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THE DICHOTOMOUS TREATMENT OF EFFICIENCIES IN HORIZONTAL MERGERS: TOO MUCH? TOO LITTLE? GETTING IT RIGHT

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The extent to which horizontal mergers deliver competitive benefits that offset any potential for competitive harm is a critical issue of antitrust enforcement. This Article evaluates economic analyses of merger efficiencies and concludes that a substantial body of work casts doubt on their presumptive existence and magnitude. That has two significant implications. First, the current methods used by the federal antitrust agencies to determine whether to investigate a horizontal merger likely rests on an overly-optimistic view of the existence of cognizable efficiencies, which we believe has the effect of justifying market-concentration thresholds that are likely too lax. Second, criticisms of the current treatment of efficiencies as too demanding—for example, that antitrust agencies and reviewing courts require too much of merging parties in demonstrating the existence of efficiencies—are misplaced, in part because they fail to recognize that full-blown merger investigations and subsequent litigation are focused on the mergers that are most likely to cause harm.

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INTRODUCTION

The 2010 Horizontal Merger Guidelines[1] (2010 HMG) establish the current basis by which the Federal Trade Commission and the Antitrust Division of the Department of Justice evaluate horizontal mergers, which are mergers of competitors or acquisitions of one competitor by another.[2]

1 U.S. DEP'T OF JUSTICE & FED. TRADE COMM'N, HORIZONTAL MERGER GUIDELINES (2010), https://www.justice.gov/sites/default/files/atr/legacy/2010/08/19/hmg-2010.pdf [https://perma.cc/7GS9-9HAR] [hereinafter 2010 HMG].

2 Simply put, a horizontal merger combines two current or potential competitors, which is to say firms that are operating in the same product market, such as two firms that sell Pay TV services to consumers. "Vertical mergers combine firms or assets that operate at different stages of the same supply chain." U.S. DEP'T OF JUSTICE & FED. TRADE COMM'N, DRAFT VERTICAL MERGER GUIDELINES 1 n.2 (2020), https://www.ftc.gov/system/files/documents/public_statements/1561715/p810034verticalmergerguidelinesdraft.pdf [https://perma.cc/MLT5-HD8A] [hereinafter 2020 Draft Vertical Guidelines]. So, for example, the AT&T/Time Warner Entertainment merger, which the Department of Justice failed to persuade a federal court to block, is a vertical merger because it combined the seller of Pay TV services (DirecTV) with the creator of content that was included in the Pay TV service. United States v. AT&T, Inc., 916 F.3d 1029, 1035 (D.C. Cir. 2019) (decision affirming the district court's denial of a permanent injunction of the "proposed vertical merger of a programmer and a distributor in the same industry"). Vertical (or to be more specific, nonhorizontal) mergers are beyond the scope of this Article, although they do raise important questions about the treatment of efficiencies. *See* Xavier Becerra et al., Public Comments of 28 State Attorneys General on Draft Vertical Merger Guidelines, 17-23 (Feb. 26, 2020), https://www.ftc.gov/system/files/attachments/798-draft-vertical-merger-guidelines/state_ags_final_vmg_comments.pdf [https://perma.cc/SE8D-29NQ].

Although they are not binding on courts, the Guidelines have been relied upon by courts reviewing horizontal mergers.[3]

The Guidelines establish a taxonomy for analysis that has become familiar to antitrust economists and attorneys, for example, defining product and geographic markets, calculating market shares, considering unilateral and coordinated effects, and then, importantly, looking to outcomes that could defeat any possible anticompetitive effects, very notably the existence of efficiencies.[4]

Here is a stylized example of the role that efficiencies might play in an antitrust review. Imagine two paper manufacturers, each with a single factory that produces several kinds of paper, and suppose their marginal costs decline with longer production runs of a single type of paper. They wish to merge, which by definition eliminates a competitor. They justify the merger on the ground that after they combine their operations, they will increase the specialization in each plant, enabling longer runs and lower marginal costs, and thus incentivizing them to lower prices to their customers and expand output. If the cost reduction were sufficiently large, such efficiencies could offset the merger's otherwise expected tendency to increase prices.[5]

Under the 2010 HMG, the agencies will not challenge a merger if the cognizable efficiencies—that is, "merger-specific efficiencies that have been verified and do not arise from anticompetitive reductions in output or service"—are sufficient to ensure the merger "is not likely to be

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3 *See, e.g.*, United States v. Aetna Inc., 240 F. Supp. 3d 1, 24 n. 7 (D.C. Cir. 2017) ("Although the Guidelines are not binding, the D.C. Circuit and other courts have looked to them for guidance in previous merger cases."); United States v. Anthem, Inc., 855 F. 3d 345, 356-60 (D.C. Cir. 2017) (citing the guidelines to evaluate the parties' arguments about efficiencies); United States v. CVS Health Corp., 407 F. Supp. 3d 45, 55 (D.D.C. 2019) (observing that the disputed "market is 'moderately,' as opposed to 'highly,' concentrated under the Government's guidelines").

4 Following Hovenkamp *infra* note 51, we use the term "efficiencies" to refer to the class of outcomes that include resource savings and lower unit costs that may offset competitive harms. A broader term might be "competitive benefits" but we use the term "efficiencies" because the agencies and courts employ the terminology. Cost reductions that result from pecuniary savings, which are transfers rather than efficiencies, or from merger-specific increases in market power, which are further competitive harm, are not efficiencies. These concepts are discussed further below. Efficiencies are not the only factor that can blunt the potential anticompetitive harm of a merger; for example, entry of new firms may prevent the merged firm from exercising market power. *See* 2010 HMG, *supra* note 1, at 27-29. For the purposes of this discussion, we posit a proposed horizontal merger in which the only basis used to contest the threat of harm is the claim of efficiencies. That is a simplification; courts can rely on efficiencies alongside other contentions. *See e.g.*, New York v. Deutsche Telekom AG, No. 1:19-cv-05434-VM-RWL, slip op. at 57 (S.D.N.Y. Feb. 10, 2020) ("The trend among lower courts has thus been to recognize or at least assume that evidence of efficiencies may rebut the presumption that a merger's effects will be anticompetitive, even if such evidence could not be used as a defense to an actually anticompetitive merger.").

5 The hypothetical is not, of course, comprehensive; it does not consider, for example, their market shares, whether the relevant market is highly concentrated, or whether entry barriers exist. *Id.*; *infra* notes 96, 126.

anticompetitive in any relevant market."[6] Thus, when the concern is that the merged company would unilaterally raise prices, efficiencies must be sufficient to offset all upward pricing pressure from the loss of a competitor.[7] The focus is on outcomes that improve competition, for example, a reduction in the resources needed to produce a given output, lowering per-unit costs.[8]

In this Article, we concentrate on two separate phases of antitrust enforcement. The first, and less studied, concerns the process by which the federal antitrust agencies decide whether to launch a full-blown investigation of a proposed merger: a so-called "Second Request."[9] Only a small fraction of proposed mergers receive such attention, but the agencies challenge a substantial portion of horizontal mergers that are fully investigated and have a high success rate when challenging horizontal mergers in court.[10] The dichotomy in outcomes between the bulk of mergers that receive relatively quick approval and those few that are subject to a full-blown investigation is stark.

