 has abused its dominant position.

Analysis

112. Although it is necessary for a firm to possess a substantial degree of market power in order to contravene section 79, this alone is not sufficient to raise issues under the abuse of dominance provisions of the Act. Even where a firm may be dominant, it must also be engaging in a practice of anti-competitive acts that gives rise to a substantial lessening

or prevention of competition. The Bureau would not view HO3's price increase as an anti-competitive act as it does not exclude, predate, or discipline a competitor or a potential competitor. Further, because the price increase is a result of HO3's pre-existing market power, not a practice of anti-competitive acts, paragraph 79(1)(c) cannot be established.

Example 2 – Market Definition

113. DUTY is one of several manufacturers of heavy-duty drills in western Canada. During the last year, SMASH, a manufacturer with a great reputation in the market for high-end hammers, started marketing "hyper-duty" drills to retailers in western Canada. These "hyper-duty" drills are 20 percent more expensive than the ones offered by DUTY, but they are also 30 percent more powerful. SMASH, DUTY, and all other drill manufacturers in western Canada only sell their products through unaffiliated retail channels.

114. Different drill manufacturers operate in eastern Canada, and shipments of drills between the two regions are limited, accounting for approximately 5 percent of drills purchased in western Canada. The share of eastern Canadian produced drills purchased in western Canada has remained relatively stable despite price fluctuations between the two regions. However, within western Canada, prices generally follow each other across the region and shipments of drills are observed in response to price differentials.

115. SMASH has complained to the Bureau, alleging that DUTY has engaged in a practice of anti-competitive acts relating to certain of DUTY's contracting practices. As part of its complaint, SMASH has presented evidence that its costs, and consequently its prices, have increased as a

result of DUTY's conduct, while the prices of DUTY and other traditional drills remained stable.

Analysis

116. This example will focus on product and geographic market definition.

117. To initially conceptualize substitutability, the Bureau would generally use the hypothetical monopolist test. In order to do so, the Bureau may seek data on substitution patterns between different drill types and manufacturers. In addition, the Bureau would seek information on qualitative factors relating to substitutability; as set out above, these include

    i. functional interchangeability,

    ii. views, strategies, behaviour and identity of buyers,

    iii. trade views, strategies and behaviour (inter-industry competition),

    iv. price relationships and relative price levels, and

    v. switching costs.

    For example, the Bureau would seek to examine if the additional power or higher cost from the "hyper-duty" drills prevents or limits substitution, or if the hyper-duty drills are interoperable with existing equipment. Such information may be sought from sources including contractors, retailers and other drill manufacturers.

118. In this instance, as all drill manufacturers only sell their products through retailers, the Bureau would likely seek to define a market relating to the sale of drills to retailers, rather than consumers. However, as substitution at the retail level could be informed by consumer demand, evidence on end-consumer preferences and substitution patterns may be relevant.

119. When defining markets for the purpose of section 79, it is necessary to assess substitutability at the price that would have prevailed absent the impugned conduct. In this case, the Bureau may accord particular weight to evidence of substitutability from before the period DUTY engaged in the alleged conduct. However, the Bureau would consider the evidence that the increase in price for "hyper-duty" drills was not correlated with an increase in price for traditional drills to be indicative that they are not in the same market.

120. Similarly, the Bureau would use the hypothetical monopolist test to examine the bounds of the geographic market, i.e., the extent of retailer switching from drill manufacturers in one region to manufacturers in another region. Generally, the Bureau would look at whether an area is sufficiently insulated from price pressures emanating from other areas so that its unique characteristics can result in its prices differing significantly in any period of time from those in other areas. Due to the pricing differentials with eastern Canada, different competitors, and limited imports that do not vary with the price differential, the Bureau would likely conclude that eastern Canada should not be included in the same geographic market as western Canada. The fact that drill manufacturers compete across western Canada and that prices and purchases track each other across the region would support the conclusion that western Canada is the appropriate geographic market.

Example 3 – Market Power

121. SUBSTANTIAL is Canada's premier supplier of toques. Toques are sold in specialized boutiques; although toque retailers usually stock several brands of toque, they do not typically sell unrelated products. SUBSTANTIAL has a market share of 40 percent. There are six other competitors who evenly account for the remainder of the market.

122. Information gathered by the Bureau suggests that a substantial number of consumers have a strong preference for SUBSTANTIAL's products, and only shop at retailers that stock them. Other customers do not share this preference, and are willing to consider other substitutes, but no other brand of toque attracts similar customer loyalty. Consumers view SUBSTANTIAL's products as key to establishing credibility as a toque boutique, and a retailer that does not carry SUBSTANTIAL toques will be significantly disadvantaged against its rivals as a result. For these reasons, SUBSTANTIAL is able to obtain considerably more favourable support from retail channels, including favourable placement and expenditure on promotional activities.

123. A competitor of SUBSTANTIAL has complained to the Bureau, alleging that SUBSTANTIAL has engaged in a practice of anti-competitive acts relating to SUBSTANTIAL's contractual terms with retailers which have excluded itself and other competitors. They have provided credible evidence that as a result of SUBSTANTIAL's practice, the price SUBSTANTIAL charges for toques has risen by more than 33 percent.

Analysis

124. The purpose of this hypothetical is to illustrate the Bureau's approach to assessing market power in the context of abuse of dominance. For the purposes of this analysis, the Bureau has already determined that the market is toques sold to retailers in Canada.

125. The Bureau will typically begin with an assessment of whether a firm holds a substantial degree of market power based on structural considerations. This involves determining the market and then assessing market shares and barriers to entry. In the absence of other evidence, based on these factors alone, the Bureau will not typically find dominance in cases where the allegedly dominant firm has a market

share of less than 50 percent. However, in some cases, contextual factors may suggest that market shares may not be representative of the full extent of a firm's market power and may prompt further investigation by the Bureau.

126. In this case, evidence of SUBSTANTIAL's leverage over retail channels and the competitive impact of SUBSTANTIAL's actions would likely prompt further investigation. When assessing the extent to which SUBSTANTIAL has commercial leverage over its retail channels, one factor the Bureau would consider is whether SUBSTANTIAL is willing and able to discipline retailers that do not comply with SUBSTANTIAL's terms, or if the threat of punishment is sufficient to exert leverage over retailers. If SUBSTANTIAL is able to unilaterally demand and receive considerably more favourable terms than other suppliers or dictate the level of support other brands of toque receive, the Bureau may consider this an indicator of market power. A key element of the Bureau's analysis would be examining the underlying consumer demand for SUBSTANTIAL's products, and the amount of switching that would occur if the prices of SUBSTANTIAL's products increased notwithstanding any alleged anti-competitive acts. The Bureau may also consider that the evidence that SUBSTANTIAL's toque prices increased by more than 33 percent as a result of SUBSTANTIAL's alleged anti-competitive conduct suggests SUBSTANTIAL has market power.

127. Given these factors, the Bureau may conclude that SUBSTANTIAL substantially or completely controls a market within the meaning of paragraph 79(1)(a), that is, it possesses a substantial degree of market power, notwithstanding SUBSTANTIAL's market share of 40 percent.

Example 4 – Joint Dominance

128. BUDDY, PAL, and CHUM are manufacturers of tandem bicycles, who sell their products through retailers. All three are roughly the same size, and each has a market share of approximately 33 percent. These market shares have remained stable over the past five years. Evidence suggests that BUDDY, PAL, and CHUM do not materially attempt to solicit the customers of the other, and there is very little customer switching between the firms.

129. BUDDY, PAL, and CHUM engage in long-term contracts with retailers that include automatic renewals, significant liquidated damages clauses in the event of early termination, and meet-or-release clauses that apply for a period subsequent to a contract being terminated in accordance with its conditions. These contracts both limit incentives for BUDDY, PAL, and CHUM to compete among each other and make it more difficult for new entrants to acquire customers.

130. FRIENDLY has unsuccessfully attempted to enter the market for tandem bicycles. Despite offering lower prices, FRIENDLY was unable to secure a sufficient number of customers due to the contracting practices of BUDDY, PAL, and CHUM. Without the ability to realize the economies of scale necessary to compete with the incumbents, FRIENDLY was forced to abandon its efforts to enter the market.

Analysis

131. This hypothetical will focus on assessing whether BUDDY, PAL, and CHUM are jointly dominant, rather than the other elements of section 79. The Bureau has already established that the product market is tandem bicycles, and the geographic market is Canada.

132. First, the Bureau would seek to assess whether firms outside the allegedly dominant group, either existing competitors or potential

entrants, can discipline any exercise of market power by BUDDY, PAL, or CHUM. In this case, as there are no other firms in the market, the focus of this assessment would be on potential entrants. The Bureau would consider the barriers to entry that exist, as well as the history of failed entry by FRIENDLY. Unless the Bureau found that barriers to entry were low (including barriers created by the conduct at issue), the Bureau may conclude that potential entrants could not discipline the joint exercise of market power by the incumbents.

133. The Bureau would then examine if competition between BUDDY, PAL, and CHUM is sufficient to prevent a joint exercise of market power to a substantial degree. Relevant information to this assessment includes factors such as the stability of market shares over time, the lack of active solicitation of the others' clients, and low customer switching, which would suggest that BUDDY, PAL, and CHUM jointly possess a substantial degree of market power. That BUDDY, PAL, and CHUM have adopted similar contractual terms may be relevant to this analysis to the extent they lessen the vigour of competition among the three, and therefore facilitate the joint exercise of market power.

134. As a result, the Bureau could conclude BUDDY, PAL, and CHUM are jointly dominant in the market for tandem bicycles in Canada, satisfying the requirement of paragraph 79(1)(a). [66]

Example 5 – Predatory Pricing

135. CHATEAU and DOMAINE are two Canadian maple-infused ice wine producers. Both produce only one type of wine, which is unique to these two vineyards. Indeed, both are located on a major hill in Gatineau with a particular micro-climate that cannot be found anywhere else in the world and this gives their products a distinctive taste which is sought after by connoisseurs.

136. Following a change in the leadership of CHATEAU, last year its new management substantially increased production and now offers customers a $40 rebate to the regular $50 price on each bottle of this year's vintage of its classic ice wine. Following this, DOMAINE contacted the Bureau alleging that this constitutes predatory pricing.

Analysis

137. Allegations of predatory pricing are examined under section 79 of the Act. Predatory pricing occurs when a firm deliberately prices below its own costs in order to eliminate or discipline existing rivals or to deter entry. This can substantially lessen or prevent competition when the firm engaging in the predation can subsequently recoup its losses by charging prices above the level that would otherwise have prevailed. For the purposes of this example, assume that the wines of CHATEAU and DOMAINE constitute the product market, the geographic market is Canada, and that CHATEAU holds a substantial degree of market power within that market.

138. As a pre-condition for predatory pricing, the Bureau considers it necessary for the relevant products to be priced below their average avoidable costs. Regarding this particular fact situation, a relevant initial way to assess the validity of DOMAINE's concerns would be to seek information from DOMAINE on its own costs and profitability. If CHATEAU's price is above DOMAINE's own costs, the Bureau would conclude that DOMAINE is not likely to be excluded by the pricing strategy and as a result, the requirements of paragraph 79(1)(c) are not likely met. Further, this would cast doubt on the assertion that CHATEAU is pricing below its own costs.

139. When assessing CHATEAU's average avoidable costs, the Bureau's focus will be on determining those costs that would have been avoided had CHATEAU not produced and sold the wine subject to the pricing strategy, including any opportunity costs. For simplicity, assume that there are four categories of costs that CHATEAU incurs:

Bottles:
CHATEAU purchases bottles shortly before bottling a given vintage based on the quantity it needs;

Barrels:
CHATEAU has a fixed stock of aging barrels, which is larger than what it typically requires at any time and CHATEAU rents excess barrels out to other vineyards;

Labour:
CHATEAU has a permanent staff who can only be fired in extreme circumstances, and hires seasonal labour to assist with grape planting, harvesting, processing, and bottling; and

Land:
CHATEAU is 68 years into a 100 year lease for the land the vineyard is situated on, cannot increase or reduce the amount of land it leases, and cannot use the land for any other purpose.

140. Because the quantity of bottles CHATEAU purchases varies based on the amount of wine CHATEAU produces, the Bureau would view this as an avoidable cost. Conversely, because CHATEAU cannot increase or reduce the amount of land it leases, the Bureau would not view land as an avoidable cost regardless of what share of CHATEAU's total costs the lease represents.

141. Because CHATEAU rents out barrels to other vineyards, when it uses them to age its own wine CHATEAU incurs an opportunity cost for the foregone rent it otherwise would have received. As a result, this

foregone rent becomes an avoidable cost even if CHATEAU would not have purchased additional barrels.

142. Certain elements of CHATEAU's labour costs would likely be avoidable, while others may not be. Any seasonal labour CHATEAU retained for the purposes of producing the wine subject to the pricing strategy would be avoidable. If CHATEAU would not have hired any additional permanent employees to produce the wine, and as CHATEAU is limited in its ability to terminate permanent employees, these costs would not be avoidable, depending on the duration of the pricing strategy. To illustrate, if the pricing occurs for a short period, CHATEAU may not be able to alter its costs related to permanent employees. However, if it persists for a longer time such that permanent employees may quit or retire and CHATEAU would have discretion as to whether to hire replacements, permanent labour costs may become avoidable.

143. The Bureau would typically also seek to determine if there is credible evidence of a legitimate business objective on the part of CHATEAU – e.g., if they were meeting a price set by a competitor, selling excess, obsolete or perishable inventory, or seeking to induce customers to try a new product.

144. Having determined CHATEAU's avoidable costs, the Bureau would then compare this to the price of the wine subject to the pricing strategy. In the absence of a credible business justification, if CHATEAU is pricing below its average avoidable cost, the Bureau would likely conclude that CHATEAU has engaged in a practice of anti-competitive acts.

145. In addition, even where a firm is pricing below its average avoidable costs, in order to substantially lessen or prevent competition and thereby raise issues under the Act it must be likely for a firm to recoup the losses it incurred through its pricing strategy. If any attempt to subsequently raise prices would be thwarted by timely new entry, re-entry, or

remaining competitors, the below cost pricing will not give rise to a substantial lessening or prevention of competition. In such cases, if the dominant firm successfully raises prices, and barriers prevent new entry, re-entry or expansion of existing competitors from being sufficiently timely or sufficient to discipline the exercise of market power on the part of the dominant firm, competition will be substantially prevented or lessened.

146. Barriers to entry may be created or strengthened by the predation. For example, by developing a "reputation for predation" a dominant incumbent may create the perception that entry will be unprofitable, deterring actual or potential entrants.

147. In this case, the Bureau would evaluate if any attempt by CHATEAU to raise prices and exercise market power would be thwarted by re-entry by DOMAINE, or by new entry. In this case, if re-entry by DOMAINE is unlikely or would not discipline CHATEAU's market power and a new entrant would be unable to obtain the land, assets, or know-how necessary to produce a competing wine, or would face significant reputational barriers due to being an unproven entrant that would prevent it from disciplining CHATEAU's market power, the Bureau may conclude that recoupment is possible and that the conduct substantially lessens or prevents competition.

Example 6 – Exclusive Dealing

148. A panopticon is a consumer electronic device that has become ubiquitous since its introduction three years ago. Most major consumer electronics manufacturers started developing their own panopticons and are competing to offer the best panopticons to consumers with the most advanced features.

149. Panopticons collect a significant volume of data on their users, including location and spending habits. Realizing the value of this data, several companies, known as panopticon data aggregators, started buying panopticon data directly from the panopticon manufacturers in order to analyze it and monetize the intelligence mined from the data. One of the key uses of aggregated panopticon data is providing insights into consumer preferences and purchases for advertising and marketing purposes.

150. In Canada, unlike in the United States where there are three major panopticon data aggregators, only one firm is offering these services. That firm, named THOTH, has been collecting panopticon data for the last two years and uses this data to enhance the capabilities of its algorithm, making its product even more desirable to customers. Having two years of Canadian panopticon data in its algorithm gives THOTH a significant competitive advantage over any entrant in the market for panopticon data aggregation in Canada. Further, THOTH collects data on how its customers use THOTH's aggregated data, which permit it to further improve the quality of its algorithm.

151. Over the last year, THOTH has started signing new ten-year contracts with all its suppliers of panopticon data in Canada. These contracts include significant monetary penalties for early termination, as well as bonus payments for providing THOTH exclusive access to data. THOTH claims that these contractual terms are necessary in order for it to recoup the significant investments it has made in integrating the data from its suppliers into its algorithm. Further, THOTH claims that the exclusivity payments incentivize data suppliers to technologically integrate themselves with THOTH's platform, increasing the quality of data THOTH collects and improving the analysis it can provide to customers.

152. ENKI, THOTH's largest competitor in the United States, has complained to the Bureau that because of these contractual terms ENKI cannot secure the data it would require to enter the Canadian market and compete with THOTH.

Analysis

153. For the purposes of this hypothetical, assume that the Bureau has already defined a product market around panopticon data aggregation in Canada, and that THOTH is dominant in that market.

154. When assessing if THOTH has engaged in a practice of anti-competitive acts, the Bureau would likely focus its analysis on the payments for exclusive access to panopticon data. [67] In particular, the Bureau would seek to determine if the purpose of the payments was to foreclose access to panopticon data in order to exclude rivals.

155. When assessing the purpose of the contractual terms, the Bureau may examine evidence relating to the negotiation of the contractual terms. This analysis may consider whether the contractual terms were included at the request of THOTH or the suppliers. In the latter case, the Bureau may assess THOTH's intent in agreeing to the supplier's request, or any modifications to the supplier's request that may have been made at the behest of THOTH.

156. As part of the Bureau's investigation, in addition to seeking any subjective evidence of intent on the part of THOTH, the Bureau may seek to determine if excluding ENKI was a reasonably foreseeable consequence of the contractual terms. This may include gathering information on the extent to which substitutes exist for the data suppliers subject to the THOTH contracts, whether additional suppliers could enter or ENKI could self-supply with data, and if the payments for exclusivity have the effect of inducing some or all data suppliers to not

deal with ENKI. The Bureau would also assess the extent to which ENKI requires data from all suppliers to be viable in the market. The Bureau may also examine whether, even without the exclusivity payments, it was reasonably foreseeable that panopticon data suppliers would not have supplied data to ENKI. If the contractual terms have the effect of preventing a sufficient number of data suppliers from dealing with ENKI and there are no viable alternatives, the Bureau could conclude that a negative exclusionary effect on a competitor was reasonably foreseeable.

157. The Bureau may also assess any relevant business justifications for the contractual terms advanced by THOTH. Here, it argues that the exclusivity payments incentivize beneficial technological integration. If, for example, there was no contemporaneous evidence at the time the contractual terms were entered into that the payments would improve technological integration and thereby product quality, the Bureau would be unlikely to find THOTH's justification credible. Even if there is some evidence of the benefits of the payments, if there was contemporaneous evidence suggesting THOTH considered other options to achieve similar outcomes through less restrictive means (e.g., contracting for similar services instead of requiring exclusivity) the Bureau may not consider THOTH's business justification persuasive.

158. The Bureau may also consider whether THOTH's exclusivity payments made economic sense but for the exclusion of competitors. This would involve trading off the costs of the exclusivity payments against any revenues that would be derived from benefits other than exclusion (e.g., increased sales of aggregated panopticon data due to higher quality, if any). In the absence of demonstrated revenues that do not depend on exclusion, the Bureau could consider this an indicator that the exclusivity payments have an anti-competitive purpose.

159. The Bureau would then consider whether the contractual terms substantially lessened or prevented competition in the market for panopticon data aggregation, i.e., if the contractual terms permit THOTH to exercise materially greater market power in the past, present, or likely in the future.

160. In this circumstance, the Bureau would seek to determine the extent to which barriers to entry are the result of THOTH's contractual terms, as compared to characteristics of the market itself. For instance, in an industry characterized by network effects, the extent to which barriers to entry already exist must be taken into account when assessing the effect of the clauses on competition. Here, THOTH's superior algorithm resulting from two years of panopticon data aggregation and customer use data may create sufficiently strong barriers that the contractual terms have no incremental effect.