We examine two questions: First, are the federal antitrust agencies under-investigating mergers? We believe the likely answer to this question is "yes." The federal antitrust agencies appear to rely on an approach that gives too much implicit weight to the existence of efficiencies in their decisions whether to investigate mergers even though the agencies do not conduct an individualized analysis of efficiencies for the vast majority of mergers that do not result in a full-fledged investigation, because they lack the detailed information at that stage in the process to do so. We describe below the existence of what we call a "standard efficiency credit," which is to say a

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6 2010 HMG, *supra* note 1, at 30. The analysis of efficiencies in the 2010 Horizontal Merger Guidelines is essentially the same as that first established by the 1997 Horizontal Merger Guidelines. *See infra* note 65 and accompanying text.

7 2010 HMG, *supra* note 1, at 30-31 ("[T]he Agencies consider whether cognizable efficiencies likely would be sufficient to reverse the merger's potential to harm customers in the relevant market, e.g., by preventing price increases in that market.").

8 *See* C. Scott Hemphill & Nancy L. Rose, *Mergers that Harm Sellers,* 127 YALE L.J. 2078, 2081-2 (2018) ("Input price reductions from a merger that reflect real resource savings present a potential source of efficiencies."); *see also infra* Part III.

9 As we explain below, parties proposing mergers and acquisitions that meet certain financial thresholds must notify the federal antitrust agencies of their intent to consummate their transactions and provide information on the transaction and potential competitive overlaps, thus triggering the opportunity for agency review. *See infra* notes 116-17 and accompanying text. Merger investigations typically proceed in two phases: the opening of a preliminary investigation during the first thirty days following a Hart–Scott–Rodino (HSR) filing (sometimes called "Phase I"), which allows the agency to make an initial determination of whether a more in depth-examination is needed to determine potential competitive harm; and a much more intensive second investigatory phase initiated by an agency's "Second Request" for information. For simplicity, our definition of full investigations excludes those closed before issuing a Second Request. *Merger Review*, FED. TRADE COMM'N, https://www.ftc.gov/news-events/media-resources/mergers-and-competition/merger-review [https://perma.cc/5BGG-AAKJ] (last visited Mar. 5, 2020).

10 *See infra* Part IV.

generalized belief in the existence of at least modest and ubiquitous efficiencies, which we argue below is likely overstated but has the effect of justifying market-concentration thresholds that are therefore likely to be too lax.[11] Second, are the burdens placed on parties to demonstrate assertions of efficiencies too high? We believe that the answer to this question is "no," and critics are not justified in asserting that the federal antitrust agencies and reviewing courts demand too much of merging parties when the existence of claimed efficiencies are reviewed in an individual transaction.

Our answers to these questions are informed by our analysis of the economic literature, which concludes that a substantial body of work casts doubt on the presumptive existence, magnitude, and importance of efficiencies in horizontal mergers.[12] That challenges the revisionist Chicago School approach, exemplified by Robert Bork,[13] which holds that horizontal mergers inevitably produce merger-specific efficiencies. Acceptance of the Chicago School assertion of ubiquitous efficiencies by antitrust practitioners and enforcement agencies has been a change with significant long-lasting effects.

This Article is organized as follows. Part I provides an overview of the treatment of efficiencies in horizontal merger policy, both in terms of historical development and current practice. Part II discusses what should properly be considered an efficiency—a designation that we believe includes true resource savings but not the use of newly-acquired market power—and draws conclusions from the economic literature on the existence and magnitude of such efficiencies. Part III considers the factors that go into deciding whether to launch a full-fledged investigation,[14] and concludes that belief in the generalized existence of efficiencies has led to the application of market concentration standards that are likely too lax and that should be reviewed. Part

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11 *See e.g.*, Michael Salinger, Dir., Bureau of Econ., Fed. Trade Comm'n, Four Questions about Horizontal Merger Enforcement 3 (Sept. 14, 2005), https://www.ftc.gov/sites/default/files/documents/public_statements/four-questions-about-horizontal-merger-enforcement/050914ababrownbag.pdf [https://perma.cc/W3CR-QZPW] ("If, however, we are unable to assess efficiencies on a case-by-case basis, then I see no alternative to treating the cost of a 'false block' as being the average improvement in efficiency, an approach I refer to as the 'standard deduction' approach to merger efficiencies."); Louis Kaplow, Efficiencies in Merger Analysis 43-56 (April 2020) (unpublished manuscript) (on file with the authors) (discussing and identifying literature concerning the origins of "an efficiency credit, akin to the standard deduction in the U.S. individual income tax"); *see also infra* Section II.B, notes 136–37 and accompanying text. It is important to recognize that resource constraints also may have contributed significantly to narrowing the horizontal merger enforcement aperture. MICHAEL KADES, WASHINGTON CTR. FOR EQUITABLE GROWTH, THE STATE OF U.S. FEDERAL ANTITRUST ENFORCEMENT 17-18 (2019) (reporting the decline in DOJ and FTC budgets in real terms over the past two decades).

12 *See infra* Part III.

13 ROBERT H. BORK, *Horizontal Mergers, in* THE ANTITRUST PARADOX: A POLICY AT WAR WITH ITSELF 217 (1978).

14 *See infra* Part III and note 115 (noting resource limitations and the importance of additional antitrust resources).

IV reviews criticisms of the federal antitrust agencies' treatment of efficiencies when investigating or challenging a merger in court and finds that, given current economic understandings, they are not well-founded.

I. THE RISE OF EFFICIENCY ANALYSIS AND INCREASED THRESHOLDS FOR MARKET CONCENTRATION: THE IMPLICIT STANDARD EFFICIENCY CREDIT

Since the issuance of the first merger guidelines in 1968, the antitrust agencies have changed their approaches to (i) the existence and treatment of efficiencies and (ii) the use of market concentration analysis to identify mergers that may be presumed to be likely to harm competition. The co-evolution of these has reinforced a tendency toward leniency: over time, the accommodation of efficiencies has expanded and market concentration thresholds identifying problematic mergers have risen. One can conceive of these as linked through the implicit use of what we call a standard efficiency credit; a generalized assumption that horizontal mergers typically generate a level of efficiencies that could offset modest increases in market power. While this credit is neither explicit nor applied directly in individual cases, its implied presence has likely contributed to the increase in the level of market concentration measures that are deemed to trigger the so-called structural presumption.[15] Such market-concentration measures define the circumstances in which, based on the impact of a merger on market concentration alone, the government can establish a prima facie case of anticompetitive harm without the need for additional evidence (which is to say they establish the structural presumption).[16] Thus, if the working assumption about the ubiquity and magnitude of efficiencies is wrong, the agencies may be applying their presumption of harm too narrowly.

In this Part, we review the evolution of the antitrust agencies' approach as expressed through the merger guidelines. Beginning in 1968, the Antitrust Division of the Department of Justice itself offered instruction on the manner in which it would analyze horizontal mergers; in 1992, and since, the Horizontal Merger Guidelines have been issued jointly by the Federal Trade Commission and the Antitrust Division.[17] Over time, the treatment of efficiencies became more generous, the economic perspective favoring their acceptance became widely-accepted, and the level of market concentration that signals presumptive harm increased, as summarized in Table 1 and described below.

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15 *See infra* notes 56-58 and accompanying text.

16 *See infra* notes 29 and 125 and accompanying text.

17 For a history of the evolution of the Horizontal Merger Guidelines as they deal with efficiencies, see William J. Kolasky & Andrew R. Dick, *The Merger Guidelines and the Integration of Efficiencies into Antitrust Review of Horizontal Mergers*, 71 ANTITRUST L.J. 207, 213 (2003).

Table 1: Treatment of Efficiencies and Market Concentration Thresholds in Merger Guidelines

Merger Guidelines	Treatment of Efficiencies	Market Concentration Measures for Highly Concentrated Markets
1968 Merger Guidelines (MG), Department of Justice (DOJ)	"Unless there are exceptional circumstances, the Department will not accept as a justification for a[horizontal] acquisition . . . the claim that the merger will produce economies (i.e., improvements in efficiency)."[18]	"In a market in which the shares of the four largest firms amount to approximately 75% or more, the Department will ordinarily challenge mergers" that would include the combination of a firm with 4% market share acquiring another firm with a market share of 4% or more.[19]
1982 MG DOJ	"Except in extraordinary cases, the Department will not consider a claim of specific efficiencies as a mitigating factor . . . ."[20]	Defined a highly concentrated market as having an Hirschman Herfindahl Index (HHI) above 1800; the DOJ is likely to challenge mergers resulting in HHIs above 1800 that produce an increase in the HHI of 100 points or more.[21]

18 U.S. DEP'T. OF JUSTICE, 1968 MERGER GUIDELINES 8 (1968), https://www.justice.gov/sites/default/files/atr/legacy/2007/07/11/11247.pdf [https://perma.cc/M68J-FBP6] [hereinafter 1968 MG].

19 *Id.* at 6.

20 U.S. DEP'T OF JUSTICE, 1982 MERGER GUIDELINES 29 (1982) https://www.justice.gov/sites/default/files/atr/legacy/2007/07/11/11248.pdf [https://perma.cc/3CYT-LQTJ] [hereinafter 1982 MG].

21 *Id.* at 13-15. In the 1982 MG, the DOJ notes that an HHI of 1800 corresponds roughly to a four-firm concentration ratio of 70%. *Id.* at 13. The 1968 DOJ guidelines focused on a four-firm ratio of 75%. 1968 MG, *supra* note 18, at 6. The DOJ points out that the 100-point increase in the HHI would not be triggered by the acquisition of a firm with less than 7% market share by a firm with a less than 7% market share, 1982 MG, *supra* note 20, at 14 n.31, a larger merger than the 4%/4% merger that would have triggered a challenge under the 1968 MG. 1968 MG, *supra* note 18, at 6.

1984 MG DOJ	"The primary benefit of mergers to the economy is their efficiency-enhancing potential"; "If the parties to the merger establish by clear and convincing evidence that a merger will achieve such [net] efficiencies, the Department will consider those efficiencies in deciding whether to challenge the merger."[22]	Except in extraordinary cases, the Department will challenge a merger where the HHI increase exceeds 100 and the post-merger HHI substantially exceeds 1800.[23]
1992 HMG DOJ and FTC	The "clear and convincing" standard is dropped. "The expected net efficiencies must be greater the more significant are the competitive risks identified" and "[t]he burden with respect to efficiency and failure continues to reside with the proponents of the merger."[24]	"Where the post-merger HHI exceeds 1800, it will be presumed that mergers producing an increase in the HHI of more than 100 points are likely to create or enhance market power or facilitate its exercise."[25]
1997 HMG DOJ Revision	Revision to 1992 joint DOJ-FTC Horizontal Merger Guidelines incorporating new Section 4 on efficiencies, to clarify how the agencies analyze efficiency claims. The current test of cognizability is promulgated.	Maintains 1992 concentration tests.

22 U.S. DEP'T OF JUSTICE, 1984 MERGER GUIDELINES, 15, 23 (1984), https://www.justice.gov/sites/default/files/atr/legacy/2007/07/11/11249.pdf [https://perma.cc/6NRT-JZ2V] [hereinafter 1984 MG].

23 *Id*.

24 U.S. DEP'T OF JUSTICE, 1992 MERGER GUIDELINES, 2 n.5, 28 (1992), https://www.justice.gov/sites/default/files/atr/legacy/2007/07/11/11250.pdf [https://perma.cc/3XYF-6Y69] [hereinafter 1992 HMG].

25 *Id*. at 15-16.

2010 Horizontal Merger Guidelines	Maintains 1997 approach to efficiencies.	"Mergers resulting in highly concentrated markets [HHI above 2500] that involve an increase in the HHI of more than 200 points will be presumed to be likely to enhance market power."[26] This is the most generous market concentration measure that the Agencies have employed.

A. *1968-1978: Early Merger Guidelines, Williamson & Bork*

The first Merger Guidelines were issued by the Department of Justice in 1968 (1968 MG).[27] They are notable in three respects. First, they take a very dim view of an efficiencies defense, consistent with the prevailing view of the courts at the time: "Unless there are exceptional circumstances, the Department will not accept as a justification for an acquisition normally subject to challenge under its horizontal merger standards the claim that the merger will produce economies."[28]

Second, they established the forerunner of the current structural presumption, reflecting the Supreme Court's decision five years earlier in *United States v. Philadelphia National Bank*, in which it used a measure of market concentration to construct a presumption of harm.[29] Using the four-firm market concentration measure that was standard before the introduction of the Hirschman-Herfindahl Index (HHI) analysis,[30] the guidelines explained that "[i]n a market in which the shares of the four largest firms amount to 75% or more, the Department will ordinarily challenge mergers" that would include, for example, the combination of a firm with 4% market share acquiring another firm with a market share of 4% or more.[31]

26 2010 HMG, *supra* note 1, at 19.

27 1968 MG, *supra* note 18.

28 *Id.* at 8.

29 *See* United States v. Phila. Nat'l Bank, 374 U.S. 321, 362-63 (1963) (referring to "a merger which produces a firm controlling an undue percentage share of the relevant market [that] results in a significant increase in the concentration of firms in that market").

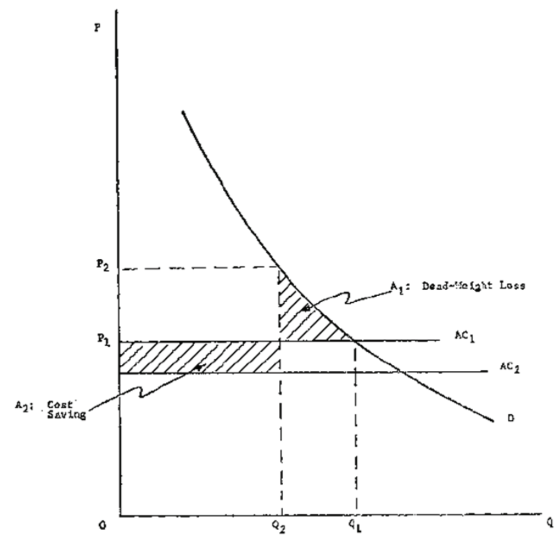
30 *See infra* notes 48–49 and accompanying text.