161. The Bureau would seek to determine if, in the absence of THOTH's contractual terms, entry would be timely, likely, and sufficient to discipline the market power of THOTH. In order to assess the effects of the contractual terms, the Bureau may seek information on the state of competition in the United States where there are no exclusivity clauses, and the views of other potential entrants. If evidence indicated that entry would be unlikely because of the market structure even in the absence of such clauses, it would make the Bureau significantly less likely to conclude that there has been, is, or is likely to be a prevention of competition resulting from the clauses.

162. If the contractual terms are having the incremental effect of deterring entry, the Bureau would seek to assess the competitive significance of that entry. This may include examining evidence on the relative state of competition in markets for panopticon data aggregation where no such exclusivity clauses with suppliers exist, such as the United States. If

evidence indicated that prices paid for panopticon data would be substantially lower, quality of services higher, or that there would be substantially more innovation in the absence of the contractual terms, the Bureau could conclude that THOTH's conduct has substantially prevented competition.

Example 7 – Tied Selling

163. GORDIAN produces hitches, which are used in a variety of industrial applications. Use of a hitch requires rope, which quickly degrades and often needs to be replaced.

164. As late as two years ago there were four different producers of rope, including GORDIAN. At that time a rival producer, ALEXANDER, began developing plans to introduce a competing product to GORDIAN's hitches. ALEXANDER planned to leverage synergies between hitch and rope production to reduce costs and offer hitches at a price 20 percent below GORDIAN. Shortly afterward, GORDIAN introduced a policy requiring that only GORDIAN rope may be used with its hitches in order for the hitch to qualify for warranty coverage. Following this, the vast majority of hitch users switched to GORDIAN rope. As a result ALEXANDER and other third party rope manufacturers exited the market, and, as ALEXANDER was no longer able to rely on production efficiencies between hitches and rope, abandoned its efforts to compete with GORDIAN hitches.

165. GORDIAN claims that this policy was implemented because of low quality third party rope causing damage to its hitches, increasing GORDIAN's costs to provide service and lowering the reputation of its products.

Analysis

166. For the purposes of this hypothetical, assume that the Bureau has already defined a product market around hitches, and that GORDIAN is dominant in that market. Further, subject to hitches and rope being separate products (as discussed below), assume that the Bureau has defined rope to be a product market. In both cases, assume that the geographic market is Canada.

167. The Bureau would seek to determine whether the alleged tying and tied products are in fact separate products. A central question in the inquiry is the extent to which separate customer demand exists for the tying and tied products. The Bureau may also consider efficiencies that arise from a tie; if, for example, implementing a tie gives rise to efficiencies such that it is not commercially viable to offer the products separately the Bureau could not conclude the tying and tied products to be separate notwithstanding consumer demand.

168. In this case, when evaluating whether separate demand exists, the Bureau may consider the history of hitches and rope being purchased from different manufacturers, as well as the views of current and potential rope purchasers. Based on these facts, the Bureau could conclude that separate demand exists.

169. The Bureau could also consider whether implementing the tie gives rise to efficiencies such that it is not practical to offer hitches and rope as separate products. Because the economies of scope between rope and hitches rely on their joint production rather than the tie, the economies of scope would not be considered as part of this analysis. Here, the Bureau could consider the history of the two products being sold separately to be dispositive, and conclude that hitches and rope are separate products.

170. The Bureau may then turn to assessing whether GORDIAN's purpose in implementing the tie was anti-competitive; in this case, focussing on

whether the tie was intended to exclude one or more competitors in the market for rope . This would involve examining evidence of GORDIAN's subjective intent in implementing the tie, as well as the reasonably foreseeable effects of the tie.

171. The Bureau would typically examine the extent to which the tie is binding, that is, the extent to which the tie was likely to divert demand in the market for rope to GORDIAN. For instance, if hitch users can readily turn to effective substitutes for GORDIAN's warranty services at a sufficiently low cost, exclusion from the change to the warranty policy is not likely to be reasonably foreseeable (and similarly, if the tie is not binding, it is unlikely to prevent or lessen competition substantially). The Bureau would also examine the extent to which entry would be effective both into the market for hitches in the absence of economies of scope between hitches and rope, as well as the feasibility and effectiveness of entry into both markets simultaneously.

172. The Bureau would also consider any business justifications posited by GORDIAN. In this case, this may include gathering evidence on the extent to which third party rope caused hitch breakdowns prior to the tie, whether breakdowns have decreased following the tie, and if customer satisfaction with hitches has improved.

173. If subjective or objective evidence suggests the tie was instituted with exclusionary intent, and that evidence in support of the business justification was not compelling, the Bureau could conclude that GORDIAN has engaged in a practice of anti-competitive acts.

174. The Bureau would then consider whether the tie has, is, or is likely to cause a substantial lessening or prevention of competition in either the market for hitches or the market for rope. For example, if the Bureau concluded that the tie had raised barriers to entry in the market for hitches by denying economies of scope with rope production, the Bureau

could conclude that there has been a substantial prevention or lessening of competition.

Example 8 – Trade Association Rules

175. SOL is a provincial trade association of solar panel manufacturers. Among other activities, SOL coordinates industry quality and performance standards for exclusive use of its members, and certifies compliance with these standards. Purchasers of solar panels have come to recognize and demand the certification SOL provides, and uncertified solar panels see markedly lower sales. Because of the significant benefits these standards provide, virtually all solar panel manufacturers in the province are members of SOL. There are similar trade associations to SOL in other provinces, who engage in similar activities. SOL is purely a trade association: it does not produce solar panels, and has not been provided with any powers or regulatory role by any federal or provincial statute.

176. There are many solar panel manufacturers that are members of SOL, and no individual member has a market share of more than 5 percent. The past several years have seen various solar panel manufacturers enter and exit the market.

177. SUNNY is a highly successful solar panel manufacturer outside the province in which SOL operates. Unlike other solar panel manufacturers who sell homogenous solar panels through traditional retail channels, SUNNY has pursued a business model where customers may order personalized solar panels through the internet, which are then shipped directly. Many consumers consider SUNNY's solar panels to be more convenient, of higher quality relative to those of its competitors, but at a comparable cost. SUNNY has grown rapidly in its native province, and is considering expanding its operations across the country.

178. Around the time SUNNY began rapidly expanding, SOL passed rules prohibiting its members from selling customized products directly to consumers. SOL claims that because customized solar panels are more varied, if they bypass traditional retail channels (where they can be more readily monitored) they cannot be subject to the same level of testing and cannot be certified as part of the standard for panels established by SOL. SUNNY has complained to the Bureau, stating that it wishes to begin operating in SOL's province, but is prevented due to the rules of SOL. SUNNY claims that without certification by SOL, demand for SUNNY's products will be markedly reduced and as a result its entry based on its current business model will not be viable.

Analysis

179. For the purpose of this hypothetical, assume the Bureau has determined the market to consist of solar panels sold in the province in which SOL operates.

180. Having defined the market, the Bureau would assess whether SOL substantially or completely controls that market. Although the Bureau may seek to understand if substitutes exist for the services of SOL -- for example, if alternate certifications exist that SOL's members can effectively substitute for SOL's -- the Bureau may not engage in a separate market definition exercise around the services of SOL or assess its market power in that second market. However, the existence and feasibility of substitutes for SOL's services may be relevant in assessing if SOL holds a substantial degree of market power in solar panels, the reasonably foreseeable effects of SOL's restrictions, and if such restrictions give rise to a substantial lessening or prevention of competition.

181. When determining whether SOL substantially or completely controls the market for solar panels, the Bureau could consider the extent to which SOL can influence factors such as price, quality, variety, service, advertising or innovation in the market for solar panels. This would typically include an examination of whether membership in SOL and access to its certification is commercially necessary to compete in the market, and the extent to which SOL can enforce its rules on its members. If, for example, SOL can effectively exclude competitors or types of competition from the market, the Bureau could consider this requirement satisfied. In this case, the Bureau may seek to assess the extent to which consumer demand for a manufacturer's solar panels depends on SOL's certification. If consumer demand was sufficiently reduced for uncertified solar panels as to make it infeasible to compete, the Bureau could conclude SOL has a substantial degree of market power.

182. The Bureau will then seek to understand if SOL has engaged in a practice of anti-competitive acts. As SOL does not compete in the market for solar panels, the Bureau may seek to determine if SOL has a plausible competitive interest in negatively affecting competition in the market for solar panels. As SOL is a trade association that acts in the interests of its members, the Bureau would likely conclude that it has such a competitive interest.

183. The Bureau would seek to evaluate the purpose of the rules adopted by SOL. This may include examination of contemporaneous evidence of SOL's intent, such as documents or statements by SOL's officers, that speak to the intent behind SOL's rule changes. The Bureau may also consider whether exclusion of business models such as SUNNY's was a reasonably foreseeable consequence of the rules adopted by SOL. The Bureau would also consider any business justifications put forward by

SOL, evaluate their credibility, and determine whether these business justifications outweigh any evidence of anti-competitive intent. When evaluating the justification that individualized products may not conform to the standards set by SOL, the Bureau may evaluate the experience from areas where comparable restrictions are not adopted and the extent to which SOL conducted any studies to support the need for its restrictions. The Bureau may also have regard to whether the restrictions made economic sense, but for the exclusion of disruptive competition.

184. The Bureau would then seek to evaluate whether the restrictions give rise to a substantial lessening or prevention of competition. In doing so, the Bureau would consider whether there would be substantially greater competition among the members of SOL in the absence of the restrictions. Notably, the Bureau would not consider the relatively small market shares of the individual members of SOL or entry and exit (i.e., the absolute level of competition in the market), as dispositive in this regard. The Bureau's concern could be that the rules of SOL exclude or impede entrants (or potential entrants), as well as innovation among the members of SOL, leading to reduced dynamic competition. Relevant factors would include if the restrictions increased barriers to entry and expansion, whether the restrictions reduced the range of solar panels offered or their quality, and whether the restrictions have reduced innovation. The Bureau may find natural experiments in other markets persuasive, as well as the projections of businesses regarding the services they could offer but for the restrictions. The Bureau would also seek to assess whether other members of SOL would be offering higher quality services, be more innovative, or otherwise be engaging in more vigorous competition in the absence of the restrictions.

Example 9 – Disciplinary Conduct (1)

185. STATIC is Canada's largest provider of Secured Lending Cross-swaps (SLCs), a type of consumer-facing financial product, selling 60 percent of all SLCs in Canada. STATIC has one competitor, DYNAMIC, who accounts for the remaining 40 percent of sales. Since the entry of STATIC and DYNAMIC, significant tax incentives for the industry have been terminated and regulatory requirements for new entrants were increased, making new entry prohibitively difficult.

186. Competitive conditions in the SLC market – market shares, fee levels, and service offerings – have remained generally stable over the past decade. Documents gathered by the Bureau suggest that each market participant has historically realized that they benefit from less vigorous competition between each other, and have not traditionally attempted to solicit each other's customers, reduced their prices, or improved their service offerings.

187. Six months ago, DYNAMIC hired a new CEO who publically stated that DYNAMIC would begin a new program of customer acquisition, cutting fees by 10 percent and developing a new and more convenient smartphone application for customers to monitor and manage their SLCs. Shortly thereafter, STATIC launched a second branding of SLCs, QUANTIFY, through which STATIC began selling SLCs at a 70 percent discount to regular fees. After one month, DYNAMIC announced it would continue with its pricing; STATIC immediately further dropped the fees of the QUANTIFY brand to 20 percent of historical levels, announcing that it would continue to offer these fees as long as DYNAMIC continued with its customer acquisition program. The following month, DYNAMIC's CEO stated they would abandon their customer acquisition program, citing changed competitive conditions. STATIC withdrew the QUANTIFY brand from the market.

188. Following a complaint to the Bureau and a preliminary investigation, evidence indicates that STATIC was not pricing below its average avoidable costs at any point. However, internal correspondence and memos indicated that, through launching QUANTIFY, STATIC intended to punish DYNAMIC for adopting a new fee strategy and deter DYNAMIC from continuing its low fees, rather than simply matching or beating DYNAMIC's pricing. STATIC has told the Bureau it was simply a pro-competitive, aggressive response to DYNAMIC's pricing.

Analysis

189. Assume the Bureau has defined the market as SLCs sold in Canada, and concluded that STATIC holds a substantial degree of market power.

190. When assessing if STATIC's conduct is an anti-competitive act, the Bureau may accord particular weight to subjective evidence of intent, in order to distinguish a disciplinary act from aggressive competition on the merits. In particular, the Bureau may look for evidence that, in launching QUANTIFY, STATIC was attempting to punish DYNAMIC for its customer acquisition program, and restore market conditions to the historical status quo. When evaluating the overarching purpose of STATIC's conduct, the Bureau could also consider documentary evidence that other competitive responses on the part of STATIC would have been profitable had DYNAMIC not abandoned its customer acquisition program.

191. If the Bureau were satisfied that STATIC's conduct constituted a practice of anti-competitive acts, the Bureau would seek to determine if it caused a substantial lessening or prevention of competition. This could involve assessing the fee levels that would have likely prevailed if STATIC had adopted a different response and DYNAMIC had persisted in its

customer acquisition strategy, as well as any non-price effects from DYNAMIC abandoning its new smartphone application.

Example 10 – Disciplinary Conduct (2)

192. WILDERNESS is the largest retailer of outdoor equipment in Canada, and sells products primarily online. Due to advantages such as sophisticated recommendation algorithms driven by consumer data, WILDERNESS enjoys significant customer loyalty. WILDERNESS is well known for using algorithms and the automated collection of data to monitor and respond to market trends.

193. For the past three years, WILDERNESS has sold over 85 percent of tents purchased in Canada. There are two producers of tents, YURT and BIVOUAC.

194. FRONTIER is a rival e-commerce retailer that has recently commenced operations in Canada, and has begun selling tents, produced by both YURT and BIVOUAC. To date, FRONTIER has made minimal inroads to the Canadian market and at present facilitates sales of only 4 percent of tents.

195. Until recently, prices for tents on FRONTIER's platform have been comparable to those on WILDERNESS's. In the past few months FRONTIER has begun competing more aggressively on sales of tents, offering discounts up to 20 percent below WILDERNESS's prices. However, when FRONTIER began doing so, both YURT and BIVOUAC found that orders of their products were being shipped substantially slower to customers by WILDERNESS, and their products featured notably less favorable placement on WILDERNESS's website. Although WILDERNESS has not confirmed that this is the direct result of FRONTIER's pricing behavior, both YURT and BIVOUAC have taken steps to prevent FRONTIER from undercutting WILDERNESS on tents. When

they did so, previous service levels and website placement with WILDERNESS resumed.

196. FRONTIER has complained to the Bureau in relation to WILDERNESS's conduct.

Analysis

197. For the purposes of this hypothetical, assume that the Bureau has defined a relevant market that consists of the retail sale of tents in Canada, and that the Bureau has concluded that WILDERNESS has a substantial degree of market power in that market.

198. Depending on the facts and evidence the Bureau could evaluate WILDERNESS's conduct as either exclusionary or disciplinary, or both. To the extent that WILDERNESS intended to increase FRONTIER's costs in order to make FRONTIER a less effective competitor in the market for tents, the Bureau may view WILDERNESS as engaging in exclusionary conduct. Alternatively, if, for example, WILDERNESS intended to deter FRONTIER from competing more vigorously without affecting its ability to compete, the Bureau may view this as disciplinary conduct.

199. In either case, to evaluate FRONTIER's claims, the Bureau may seek evidence from WILDERNESS with respect to the operation of its monitoring algorithms, fulfillment services, and decisions with respect to website placement, including the extent to which sales of YURT and BIVOUAC's products were indeed contingent on FRONTIER's lower pricing.

200. In order to evaluate if WILDERNESS's conduct gives rise to a substantial lessening or prevention of competition, the Bureau would seek evidence that but for the impugned conduct, prices would be lower in the market for tents. This would likely involve examining the extent to which FRONTIER would lower its prices in the absence of the impugned

conduct. As part of this analysis, the Bureau would likely analyze the extent to which YURT and BIVOUAC are impacted by WILDERNESS's conduct, the causal impact of WILDERNESS's conduct on YURT and BIVOUAC's decision to prevent FRONTIER from undercutting WILDERNESS, as well as the extent to which FRONTIER would capture a significant share of WILDERNESS's former consumers if WILDERNESS continued to degrade its quality of service in relation to tent orders. The Bureau would also assess the duration of the lessening or prevention of competition; for example, if FRONTIER was engaging in promotional pricing for a limited period of time with little lasting benefit to FRONTIER's ability to compete with WILDERNESS, the Bureau would be less likely to conclude competition is substantially prevented or lessened.

Full citations of judicial decisions

Air Canada:

Commissioner of Competition v Air Canada, 2003 Comp Trib 13

Canada Pipe CT:

Commissioner of Competition v Canada Pipe, 2005 Comp Trib 3

Canada Pipe FCA 1:

Canada (Commissioner of Competition) v Canada Pipe Co, 2006 FCA 233, leave to appeal refused (10 May 2007).

Canada Pipe FCA 2

Canada (Commissioner of Competition) v Canada Pipe Company Ltd, 2006 FCA 236, leave to appeal refused, (10 May 2007).

Direct Energy:

The Commissioner of Competition v Direct Energy Marketing Limited, 2015 Comp Trib 2

Hillsdown:

Canada (Director of Investigation and Research) v Hillsdown Holdings Ltd (1992), 41 CPR (3d) 289 (Comp Trib)

Laidlaw:

Canada (Director of Investigation and Research) v Laidlaw Waste Systems Ltd (1992), 40 CPR (3d) 289 (Comp Trib)

NutraSweet:

Canada (Director of Investigation and Research) v NutraSweet Co (1990), 32 CPR (3d) 1 (Comp Trib)

Tele-Direct:

Canada (Director of Investigation and Research) v Tele-Direct (Publications) Inc. (1997), 73 CPR (3d) 1 (Comp Trib)

Tervita:

Tervita v Canada (Commissioner of Competition), 2015 SCC 3.

TREB CT:

The Commissioner of Competition v The Toronto Real Estate Board, 2016 Comp Trib 7

TREB FCA 1:

Commissioner of Competition v Toronto Real Estate Board, 2014 FCA 29, leave to appeal refused (24 July 2014).

TREB FCA 2:

Toronto Real Estate Board v Commissioner of Competition, 2017 FCA 236, leave to appeal refused (23 August 2018).

Visa:

The Commissioner of Competition v Visa Canada Corporation and MasterCard International Incorporated, 2013 Comp Trib 10

Footnotes

1 RSC 1985, c C-34.

2 To simplify the discussion, unless otherwise indicated, the term "price" in these guidelines refers to all dimensions of competition, such as quality or innovation. References to an increase in price encompass an increase in the monetary price, but may also refer to a reduction in quality, product choice, service, innovation or other dimensions of competition.

3 For the remainder of this document the terms "firm", "person", and "entity" will be used interchangeably. Similarly, unless otherwise indicated, any reference to a single allegedly dominant person should be read to include reference to either a single dominant person or multiple dominant persons.

4 As discussed further below, the Bureau may define different markets for the purposes of paragraphs 79(1)(a) and 79(1)(c). As such, market definition is also relevant to the assessment of competitive effects.

5 TREB CT at para 132.

6 NutraSweet at 9. The term product also encompasses services (see subsection 2(1) of the Act).

7 The Bureau considers supply responses, or the ability of potential competitors to begin supplying in response to a price increase, when assessing the "control" element of paragraph 79(1)(a), such as when assessing market shares and participants, rather than when defining markets.

8 TREB CT at para 124.

9 TREB CT at paras 129-130.

10 When detailed data on the prices and quantities of the relevant products and their substitutes are available, statistical measures may be used to define product markets. Demand elasticities indicate how buyers change their consumption of a product in response to a change in the product's price (own-price elasticity) or in response to changes in the price of another identified product (cross-price elasticity). While cross-price elasticities do not directly measure the ability of a firm to increase price, they are particularly useful for determining whether differentiated products are close substitutes for one another.

11 See Visa at para 189. Similarly, where the Bureau has defined a market as one side of a platform the Bureau, where appropriate, may consider effects of conduct on multiple sides of the platform when evaluating issues beyond market definition.

12 NutraSweet at 20.

13 TREB CT at para 173.

14 Tervita at para 44.

15 TREB CT at paras 174.

16 TREB CT at para 176.

17 The Tribunal has accepted some direct indicators as evidence of market power, such as a high price-to-average-cost margin and corresponding high accounting profits. Similarly, significant variations in price by region, along with the ability to lower prices in response to increased competition or entry, has been accepted by the Tribunal as evidence of supra-competitive pricing in higher-price regions. In these cases, direct indicators alone were insufficient to establish market power, which was substantiated through the use of indirect indicators. See Tele-Direct at 101 and Canada Pipe CT at para 161.