31 1968 MG, *supra* note 18, at 6.

Third, the 1968 guidelines connect the view of efficiencies with the market concentration analysis. The guidelines explained that the relevant range for economies of scale was likely below the level that would produce challenges, in other words, that the presumption of harm was sufficiently relaxed to accommodate those efficiencies that might exist.[32]

The academic and policy debate over merger efficiencies was transformed by a second event in 1968: publication of Oliver Williamson's theoretical model illuminating a tension that could occur when mergers increased both market power and cost savings.[33] Williamson described the "welfare trade-offs" between productive efficiency gains and consumer losses, illustrated in Figure 1 below.[34] Importantly, Williamson focuses on "total welfare," an economic term for the sum of producer (firms) and consumer (buyers) surpluses, rather than analyzing the merger's impact only on consumers of the firms' products.[35]

Figure 1: Williamson's Welfare Tradeoffs[36]



32 *Id*. at 8.

33 Oliver E. Williamson, *Economies as an Antitrust Defense: The Welfare Trade-Offs*, 58 AM. ECON. REV. 18, 21 (1968). Williamson came to the topic when, as an economist in the Antitrust Division, he was tasked by then-Assistant Attorney General Donald Turner to explore the topic in advance of the issuance of the 1968 merger guidelines. Kolasky & Dick, *supra* note 17, at 7.

34 Williamson, *supra* note 33, at 21.

35 Williamson's analysis applies to a merger of competing sellers, so the focus is on buyers of the product. A merger of competing buyers could induce an analogous but upstream anticompetitive harm, in that case to suppliers to the merging firms. For a discussion of buy-side mergers, see Hemphill & Rose, *supra* note 8, at 2082-92. For a discussion of total welfare, see also *infra* note 72.

36 Williamson, *supra* note 33, at 21.

In what he labels a "naïve tradeoff"[37] analysis, Williamson begins with an industry equilibrium with price P_1 equal to average costs AC_1, as illustrated above. Though he does not mention marginal cost in his article, both Figure 1 and the analysis implicitly assume perfect competition pre-merger—that is, that price is equal to marginal costs, and both are equal to average costs of AC_1.[38] He then considers a merger that would increase market power and raise price to P_2, while simultaneously creating efficiencies that reduce costs to AC_2. Williamson's Figure 1 shows that the deadweight loss to consumers who no longer purchase a product (the triangular cross-hatched area A_1) may be offset by the gain from cost savings that accrue to the firms (the rectangular cross-hatched area A_2). When A_2 is larger than A_1, the net impact on total welfare is positive.

Williamson argued that an efficiency gain would not have to be very large to outweigh consumer harm: "since a relatively large percentage increase in price is usually required to offset the benefits that result from a 5 to 10 percent reduction in average costs, the existence of economies of this magnitude is sufficiently important to give the antitrust authorities pause before disallowing such a merger."[39] His argument is critically dependent on a set of implicit assumptions, importantly including that the firms have no market power pre-merger; if there were prior market power, there would be additional harm from the merger not shown in his diagram.[40] Moreover, Williamson's naïve tradeoff analysis is indifferent as to whether any of the efficiencies flow to consumers—they may all be captured by the merged firm through higher profits, as in his example. Further, losses to consumers who continue to buy the product, but at a higher price, are not considered as a competitive harm, but "merely" a transfer from consumers to producers.[41]

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37 *Id.* at 24-32 (noting the naïve nature of the partial equilibrium analysis and describing myriad considerations that could alter its conclusions, including general equilibrium effects, inference and enforcement expenses, delayed timing, incipiency, price increases by competitors of the merging firms in response to the merger, income distribution concerns, concentration of political power, impact on innovation, and managerial slack). Subsequent commentators have noted other qualifications that limit or reverse the inferences that Williamson draws. *See, e.g.*, *infra* note40.

38 Williamson, *supra* note 33, at 21-23. While Williamson refers only to average costs in his article, the shaded areas in Figure 1 and comparisons of the magnitudes of efficiency gains to deadweight losses are correct only when marginal cost is equal to average cost; that is, for perfect competition under a constant returns to scale production technology. If the initial price is above marginal cost, the deadweight loss from further market power would be greater than in this figure. *See infra* note 40.

39 Williamson, *supra* note 33, at 34.

40 *See supra* Figure 1; MICHAEL D. WHINSTON, LECTURES ON ANTITRUST ECONOMICS 60-62 (2006) (arguing that proponents of Williamson's argument frequently fail to appreciate the dependence of this relative welfare comparison on a number of assumptions that may not be met. If firms have market power even prior to the merger, for example, the incremental harm from increased market power makes the merger more likely to reduce total welfare for any given level of cost efficiencies).

41 Williamson, *supra* note 33, at 28.

Williamson's emphasis on total welfare was embraced but relabeled by Robert Bork in *The Antitrust Paradox*.[42] While Bork argues he is applying a "consumer welfare" standard, this is belied by his claim that "consumers have lost . . . the area labeled A_1—-and have gained in resource savings an amount equal to the area A_2," which represents "merely a shift of income between two classes of consumers."[43] Two classes exist, in Bork's argument, because the owners of the merged company are themselves consumers and their gains thus fit within the scope of consumer welfare. This terminology is inconsistent with both the economic nomenclature and common understanding of consumer welfare, and at direct odds with Williamson, who highlights the redistribution from consumers to firms. Indeed, Bork ignores this and more than eight pages of qualifications that Williamson lays out as possible objections to the conclusions of his "naïve tradeoff" model. But, as we will see, Bork's argument continues to influence the debate over the "benefits" that merger authorities should recognize.[44]

Bork made a second fundamental point—one that diverged from Williamson's focus on the measurement of total welfare effects and remains important today. Bork believed that it is not necessary, or indeed possible, to calculate individual efficiencies at all; rather, they should be presumed to exist.[45] In other words, "[e]conomic analysis does away with the need to measure efficiencies directly. It is enough to know in what sorts of transactions efficiencies are likely to be present and in what sorts anticompetitive effects are likely to be present."[46] Bork specifically suggested that market shares could be used as a means of screening merger efficiencies, foreshadowing the current approach, which has been traced back to the Chicago School's skepticism of the ability of antitrust enforcers and courts to calculate efficiencies in individual cases.[47]

42 BORK, *supra* note 13, at 107-12; *see also* Herbert Hovenkamp & Fiona Scott Morton, *Framing the Chicago School of Antitrust Analysis*, 168 U. PA. L. REV. 1843, 1876 ("Bork adopted [the Williamson] model in the late 1970s, but renamed it 'consumer welfare.'").

43 BORK, *supra* note 13, at 108-10.

44 *See* Part IV, *infra*.