18 TREB FCA 1 at para 13.

19 The Tribunal has held that the use of the present tense in paragraph 79(1)(a) means that at the time a person engages in a practice of anti-competitive acts, they must be in a position of dominance in the market (Direct Energy at para 40). The Bureau may conclude that paragraph 79(1)(a) is satisfied where a firm attains dominance through a practice of anti-competitive acts, provided that the firm is dominant at some point in time when the practice is ongoing.

20 However, as discussed in more detail below, in exceptional cases the Bureau may consider firms with relatively low market shares to possess a substantial degree of market power where other evidence establishes its existence.

21 In Tele-Direct, at 83, the Tribunal stated that it would require evidence of "extenuating circumstances, in general, ease of entry" to overcome a prima facie determination of control based on market shares of 80 percent and higher; whereas, in Laidlaw, the Tribunal observed that a market share of less than 50 percent would not give rise to a prima facie finding of dominance. However, this does not preclude the possibility that a substantial degree of market power could be found below that threshold.

22 The Tribunal has recognized that firms with relatively low market shares may possess some degree of market power. For example, in the context of other provisions of Part VIII of the Act, the Tribunal has found a firm to possess market power with a share as low as 33 percent (Visa at para 267), and has recognized that market shares may either overstate or understate a firm's market power (Hillsdown at 318).

23 See, for instance, TREB CT at para 196.

24 See TREB CT at para 174.

25 Laidlaw at 331; Tele-Direct, at 95; Canada Pipe CT at paras 138, 146; Canada Pipe FCA 2 at paras 24-25, 36.

26 TREB CT at para 176.

27 TREB CT at paras 182, 190, 254(n).

28 TREB FCA 1 at para 13.

29 TREB CT at paras 203-207.

30 Prices that appear to be at or near the competitive level could be evidence of vigorous competition. Other factors may include, but are not limited to, price competition among competitors, instability of market shares over time, attempts to solicit rival's customers, or "leapfrog" competition through innovation. Conversely, the absence of these factors on the part of firms within the allegedly jointly dominant group could indicate that these firms are not competing vigorously with one another.

31 Canada Pipe FCA 1 at para 60.

32 In addition, subsection 79(5) states that "For the purpose of this section, an act engaged in pursuant only to the exercise of any right or enjoyment of any interest derived under the *Copyright Act*, *Industrial Design Act*, *Integrated Circuit Topography Act*, *Patent Act*, *Trade-marks Act* or any other Act of Parliament pertaining to intellectual or industrial property is not an anti-competitive act." For information on the Bureau's approach to reviewing business conduct involving intellectual property, see the Bureau's *Intellectual Property Enforcement Guidelines*.

33 Canada Pipe FCA 1 at para 66.

34 The Federal Court of Appeal and Tribunal have acknowledged that paragraph 78(1)(f) does not contain an explicit reference to a purpose vis-à-vis a competitor. The Federal Court of Appeal has characterized the conduct in paragraph 78(1)(f) as reflecting "a self-serving intent, not a relative one intended to harm a competitor", and that on the premise of its earlier jurisprudence "requiring a predatory, exclusionary, or disciplinary negative effect on a competitor in all cases would render paragraph 78(1)(f) meaningless" (TREB FCA 2 at para 54)

35 Canada Pipe FCA 1 at paras 72-73.

36 NutraSweet at 35.

37 TREB CT at para 277; TREB FCA 1 at paras 17-20.

38 TREB CT at paras 279-282.

39 The Bureau will typically consider the question of whether a firm can recoup any losses incurred in predation in the analysis of whether the conduct has given rise to a substantial lessening or prevention of competition pursuant to paragraph 79(1)(c). In many cases the ability to recoup losses from predation will depend on barriers to entry that prevent new entry in response to supra-competitive prices, or re-entry by predated firms. In the absence of recoupment in the past, present, or likely recoupment in the future, the Bureau would not typically consider paragraph 79(1)(c) to be satisfied.

40 Air Canada at paras 76, 80.

41 Exceptions to this approach may exist. For example, if a firm engaged in similar behaviour after being sanctioned for disciplinary conduct, or if the Bureau observed substantially similar conduct in a market in which disciplinary conduct had previously taken place, the Bureau may put less of a focus on subjective evidence of intent.

42 The Bureau recognizes that difficulties may arise identifying an appropriate remedy for disciplinary anti-competitive acts. As with other conduct actionable under section 79, the appropriate remedy for a disciplinary act will ultimately depend on the specific facts of any given case. When determining the appropriate remedy for disciplinary conduct the Bureau will have regard to the spectrum of options afforded by section 79, including administrative monetary penalties where appropriate.

43 Canada Pipe FCA 1 at para 73.

44 However, as the Tribunal has recognized, it is necessary to consider all known circumstances; for example, cost reductions that may be contemplated or realized by driving one's rivals from a market would not suffice to shield conduct that was primarily motivated by a predatory, exclusionary or disciplinary purpose (see TREB CT at para 295).

45 TREB FCA 2 at para 146.

46 TREB FCA 2 at para 144.

47 TREB CT at paras 311-318. In addition, the Tribunal indicated that it may also have regard to whether the acts involved the sacrifice of short-term profits that would not be recouped but for the exclusion of a competitor. The Bureau's approach to such analysis is similar to what is set out above with respect to the no economic sense analysis.

48 When analyzing whether conduct made no reasonably foreseeable economic sense but for the exclusion of a competitor, the Bureau will not always consider the appropriate counterfactual scenario (against which to assess relative economic benefits) to be the one in which the firm took no action whatsoever. For instance, where a firm is presented with two options and elects to pursue the one in which it foresees deriving greater profits due to exclusion (and lower profits from other sources) than the alternative, the Bureau would consider this to make no economic sense but for the exclusion of a competitor.

49 Canada Pipe FCA 1 at para 87.

50 The Tribunal has recognized that business justifications "do not give rise to the quantitative assessment contemplated by the efficiency exception in section 96 of the Act" and that "it would be much more difficult, and perhaps even completely intractable, in the section 79 context" (TREB CT at para 291).

51 When assessing competitive effects pursuant to paragraph 79(1)(c) the Bureau analyzes effects in reference to a market, which in turn engages the concepts of market definition. The Bureau is of the view that the markets for the purposes of paragraphs 79(1)(a) and 79(1)(c) need not be the same; that is, section 79 may apply where a firm is dominant in one market but substantially lessens or prevents competition in another (see, for instance, Tele-direct at 214). When necessary, the Bureau applies the same approach to market definition for the purposes of paragraph 79(1)(c) as it does in reference to paragraph 79(1)(a), discussed above.

52 This test was accepted by the Federal Court of Appeal in Canada Pipe FCA 1 at para 38. The Court stated that other tests might also be appropriate depending on the circumstances.

53 TREB CT at paras 472-474.

54 This could include causing rivals to adopt more accommodating competitive reactions.

55 When assessing a reasonable time period for potential competitors to provide effective competition in the absence of the anti-competitive acts, the Bureau will assess the time required for competitors to develop products and marketing plans, to build facilities or make adjustments to existing facilities, and to achieve a level of sales sufficient to prevent or discipline a material price increase by dominant firms. The Federal Court of Appeal has held that a duration of two years will usually be sufficient to establish an effect (TREB FCA 2 at para 64).

56 Tele-Direct at 247.

57 Although in certain circumstances the Bureau may undertake quantitative studies of competitive effects when assessing potential abuses of dominance, it is not necessary for the Bureau to adduce quantitative evidence to establish a substantial prevention or lessening of competition (TREB FCA 2 at paras 101, 104).

58 TREB CT at para 712.

59 See also the Bureau's *Competition and Compliance Framework*.

60 Where the Commissioner has concluded the elements of section 79 are satisfied, the Commissioner will not typically discontinue an inquiry or application if the dominant firm unilaterally ceases its practice of anti-competitive acts unless the dominant firm enters into a consent agreement. This provides certainty and predictability to the Bureau and market participants that the anti-competitive conduct will not be resumed. In some cases the Bureau may seek compensation for investigative costs as part of a consent agreement. Additionally, the Bureau may seek administrative monetary penalties in consent agreements, where appropriate.

61 The Commissioner is the only party that may make applications to the Tribunal under section 79. See subsection 79(1) of the Act.

62 Subsection 79(2) permits the Tribunal to grant both prescriptive behavioural remedies (e.g., compelling a respondent to undertake certain mandatory conduct) and structural remedies (e.g., the divestiture of assets). The Bureau does not seek structural remedies to abuses of dominance in the vast majority of circumstances, but may consider doing so where an abuse of dominance causes structural changes in a market such that competition cannot be restored by a behavioural remedy alone. For example, where a practice has removed effective pre-existing competitors from a market where barriers to entry (that are not created or enhanced by the abuse of dominance) have increased over time with the result that new entry is not feasible, the Bureau may seek a divestiture that would permit a new entrant to be a viable competitor. This could either be in lieu of or in addition to a prohibition order under subsection 79(1) and/or a prescriptive behavioural remedy under subsection 79(2).

63 See section 66 of the Act.

64 See subsection 79(3.3) of the Act.

65 See section 79.1 of the Act.

66 In addition to the above factors, the Bureau would also consider any other relevant evidence that a substantial degree of market power exists on the part of BUDDY, PAL, or CHUM, such as direct evidence of market power, or an ability to exclude.

67 Because the contractual terms have been consistently inserted into ten-year agreements with data suppliers, the Bureau would consider THOTH to be engaged in a practice.

Date modified:
2024-06-27

ontact the Competition Bureau

Exhibit 7 to the Cross-Examination of Keith Hylton

AMERICAN ECONOMIC ASSOCIATION

JEL Classification System / EconLit Subject Descriptors

All changes since 2024-08-01 are noted below.
‡ = New Classification
† = Updated Classification

General Categories

A General Economics and Teaching

B History of Economic Thought, Methodology, and Heterodox Approaches

C Mathematical and Quantitative Methods

D Microeconomics

E Macroeconomics and Monetary Economics

F International Economics

G Financial Economics

H Public Economics

I Health, Education, and Welfare

J Labor and Demographic Economics

K Law and Economics

L Industrial Organization

M Business Administration and Business Economics • Marketing • Accounting • Personnel Economics

N Economic History

O **Economic Development, Innovation, Technological Change, and Growth**

P **Political Economy and Comparative Economic Systems**

Q **Agricultural and Natural Resource Economics • Environmental and Ecological Economics**

R **Urban, Rural, Regional, Real Estate, and Transportation Economics**

Y **Miscellaneous Categories**

Z **Other Special Topics**

A. General Economics and Teaching

A1 General Economics

- A10 General
- A11 Role of Economics • Role of Economists • Market for Economists
- A12 Relation of Economics to Other Disciplines
- A13 Relation of Economics to Social Values
- A14 Sociology of Economics
- A19 Other

A2 Economic Education and Teaching of Economics

- A20 General
- A21 Pre-college
- A22 Undergraduate
- A23 Graduate
- A29 Other

A3 Collective Works

- A30 General
- A31 Collected Writings of Individuals
- A32 Collective Volumes
- A33 Handbooks
- A39 Other

B. History of Economic Thought, Methodology, and Heterodox Approaches

B00 General

B1 History of Economic Thought through 1925

- B10 General
- B11 Preclassical (Ancient, Medieval, Mercantilist, Physiocratic)
- B12 Classical (includes Adam Smith)
- B13 Neoclassical through 1925 (Austrian, Marshallian, Walrasian, Wicksellian)
- B14 Socialist • Marxist
- B15 Historical • Institutional • Evolutionary
- B16 Quantitative and Mathematical
- B17 International Trade and Finance
- B19 Other

B2 History of Economic Thought since 1925

- B20 General
- B21 Microeconomics
- B22 Macroeconomics
- B23 Econometrics • Quantitative and Mathematical Studies
- B24 Socialist • Marxist • Sraffian
- B25 Historical • Institutional • Evolutionary • Austrian • Stockholm School
- B26 Financial Economics
- B27 International Trade and Finance
- B29 Other

B3 History of Economic Thought: Individuals

- B30 General

B31 Individuals

B32 Obituaries

B4 Economic Methodology

B40 General

B41 Economic Methodology

B49 Other

B5 Current Heterodox Approaches

B50 General

B51 Socialist • Marxian • Sraffian

B52 Historical • Institutional • Evolutionary • Modern Monetary Theory

B53 Austrian

B54 Feminist Economics

B55 Social Economics

B59 Other

C. Mathematical and Quantitative Methods

C00 General

C01 Econometrics

C02 Mathematical Methods

C1 Econometric and Statistical Methods and Methodology: General

C10 General

C11 Bayesian Analysis: General

C12 Hypothesis Testing: General

C13 Estimation: General

C14 Semiparametric and Nonparametric Methods: General

C15 Statistical Simulation Methods: General

C18 Methodological Issues: General

C19 Other

C2 Single Equation Models • Single Variables

C20 General

C21 Cross-Sectional Models • Spatial Models • Treatment Effect Models • Quantile Regressions

C22 Time-Series Models • Dynamic Quantile Regressions • Dynamic Treatment Effect Models • Diffusion Processes

C23 Panel Data Models • Spatio-temporal Models

C24 Truncated and Censored Models • Switching Regression Models • Threshold Regression Models

C25 Discrete Regression and Qualitative Choice Models • Discrete Regressors • Proportions • Probabilities

C26 Instrumental Variables (IV) Estimation

C29 Other

C3 Multiple or Simultaneous Equation Models • Multiple Variables

- C30 General
- C31 Cross-Sectional Models • Spatial Models • Treatment Effect Models • Quantile Regressions • Social Interaction Models
- C32 Time-Series Models • Dynamic Quantile Regressions • Dynamic Treatment Effect Models • Diffusion Processes • State Space Models
- C33 Panel Data Models • Spatio-temporal Models
- C34 Truncated and Censored Models • Switching Regression Models
- C35 Discrete Regression and Qualitative Choice Models • Discrete Regressors • Proportions
- C36 Instrumental Variables (IV) Estimation
- C38 Classification Methods • Cluster Analysis • Principal Components • Factor Models
- C39 Other

C4 Econometric and Statistical Methods: Special Topics

- C40 General
- C41 Duration Analysis • Optimal Timing Strategies
- C43 Index Numbers and Aggregation
- C44 Operations Research • Statistical Decision Theory
- C45 Neural Networks and Related Topics
- C46 Specific Distributions • Specific Statistics
- C49 Other

C5 Econometric Modeling

- C50 General
- C51 Model Construction and Estimation
- C52 Model Evaluation, Validation, and Selection
- C53 Forecasting and Prediction Methods • Simulation Methods

C54 Quantitative Policy Modeling

C55 Large Data Sets: Modeling and Analysis

C57 Econometrics of Games and Auctions

C58 Financial Econometrics

C59 Other

C6 Mathematical Methods • Programming Models • Mathematical and Simulation Modeling

C60 General

C61 Optimization Techniques • Programming Models • Dynamic Analysis

C62 Existence and Stability Conditions of Equilibrium

C63 Computational Techniques • Simulation Modeling

C65 Miscellaneous Mathematical Tools

C67 Input–Output Models

C68 Computable General Equilibrium Models

C69 Other

C7 Game Theory and Bargaining Theory

C70 General

C71 Cooperative Games

C72 Noncooperative Games

C73 Stochastic and Dynamic Games • Evolutionary Games • Repeated Games

C78 Bargaining Theory • Matching Theory

C79 Other

C8 Data Collection and Data Estimation Methodology • Computer Programs

C80 General

C81 Methodology for Collecting, Estimating, and Organizing Microeconomic Data • Data Access

C82 Methodology for Collecting, Estimating, and Organizing Macroeconomic Data • Data Access

C83 Survey Methods • Sampling Methods

C87 Econometric Software

C88 Other Computer Software

C89 Other

C9 Design of Experiments

C90 General

C91 Laboratory, Individual Behavior

C92 Laboratory, Group Behavior

C93 Field Experiments

C99 Other

D. Microeconomics

D00 General

D01 Microeconomic Behavior: Underlying Principles

D02 Institutions: Design, Formation, Operations, and Impact

D04 Microeconomic Policy: Formulation, Implementation, and Evaluation

D1 Household Behavior and Family Economics

D10 General

D11 Consumer Economics: Theory

D12 Consumer Economics: Empirical Analysis

D13 Household Production and Intrahousehold Allocation

D14 Household Saving • Personal Finance

D15 Intertemporal Household Choice • Life Cycle Models and Saving

D16 Collaborative Consumption

D18 Consumer Protection

D19 Other

D2 Production and Organizations

D20 General

D21 Firm Behavior: Theory

D22 Firm Behavior: Empirical Analysis

D23 Organizational Behavior • Transaction Costs • Property Rights

D24 Production • Cost • Capital • Capital, Total Factor, and Multifactor Productivity • Capacity

D25 Intertemporal Firm Choice: Investment, Capacity, and Financing

D26 Crowd-Based Firms

D29 Other

D3 Distribution

- D30 General
- D31 Personal Income, Wealth, and Their Distributions
- D33 Factor Income Distribution
- D39 Other

D4 Market Structure, Pricing, and Design

- D40 General
- D41 Perfect Competition
- D42 Monopoly
- D43 Oligopoly and Other Forms of Market Imperfection
- D44 Auctions
- D45 Rationing • Licensing
- D46 Value Theory
- D47 Market Design
- D49 Other

D5 General Equilibrium and Disequilibrium

- D50 General
- D51 Exchange and Production Economies
- D52 Incomplete Markets
- D53 Financial Markets
- D57 Input–Output Tables and Analysis
- D58 Computable and Other Applied General Equilibrium Models
- D59 Other

D6 Welfare Economics

D60 General

D61 Allocative Efficiency • Cost–Benefit Analysis

D62 Externalities

D63 Equity, Justice, Inequality, and Other Normative Criteria and Measurement

D64 Altruism • Philanthropy • Intergenerational Transfers

D69 Other

D7 Analysis of Collective Decision-Making

D70 General

D71 Social Choice • Clubs • Committees • Associations

D72 Political Processes: Rent-Seeking, Lobbying, Elections, Legislatures, and Voting Behavior

D73 Bureaucracy • Administrative Processes in Public Organizations • Corruption

D74 Conflict • Conflict Resolution • Alliances • Revolutions

D78 Positive Analysis of Policy Formulation and Implementation

D79 Other

D8 Information, Knowledge, and Uncertainty

D80 General

D81 Criteria for Decision-Making under Risk and Uncertainty

D82 Asymmetric and Private Information • Mechanism Design

D83 Search • Learning • Information and Knowledge • Communication • Belief • Unawareness

D84 Expectations • Speculations

D85 Network Formation and Analysis: Theory

D86 Economics of Contract: Theory

D87 Neuroeconomics

D89 Other

D9 Micro-Based Behavioral Economics

D90 General

D91 Role and Effects of Psychological, Emotional, Social, and Cognitive Factors on Decision Making

E. Macroeconomics and Monetary Economics

E00 General

E01 Measurement and Data on National Income and Product Accounts and Wealth • Environmental Accounts

E02 Institutions and the Macroeconomy

E1 General Aggregative Models

E10 General

E11 Marxian • Sraffian • Kaleckian

E12 Keynes • Keynesian • Post-Keynesian • Modern Monetary Theory

E13 Neoclassical

E14 Austrian • Evolutionary • Institutional

E16 Social Accounting Matrix

E17 Forecasting and Simulation: Models and Applications

E19 Other

E2 Consumption, Saving, Production, Investment, Labor Markets, and Informal Economy

E20 General

E21 Consumption • Saving • Wealth

E22 Investment • Capital • Intangible Capital • Capacity

E23 Production

E24 Employment • Unemployment • Wages • Intergenerational Income Distribution • Aggregate Human Capital • Aggregate Labor Productivity

E25 Aggregate Factor Income Distribution

E26 Informal Economy • Underground Economy

E27 Forecasting and Simulation: Models and Applications

E29 Other

E3 Prices, Business Fluctuations, and Cycles

- E30 General
- E31 Price Level • Inflation • Deflation
- E32 Business Fluctuations • Cycles
- E37 Forecasting and Simulation: Models and Applications
- E39 Other

E4 Money and Interest Rates

- E40 General
- E41 Demand for Money
- E42 Monetary Systems • Standards • Regimes • Government and the Monetary System • Payment Systems
- E43 Interest Rates: Determination, Term Structure, and Effects
- E44 Financial Markets and the Macroeconomy
- E47 Forecasting and Simulation: Models and Applications
- E49 Other

E5 Monetary Policy, Central Banking, and the Supply of Money and Credit

- E50 General
- E51 Money Supply • Credit • Money Multipliers
- E52 Monetary Policy
- E58 Central Banks and Their Policies
- E59 Other

E6 Macroeconomic Policy, Macroeconomic Aspects of Public Finance, and General Outlook

- E60 General
- E61 Policy Objectives • Policy Designs and Consistency • Policy Coordination

E62 Fiscal Policy • Modern Monetary Theory

E63 Comparative or Joint Analysis of Fiscal and Monetary Policy • Stabilization • Treasury Policy

E64 Incomes Policy • Price Policy

E65 Studies of Particular Policy Episodes

E66 General Outlook and Conditions

E69 Other

E7 Macro-Based Behavioral Economics

E70 General

E71 Role and Effects of Psychological, Emotional, Social, and Cognitive Factors on the Macro Economy

F. International Economics

F00 General

F01 Global Outlook

F02 International Economic Order and Integration

F1 Trade

F10 General

F11 Neoclassical Models of Trade

F12 Models of Trade with Imperfect Competition and Scale Economies • Fragmentation

F13 Trade Policy • International Trade Organizations

F14 Empirical Studies of Trade

F15 Economic Integration

F16 Trade and Labor Market Interactions

F17 Trade Forecasting and Simulation

F18 Trade and Environment

F19 Other

F2 International Factor Movements and International Business

F20 General

F21 International Investment • Long-Term Capital Movements

F22 International Migration

F23 Multinational Firms • International Business

F24 Remittances

F29 Other

F3 International Finance

F30 General

F31 Foreign Exchange

F32 Current Account Adjustment • Short-Term Capital Movements

F33 International Monetary Arrangements and Institutions

F34 International Lending and Debt Problems

F35 Foreign Aid

F36 Financial Aspects of Economic Integration

F37 International Finance Forecasting and Simulation: Models and Applications

F38 International Financial Policy: Financial Transactions Tax; Capital Controls

F39 Other

F4 Macroeconomic Aspects of International Trade and Finance

F40 General

F41 Open Economy Macroeconomics

F42 International Policy Coordination and Transmission

F43 Economic Growth of Open Economies

F44 International Business Cycles

F45 Macroeconomic Issues of Monetary Unions

F47 Forecasting and Simulation: Models and Applications

F49 Other

F5 International Relations, National Security, and International Political Economy

F50 General

F51 International Conflicts • Negotiations • Sanctions

F52 National Security • Economic Nationalism

F53 International Agreements and Observance • International Organizations

F54 Colonialism • Imperialism • Postcolonialism

F55 International Institutional Arrangements

F59 Other

F6 Economic Impacts of Globalization

F60 General

F61 Microeconomic Impacts

F62 Macroeconomic Impacts

F63 Economic Development

F64 Environment

F65 Finance

F66 Labor

F68 Policy

F69 Other

G. Financial Economics

G00 General

G01 Financial Crises

G1 General Financial Markets

G10 General

G11 Portfolio Choice • Investment Decisions

G12 Asset Pricing • Trading Volume • Bond Interest Rates

G13 Contingent Pricing • Futures Pricing

G14 Information and Market Efficiency • Event Studies • Insider Trading

G15 International Financial Markets

G17 Financial Forecasting and Simulation

G18 Government Policy and Regulation

G19 Other

G2 Financial Institutions and Services

G20 General

G21 Banks • Depository Institutions • Micro Finance Institutions • Mortgages

G22 Insurance • Insurance Companies • Actuarial Studies

G23 Non-bank Financial Institutions • Financial Instruments • Institutional Investors

G24 Investment Banking • Venture Capital • Brokerage • Ratings and Ratings Agencies

G28 Government Policy and Regulation

G29 Other

G3 Corporate Finance and Governance

G30 General

G31 Capital Budgeting • Fixed Investment and Inventory Studies • Capacity

G32 Financing Policy • Financial Risk and Risk Management • Capital and Ownership Structure • Value of Firms • Goodwill

G33 Bankruptcy • Liquidation

G34 Mergers • Acquisitions • Restructuring • Corporate Governance

G35 Payout Policy

G38 Government Policy and Regulation

G39 Other

G4 Behavioral Finance

G40 General

G41 Role and Effects of Psychological, Emotional, Social, and Cognitive Factors on Decision Making in Financial Markets

G5 Household Finance

G50 General

G51 Household Saving, Borrowing, Debt, and Wealth

G52 Insurance

G53 Financial Literacy

G59 Other

H. Public Economics

H00 General

H1 Structure and Scope of Government

H10 General

H11 Structure, Scope, and Performance of Government

H12 Crisis Management

H13 Economics of Eminent Domain • Expropriation • Nationalization

H19 Other

H2 Taxation, Subsidies, and Revenue

H20 General

H21 Efficiency • Optimal Taxation

H22 Incidence

H23 Externalities • Redistributive Effects • Environmental Taxes and Subsidies

H24 Personal Income and Other Nonbusiness Taxes and Subsidies

H25 Business Taxes and Subsidies

H26 Tax Evasion and Avoidance

H27 Other Sources of Revenue

H29 Other

H3 Fiscal Policies and Behavior of Economic Agents

H30 General

H31 Household

H32 Firm

H39 Other

H4 Publicly Provided Goods

- H40 General
- H41 Public Goods
- H42 Publicly Provided Private Goods
- H43 Project Evaluation • Social Discount Rate
- H44 Publicly Provided Goods: Mixed Markets
- H49 Other

H5 National Government Expenditures and Related Policies

- H50 General
- H51 Government Expenditures and Health
- H52 Government Expenditures and Education
- H53 Government Expenditures and Welfare Programs
- H54 Infrastructures • Other Public Investment and Capital Stock
- H55 Social Security and Public Pensions
- H56 National Security and War
- H57 Procurement
- H59 Other

H6 National Budget, Deficit, and Debt

- H60 General
- H61 Budget • Budget Systems
- H62 Deficit • Surplus
- H63 Debt • Debt Management • Sovereign Debt
- H68 Forecasts of Budgets, Deficits, and Debt
- H69 Other

H7 State and Local Government • Intergovernmental Relations

H70 General

H71 State and Local Taxation, Subsidies, and Revenue

H72 State and Local Budget and Expenditures

H73 Interjurisdictional Differentials and Their Effects

H74 State and Local Borrowing

H75 State and Local Government: Health • Education • Welfare • Public Pensions

H76 State and Local Government: Other Expenditure Categories

H77 Intergovernmental Relations • Federalism • Secession

H79 Other

H8 Miscellaneous Issues

H80 General

H81 Governmental Loans • Loan Guarantees • Credits • Grants • Bailouts

H82 Governmental Property

H83 Public Administration • Public Sector Accounting and Audits

H84 Disaster Aid

H87 International Fiscal Issues • International Public Goods

H89 Other

I. Health, Education, and Welfare

I00 General

I1 Health

I10 General

I11 Analysis of Health Care Markets

I12 Health Behavior

I13 Health Insurance, Public and Private

I14 Health and Inequality

I15 Health and Economic Development

I18 Government Policy • Regulation • Public Health

I19 Other

I2 Education and Research Institutions

I20 General

I21 Analysis of Education

I22 Educational Finance • Financial Aid

I23 Higher Education • Research Institutions

I24 Education and Inequality

I25 Education and Economic Development

I26 Returns to Education

I28 Government Policy

I29 Other

I3 Welfare, Well-Being, and Poverty

I30 General

I31 General Welfare, Well-Being

I32 Measurement and Analysis of Poverty

I38 Government Policy • Provision and Effects of Welfare Programs

I39 Other

J. Labor and Demographic Economics

J00 General

J01 Labor Economics: General

J08 Labor Economics Policies

J1 Demographic Economics

J10 General

J11 Demographic Trends, Macroeconomic Effects, and Forecasts

J12 Marriage • Marital Dissolution • Family Structure • Domestic Abuse

J13 Fertility • Family Planning • Child Care • Children • Youth

J14 Economics of the Elderly • Economics of Disability • Non-Labor Market Discrimination

J15 Economics of Minorities, Races, Indigenous Peoples, and Immigrants • Non-labor Discrimination

J16 Economics of Gender • Non-labor Discrimination

J17 Value of Life • Forgone Income

J18 Public Policy

J19 Other

J2 Demand and Supply of Labor

J20 General

J21 Labor Force and Employment, Size, and Structure

J22 Time Allocation and Labor Supply

J23 Labor Demand

J24 Human Capital • Skills • Occupational Choice • Labor Productivity

J26 Retirement • Retirement Policies

J28 Safety • Job Satisfaction • Related Public Policy

J29 Other

J3 Wages, Compensation, and Labor Costs

- J30 General
- J31 Wage Level and Structure • Wage Differentials
- J32 Nonwage Labor Costs and Benefits • Retirement Plans • Private Pensions
- J33 Compensation Packages • Payment Methods
- J38 Public Policy
- J39 Other

J4 Particular Labor Markets

- J40 General
- J41 Labor Contracts
- J42 Monopsony • Segmented Labor Markets
- J43 Agricultural Labor Markets
- J44 Professional Labor Markets • Occupational Licensing
- J45 Public Sector Labor Markets
- J46 Informal Labor Markets
- J47 Coercive Labor Markets
- J48 Public Policy
- J49 Other

J5 Labor–Management Relations, Trade Unions, and Collective Bargaining

- J50 General
- J51 Trade Unions: Objectives, Structure, and Effects
- J52 Dispute Resolution: Strikes, Arbitration, and Mediation • Collective Bargaining
- J53 Labor–Management Relations • Industrial Jurisprudence
- J54 Producer Cooperatives • Labor Managed Firms • Employee Ownership
- J58 Public Policy

J59 Other

J6 Mobility, Unemployment, Vacancies, and Immigrant Workers

J60 General

J61 Geographic Labor Mobility • Immigrant Workers

J62 Job, Occupational, and Intergenerational Mobility

J63 Turnover • Vacancies • Layoffs

J64 Unemployment: Models, Duration, Incidence, and Job Search

J65 Unemployment Insurance • Severance Pay • Plant Closings

J68 Public Policy

J69 Other

J7 Labor Discrimination

J70 General

J71 Discrimination

J78 Public Policy

J79 Other

J8 Labor Standards: National and International

J80 General

J81 Working Conditions

J82 Labor Force Composition

J83 Workers' Rights

J88 Public Policy

J89 Other

K. Law and Economics

K00 General

K1 Basic Areas of Law

- K10 General
- K11 Property Law
- K12 Contract Law
- K13 Tort Law and Product Liability • Forensic Economics
- K14 Criminal Law
- K15 Civil Law • Common Law
- K16 Election Law
- K19 Other

K2 Regulation and Business Law

- K20 General
- K21 Antitrust Law
- K22 Business and Securities Law
- K23 Regulated Industries and Administrative Law
- K24 Cyber Law
- K25 Real Estate Law
- K29 Other

K3 Other Substantive Areas of Law

- K30 General
- K31 Labor Law
- K32 Energy, Environmental, Health, and Safety Law
- K33 International Law

K34 Tax Law

K35 Personal Bankruptcy Law

K36 Family and Personal Law

K37 Immigration Law

K38 Human Rights Law • Gender Law • Animal Rights Law

K39 Other

K4 Legal Procedure, the Legal System, and Illegal Behavior

K40 General

K41 Litigation Process

K42 Illegal Behavior and the Enforcement of Law

K49 Other

L. Industrial Organization

L00 General

L1 Market Structure, Firm Strategy, and Market Performance

- L10 General
- L11 Production, Pricing, and Market Structure • Size Distribution of Firms
- L12 Monopoly • Monopolization Strategies
- L13 Oligopoly and Other Imperfect Markets
- L14 Transactional Relationships • Contracts and Reputation • Networks
- L15 Information and Product Quality • Standardization and Compatibility
- L16 Industrial Organization and Macroeconomics: Industrial Structure and Structural Change • Industrial Price Indices
- L17 Open Source Products and Markets
- L19 Other

L2 Firm Objectives, Organization, and Behavior

- L20 General
- L21 Business Objectives of the Firm
- L22 Firm Organization and Market Structure
- L23 Organization of Production
- L24 Contracting Out • Joint Ventures • Technology Licensing
- L25 Firm Performance: Size, Diversification, and Scope
- L26 Entrepreneurship
- L29 Other

L3 Nonprofit Organizations and Public Enterprise

- L30 General

L31 Nonprofit Institutions • NGOs • Social Entrepreneurship

L32 Public Enterprises • Public-Private Enterprises

L33 Comparison of Public and Private Enterprises and Nonprofit Institutions • Privatization • Contracting Out

L38 Public Policy

L39 Other

L4 Antitrust Issues and Policies

L40 General

L41 Monopolization • Horizontal Anticompetitive Practices

L42 Vertical Restraints • Resale Price Maintenance • Quantity Discounts

L43 Legal Monopolies and Regulation or Deregulation

L44 Antitrust Policy and Public Enterprises, Nonprofit Institutions, and Professional Organizations

L49 Other

L5 Regulation and Industrial Policy

L50 General

L51 Economics of Regulation

L52 Industrial Policy • Sectoral Planning Methods

L53 Enterprise Policy

L59 Other

L6 Industry Studies: Manufacturing

L60 General

L61 Metals and Metal Products • Cement • Glass • Ceramics

L62 Automobiles • Other Transportation Equipment • Related Parts and Equipment

L63 Microelectronics • Computers • Communications Equipment

L64 Other Machinery • Business Equipment • Armaments

L65 Chemicals • Rubber • Drugs • Biotechnology • Plastics

L66 Food • Beverages • Cosmetics • Tobacco • Wine and Spirits

L67 Other Consumer Nondurables: Clothing, Textiles, Shoes, and Leather Goods; Household Goods; Sports Equipment

L68 Appliances • Furniture • Other Consumer Durables

L69 Other

L7 Industry Studies: Primary Products and Construction

L70 General

L71 Mining, Extraction, and Refining: Hydrocarbon Fuels

L72 Mining, Extraction, and Refining: Other Nonrenewable Resources

L73 Forest Products

L74 Construction

L78 Government Policy

L79 Other

L8 Industry Studies: Services

L80 General

L81 Retail and Wholesale Trade • e-Commerce

L82 Entertainment • Media

L83 Sports • Gambling • Restaurants • Recreation • Tourism

L84 Personal, Professional, and Business Services

L85 Real Estate Services

L86 Information and Internet Services • Computer Software

L87 Postal and Delivery Services

L88 Government Policy

L89 Other

L9 Industry Studies: Transportation and Utilities

- L90 General
- L91 Transportation: General
- L92 Railroads and Other Surface Transportation
- L93 Air Transportation
- L94 Electric Utilities
- L95 Gas Utilities • Pipelines • Water Utilities
- L96 Telecommunications
- L97 Utilities: General
- L98 Government Policy
- L99 Other

M. Business Administration and Business Economics • Marketing • Accounting • Personnel Economics

M00 General

M1 Business Administration

- M10 General
- M11 Production Management
- M12 Personnel Management • Executives; Executive Compensation
- M13 New Firms • Startups
- M14 Corporate Culture • Diversity • Social Responsibility
- M15 IT Management
- M16 International Business Administration
- M19 Other

M2 Business Economics

- M20 General
- M21 Business Economics
- M29 Other

M3 Marketing and Advertising

- M30 General
- M31 Marketing
- M37 Advertising
- M38 Government Policy and Regulation
- M39 Other

M4 Accounting and Auditing

- M40 General
- M41 Accounting
- M42 Auditing
- M48 Government Policy and Regulation
- M49 Other

M5 Personnel Economics

- M50 General
- M51 Firm Employment Decisions • Promotions
- M52 Compensation and Compensation Methods and Their Effects
- M53 Training
- M54 Labor Management
- M55 Labor Contracting Devices
- M59 Other

N. Economic History

- N00 General
- N01 Development of the Discipline: Historiographical; Sources and Methods

N1 Macroeconomics and Monetary Economics • Industrial Structure • Growth • Fluctuations

- N10 General, International, or Comparative
- N11 U.S. • Canada: Pre-1913
- N12 U.S. • Canada: 1913–
- N13 Europe: Pre-1913
- N14 Europe: 1913–
- N15 Asia including Middle East
- N16 Latin America • Caribbean
- N17 Africa • Oceania

N2 Financial Markets and Institutions

- N20 General, International, or Comparative
- N21 U.S. • Canada: Pre-1913
- N22 U.S. • Canada: 1913–
- N23 Europe: Pre-1913
- N24 Europe: 1913–
- N25 Asia including Middle East
- N26 Latin America • Caribbean
- N27 Africa • Oceania

N3 Labor and Consumers, Demography, Education, Health, Welfare, Income, Wealth, Religion, and Philanthropy

- N30 General, International, or Comparative

N31 U.S. • Canada: Pre-1913

N32 U.S. • Canada: 1913-

N33 Europe: Pre-1913

N34 Europe: 1913-

N35 Asia including Middle East

N36 Latin America • Caribbean

N37 Africa • Oceania

N4 Government, War, Law, International Relations, and Regulation

N40 General, International, or Comparative

N41 U.S. • Canada: Pre-1913

N42 U.S. • Canada: 1913–

N43 Europe: Pre-1913

N44 Europe: 1913–

N45 Asia including Middle East

N46 Latin America • Caribbean

N47 Africa • Oceania

N5 Agriculture, Natural Resources, Environment, and Extractive Industries

N50 General, International, or Comparative

N51 U.S. • Canada: Pre-1913

N52 U.S. • Canada: 1913–

N53 Europe: Pre-1913

N54 Europe: 1913–

N55 Asia including Middle East

N56 Latin America • Caribbean

N57 Africa • Oceania

N6 Manufacturing and Construction

- N60 General, International, or Comparative
- N61 U.S. • Canada: Pre-1913
- N62 U.S. • Canada: 1913–
- N63 Europe: Pre-1913
- N64 Europe: 1913–
- N65 Asia including Middle East
- N66 Latin America • Caribbean
- N67 Africa • Oceania

N7 Transport, Trade, Energy, Technology, and Other Services

- N70 General, International, or Comparative
- N71 U.S. • Canada: Pre-1913
- N72 U.S. • Canada: 1913–
- N73 Europe: Pre-1913
- N74 Europe: 1913–
- N75 Asia including Middle East
- N76 Latin America • Caribbean
- N77 Africa • Oceania

N8 Micro-Business History

- N80 General, International, or Comparative
- N81 U.S. • Canada: Pre-1913
- N82 U.S. • Canada: 1913–
- N83 Europe: Pre-1913
- N84 Europe: 1913–
- N85 Asia including Middle East
- N86 Latin America • Caribbean

N87 Africa • Oceania

N9 Regional and Urban History

N90 General, International, or Comparative

N91 U.S. • Canada: Pre-1913

N92 U.S. • Canada: 1913–

N93 Europe: Pre-1913

N94 Europe: 1913–

N95 Asia including Middle East

N96 Latin America • Caribbean

N97 Africa • Oceania

O. Economic Development, Innovation, Technological Change, and Growth

O1 Economic Development

- O10 General
- O11 Macroeconomic Analyses of Economic Development
- O12 Microeconomic Analyses of Economic Development
- O13 Agriculture • Natural Resources • Energy • Environment • Other Primary Products
- O14 Industrialization • Manufacturing and Service Industries • Choice of Technology
- O15 Human Resources • Human Development • Income Distribution • Migration
- O16 Financial Markets • Saving and Capital Investment • Corporate Finance and Governance
- O17 Formal and Informal Sectors • Shadow Economy • Institutional Arrangements
- O18 Urban, Rural, Regional, and Transportation Analysis • Housing • Infrastructure
- O19 International Linkages to Development • Role of International Organizations