45 BORK, *supra* note 13, at 124-29; *see also* Hovenkamp & Scott Morton, *supra* note 42, at 1875 ("Bork as well as Posner believed that efficiencies could not be measured in specific antitrust cases but must be presumed.").

46 Williamson, *supra* note 33, at 20 (quoting Robert H. Bork, *Contrasts in Antitrust Theory: I*, 65 COLUM. L. REV. 401, 411 (1965)). *See generally* Timothy J. Muris, *The Efficiency Defense under Section 7 of the Clayton Act*, 30 CASE W. RES. L. REV. 381, 417, 429 n.203 (1980) (noting that Bork contended that requiring an efficiency justification was unwarranted and reviewing the application of Bork's approach).

47 *See* Kolasky & Dick, *supra* note 17, at 16 (discussing the 1982 Merger Guidelines); RICHARD A. POSNER, ANTITRUST LAW: AN ECONOMIC PERSPECTIVE 112 (1976) (stating that individual efficiencies need not be calculated).

B. *1982-2010: Greater Recognition of Efficiencies and Higher Thresholds for Market Concentration*

The 1982 MG introduced the use of Hirschman Herfindahl Index (HHI) as a measure of market concentration and recast the circumstances in which harm would be presumed.[48] Here, and until the promulgation of the 2010 HMG, harm would be presumed where a merger increased HHI by 100 points or more *and* resulted in a market with an HHI above 1800.[49] The 1982 MG expressed skepticism about the existence of efficiencies,[50] but the new market concentration approach, which was less strict than its 1968 predecessor, appears consistent with the notion that "the substantive standards of illegality already assumed and accounted for merger efficiencies."[51] Thus, "a real sympathy to efficiencies is built into the Guidelines from the start."[52]

The more dramatic departure from earlier positions came when the 1984 Merger Guidelines embraced the typical existence of merger efficiencies, despite the dearth of rigorous evidence underpinning that intellectual change.[53] Although the 1984 MG did not go as far as Bork recommended in granting presumptive status to efficiencies in a wide range of circumstances, they marked a significant shift in favor of the recognition of efficiencies, pronouncing the view that "[t]he primary benefit of mergers to the economy is their efficiency-enhancing potential, which can increase the competitiveness of firms and result in lower prices to consumers."[54] This was part of a broader shift from a focus on the structure of a market (as in the 1968 guidelines) to

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48 1982 MG, *supra* note 20, at 12-13. The HHI is the sum of the squared market shares (measured from zero to one hundred percent) across all the firms in a market. To get a sense of what the thresholds mean, it may be useful to recognize that this definition implies, for example, an HHI of 1000 for a market with 10 equal-sized firms (ten percent share each), 1667 for a market with six equal-sized firms, and 2500 for a market with four equal-sized firms.

49 *See* 1982 MG, *supra* note 20, at 14-15; 1984 MG, *supra* note 22, at 15; U.S. DEP'T OF JUSTICE & FED. TRADE COMM'N, HORIZONTAL MERGER GUIDELINES 16 (1997), https://www.justice.gov/sites/default/files/atr/legacy/2007/08/14/hmg.pdf [https://perma.cc/9NNP-GLQL] [hereinafter 1997 HMG]; 2010 HMG, *supra* note 1, at 19.

50 *See* 1982 MG, *supra* note 20, at 29 ("Plausible efficiencies are far easier to allege than prove . . . . their magnitudes would be extremely difficult to determine.").

51 Herbert Hovenkamp, *Appraising Merger Efficiencies*, 24 GEO. MASON L. REV. 703, 707 (2017); *see also* Joseph Farrell & Carl Shapiro, *Horizontal Mergers: An Equilibrium Analysis*, 80 AM. ECON. REV. 107, 122 (1990) ("[A]ny [horizontal] merger that generates no synergies . . . raises price.").

52 Joseph Farrell & Carl Shapiro, *Scale Economies and Synergies in Horizontal Merger Analysis* 2 (Univ. of Cal., Berkeley Competition Policy Ctr. Working Paper No. CPC00-15, 2000) (reviewing the 1997 Horizontal Merger Guidelines).

53 *See infra,* Part III.

54 1984 MG, *supra* note 22, at 23.

the recognition of factors, like efficiencies and entry, that could change an enforcer's understanding of potential anticompetitive outcomes.[55]

Some relationship between the HHI standards for presumed harm and likely merger efficiencies was recognized at the time. For example, then-DOJ economist Frederick Warren-Bolton explained in 1985 that "the very existence of 'safe harbor' Herfindahls in the Guidelines already implies a 'standard deduction' for efficiencies."[56] Two decades later, Michael Salinger, then-Director of the Bureau of Economics, assured the Antitrust Modernization Commission that "[e]fficiencies do play a key role in our analysis, although the way they are considered is perhaps less formal than is suggested by the guidelines" and that "[e]fficiencies affect the judgments we make even if they are not cognizable."[57]

This is not surprising. "Since absent any efficiency gains a horizontal merger will generally (weakly) increase prices, any merger screen that would allow some mergers and block others must implicitly be relying on some presumption of the efficiency gain that, on average, should be credited to a typical merger."[58]

Despite their claim that efficiencies are likely ubiquitous and implicit acceptance of a "standard efficiency credit," the 1984 MG recognized that efficiencies were unlikely to cure all adverse effects of mergers in more concentrated settings. They placed the burden on parties to produce "clear and convincing evidence" of efficiencies.[59] Still, it was in 1984 that the merger guidelines created the dynamic that led to the current approach: granting presumed efficiencies to mergers that do not raise particular concentration

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55 *See* Hovenkamp & Scott Morton, *supra* note 42, at 21 ("In the 1980s both the Supreme Court and government enforcement policy began to de-emphasize the role of pure structure and added other factors, including nonstructural features bearing on the risk of collusion, barriers to entry, and efficiencies"). In *United States v. General Dynamics*, 415 U.S. 486, 498 (1974), the Supreme Court held that market-concentration measures were not determinative in light of other market characteristics.

56 Frederick Warren-Boulton, *Merger Policy and Enforcement at the Antitrust Division: The Economist's View*, 54 ANTITRUST L.J. 109, 112 (1985).

57 Michael Salinger, Dir., Bureau of Econ., Fed Trade Comm'n, Treatment of Efficiencies in Merger Enforcement 2 (Nov. 17, 2005), https://www.ftc.gov/sites/default/files/documents/public_statements/treatment-efficiencies-merger-enforcement/051117amcstatement.pdf [https://perma.cc/TSG8-R7HH].

58 Louis Kaplow & Carl Shapiro, *Antitrust*, in 2 HANDBOOK OF LAW AND ECONOMICS 1073, 1163 (A. Mitchell Polinsky & Steven Shavell eds., 2007) ("[I]t seems appropriate to understand an efficiencies defense to a merger whose suspected anticompetitive effects exceed the threshold as implicitly involving a claim that the merger synergies are not merely substantial but are large enough to notably exceed the level ordinarily presumed to exist."); Joseph Farrell & Carl Shapiro, *Antitrust Evaluation of Horizontal Mergers: An Economic Alternative to Market Definition,* 10 B.E. J. THEORETICAL ECON. 1, 10 (2010) (describing the "standard deduction" and noting that "this idea might lie behind the established policy of allowing most horizontal mergers without special showings of efficiencies."); Volker Nocke & Michael D. Whinston, Concentration Screens for Horizontal Mergers 5 (Apr. 29, 2020) (unpublished paper), http://economics.mit.edu/files/19692 [https://perma.cc/THP8-72UR].