O2 Development Planning and Policy

- O20 General
- O21 Planning Models • Planning Policy
- O22 Project Analysis
- O23 Fiscal and Monetary Policy in Development
- O24 Trade Policy • Factor Movement Policy • Foreign Exchange Policy
- O25 Industrial Policy
- O29 Other

O3 Innovation • Research and Development • Technological Change • Intellectual Property Rights

- O30 General
- O31 Innovation and Invention: Processes and Incentives
- O32 Management of Technological Innovation and R&D
- O33 Technological Change: Choices and Consequences • Diffusion Processes
- O34 Intellectual Property and Intellectual Capital
- O35 Social Innovation
- O36 Open Innovation
- O38 Government Policy
- O39 Other

O4 Economic Growth and Aggregate Productivity

- O40 General
- O41 One, Two, and Multisector Growth Models
- O42 Monetary Growth Models
- O43 Institutions and Growth
- O44 Environment and Growth
- O47 Empirical Studies of Economic Growth • Aggregate Productivity • Cross-Country Output Convergence
- O49 Other

O5 Economywide Country Studies

- O50 General
- O51 U.S. • Canada
- O52 Europe
- O53 Asia including Middle East
- O54 Latin America • Caribbean
- O55 Africa

O56 Oceania

O57 Comparative Studies of Countries

P. Political Economy and Comparative Economic Systems

P00 General

P1 Capitalist Economies

- P10 General
- P11 Planning, Coordination, and Reform
- P12 Capitalist Enterprises
- P13 Cooperative Enterprises
- P14 Property Rights
- P16 Capitalist Institutions • Welfare State
- P17 Performance and Prospects
- P18 Energy • Environment
- P19 Other

P2 Socialist and Transition Economies

- P20 General
- P21 Planning, Coordination, and Reform
- P22 Prices
- P23 Factor and Product Markets • Industry Studies • Population
- P24 National Income, Product, and Expenditure • Money • Inflation
- P25 Urban, Rural, and Regional Economics
- P26 Property Rights
- P27 Performance and Prospects
- P28 Natural Resources • Energy • Environment
- P29 Other

P3 Socialist Institutions and Their Transitions

P30 General

P31 Socialist Enterprises and Their Transitions

P32 Collectives • Communes • Agriculture

P33 International Trade, Finance, Investment, Relations, and Aid

P34 Financial Economics

P35 Public Economics

P36 Consumer Economics • Health • Education and Training • Welfare, Income, Wealth, and Poverty

P37 Legal Institutions • Illegal Behavior

P39 Other

P4 Other Economic Systems

P40 General

P41 Planning, Coordination, and Reform

P42 Productive Enterprises • Factor and Product Markets • Prices • Population

P43 Public Economics • Financial Economics

P44 National Income, Product, and Expenditure • Money • Inflation

P45 International Trade, Finance, Investment, and Aid

P46 Consumer Economics • Health • Education and Training • Welfare, Income, Wealth, and Poverty

P47 Performance and Prospects

P48 Legal Institutions • Property Rights • Natural Resources • Energy • Environment • Regional Studies

P49 Other

P5 Comparative Economic Systems

P50 General

P51 Comparative Analysis of Economic Systems

P52 Comparative Studies of Particular Economies

P59 Other

Q. Agricultural and Natural Resource Economics • Environmental and Ecological Economics

- Q00 General
- Q01 Sustainable Development
- Q02 Commodity Markets

- Q1 Agriculture
  - Q10 General
  - Q11 Aggregate Supply and Demand Analysis • Prices
  - Q12 Micro Analysis of Farm Firms, Farm Households, and Farm Input Markets
  - Q13 Agricultural Markets and Marketing • Cooperatives • Agribusiness
  - Q14 Agricultural Finance
  - Q15 Land Ownership and Tenure • Land Reform • Land Use • Irrigation • Agriculture and Environment
  - Q16 R&D • Agricultural Technology • Biofuels • Agricultural Extension Services
  - Q17 Agriculture in International Trade
  - Q18 Agricultural Policy • Food Policy • Animal Welfare Policy
  - Q19 Other

- Q2 Renewable Resources and Conservation
  - Q20 General
  - Q21 Demand and Supply • Prices
  - Q22 Fishery • Aquaculture
  - Q23 Forestry
  - Q24 Land
  - Q25 Water
  - Q26 Recreational Aspects of Natural Resources

Q27 Issues in International Trade

Q28 Government Policy

Q29 Other

Q3 Nonrenewable Resources and Conservation

Q30 General

Q31 Demand and Supply • Prices

Q32 Exhaustible Resources and Economic Development

Q33 Resource Booms

Q34 Natural Resources and Domestic and International Conflicts

Q35 Hydrocarbon Resources

Q37 Issues in International Trade

Q38 Government Policy

Q39 Other

Q4 Energy

Q40 General

Q41 Demand and Supply • Prices

Q42 Alternative Energy Sources

Q43 Energy and the Macroeconomy

Q47 Energy Forecasting

Q48 Government Policy

Q49 Other

Q5 Environmental Economics

Q50 General

Q51 Valuation of Environmental Effects

Q52 Pollution Control Adoption and Costs • Distributional Effects • Employment Effects

Q53 Air Pollution • Water Pollution • Noise • Hazardous Waste • Solid Waste • Recycling

Q54 Climate • Natural Disasters and Their Management • Global Warming

Q55 Technological Innovation

Q56 Environment and Development • Environment and Trade • Sustainability • Environmental Accounts and Accounting • Environmental Equity • Population Growth

Q57 Ecological Economics: Ecosystem Services • Biodiversity Conservation • Bioeconomics • Industrial Ecology

Q58 Government Policy

Q59 Other

R. Urban, Rural, Regional, Real Estate, and Transportation Economics

R00 General

R1 General Regional Economics

- R10 General
- R11 Regional Economic Activity: Growth, Development, Environmental Issues, and Changes
- R12 Size and Spatial Distributions of Regional Economic Activity
- R13 General Equilibrium and Welfare Economic Analysis of Regional Economies
- R14 Land Use Patterns
- R15 Econometric and Input–Output Models • Other Models
- R19 Other

R2 Household Analysis

- R20 General
- R21 Housing Demand
- R22 Other Demand
- R23 Regional Migration • Regional Labor Markets • Population • Neighborhood Characteristics
- R28 Government Policy
- R29 Other

R3 Real Estate Markets, Spatial Production Analysis, and Firm Location

- R30 General
- R31 Housing Supply and Markets
- R32 Other Spatial Production and Pricing Analysis
- R33 Nonagricultural and Nonresidential Real Estate Markets
- R38 Government Policy

R39 Other

R4 Transportation Economics

R40 General

R41 Transportation: Demand, Supply, and Congestion • Travel Time • Safety and Accidents • Transportation Noise

R42 Government and Private Investment Analysis • Road Maintenance • Transportation Planning

R48 Government Pricing and Policy

R49 Other

R5 Regional Government Analysis

R50 General

R51 Finance in Urban and Rural Economies

R52 Land Use and Other Regulations

R53 Public Facility Location Analysis • Public Investment and Capital Stock

R58 Regional Development Planning and Policy

R59 Other

Y. Miscellaneous Categories

Y1 Data: Tables and Charts

Y10 Data: Tables and Charts

Y2 Introductory Material

Y20 Introductory Material

Y3 Book Reviews (unclassified)

Y30 Book Reviews (unclassified)

Y4 Dissertations (unclassified)

Y40 Dissertations (unclassified)

Y5 Further Reading (unclassified)

Y50 Further Reading (unclassified)

Y6 Excerpts

Y60 Excerpts

Y7 No Author General Discussions

Y70 No Author General Discussions

Y8 Related Disciplines

Y80 Related Disciplines

Y9 Other

Y90 Other

Y91 Pictures and Maps

Y92 Novels, Self-Help Books, etc.

Z. Other Special Topics

Z00 General

Z1 Cultural Economics • Economic Sociology • Economic Anthropology

- Z10 General
- Z11 Economics of the Arts and Literature
- Z12 Religion
- Z13 Economic Sociology • Economic Anthropology • Language • Social and Economic Stratification
- Z18 Public Policy
- Z19 Other

Z2 Sports Economics

- Z20 General
- Z21 Industry Studies
- Z22 Labor Issues
- Z23 Finance
- Z28 Policy
- Z29 Other

Z3 Tourism Economics

- Z30 General
- Z31 Industry Studies
- Z32 Tourism and Development
- Z33 Marketing and Finance
- Z38 Policy
- Z39 Other

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CT-2024-010

THE COMPETITION TRIBUNAL

IN THE MATTER OF the Competition Act, R.S.C. 1985, c. C-34;

AND IN THE MATTER OF certain conduct of Google Canada Corporation and Google LLC relating to the supply of online advertising technology services in Canada;

AND IN THE MATTER OF an application by the Commissioner of Competition for one or more orders pursuant to section 79 of the Competition Act.

B E T W E E N:

COMMISSIONER OF COMPETITION

Applicant

- and -

GOOGLE CANADA CORPORATION AND GOOGLE LLC

Respondents

--- This is the Cross-Examination of RON ZEMBER upon affidavit sworn May 2, 2025, conducted virtually by Veritext Legal Solutions, with all participants attending virtually, on August 6, 2025.

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A P P E A R A N C E S:

John Syme, Esq.,		for the Applicant,
Sanjay Kumbhare, Esq.,		The Commissioner of
Katherine Rydel, Esq.,		Competition
Estelle Filiatrault-Bégin, Esq.,		
Christina Pan, Esq.,		
Kristen McLean, Esq.,		
Donald Houston, Esq.,		
Kent E. Thomson, Esq.,		for the Respondents,
Chenyang Li, Esq.,		Google Canada
		Corporation and Google
		LLC

ALSO PRESENT: Mallory Kelly

REPORTED BY: Carissa Stabbler, RPR
Stenographic Court Reporter

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I N D E X

WITNESS: RON ZEMBER

PAGE

CROSS-EXAMINATION BY MS. RYDEL..... 5

The following list of undertakings, advisements and refusals is meant as a guide only for the assistance of counsel and no other purpose

INDEX OF UNDERTAKINGS

(NONE MARKED)

INDEX OF ADVISEMENTS

(NONE MARKED)

INDEX OF REFUSALS

The questions/requests refused are noted by R/F and appear on the following pages: 53:1

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INDEX OF EXHIBITS

NUMBER/DESCRIPTION	PAGE/LINE NO.
1: Press Release issued by European Commission dated June 14, 2023.	31:6
2: Alphabet Inc. Consolidated Balance Sheets setting out goodwill value from December 31, 2015, to December 31, 2024.	40:22
3: Alphabet Form 8-K dated June 27, 2017.	50:9
4: Alphabet Form 8-K dated July 18, 2018.	50:13
5: Alphabet Form 8-K dated March 20, 2019.	50:17
6: Alphabet Form 8-K dated April 17, 2025.	50:22

-- Upon commencing at 10:00 a.m. --

RON ZEMBER: AFFIRMED.

CROSS-EXAMINATION BY MS. RYDEL:

1 Q. Good morning. I'm Katherine Rydel. I'm counsel to the Commissioner of Competition, and I'd like to acknowledge also I'm here with some colleagues, including Ms. Mallory Kelly, who will be helping me by putting a few documents on the screen this morning for us. So good morning, Mr. Zember.

A. Good morning.

2 Q. Can you state your name for the record again, please.

A. My name is Ron Zember.

3 Q. And to confirm, just a moment ago, you took an affirmation to tell the truth?

A. That is correct.

4 Q. Wonderful. I'd like to start with a couple of ground rules before we begin, please.

If it's a yes-or-no question, I ask that you please say "yes" or "no" as opposed to shaking your head or nodding so that the record can pick up your answer. If you don't know the answer to a question, that's okay. If you need to review a document, that's absolutely fine. Please take

PUBLIC

the time to do so.

If you don't understand the question, I'm happy to explain what I mean, but I think you'll find that my questions will be pretty straightforward this morning. If you don't ask me for a clarification, I'm going to assume that you understood my question.

And you are aware, sir, that this transcript will be made public, that there will be a transcription --

A. Yes.

5 Q. -- that will be made public?

Okay. I don't expect that we will venture into any confidential information, but we are, as I think your counsel might have told you, subject to a confidentiality and protective order in front of the Canadian Competition Tribunal. So if we venture into confidential territory, I ask that you please let me know or your counsel could please let me know.

A. Okay.

6 Q. Finally, if you need a break, please don't hesitate, and we'll take one.

A. Okay. Thank you.

7 Q. Okay. A couple underlying things:

I'll be referring to the Canadian Commissioner of Competition as "the Commissioner"; is that okay?

A. Sounds good. Thank you.

8 Q. And then I'll refer to Alphabet Inc., Google LLC, and Google Canada Corporation collectively as "Google." If I mean just one of the entities in particular, I'll specify which one.

A. Understood.

9 Q. Thanks. So I'd like to start with some questions about your education and employment history. I understand from your affidavit that you obtained a Bachelor of Science Degree in Applied Economics and Management from Cornell University and a Masters of Business Administration from the Stern School of Business at New York University?

A. That's correct.

10 Q. And as part of your studies, you would have taken courses in finance, accounting, and economics?

A. Yes, that is correct.

11 Q. So you're, of course, familiar with finance and accounting concepts?

A. Yes, I am.

12 Q. What is your current job title?

A. So my current job title is Senior Finance Manager. I lead the Sellside Finance organization at Google.

Q. Thank you. And your affidavit also says Global Head of Finance for Google Network; is that correct?

A. Let me just open up the affidavit, if that's all right.

Q. Certainly. I should have asked you if you have copy of it in front of you. Do you have any notes in front of you or anything like that or just the affidavit?

A. I have a few things but no notes. I have a copy of the Notice of Application from the Competition Tribunal.

MR. THOMSON: To be clear, it's the Amended Notice of Application of the Commissioner.

MS. RYDEL: Okay.

THE WITNESS: Thank you. Then I have the --

MR. THOMSON: Section 79 of the Competition Act.

THE WITNESS: I have an extra copy of Exhibit R, which is our most recent annual report, and then I have my affidavit, including all, I

don't know, 20-some-odd exhibits here.

MS. RYDEL: Okay. So maybe we can open up Volume 1 of the record, please, Ms. Kelly. We'll go to PDF page 38. So we'll put it up on the screen.

MR. THOMSON: Katherine, we're using a different document. This is a clean copy of Mr. Zember's affidavit, so we won't have the same page numbers as you do, but we can sure follow along.

MS. RYDEL: Okay. Well, please let me know if you can see it on the screen.

MR. THOMSON: Now we can, yes.

THE WITNESS: Yes. Thank you.

BY MS. RYDEL:

15 Q. Okay. Maybe we should go to the page before, please. There we go.

So paragraph 1, it says:

"Senior Finance Manager and Global Head of Finance for Google Network (also known as Sellside Finance) at Google LLC."

A. That is correct.

16 Q. That's correct? Okay. Thank you.

A. Yes.

Q. And you've been in this role since November 2022?

A. Yes.

Q. Could you please describe your current roles and responsibilities.

A. Sure. I lead a team of -- excuse me, I lead a geo-distributed team of both financial analysts and data scientists. We're responsible for finance strategy and for financial operations for the Sellside business at Google.

I would caveat that that is not the same thing as accounting. We have a very close partnership with the controllership team, but I'm not a CPA, and I don't employ any CPAs on my team, but rather, we work very closely with that team.

Q. Thank you.

A. Ah -- yeah.

Q. Go ahead.

A. Thank you.

Q. And you do have a professional designation, Mr. Zember; correct?

A. Yes, I do. I'm a Chartered Financial Analyst or a CFA charter holder.

Q. Thank you. Who do you report to in the organization?

A. I report in to Andy Miller. He's the vice president of ads and commerce finance at Google.

23 Q. And can you tell us approximately how many people report to you?

A. It's about seven, if we include dotted line. Seven people, one of -- two of whom -- excuse me, one of the direct reports is a manager; one of the dotted lines is also a manager.

24 Q. Thank you. And I understand that prior to becoming the Senior Finance Manager and Global Head of Finance for Google Network, you had a series of roles in finance at Google?

A. That is correct.

25 Q. If we can scroll down the page, please, Ms. Kelly.

They are listed here. So you were a Senior Financial Analyst from 2015 to November 2018?

A. Yes, that's right.

26 Q. And Finance Manager and Head of Americas for Google Network Sales Finance from November 2018 to November 2020?

A. No, until November 2022.

27 Q. 2022, yes. Thank you. Thanks

very much.

And in your roles, you mentioned that you don't have CPAs on your team, but you would, of course, be familiar with Google or Alphabet's financial statements?

A. That is correct.

28 Q. And, of course, you attach them, and you refer to them in your affidavit?

A. Yes, we did. Thank you.

29 Q. And do you contribute to their preparation?

A. No, I don't.

30 Q. Okay. So I'd like to open one of those financial statements, please. If we can turn to Exhibit R. So in the Application Record, that's page 1725, and on the PDF, it's Volume 5, page 192, PDF page 192.

So turning the page to 1726 of the Application Record, there we go, we see the number in green. Let's situate ourselves. Could you please describe, what is Exhibit R?

A. So Exhibit R is our publicly stated Form 10-K. It's our annual report. It's a requirement for publicly traded companies in the United States by the Securities and Exchange

Commission, also known as the SEC.

31 Q. Thank you. So I understand that means we're looking at a snapshot of the company's financial position at that moment in time?

A. Yes.

32 Q. So everything up to and including December 31st, 2024, would be included in the statement?

A. That is correct.

33 Q. Could we please turn to page 1823.

MR. THOMSON: So, again, we don't have your page numbers, so we'll --

THE WITNESS: I'll follow along on the screen.

MS. RYDEL: Okay. So --

MR. THOMSON: Can your colleague expand the size of the print?

MS. RYDEL: Thanks, Ms. Kelly.

MR. THOMSON: Good. Thanks.

BY MS. RYDEL:

34 Q. There is a signature --

MR. THOMSON: We're going to turn to page 97 of the version that we have in front of us.

BY MS. RYDEL:

35 Q. Please let me know when you have

it.

A. I have it.

36 Q. Thank you. There is a signature and -- well, a typed electronic signature, if you will, at the top of the page. Whose signature is that?

A. Sundar Pichai. He's the CEO of Alphabet.

37 Q. Okay. So it's fair to say that his signature means that the CEO has effectively signed off on the 10-K?

A. Yeah, that is correct. Yes, that is correct.

38 Q. Could we turn to -- thank you. Could we turn to page 49 of the document. That's page 1775 of the PDF. It's 242 of Volume 5. I understand that I'm looking at the Report of the Independent Registered Public Accounting Firm?

A. Yes, that is correct.

39 Q. That firm is Ernst & Young?

A. Yes.

40 Q. And scroll down a little bit, Ms. Kelly.

That firm has been Google or Alphabet's auditor since 1999?

A. According to the statement here, yes, that appears to be true.

41 Q. And the auditors were of the opinion that the financial statements present fairly, in all material respects, the financial position of the company?

A. Excuse me, could you just repeat the question, please.

42 Q. Yes. The auditors, Ernst & Young, were of the opinion that the financial statements present fairly, in all material respects, the financial position of the company?

A. Yes, that is correct.

43 Q. Thank you. And it's fair to say that the financial statement is a true representation of Google's or Alphabet's financial position as of December 31st, 2024?

A. To the best of my understanding, yes, that is true.

44 Q. And it's fair to say that Google takes considerable efforts to ensure the truth and accuracy of the representations it makes in its financial statements?

A. I can't speculate on that, but in general, publicly traded companies are held to a

very high bar in terms of what they report. They're subject to audits, and their -- they have -- there's a bunch of rules that the Securities and Exchange Commission have. I'm just not an expert on how they're prepared or how that works exactly.

45 Q. But your understanding is that Google follows those rules?

A. That is my understanding, correct.

46 Q. And as part of those rules, Google would report -- or Alphabet in this case -- all material elements of its business in its financial statements?

A. To the best of my understanding, yes.

47 Q. Okay. Could we please turn to Volume 5, PDF page 196. That's 1729 of the document. That's 196 in Volume 5.

MR. THOMSON: What is the page number of the document itself? Do you know?

MS. RYDEL: 3.

THE WITNESS: Yes, I'm there.

BY MS. RYDEL:

48 Q. Thank you. Looking at the top of the page, it says it's a note about forward-looking

statements. Indicates:

"This Annual Report on Form 10-K contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. These include, among other things, statements regarding..."

Do you see that?

A. Yes, I see that.

49 Q. Thank you. And if we could scroll to the final bullet, please, it says:

"Our potential exposure in connection with new and pending investigations, proceedings, and other contingencies, including the possibility that certain legal proceedings to which we are a party could harm our business, financial condition, and operating results."

I take it that this statement is correct?

A. To the best of my knowledge, yes.

50 Q. Thank you. Okay. Stepping away from the statement itself, I'd like to discuss the

term "contingent liability." I understand that contingent liabilities are liabilities that may occur if a future event happens; is that correct?

A. I'm not very familiar with that term.

51 Q. Okay. So would you agree with me that -- so you haven't come across the term, even though it's represented in the financial statements multiple times? You're not familiar with the concept at all, or you're familiar with the concept at a high level?

A. I'm familiar with the concept at a very high level but not the specifics of that language.

52 Q. Okay. So let's take, for a moment, the definition that I have proposed, that a contingent liability is a liability that may occur if a future event happens. You would agree -- would you agree with me -- are you familiar with the Generally Accepted Accounting Principles?

A. At a high level, I am, but, again, I'm not a CPA. It's --

53 Q. Okay.

A. -- not my area of expertise.

54 Q. Understood. I'll refer to them --

MR. THOMSON: Sorry, you're both -- it's not your fault, Katherine. It's not Ron's fault. It's the fault of the technology. You're both speaking at the same time, and I'm guessing the court reporter is going to have a very difficult time transcribing this, so --

MS. RYDEL: That's a good -- that's a good point. I apologize. I don't intend to interrupt. There's a bit of a lag, and so I sometimes think you've finished speaking when you haven't, and I am not deliberately interrupting. And so I will wait longer between questions.

MR. THOMSON: Thank you.

MS. RYDEL: Please continue.

THE WITNESS: I'll do the same, yeah.

MR. THOMSON: Okay, good. All right.

BY MS. RYDEL:

55 Q. So we were just talking about the Generally Accepted Accounting Principles. I'll refer to them as "GAAP"; is that okay?

A. That is fine.

56 Q. Okay. So at a high level, you're familiar with the GAAP accounting rules, but you do understand that they require that contingent liabilities or liabilities that may occur if a

future event happens, that they -- if they can be estimated, that they be recorded in financial statements?

A. Yes, I have a high-level understanding of that. This comes up from time to time. And generally speaking, at Google, we have a team of experts in technical accounting as well as in external reporting who make those determinations on what we would include.

And there is -- I know that there is a number of metrics and bars that have to be met in order for us to include such things. I just don't know exactly what those bars are. Oftentimes, I am a downstream recipient of that information.

57 Q. Fair enough. Fair enough. If we could turn to Volume 5, PDF page 271. That's page 1804 of the Application Record, and that's page 78 of your document, Mr. Zember. So if we could look at the paragraph that says "Legal Matters," please.

A. Yes, I am there.

58 Q. So I might be able to help you with the standard. So it indicates there:

"We record a liability when we believe that it is probable that a

loss has been incurred, and the amount can be reasonably estimated." I take it that statement is true?

A. Yes, I'm familiar with that statement. The "reasonably estimated" and the "probable" parts of that statement are beyond my scope of expertise, and that's where those other experts come in to make those determinations.

59 Q. Understood. And these liabilities are included in notes to the financial statement, like this one?

A. Typically, yes. Typically, yes.

60 Q. Okay. And so it follows that, based on the statement that if contingencies are either not probable or they're remote, then generally, they're not disclosed in the statements because they don't meet this threshold?

A. Yeah, generally speaking. And, again, it's subject to the interpretation by those teams and others at Google that I mentioned.

61 Q. Okay. So it follows that if Google has material contingent liabilities on the horizon, it would include them in its financial statements?

A. Yes.

62 Q. And Google does do that?

A. Yes.

63 Q. Thank you. Turning to page 271 of the PDF please, Volume 5. I think we're on the same page.

MR. THOMSON: What is the page of the underlying document?

MS. RYDEL: It's the same page. It's the same page. I was just situating us for the record. We're just looking more further down the page.

BY MS. RYDEL:

64 Q. So "Legal Matters," and let's scroll a little farther down, actually, to "Antitrust Matters." Okay. Just give me one moment, please. I'm just having a little trouble reading the text because it's very small on my screen.

So we're looking at the Note 10 that has "Commitments and Contingencies." We just looked at "Legal Matters." Right? Is that -- can you actually scroll up, Ms. Kelly, so we have both "Legal Matters" and "Antitrust Matters." Thank you so much.

Okay. So under "Antitrust Matters" --

do you see the heading, Mr. Zember?

A. Yes, I do.

65 Q. Okay. I'd like to take a moment to review that list, please. So first, following the italicized text that says "Shopping." Do you see that?

A. Yes.

66 Q. There is a description of an EC decision. It says that:

"Google made a cash payment of $3 billion."

And I assume -- maybe just to take a step back, where you have dollars in these financial statements, we are talking about U.S. dollars, of course?

A. That is correct.

67 Q. Okay. Coming back to the italicized text that says "Shopping." Following that text, it says that:

"Google made a cash payment of $3 billion for a fine imposed by the European Court of Justice."

I take it Google made that payment?

A. To the best of my knowledge, yes.

68 Q. Next page, please. Following the

italicized text that says "Android." Do you see that?

A. Yes.

69 Q. There is a mention of an EC proceeding in which EC imposed a fine of €4.3 billion, and then the General Court reduced the fine to €4.1 billion. Google's appeal to the European Court of Justice remains pending; is that correct?

A. To the best of my knowledge, that's what it says here, yes.

70 Q. It says:

"Google has recognized a charge of 5.1 billion for the fine, which Google reduced by 217 million in 2022."

Is that correct?

A. To the best of my knowledge, based on this document, yes.

71 Q. To clarify, do you know what it means to recognize a charge?

A. Yes. So when we recognize a charge, it's our books, so to speak, or these financial statements. It is -- does not necessarily mean, though, that we've actually paid

anything yet.

72 Q. What does it mean?

A. So -- well, it means we are booking the expense on our -- on our statements. Whether or not there's an actual exchange of cash is a separate question, generally speaking.

In addition, right, just to be helpful for a second, back to when we spoke about the legal matters, right, we record the liability when it's probable, and the amount can be reasonably estimated. Okay?

And so sometimes -- and this is for all companies, not just Google, all publicly traded companies in the United States. When that happens, there's a chance that the actual payment will be different, and so that will then be handled at that time in that financial statement. Does that make sense, what I just said?

73 Q. It does, and that's helpful. Thank you.

A. No problem.

74 Q. Following the italicized text, it says, "AdSense for Search." Do you see the text?

A. Yes, I do.

75 Q. The statement indicates that you

recognized a charge of 1.7 billion for a fine of €1.7 billion; is that correct?

A. We recognized the charge of $1.7 billion. Yes, I see that.

MR. THOMSON: For the fine of --

THE WITNESS: For the fine of €1.5 billion, yes.

MR. THOMSON: And then it goes on to say:

"And appealed the EC decision. In September 2024, the General Court overturned the EC decision and annulled the €1.5 billion fine. The EC has appealed the General Court's decision with the European Court of Justice."

MS. RYDEL: Thank you. I was just getting to that, Mr. Thomson.

BY MS. RYDEL:

76 Q. And that statement is correct?

A. To the best of my knowledge, yes.

77 Q. Okay. Moving to the italicized text that says "Search," there's a description of a U.S. Department of Justice proceeding on conduct related to search and search advertising. It

states that there is a remedies proceeding being held; is that correct?

A. To the best of my knowledge, yes.

78 Q. Then scrolling down, it's not a bullet, but it's between bullets, it says that:

"The Australian Competition and Consumer Commission opened an investigation into search distribution practices in June 2022."

Is that right?

A. Yes, I see that.

79 Q. And I take it that statement is true?

A. To the best of my knowledge, yes.

80 Q. And than the Japanese Fair Trade Commission did the same in October 2023?

A. As per this document, that looks to be correct as well.

81 Q. Thank you. For both these matters, given their nature, Alphabet cannot estimate a possible loss; is that correct?

A. That is correct.

82 Q. Then moving to the italicized text that says "Advertising Technology," there is a

reference to two proceedings in the United States in front of the U.S. District Court for the Eastern District of Texas and the U.S. District Court for the Eastern District of Virginia; is that correct?

A. Yes, that is correct.

83 Q. And for the Eastern District of Virginia, it indicates that the trial ended in September 2024, and a decision was expected in early 2025; is that right?

A. That is correct.

84 Q. Moving down a little bit, it indicates that:

"In June 2023, the EC issued a Statement of Objections informing Google of its preliminary view that Google violated the European antitrust laws relating to its advertising technology, to which [Google] responded."

Is that correct?

A. That is correct.

85 Q. And given the nature of these advertising technology matters, Google could not estimate a possible loss; is that right?

A. That is also correct.

86 Q. I'd like to interrupt the list for a moment to clarify something. If we could please put on screen a press release that's in the exhibit binder at Tab 6, PDF page 26. It's a press release that was issued by the European Commission.

I'll give you a moment to review the -- the first paragraph or so I'll be asking about, but, of course, you can take the time to review all of it. I'll just be asking about the heading in the first paragraph.

A. Okay. Please give me one minute to review.

87 Q. Please let me know when you're done.

A. Yes, I'm done with that first paragraph and the heading.

88 Q. Thank you. So I'm putting in front of you, Mr. Zember, a press release from the European Commission. It's dated June 14th, 2023.

Do I understand correctly that this press release that indicates that the European Commission has informed Google of its preliminary views -- it's about the Statement of Objections -- it's referring to the same matter that I just described in the portion of the financial statement

that I just read to you, and I'll read it again just to have it fresh in your mind:

"In June 2023, the EC issued a Statement of Objections informing Google of its preliminary view that Google violated the European antitrust laws relating to its advertising technology."

MR. THOMSON: So you're asking whether the document on the screen, that is, the release of the European Commission of June 14, 2023, is the same document that's referred to in the Form 10-K on page 79 that says:

"Further, in June 2023, the EC issued a Statement of Objections informing Google of its preliminary view that Google violated European antitrust laws relating to its advertising technology, to which we responded."

Is that the question?

MS. RYDEL: I'm asking if that note that you just read, Mr. Thomson, in the financial statement refers to the proceedings referred to in this press release.

THE WITNESS: Yes.

MS. RYDEL: Thank you.

And could we mark this press release as an exhibit, the first exhibit?

MR. THOMSON: Yes.

EXHIBIT NO. 1: Press Release issued by European Commission dated June 14, 2023.

BY MS. RYDEL:

89 Q. Coming back to the December 31st, 2024, 10-K that's Exhibit R, beginning at page -- we're coming back to the same page. It's 1805 for the record, and it's page 79 in front of you, Mr. Zember.

A. I'm on that page.

90 Q. You are. Thank you.

Following the italicized text that says "Google Play," there's a reference to a settlement pending before the court and that in May 2024, Google funded that settlement amount to an escrow agent; is that right?

A. To the best of my knowledge, yes.

91 Q. And in the final paragraph on this page, it indicates that:

"A California jury delivered a

verdict in Epic Games v. Google finding that Google violated U.S. antitrust laws related to Google Play's business."

Is that correct?

A. Yes, to the best of my knowledge.

92 Q. And Google is appealing?

A. As per this document, yes. I'm not as familiar with that case, but that's what this says here.

93 Q. And here, as above on the page that we're looking at, it says:

"[Google] cannot estimate a possible loss."

I take it that that's a correct statement?

A. To the best of my knowledge, yes.

94 Q. Turning to the next page, please, there's italicized text at the top that says "European Digital Markets Act." Do you see that?

A. Yes, I see that.

95 Q. Indicates:

"The EC opened two investigations into Google's compliance with European laws."

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Is that correct?

A. Yes, that is correct.

96 Q. Having gone through this list -- and I appreciate your patience in doing so -- you would agree with me that under the heading of "Antitrust Matters," there's no specific mention of the Commissioner's Notice of Application against Google before the Canadian Competition Tribunal?

A. If you just give me one minute.

97 Q. Certainly.

A. I can confirm that in this 10-K, under "Antitrust Matters," there's no reference to Canada.

98 Q. Thank you. And you would agree with me that the risk of Google being unsuccessful in the Commissioner's proceedings against it did not cause it to report the proceedings in this section of the 10-K?

A. I cannot speculate as to what gets added into the 10-K or what doesn't get added into the 10-K under the antitrust matters section. It's not my subject matter expertise, unfortunately.

99 Q. But Alphabet did report investigations being started? For example, we saw

in the middle of the previous page in Australia.

A. That is correct.

100 Q. And if Alphabet received a contingent liability to be material, we just discussed, it would be obliged to report it?

A. To the best of my understanding, yes.

101 Q. Thank you. I'd like to move away from this piece of your affidavit, Mr. Zember, and talk about goodwill in the accounting or finance sense. Can you describe, what is goodwill?

A. I'm not an expert in that term.

102 Q. Would you agree that it's an intangible asset?

A. Yes, it would be considered an intangible asset, but I'm not a subject matter expert.

103 Q. Okay. Are you familiar with goodwill impairment?

A. Only at a very, very high level. I don't touch accounting matters in my day-to-day world. So the last time I thought about things like goodwill impairment was very academic, when I was in school.

104 Q. Understood. But you do understand

that goodwill impairment is when the goodwill asset loses value?

A. Yes.

105 Q. Let's move to page 255, Volume 5 of the PDF. That's 1788 of the Application Record, and we'll give you a physical page number in just a second, Mr. Zember. Page 62.

MR. THOMSON: It's page 62 of the Form 10-K, but it's Exhibit R of Mr. Zember's affidavit?

MS. RYDEL: That's correct. We're still in Exhibit R, and on the Application Record, it's page 1788.

BY MS. RYDEL:

106 Q. I'll ask you to go to the heading "Goodwill" in the middle of the page, please.

A. Yes, I'm there.

107 Q. Thank you. Just give you a moment to take a look at that paragraph, please. Is it fair to say that Google asked for goodwill impairment at least annually?

A. Yes.

108 Q. And more frequently if events or changes in circumstances indicate impairment?

A. To the best of my knowledge, yes.

109 Q. Coming back to your understanding of goodwill impairment, Mr. Zember, would you agree with me that goodwill impairment can be caused by a number of factors?

A. Again, I'm not an expert here, and I haven't thought about goodwill in quite some time, so I'm not entirely positive.

110 Q. Would it be fair to say that goodwill impairment could be caused by brand value decline?

A. Again, I'm not an expert, and I can't speculate.

111 Q. Okay. Turning to page 255, PDF page 255. That's -- we're still on Exhibit R. We're still on -- actually, Ms. Kelly, I'm going to give you a -- sorry, we'll still go back one more time to that paragraph that says "Goodwill" before we move.

A. Okay.

112 Q. I take it that it's fair to say -- and you can take a look at the end of that paragraph there, please, Mr. Zember -- that goodwill impairments were not material for the period presented?

A. To the best of my knowledge, the

employees who put this document together and made that assessment, yes.

113 Q. And when we say "the period presented," we mean the year ending, again, December 31st, 2024.

MR. THOMSON: It actually says "the periods presented," plural.

THE WITNESS: Yeah, I believe --

BY MS. RYDEL:

114 Q. Would it be for the year, for the four quarters?

A. It would --

115 Q. Actually --

A. -- be for all of -- it would be for all of the years listed in the 10-K. So the 10-K is for the year 2024, but there are parts of the 10-K that also include information about one or two prior years.

116 Q. So let's go to that to be certain. So we'll move now to page 245, please, of the PDF. That's page 1778. Here we go. That's 52 for you, Mr. Zember. I think that's what you might be referring to for the periods presented, 2023 and 2024?

A. Yes.

117 Q. And could you please take a look at the line that says "Goodwill."

A. Yes.

118 Q. What was the value of goodwill as of December 31st, 2023?

A. As of December 31st, 2023, goodwill was $29,198,000,000.

119 Q. And for December 31st, 2024?

A. For December 31st, 2024, $31,885,000,000, U.S. dollars.

120 Q. Thank you. And it's fair to say that between December 31st, 2023, and December 31st, 2024, goodwill has increased in value?

A. Yes.

121 Q. I won't take you through, Mr. Zember, all of your exhibits to compare goodwill numbers. Instead, we've prepared a little chart summarizing Google numbers from December 31st, 2015, to December 31st, 2024. It's exhibit binder Tab 5, PDF page 24.

MR. THOMSON: It is where that you said?

MS. RYDEL: Exhibit binder Tab 5. We have it --

MR. THOMSON: Under Tab 5.

MS. RYDEL: Yes.

MR. THOMSON: Sorry, I'm just catching up with you and Chenyang. Anyway, if you're pulling it up to the screen, let me know when you need me to find elsewhere.

BY MS. RYDEL:

122 Q. It's on the screen. Do you see it?

A. We can see it on the screen.

123 Q. Thank you. Please take a moment to review those numbers. I won't ask you to go through your affidavit exhibits to confirm them all. I'll ask that you take our word for it, that those numbers accurately reflect what's in the exhibits that are attached to your affidavit. If I could trouble you, please, to just take a quick look.

Based on those numbers, is it fair to say that Google or Alphabet Inc.'s goodwill has increased in value from 15,869 in millions, that's million, as of December 31st, 2015, to 31,885, millions again, as of December 31st, 2024?

A. So I have the 2024 10-K also in front of me right now, so I can see the 2023 number

matches, and I can see that the 2024 number matches. If we assume that the rest of these numbers are, in fact, accurate from their respective 10-Ks, then yes.

124 Q. Am I correct also that the goodwill value has increased every year from December 31, 2015, to December 31, 2024?

A. Again, with the caveat that we're assuming that these numbers are correct and pulled from their respective 10-Ks, yes, it appears that every year goodwill has increased.

MS. RYDEL: Thank you. We're finished with this document. Could we mark it as the next exhibit, please.

MR. THOMSON: Why don't we proceed on the assumption that this chart sets out the figures accurately from December 31, 2015, to December 31, 2024, and if we have any issues with respect to the accuracy of the chart, we'll let you know.

MS. RYDEL: Certainly. Thank you. That would be helpful.

EXHIBIT NO. 2: Alphabet Inc. Consolidated Balance Sheets setting out goodwill value from December 31, 2015, to December 31, 2024.

BY MS. RYDEL:

125 Q. I'd like to talk to you about a financial document called a Form 8-K. I take it you're familiar with this kind of document?

A. At a high level, yes. I generally don't look at Google's Form 8-Ks, and I am not involved in the preparation of any of them.

126 Q. Is it accurate to say that they are used to disclose unscheduled material events to investors?

A. Typically, that is the function of the SEC Form 8-K.

127 Q. I understand they're also referred to as "Current Reports"; is that correct?

A. I'm not familiar with that term, but I am familiar with the term "Form 8-K."

128 Q. So when Alphabet or Google becomes aware of a material event, something of which investors are not aware, it would file a Form 8-K?

A. To the best of my understanding, that is the general practice of publicly traded companies in the United States.

129 Q. And Alphabet as well?

A. Alphabet being, yes, a publicly traded company in the United States, yes.

130 Q. Thank you. I'd like to show you some Form 8-K documents, Mr. Zember. The first one is in the exhibit binder, Tab 3. It's PDF page 13. Here it says "Form 8-K." I see a reference to "Current Report," which is why I asked you if they were also referred to as "Current Reports." Do you see that there?

A. I see that, and I understand. I've just not heard of it referenced that way colloquially. So it's Form 8-K. It might just be how finance folks speak with each other.

131 Q. That's fair. So this one was filed in 2017. It's dated June 27, 2017. Do you see that?

A. I do. Is it possible to increase the size of the font a little? It would be easier to read it. Thank you.

132 Q. Scrolling to the top of the second page, please. And here, Ms. Kelly, we'll ask you to zoom in even more, please, because it's quite small. Is that legible?

A. Yes, I can read it.

133 Q. Okay. So at the top, it says: "Google was fined €2.42 billion by the European Commission on June

27, 2017."

Is that correct?

MR. THOMSON: Can't see that on the screen. We're seeing the legend on the top of page 2 of 6.

BY MS. RYDEL:

134 Q. Maybe we can scroll. There we go. The 8.1. Do you see -- or 8.01. Do you see it there now? I'll give you a moment.