59 1984 MG, *supra* note 22, at 23.

concerns, but requiring parties in cases that are fully investigated to demonstrate cognizable efficiencies sufficient to offset the impact of significant reductions in competition.

Those burdens were further described in the 1997 revised guidelines, designed to "clarify how the agencies analyze efficiency claims in mergers" with an eye to "bring[ing] the analysis of efficiencies in mergers up-to-date."[60] The 1997 revisions set out the now-familiar requirements that efficiencies be cognizable, which means that they are (1) merger-specific, (2) substantiated, (3) "do not arise from anticompetitive reductions in output or service,"[61] and (4) are sufficient to negate harm to consumers through, for example, preventing price increases.[62] In tandem with the 1992 guidelines, the 1997 revision also expressly replaced the requirement that efficiencies be demonstrated by the merging parties by clear and convincing evidence.[63]

The most recent Horizontal Merger Guidelines were issued in 2010.[64] The treatment of efficiencies remained essentially the same as in 1997,[65] but the market concentration standard for the presumption of harm was shifted upwards—from treating a market above an HHI of 1800 as highly concentrated to establishing that threshold at an HHI of 2500, and from treating an increase of more than one hundred points in a highly concentrated marketed as triggering the structural presumption, to moving to a requirement that the HHI increase by more than 200 points. This change was described as reflecting the experience of the antitrust agencies;[66] retention of the structural presumption was made over the objection of the ABA Section of Antitrust Law, which "urge[d] the Agencies to remove the presumption of illegality keyed to the level and increase in the HHI."[67] A threshold of 2500

60 Press Release, Fed. Trade Comm'n, FTC/DOJ Announce Revised Guidelines on Efficiencies in Mergers 1 (Apr. 8, 1997), https://www.ftc.gov/news-events/press-releases/1997/04/ftcdoj-announce-revised-guidelines-efficiencies-mergers [https://perma.cc/V7JF-URFV].

61 1997 HMG, *supra* note 49, at 31.

62 *Id.*

63 *Compare* 1997 HMG, *supra* note 49, at 31 ("[T]he merging firms must substantiate efficiency claims . . . .") *with* 1984 MG, *supra* note 22, at 23 (stating that the Department will consider efficiencies "[i]f the parties to the merger establish by clear and convincing evidence that a merger will achieve such efficiencies"). The 1992 Horizontal Merger Guidelines removed the "clear and convincing" requirement. *See* Table 1, *infra*. However, the 1992 Horizontal Merger Guidelines did not specify the burden placed on merging parties. 1992 HMG, *supra* note 24, at 30-33.

64 2010 HMG, *supra* note 1.

65 *See* Carl Shapiro, *The 2010 Horizontal Merger Guidelines: From Hedgehog to Fox in Forty Years*, 77 ANTITRUST L.J. 702, 707 (2010) (stating that the 2010 Horizontal Merger Guidelines basically follow the approach of the 1997 Horizontal Merger Guidelines on efficiencies).

66 Carl Shapiro, *Antitrust in a Time of Populism*, 61 INT'L J. INDUS. ORG. 714, 729 (2018).

67 ABA Section of Antitrust Law, Comment Letter on Proposed Horizontal Merger Guidelines 4 (June 4, 2010), https://www.ftc.gov/sites/default/files/documents/public_comments/horizontal-merger-guidelines-review-project-proposed-new-horizontal-merger-guidelines-548050-00026/548050-00026.pdf [https://perma.cc/5LE3-UHRR]

for presumptively anticompetitive mergers suggests the possibility that a merger resulting in four equally-sized competitors would be allowed, a long way from the approach of the 1968 guidelines.

This synchronized movement toward raising the threshold for presumed anticompetitive harm in league with the view that efficiencies are generally present and need not be very large to reverse anticompetitive effects[68] appears consistent with our characterization of the agencies acting as if each merger gets what we have referred to as a standard efficiency credit. That can lead to focusing enforcement primarily on those transactions that trigger the structural presumption. In other words, the magnitude of the assumed standard efficiency credit impacts the setting of market concentration standards, which logically should be lower if the agencies believed that efficiencies were rare rather than commonplace.

It is worth emphasizing the Guidelines' explicit rejection of the total welfare approach embraced by Williamson and Bork, and insistence that efficiencies must benefit actual consumers of the merged firm's products. Thus, the 2010 HMG explain that "the Agencies consider whether cognizable efficiencies likely would be sufficient to reverse the merger's potential to harm customers in the relevant market, e.g., by preventing price increases in that market."[69] Indeed, "[t]he greater the potential adverse competitive effect of a merger, the greater must be the cognizable efficiencies, and the more they must be passed through to customers, for the Agencies to conclude that the merger will not have an anticompetitive effect in the relevant market."[70] In language that stands in stark contrast with the Williamson-Bork view that increased profits to the newly-formed company should be balanced against harm to customers, the Agencies explained that "the antitrust laws give competition, not internal operational efficiency, primacy in protecting customers."[71]

Rejecting the total welfare standard is correct and also has implications for current critiques of the antitrust agencies' and courts' approach to efficiencies that are discussed in Part IV. The total welfare standard can easily accept harm to competition as a positive outcome—not only increased profits to the merging firms, but even increased profits to their horizontal rivals who

68 *See* Muris, *supra* note 46, at 420 ("[I]f the defendant can show the existence of nontrivial economies—that is in the magnitude of only one to two percent—the merger should be presumed to be procompetitive.").

69 2010 HMG, *supra* note 1, at 30-31. A similar stance is also embodied in the 2006 HMG Commentary. *See* U.S. DEP'T OF JUSTICE & FED. TRADE COMM'N, COMMENTARY ON THE HORIZONTAL MERGER GUIDELINES 2006 55, https://www.justice.gov/atr/file/801216/download [https://perma.cc/TDT2-EVKU] ("As noted in section 4 of the Guidelines, the Agencies seek to determine 'whether cognizable efficiencies likely would be sufficient to reverse the merger's potential to harm consumers in the relevant market, e.g., by preventing price increases in that market.'").

70 2010 HMG, *supra* note 1, at 31.

71 *Id*.

are freed from the pressure of competition.[72] By contrast, asking whether efficiencies negate the potential anticompetitive harm from a merger appropriate focuses on whether efficiencies are passed through to consumers (in the merger of two firms that sell to consumers).[73]

II. EFFICIENCIES AND ECONOMICS

Economics can help guide the appropriate treatment of potential efficiencies in horizontal merger enforcement by providing insight on two questions: (i) what should qualify as "efficiencies" under antitrust law, and (ii) how prevalent are realized efficiencies in horizontal mergers?

While Williamson and Bork fundamentally altered the debate over efficiencies in merger review, their arguments were at their heart based on theoretical possibilities that have in large part found their way into current analysis. As we discuss below, the empirical foundation for those possibilities is at best shaky.