A. Now I see it. If I could just have a moment to read it, please. Okay, I've read it.

135 Q. Thank you. So it says that Google was fined €2.42 billion by the European Commission on June 27th, 2017; is that correct?

A. The decision imposed that fine. That's...

136 Q. Is it fair to say that this event was reported because it was material?

A. I can't speak to why an 8-K was decided on, but it appears that this was a material effect on -- it's not clear from this document if it was material because of the event itself or because of the fine, and I can't speculate as to why.

137 Q. Okay. But the contents -- or the fact of the 8-K means that something material happened that caused them to file an 8-K?

A. Correct.

138 Q. Okay.

MR. THOMSON: This seems to have been issued. This seems to have been issued. I'm just going back, looking at the Form 10-K that you started with for the year ended December 31, 2024. That's Exhibit R to Mr. Zember's affidavit. I'm just comparing one to the other. This Form 8-K appears to have been issued before Google appealed the EC decision.

MS. RYDEL: Yes. I'm not trying to situate us in terms of where we are in the appeal process, et cetera. I just wanted to ask about date of this particular 8-K and the fact that it was filed, and I had done so.

MR. THOMSON: We're just trying to situate it in time. That's all.

MS. RYDEL: Understood.

BY MS. RYDEL:

139 Q. We'll move to another one, please. Exhibit binder Tab 8. Do you see that, Mr. Zember?

A. Yes, I do. It's another Form 8-K.

140 Q. All right. And this one is dated July 18, 2018?

A. Yes.

141 Q. And scrolling down, please, to where it says 8.01 -- there we go -- "Other Events." Give you a moment to review that, please.

A. Yes, I've read it.

142 Q. Okay. It says that Google was fined €4.34 billion by the European Commission on July 18, 2018; is that correct?

MR. THOMSON: Sorry, say it again. Okay, 4.34. I thought you said €43 billion. It's €4.34 billion, yes.

BY MS. RYDEL:

143 Q. €4.34 billion. My apologies if I misspoke, but I did intend to say what you just said, Mr. Thomson, €4.34 billion on July 18th, 2018.

A. Correct.

144 Q. Thank you. Fair to say that this event was reported because it was material?

A. Again, I'm not one of the decision-makers who decides when we file a Form 8-K. But generally speaking, a Form 8-K is produced when a material event happens. And so

this -- this would be filed under "Other Events," which should be a material event if it requires an 8-K.

MR. THOMSON: Again, just to situate this in time, I'm just comparing two documents. I'm going back now to comparing this to the Form 8-K that you started with. That's Exhibit R to Mr. Zember's affidavit, page 79. It appears that this Form 8-K was filed before Google appealed the decision of the European Commission.

BY MS. RYDEL:

145 Q. Moving to another document now, please, Tab 9 of the exhibit binder. It's another 8-K. This one is dated March 20, 2019.

A. Okay.

146 Q. Scrolling to the top of the next page, please, again Item 8.01, "Other Events." I'll give you a moment to review it.

A. Thank you. I've completed reading it.

147 Q. Thank you. It says that Google was fined €1.49 billion by the European Commission on March 20, 2019; correct?

A. That's correct.

148 Q. Again, is it fair to say that this

event was reported because Alphabet thought it was material?

A. Again, I was not a decision-maker in ascertaining the materiality, but generally speaking, an 8-K is released when the company determines that a material event has happened.

MR. THOMSON: Again, just to complete the thought, again, comparing the two documents, page 79 of the Form 10-K attached to Mr. Zember's affidavit as Exhibit R, this Form 8-K appears to have been issued before Google launched an appeal on this decision of the European Commission that I note for the record, in September 2024, the General Court of the European Union overturned the Commission you're referring to in this Form 8-K.

BY MS. RYDEL:

149 Q. Okay. And one more example that I'll show you. I'm not suggesting that it's all of them. I just -- it's the last one that I'll ask to be put on the screen before I ask for them to be marked as exhibits.

If we can turn to the exhibit binder Tab 4, please. Here's one that's dated April 17, 2025. Do you see that, Mr. Zember?

A. I do.

150 Q. We'll scroll to the next page, please. There we go. And 8.01. And I'll give you a moment to review it, please.

A. Yes, I read it.

151 Q. Thank you. So here it says that the U.S. District Court for the Eastern District of Virginia issued a mixed decision in the U.S. Department of Justice's case against Google; is that correct?

A. That is correct.

152 Q. And Google is appealing the adverse portion of this decision; correct?

A. Google plans to appeal.

MR. THOMSON: Plans to appeal. As I understand it, Google cannot -- under U.S. law, cannot appeal the decision until the remedies phase of this case comes to an end.

BY MS. RYDEL:

153 Q. Understood. Pardon me, I misspoke, but thank you for the correction. That's what I intended to say, that Google plans to appeal.

A. Yes.

154 Q. And is it fair to say that this event was reported because Alphabet determined that

it was material?

A. Again, I'm not the expert here, and I'm not the decision-maker, but, yes, if we released a Form 8-K, it would mean that the folks who make those decisions decided that this is a material event that should be disclosed to our investors and the Securities and Exchange Commission.

155 Q. Thank you. And on my reading of this event in Item 8.1, there's no mention of any remedy or any penalty?

A. That is correct.

156 Q. And there's no -- obviously, if there's no penalty, there's no estimate of quantum in this one?

A. That is correct.

MS. RYDEL: So I'd like to mark these four 8-Ks as the next exhibits, please.

MR. THOMSON: That's fine. Do you want to make them one collective exhibit?

MS. RYDEL: I'm happy to or we can mark them individually, Mr. Thomson. I'm happy to --

MR. THOMSON: Whatever your preference.

MS. RYDEL: Let's mark them individually because they're individual tabs in the

exhibit binder, so it might be easier later to refer to them. Is that okay?

MR. THOMSON: Yes. So, again, do you want to ascribe a number and identify which one's which?

MS. RYDEL: I think we're on Exhibit 3; is that correct? Okay. So Exhibit 3 will be the Alphabet Form 8-K dated June 27th, 2017.

EXHIBIT NO. 3: Alphabet Form 8-K dated June 27, 2017.

MS. RYDEL: Exhibit 4 will be the Alphabet Form 8-K dated July 18th, 2018.

EXHIBIT NO. 4: Alphabet Form 8-K dated July 18, 2018.

MS. RYDEL: Exhibit 5 will be the Form 8-K dated March 20th, 2019.

EXHIBIT NO. 5: Alphabet Form 8-K dated March 20, 2019.

MS. RYDEL: And Exhibit 6 will be the Form 8-K dated April 17th, 2025.

MR. THOMSON: That's fine.

EXHIBIT NO. 6: Alphabet Form 8-K dated April 17, 2025.

BY MS. RYDEL:

157 Q. Okay. So we can take that down,

Ms. Kelly.

Is it fair to say that Alphabet did not file a Form 8-K when the Commissioner filed its Notice of Application at the Competition Tribunal in Canada?

A. I don't know.

158 Q. But you're not aware of one being filed?

A. I'm not aware of one being filed, no.

159 Q. If that's correct and Alphabet did not file a Form 8-K in this regard, that would be indicative that it didn't believe the event was sufficiently material that it needed to be reported?

A. I can't speculate on how a decision was made whether or not to put out an 8-K. I'm not part of that team, I'm not part of that process, and I'm not a subject matter expert how we --

160 Q. Understood.

A. -- quantify its auditing (ph) thresholds.

MR. THOMSON: I would note, for the record, that none of the 8-Ks you just referred to

were issued on the commencement of our proceeding anywhere, but you can draw your own conclusions from that.

BY MS. RYDEL:

161 Q. So coming back to my question then, we did agree that when Google or Alphabet has an obligation to report material events, it does so?

MR. THOMSON: Well, again, the witness's evidence will speak for itself. He's already testified about his lack of knowledge of 8-Ks and his lack of subject matter expertise. He's not an accountant and doesn't make these decisions.

MS. RYDEL: I understand that. We talked earlier about understanding that such obligations exist and that Google and Alphabet fulfill their obligations. So I'm merely confirming that that's still Mr. Zember's view.

MR. THOMSON: Well, his evidence speaks for itself. I'm not going to get into repeating his evidence, so let's move ahead, please.

BY MS. RYDEL:

162 Q. I don't think it's an unfair question. Could you please confirm, Mr. Zember?

R/F MR. THOMSON: Well, I've objected to it, so let's move ahead, please.

BY MS. RYDEL:

163 Q. Okay. One last thing, if we can open your affidavit, please, the actual first volume, the actual affidavit, not the exhibits.

A. Just give us one second. It's a large binder.

MR. THOMSON: Chenyang has assembled the single largest binder I've ever seen that contains the affidavit and all of the exhibits.

MS. RYDEL: We'll turn to paragraph 18, please.

MR. THOMSON: Hang on, hang on, we're still flipping. You have no idea how large this binder is.

MS. RYDEL: I wish I could see it.

MR. THOMSON: Well, wait, hang on. There, can you see it?

MS. RYDEL: Wow.

MR. THOMSON: We have the first page of the affidavit.

THE WITNESS: I have the first page of the affidavit.

MR. THOMSON: You want to go to where,

Katherine? Page 10?

BY MS. RYDEL:

164 Q. We're looking at paragraph 18.

A. Yeah, I'm at paragraph 18.

165 Q. It indicates:

"Calculating the benefit derived by Google LLC and Google Canada Corporation from the anticompetitive acts alleged by the Commissioner would be an extremely difficult, time-consuming, and onerous task."

Do you see that?

A. I see that.

166 Q. Have you performed such a calculation, Mr. Zember?

A. Are you asking if I've performed the calculation that would be an extremely difficult, time-consuming, and onerous task?

167 Q. Yes.

A. No, I have not.

168 Q. You didn't try it, did you, sir?

A. Excuse me?

169 Q. You didn't try to calculate it?

A. No, I did not.

170 Q. Thank you.

A. This would be -- unfortunately, this is not something very easy to get. I couldn't just push a button and pull it out. It's not the type of data that we would look at in our general day-to-day work, nor in our -- nor would it have been something I could easily do.

171 Q. Thank you.

MS. RYDEL: I'm very close to being finished my cross-examination of Mr. Zember. I'd like to propose a short health break, and then we can finish up. Would that work?

MR. THOMSON: Sure. Do you want to take ten minutes?

MS. RYDEL: Sure. We'll be back at ten after.

(RECESSED AT 10:58 A.M.)

(RESUMED AT 11:09 A.M.)

MS. RYDEL: Mr. Zember, those are all my questions. I'd like to thank you very much for your time and for your patience in answering them.

And I'd also like to acknowledge Ms. Kelly for her most excellent work in getting us all organized with all of the documents on the screen. So thank you very much.

PUBLIC

THE WITNESS: Thank you.

MR. THOMSON: We have no re-examination. Thank you very much, Katherine.

MS. RYDEL: Thank you. Take care.

-- Adjourned at 11:10 a.m.

PUBLIC

REPORTER'S CERTIFICATE

I, CARISSA STABBLER, Registered Professional Reporter, certify:

That the foregoing proceedings were held virtually via Veritext Virtual videoconference at the time therein set forth, at which time the witness was put under oath by me;

That the testimony of the witness and all objections made at the time of the examination were recorded stenographically by me and were thereafter transcribed;

That the foregoing is a true and correct transcript of my shorthand notes so taken.

Dated this 9th day of August 2025.



Veritext Legal Solutions Canada

Per: Carissa Stabbler, RPR

Stenographic Court Reporter

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Exhibit 1 to the Cross-Examination of Ron Zember

Antitrust: Commission sends Statement of Objections to Google over abusive practices in online advertising technology

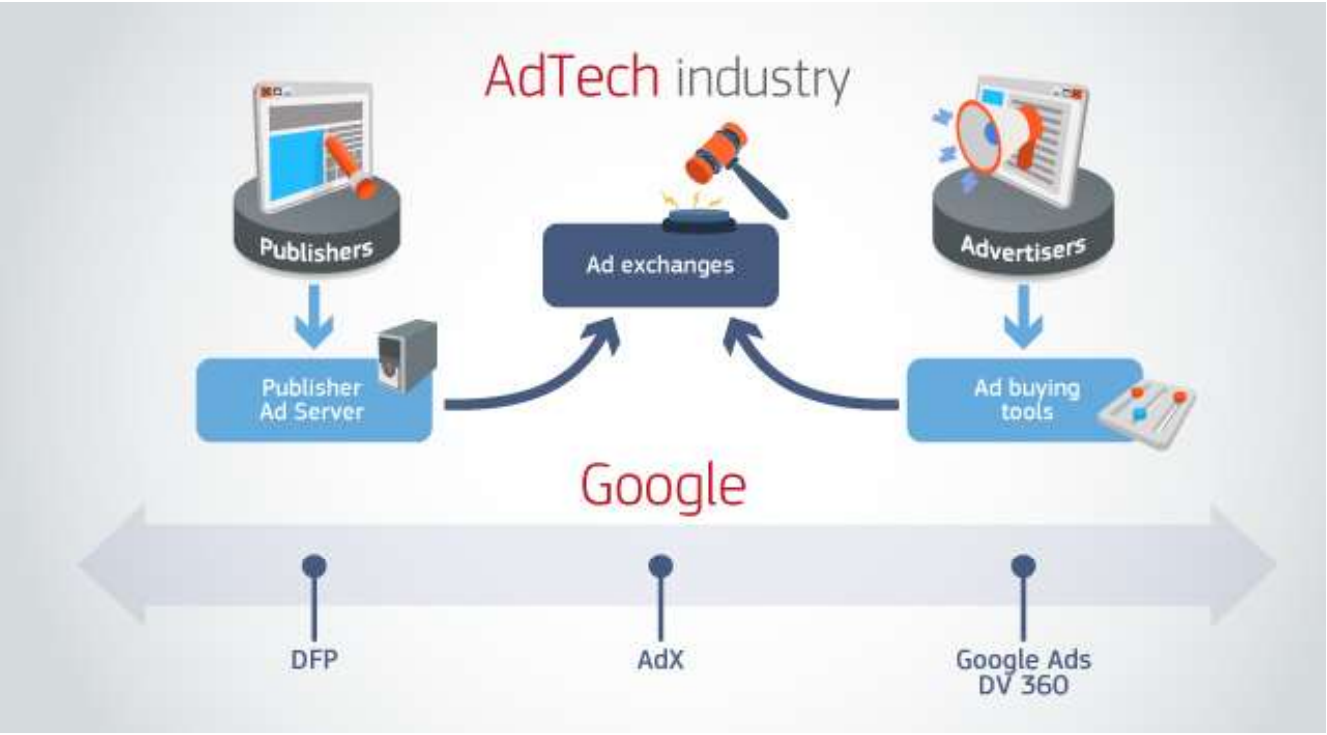
Brussels, 14 June 2023

The European Commission has informed **Google** of its preliminary view that the company breached EU antitrust rules by distorting competition in the advertising technology industry ('adtech'). The Commission takes issue with Google favouring its own online display advertising technology services to the detriment of competing providers of advertising technology services, advertisers and online publishers.

Google is a US multinational technology company. Google's flagship service is its search engine Google Search. Google also operates other popular services, such as the video streaming platform YouTube or the mobile operating system Android. Google's main source of revenue is online advertising: (i) it **sells** advertising space on its own websites and apps; and (ii) it **intermediates** between advertisers that want to place their ads online and publishers (i.e. third-party websites and apps) that can supply such space.

Advertisers and publishers rely on the adtech industry's digital tools for the placement of real time ads not linked to a search query, such as banner ads in websites of newspapers ('display ads'). In particular, the adtech industry provides three digital tools: (i) **publisher ad servers** used by publishers to manage the advertising space on their websites and apps; (ii) **ad buying tools** used by advertisers to manage their automated advertising campaigns; and (iii) **ad exchanges** where publishers and advertisers meet in real time, typically via auctions, to buy and sell display adds.

Google provides several adtech services that intermediate between advertisers and publishers in order to display ads on web sites or mobile apps. It operates (i) two ad buying tools - "Google Ads" and "DV 360"; (ii) a publisher ad server, "DoubleClick For Publishers, or DFP"; and (iii) an ad exchange, "AdX".



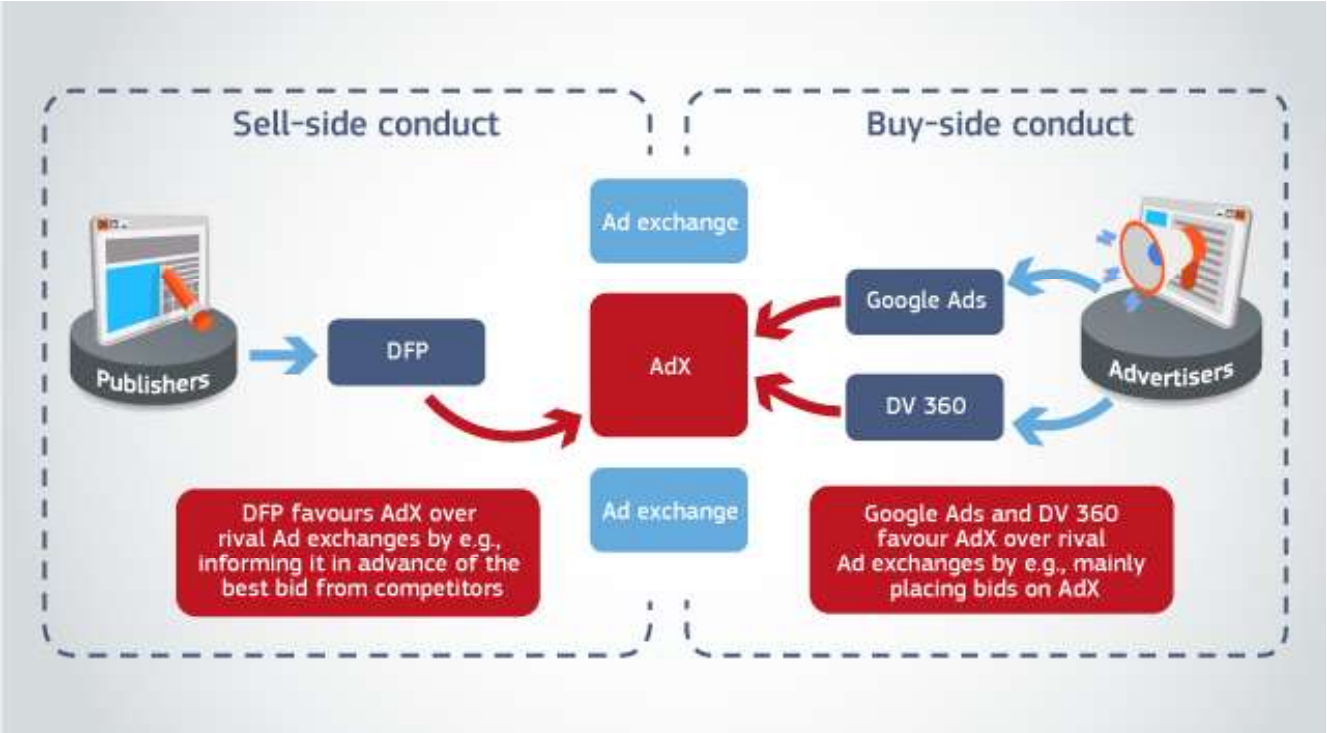
Statement of Objections on Google's practices in adtech

The Commission preliminarily finds that Google is **dominant** in the European Economic Area-wide markets: (i) for **publisher ad servers** with its service 'DFP'; and (ii) for **programmatic ad buying**

tools for the open web with its services 'Google Ads' and 'DV360'.

The Commission preliminarily finds that, since at least 2014, Google abused its dominant positions by:

- Favouring its own ad exchange AdX in the ad selection auction run by its dominant publisher ad server DFP by, for example, informing AdX in advance of the value of the best bid from competitors which it had to beat to win the auction.
- Favouring its ad exchange AdX in the way its ad buying tools Google Ads and DV360 place bids on ad exchanges. For example, Google Ads was avoiding competing ad exchanges and mainly placing bids on AdX, thus making it the most attractive ad exchange.