A. *What Constitutes an Efficiency?*

As noted earlier, to be cognizable, the 2010 HMG require that efficiencies be merger-specific; verifiable; not the fruits of anticompetitive outcomes; and, if offered in defense of an otherwise anticompetitive merger, ultimately sufficient to offset all potential anticompetitive outcomes from the merger.[74] Although the guidelines are not binding on the judiciary, courts have tended to articulate the same approach towards identifying and analyzing efficiencies.[75]

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72 *See* Steven Salop, *Question: What is the Real and Proper Antitrust Welfare Standard? Answer: The True Consumer Welfare Standard*, 22 LOY. CONSUMER L. REV. 336, 351-53 (2010) (noting that the aggregate welfare standard is satisfied where cost savings from production outweigh deadweight loss stemming from higher consumer prices).

73 *See, e.g.*, United States v. Anthem, Inc., 855 F.3d 345, 362 (D.C. Cir. 2017) (noting that a merger can reverse its potentially harmful effects only if it creates adequate downward price pressure); FTC v. Penn State Hershey Med. Ctr., 838 F.3d 327, 350 (3d Cir. 2016) (noting that the post-merger firm must "provide clear evidence showing that the merger will result in efficiencies that will offset anticompetitive effects and ultimately benefit consumers").

74 2010 HMG, *supra* note 1, at 1-2. For purposes of this Article, we rely upon the analysis of efficiencies as stated in the 2010 HMG, focused on whether the effect of a proposed transaction "may be substantially to lessen competition." *Id*. at 1. That is, the existence of efficiencies may be used to show that the effect of a transaction would not be to substantially lessen competition. *See also* Hovenkamp, *supra* note 51, at 704 (noting the adoption of an "efficiency defense" in the 2010 Horizontal Merger Guidelines).

75 Lawyers and courts continue to debate whether an efficiencies defense even exists. *See, e.g.*, *Anthem, Inc.*, 855 F.3d at 371 (D.C. Cir. 2017) (noting that the congressional proscription of mergers that substantially lessen competition is not overridable by the presence of price decreases); FTC v. H.J. Heinz Co., 246 F.3d 708, 720-22 (D.C. Cir. 2001) (positing that district courts often use an efficiencies defense although the Supreme Court has not authorized its use and the defense often fails when invoked).

These standards are well-aligned with the economics of ensuring that mergers do not cause anticompetitive harm in the markets served by the merging firms. There is broad agreement that an efficiency must be resource saving, that is, an improvement in the economics of value creation, such as a reduction in the real resources required to produce a given product, or an improvement in the product that is achieved without the need for increased resources.[76] Economic efficiencies are distinguished from purely financial gains by excluding pecuniary effects, and specifically excluding cost reductions that accrue from an increase of market power.[77] "Revenue synergies" that derive from the ability to raise prices following the elimination of competition between firms are evidence of competitive harm, even if they motivate Wall Street dealmakers, CEOs, and shareholders. In the words of the 2010 HMG, efficiencies "enhance the merged firm's ability and incentive to compete";[78] they do not enhance the merged firm's ability and incentive to harm competition.

Cost reductions arising from productivity gains exemplify this standard. Consider a hypothetical merger of two small beer manufacturers that each have one brewery; one is located in the Southeast and the other in the Northeast. A merger would permit them to produce both beers at each brewery, substantially reducing transportation costs to each brand's more distant markets. Such a merger could, in theory, lead to lower delivered prices and higher output, if cost reductions were sufficiently large and the likely diminution of competition post-merger was sufficiently small such that the new firm's most profitable strategy was to expand sales.[79] The 2010 HMG tells

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76 *E.g.*, Williamson, *supra* note 33, at 19 (noting the "appropriate" "distinction" drawn by Justice Douglas in *Federal Trade Commission v. Procter & Gamble Co.*, 386 U.S. 568 (1967) between "economies . . . merely pecuniary rather than real"); Hovenkamp, *supra* note 51, at 704, 709 (noting that mergers are permitted when they lead to cost savings product improvements).

77 *See Anthem, Inc.*, 855 F.3d at 349, 369 (D.C. Cir. 2017) (Millett C.J. concurring) ("[T]here is no dispute that, to have any legal relevance, a proffered efficiency cannot arise from anticompetitive effects.").

78 HMG 2010, *supra* note 1, at 29.

79 Even if efficiencies are large enough to offset the unilateral incentive to raise prices, they may be dwarfed by the possibility of increased coordination with other rivals post-merger. In such cases, the merger should be blocked. For an illustration of this danger, see Nathan H. Miller & Matthew C. Weinberg, *Understanding the Price Effects of the Miller-Coors Joint Venture*, 85 ECONOMETRICA 1763, 1788-89 (2017), which performs an ex post empirical analysis of the 2008 SABMiller-Molson Coors joint venture that finds evidence of increased price due to enhanced coordinated effects. The joint venture had a fact pattern akin to this hypothetical. The Department of Justice (DOJ) cited "substantial and credible savings that [would] significantly reduce the companies' costs of producing and distributing beer" in its closing statement clearing the merger. Press Release, U.S. Dep't of Justice, Statement of the Department of Justice's Antitrust Division on its Decision to Close its Investigation of the Joint Venture Between SABMiller PLC and Molson Coors Brewing Company (June 5, 2008), https://www.justice.gov/archive/atr/public/press_releases/2008/233845.pdf [https://perma.cc/4NUJ-PLHC]. Miller and Weinberg find that despite significant realized efficiencies from the joint venture, prices increased following its close due

us that "efficiencies resulting from shifting production among facilities formerly owned separately, which enable the merging firms to reduce the incremental cost of production, are more likely to be susceptible to verification and are less likely to result from anticompetitive reductions in output."[80]

Improved incentives to compete efficiently, such as the ability to produce more or higher quality output with the same level of cost, are also recognized as efficiencies.[81] In the interest of simplicity, we refer to cost-reducing efficiencies, but implicitly incorporate enhanced product quality, innovation or other potential efficiency benefits.

Not every merger-related cost reduction is an efficiency. So-called "pecuniary" benefits, such as tax savings, do not qualify.[82] As the DOJ has explained: "Economics distinguishes between a 'real' savings and a 'pecuniary' savings. The former enlarges the pie shared by all members of society. The latter enlarges one slice by shrinking one or more other slices."[83] Because they do not result in resource savings but are merely transfers, pecuniary savings are not properly recognized as "efficiencies," even if they trigger a financial gain to the merging firm.[84]

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to its facilitation of greater tacit collusion between Miller-Coors and Anheuser-Busch InBev (ABI). The DOJ cited these coordinated effects in its 2013 complaint and settlement of ABI's proposed acquisition of Grupo Modelo. *See* Complaint at 13-14, United States v. Anheuser-Busch InBev SA/NV, No. CV 13-127(RWR), 2013 WL 7018607 (D.D.C. 2013) (referencing ABI's "strategic plan for pricing in the United States that reads like a how-to manual for successful price coordination"); *see also* Competitive Impact Statement at 7, United States v. Anheuser-Busch InBev SA/NV, No. CV 13-127(RWR), 2013 WL 7018607 (D.D.C. 2013) ("[L]arge brewers engage in significant levels of tacit coordination and that coordination has reduced competition and increased prices.").