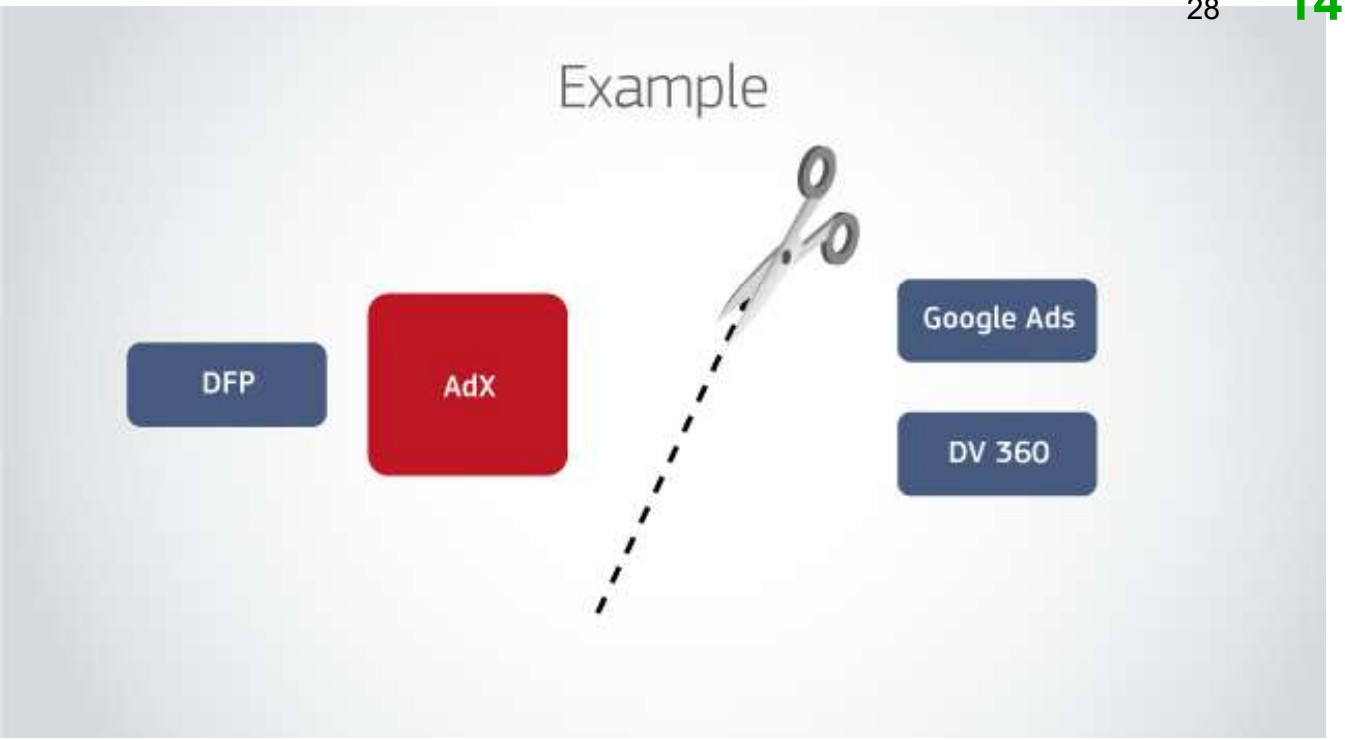


The Commission is concerned that Google's allegedly intentional conducts aimed at giving AdX a competitive advantage and may have foreclosed rival ad exchanges. This would have reinforced Google's AdX central role in the adtech supply chain and Google's ability to charge a high fee for its service.

If confirmed, those conducts would infringe Article 102 of the Treaty on the Functioning of the European Union ('TFEU') that prohibits the abuse of a dominant market position.

The Commission preliminarily finds that, in this particular case, a behavioural remedy is likely to be ineffective to prevent the risk that Google continues such self-preferencing conducts or engages in new ones. Google is active on both sides of the market with its publisher ad server and with its ad buying tools and holds a dominant position on both ends. Furthermore, it operates the largest ad exchange. This leads to a situation of inherent conflicts of interest for Google. The Commission's preliminary view is therefore that only the mandatory divestment by Google of part of its services would address its competition concerns.

The sending of a Statement of Objections does not prejudge the outcome of an investigation.



Background

Article 102 of the TFEU prohibits the abuse of a dominant position. The implementation of these provisions is defined in the Antitrust Regulation (Council Regulation No 1/2003), which can also be applied by the national competition authorities.

On 22 June 2021, the Commission opened formal proceedings into possible anticompetitive conduct by Google in the online advertising technology sector

A Statement of Objections is a formal step in Commission investigations into suspected violations of EU antitrust rules. The Commission informs the parties concerned in writing of the objections raised against them. The addressees can examine the documents in the Commission's investigation file, reply in writing and request an oral hearing to present their comments on the case before representatives of the Commission and national competition authorities. Sending a Statement of Objections and opening of a formal antitrust investigation does not prejudge the outcome of the investigations.

If the Commission concludes, after the company has exercised its rights of defence, that there is sufficient evidence of an infringement, it can adopt a decision prohibiting the conduct and imposing a fine of up to 10% of the company's annual worldwide turnover.

Where the Commission, finds that there is an infringement of Article 101 or of Article 102 of the TFEU, it may by decision require the company concerned to bring such infringement to an end. For this purpose, it may impose on them any behavioural or structural remedies which are proportionate to the infringement committed and necessary to bring the infringement effectively to an end. Structural remedies can only be imposed either where there is no equally effective behavioural remedy or where any equally effective behavioural remedy would be more burdensome for the company concerned than the structural remedy.

There is no legal deadline for bringing an antitrust investigation to an end. The duration of an antitrust investigation depends on a number of factors, including the complexity of the case, the extent to which the undertakings concerned cooperate with the Commission and the exercise of the rights of defence.

For More Information

More information on the investigation is available on the Commission's competition website, in the public case register under case number AT.40670.

IP/23/3207

Quotes:

Google has a very strong market position in the online advertising technology sector. It collects users' data, it sells advertising space, and it acts as an online advertising intermediary. So Google is present at almost all levels of the so-called adtech supply chain. Our preliminary concern is that Google may have used its market position to favour its own intermediation services. Not only did this possibly harm Google's competitors but also publishers' interests, while also increasing advertisers' costs. If confirmed, Google's practices would be illegal under our competition rules.
Margrethe Vestager, Executive Vice-President in charge of competition policy - 14/06/2023

Press contacts:

Arianna PODESTA (+32 2 298 70 24)
Sara SIMONINI (+32 2 298 33 67)

General public inquiries: Europe Direct by phone 00 800 67 89 10 11 or by email

Exhibit 2 to the Cross-Examination of Ron Zember

Alphabet Inc. - Goodwill (as reported in Form 10K) (in millions)		
As of December 31, **2015**	$15,869	Exhibit J – Page 1000
As of December 31, **2016**	$16,468	Exhibit J – Page 1000
As of December 31, **2017**	$16,747	Exhibit K – Page 1099
As of December 31, **2018**	$17,888	Exhibit L – Page 1194
As of December 31, **2019**	$20,624	Exhibit M – Page 1289
As of December 31, **2020**	$21,175	Exhibit N – Page 1392
As of December 31, **2021**	$22,956	Exhibit O – Page 1488
As of December 31, **2022**	$28,960	Exhibit P – Page 1582
As of December 31, **2023**	$29,198	Exhibit Q – Page 1679
As of December 31, **2024**	$31,885	Exhibit R – Page 1778

Exhibit 3 to the Cross-Examination of Ron Zember

8-K 1 d411078d8k.htm 8-K

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 8-K

CURRENT REPORT
Pursuant to Section 13 or 15(d)
of The Securities Exchange Act of 1934

Date of Report (Date of earliest event reported)

June 27, 2017

ALPHABET INC.
(Exact name of registrant as specified in its charter)

Delaware	001-37580	61-1767919
(State or other jurisdiction of incorporation)	(Commission File Number)	(IRS Employer Identification No.)

1600 Amphitheatre Parkway
Mountain View, CA 94043
(Address of principal executive offices, including zip code)

(650) 253-0000
(Registrant's telephone number, including area code)

Not Applicable
(Former name or former address, if changed since last report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions (see General Instruction A.2. below):

☐ Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)

☐ Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)

☐ Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))

☐ Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (§230.405 of this chapter) or Rule 12b-2 of the Securities Exchange Act of 1934 (§240.12b-2 of this chapter).

Emerging growth company ☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Item 8.01 Other Events

On June 27, 2017, the European Commission (EC) announced its decision that certain actions taken by Google Inc. ("Google"), a wholly-owned subsidiary of Alphabet Inc. ("Alphabet"), regarding Google's display and ranking of shopping ads infringed European competition law. The EC decision imposes a €2.42 billion fine and directs the termination of the conduct at issue. Google's blog post response to the EC decision is attached hereto as Exhibit 99.1 and is incorporated in this Item 8.01 by reference.

Alphabet will review the formal decision, but expects that it will accrue the fine in the second quarter of 2017.

Item 9.01 Financial Statements and Exhibits.

(d) Exhibits.

Exhibit Number	Description
99.1	Google blog post dated June 27, 2017

SIGNATURE

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

ALPHABET INC.

Date: June 27, 2017

/s/ Kent Walker
Kent Walker
Assistant Secretary

EXHIBIT INDEX

Exhibit No.	Description
99.1	Google blog post dated June 27, 2017

Exhibit 4 to the Cross-Examination of Ron Zember

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 8-K

CURRENT REPORT
Pursuant to Section 13 or 15(d)
of The Securities Exchange Act of 1934

Date of Report (Date of earliest event reported)
July 18, 2018

ALPHABET INC.

(Exact name of registrant as specified in its charter)

Delaware	001-37580	61-1767919
(State or other jurisdiction of incorporation)	(Commission File Number)	(IRS Employer Identification No.)

1600 Amphitheatre Parkway
Mountain View, CA 94043
(Address of principal executive offices, including zip code)

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Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (§230.405 of this chapter) or Rule 12b-2 of the Securities Exchange Act of 1934 (§240.12b-2 of this chapter).

Emerging growth company ☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Item 8.01. Other Events.

On July 18, 2018, the European Commission (EC) announced its decision that certain contractual provisions in agreements between Google LLC ("Google"), a wholly-owned subsidiary of Alphabet Inc. ("Alphabet"), and Android partners infringed European competition law. The EC decision imposes a €4.34 billion fine and directs the termination of the conduct at issue. Google's blog post response to the EC decision is attached hereto as Exhibit 99.1 and is incorporated in this Item 8.01 by reference. Alphabet expects that it will accrue the fine in the second quarter of 2018.

Item 9.01 Financial Statements and Exhibits.

(d) Exhibits.

Exhibit No.	Description
99.1	Google blog post dated July 18, 2018

SIGNATURE

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

ALPHABET INC.

Date: July 18, 2018

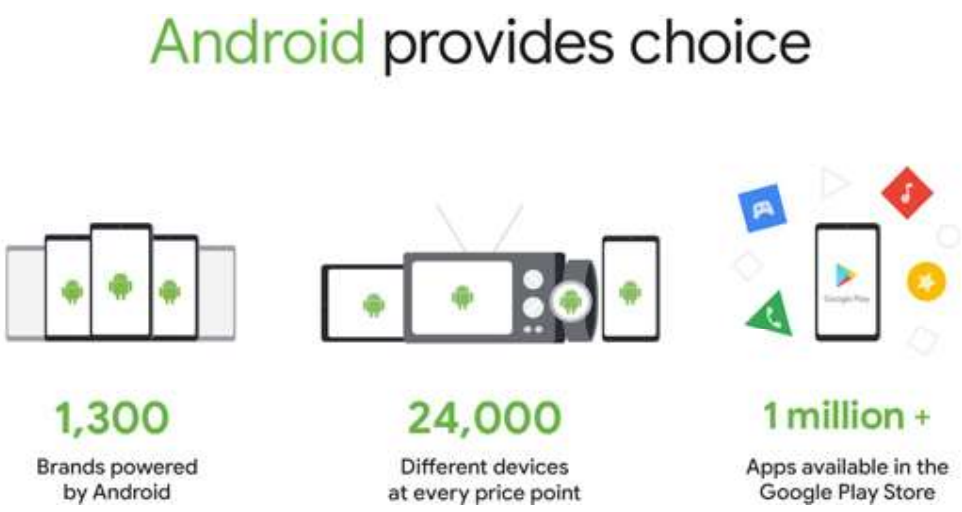
/s/ Kent Walker
Kent Walker
Assistant Secretary

Android has created more choice, not less

If you buy an Android phone, you're choosing one of the world's two most popular mobile platforms—one that has expanded the choice of phones available around the world.

Today, the European Commission issued a competition decision against Android, and its business model. The decision ignores the fact that Android phones compete with iOS phones, something that 89 percent of respondents to the Commission's own market survey confirmed. It also misses just how much choice Android provides to thousands of phone makers and mobile network operators who build and sell Android devices; to millions of app developers around the world who have built their businesses with Android; and billions of consumers who can now afford and use cutting-edge Android smartphones.

Today, because of Android, there are more than 24,000 devices, at every price point, from more than 1,300 different brands, including Dutch, Finnish, French, German, Hungarian, Italian, Latvian, Polish, Romanian, Spanish and Swedish phone makers.



The phones made by these companies are all different, but have one thing in common—the ability to run the same applications. This is possible thanks to simple rules that ensure technical compatibility, no matter what the size or shape of the device. No phone maker is even obliged to sign up to these rules—they can use or modify Android in any way they want, just as Amazon has done with its Fire tablets and TV sticks.

To be successful, open-source platforms have to painstakingly balance the needs of everyone that uses them. History shows that without rules around baseline compatibility, open-source platforms fragment, which hurts users, developers and phone makers. Android's compatibility rules avoid this, and help make it an attractive long-term proposition for everyone.

Creating flexibility, choice and opportunity

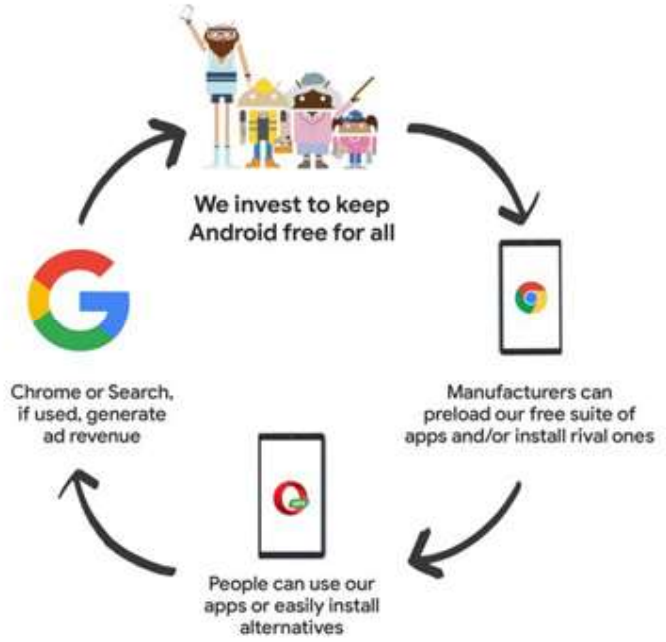
Today, because of Android, a typical phone comes preloaded with as many as 40 apps from multiple developers, not just the company you bought the phone from. If you prefer other apps—or browsers, or search engines—to the preloaded ones, you can easily disable or delete them, and choose other apps instead, including apps made by some of the 1.6 million Europeans who make a living as app developers.

In fact, a typical Android phone user will install around 50 apps themselves. Last year, over 94 billion apps were downloaded globally from our Play app store; browsers such as Opera Mini and Firefox have been downloaded more than 100 million times, UC Browser more than 500 million times.

This is in stark contrast to how things used to be in the 1990s and early 2000s—the dial-up age. Back then, changing the pre-installed applications on your computer, or adding new ones, was technically difficult and time-consuming. The Commission's Android decision ignores the new breadth of choice and clear evidence about how people use their phones today.

A platform built for the smartphone era

In 2007, we chose to offer Android to phone makers and mobile network operators for free. Of course, there are costs involved in building Android, and Google has invested billions of dollars over the last decade to make Android what it is today. This investment makes sense for us because we can offer phone makers the option of pre-loading a suite of popular Google apps (such as Search, Chrome, Play, Maps and Gmail), some of which generate revenue for us, and all of which help ensure the phone 'just works', right out of the box. Phone makers don't have to include our services; and they're also free to pre-install competing apps alongside ours. This means that we earn revenue only if our apps are installed, *and* if people choose to use our apps instead of the rival apps.



Good for partners, good for consumers

The free distribution of the Android platform, and of Google's suite of applications, is not only efficient for phone makers and operators—it's of huge benefit for developers and consumers. If phone makers and mobile network operators couldn't include our apps on their wide range of devices, it would upset the balance of the Android ecosystem. So far, the Android business model has meant that we haven't had to charge phone makers for our technology, or depend on a tightly controlled distribution model.

We've always agreed that with size comes responsibility. A healthy, thriving Android ecosystem is in everyone's interest, and we've shown we're willing to make changes. But we are concerned that today's decision will upset the careful balance that we have struck with Android, and that it sends a troubling signal in favor of proprietary systems over open platforms.

Rapid innovation, wide choice, and falling prices are classic hallmarks of robust competition and Android has enabled all of them. Today's decision rejects the business model that supports Android, which has created more choice for everyone, not less. We intend to appeal.

#AndroidWorks

Posted by: Sundar Pichai, CEO, Google

Exhibit 5 to the Cross-Examination of Ron Zember

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 8-K

CURRENT REPORT
Pursuant to Section 13 or 15(d) of
The Securities Exchange Act of 1934

Date of Report (Date of earliest event reported)

March 20, 2019

ALPHABET INC.
(Exact name of registrant as specified in its charter)

Delaware	001-37580	61-1767919
(State or other jurisdiction of incorporation)	(Commission File Number)	(IRS Employer Identification No.)

1600 Amphitheatre Parkway
Mountain View, CA 94043
(Address of principal executive offices, including zip code)

(650) 253-0000
(Registrant's telephone number, including area code)

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(Former name or former address, if changed since last report)

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☐ Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (§230.405 of this chapter) or Rule 12b-2 of the Securities Exchange Act of 1934 (§240.12b-2 of this chapter).

Emerging growth company ☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Item 8.01. Other Events.

On March 20, 2019, the European Commission (EC) announced its decision that certain contractual provisions in agreements that Google LLC, a wholly-owned subsidiary of Alphabet Inc. ("Alphabet"), had with AdSense for Search (AFS) partners infringed European competition law. The EC decision imposes a €1.49 billion fine and directs actions relating to the AFS agreements. Alphabet expects that it will accrue the fine in the first quarter of 2019.

SIGNATURE

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

ALPHABET INC.

Date: March 20, 2019

/s/ Kent Walker
Kent Walker
Assistant Secretary

Exhibit 6 to the Cross-Examination of Ron Zember

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 8-K

CURRENT REPORT
Pursuant to Section 13 or 15(d) of
The Securities Exchange Act of 1934
Date of Report (Date of earliest event reported)
April 17, 2025

ALPHABET INC.
(Exact name of registrant as specified in its charter)

Delaware	**001-37580**	**61-1767919**
(State or other jurisdiction of incorporation)	(Commission File Number)	(IRS Employer Identification No.)

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Mountain View, CA 94043
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☐ Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Class A Common Stock, $0.001 par value	**GOOGL**	**Nasdaq Stock Market LLC (Nasdaq Global Select Market)**
Class C Capital Stock, $0.001 par value	**GOOG**	**Nasdaq Stock Market LLC (Nasdaq Global Select Market)**

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (§230.405 of this chapter) or Rule 12b-2 of the Securities Exchange Act of 1934 (§240.12b-2 of this chapter).

Emerging growth company ☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Item 8.01. Other Events.

On April 17, 2025, Judge Leonie M. Brinkema of U.S. District Court for the Eastern District of Virginia issued a mixed decision in the U.S. Department of Justice's ("DOJ") case against Google LLC ("Google"), a subsidiary of Alphabet Inc., ruling that the DOJ failed to show that Google's advertiser tools or acquisitions of DoubleClick and AdMeld were anticompetitive, but that Google's publisher tools violated antitrust laws by excluding rivals. Google plans to appeal the adverse portion of this decision.

SIGNATURE

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

ALPHABET INC.

Date: April 17, 2025

/s/ KATHRYN W. HALL
Kathryn W. Hall
Assistant Secretary