80 2010 HMG, *supra* note 1, at 31.

81 *See infra* Part I. Credibly quantifying expected merger-specific quality improvement is even more difficult than predicting price effects and should be subject to a high bar. *See* FTC v. H.J. Heinz Co., 246 F.3d 708, 721 (D.C. Cir. 2001) (discussing, but ultimately rejecting, claimed quality-enhancing efficiencies).

82 PHILLIP E. AREEDA & HERBERT HOVENKAMP, ANTITRUST LAW: AN ANALYSIS OF ANTITRUST PRINCIPLES AND THEIR APPLICATION § 970e (2019); *see also* FTC v. Proctor & Gamble Co., 386 U.S. 568, 604 (Harlan, J., concurring) (stating that cognizable efficiencies "must be shown in what economists label 'real' terms, that is in terms of resources applied to the accomplishment of the objective"); FTC v. Penn State Hershey Med. Ctr., 838 F.3d 327, 349 (3d Cir. 2016) (requiring "what economists label 'real' terms"); Williamson, *supra* note 33, at 24 ("The relevant effects are those which take the form of real rather than pecuniary economies.").

83 Corrected Brief of Appellees The United States of America and Plaintiff States at 59, United States v. Anthem, Inc., 855 F.3d 345 (D.D.C. 2017) (No. 16-1493); *See also* Warren-Boulton, *supra* note 56, at 112-13 (distinguishing "real" efficiencies, such as a merger that results in greater output using fewer inputs, from pecuniary efficiencies, including tax gains and the creation of monopsony power).

84 This article does not discuss efficiencies in the context of vertical mergers. It is worth pointing out, however, that the antitrust agencies have proposed that efficiencies claimed in vertical mergers be assessed under the same standards as in horizontal mergers. *See* 2020 Draft Vertical Guidelines, *supra* note 2 , at 9. But, there is a considerable debate about the extent to which claimed elimination of double marginalization should be scrutinized in the same manner as efficiencies (putting aside, for the moment, whether elimination of double marginalization meets the definition

Of particular importance are transactions in which merging parties claim benefits that arise from the acquisition of upstream market power.[85] The 2010 HMG explain that efficiencies cannot be the product of "anticompetitive reductions in output or service."[86] As explained by Scott Hemphill and Nancy Rose,

> [S]avings achieved through the exercise of increased classical monopsony power or bargaining leverage are premised on a reduction in competition. Under existing law developed mainly in the analysis of output markets, such 'benefits' are not cognizable efficiencies. Such a savings does not count as an antitrust benefit, even if it is passed through to downstream purchasers.[87]

This argument is featured in the DOJ's 2016 challenge to the proposed merger of two of health insurers, Anthem and Cigna. There, the merging parties claimed their expected reductions in payments to providers such as doctors and hospitals would be delivered as a benefit to their customers in the form of lower prices. Disagreeing, the DOJ alleged that "Anthem's defense that its acquisition of Cigna will enable it to lower reimbursement rates confirms rather than refutes the anticompetitive purpose and effect of the acquisition."[88] The United States Court of Appeals for the District of Columbia Circuit affirmed the DOJ position, concluding that the exercise of monopsony power is as inimical to competition as is the exercise of monopoly power and "a proffered efficiency cannot arise from anticompetitive effects."[89]

A cognizable efficiency further must reduce the incremental production cost (or increase the incremental product value) in order to undo the upward pricing pressure that results from the diminution of competition between the

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of an efficiency). *See id*. at 7 (noting that the Department of Justice will generally rely on the parties to demonstrate the elimination of double marginalization); Becerra et al., *supra* note 2, at 21-23 (claiming that claims of elimination of double marginalization should be analyzed under the general standard applicable to efficiencies); Jonathan Sallet, *The Future of Vertical Mergers and The Thing Called 'EDM'"*, THE WASHINGTON CTR. FOR EQUITABLE GROWTH: COMPETITIVE EDGE (Mar. 19, 2020), https://equitablegrowth.org/competitive-edge-the-future-of-vertical-mergers-and-the-thing-called-edm/ [https://perma.cc/XUF8-X7RV] ("[T]he antitrust agencies need to clarify their final [vertical merger] guidelines to make plain that claims of EDM are to be presented and assessed the same as any other claimed procompetitive benefit.").

85 For further discussion of mergers of competing buyers and potential sources of efficiencies in such transactions, see 2010 HMG, *supra* note 1, at 32-33.

86 *Id.* at 30.

87 Hemphill & Rose, *supra* note 8, at 2082.

88 Plaintiffs' Supplemental Memorandum on the Buy-Side Case at 4, United States v. Anthem, Inc., 855 F.3d 345 (D.D.C. 2017) (No. 16-1493) (quoting Nat'l Soc'y of Prof'l Eng'rs v. United States, 435 U.S. 679, 693 (1978)), https://www.justice.gov/atr/case-document/file/920331/download [https://perma.cc/B964-9YQM].

89 *Anthem, Inc.*, 855 F.3d at 369 (Millet, J., concurring); *see also* AREEDA & HOVENKAMP, *supra* note 82, at § 975i (discounting a claimed efficiency that "simply transfers income from supplier to purchaser without any resource savings.").

merging firms. Purely fixed cost savings, even if realized, may increase a firm's profitability, but generally do not induce the firm to increase output or reduce prices, as those decisions depend only on the firm's marginal costs, not its average costs. Such fixed cost reductions would not offset the competitive harm and would not be considered a cognizable efficiency.[90]

This understanding of what is an efficiency leaves the question: How frequent and of what magnitude in horizontal mergers are such efficiencies? We turn next to that discussion.

B. *What is the Economic Evidence on Efficiencies?*

It is tempting to infer that the embrace of efficiencies in 1984 rested on a foundation of rigorous empirical evidence that merger motivations and effects were dominated by efficiencies. That would be wrong. The economic scholarship of that period on merger efficiencies seems to have been at first premised on theoretical discourse on their possibility, even then often heavily caveated, as in Williamson's 1968 work.[91] Some, like Harold Demsetz, observed that an empirical correlation of profits and firm size in concentrated markets could as easily arise from efficiencies of scale as from market power.[92] That does not prove that mergers induce efficiencies. But those arguments seem to have quickly been transformed from a caution about theoretical costs of proposals to break up large firms where economies of scale are important to the logical fallacy that this implied merger enforcement was too stringent.[93]

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90 *See* Hovenkamp, *supra* note 51, at 731 (noting that the 2010 HMG require that significant efficiencies be proven and passed on to consumers such that the post-merger price is no higher than the pre-merger price). A fixed cost reduction that facilitates entry or innovation may have the potential to offset competitive harm in the longer-run, but there is scant theoretical or empirical reason to expect merger-induced overhead or fixed cost reductions to have that character. Moreover, the delayed impact and greater uncertainty of benefits resting on future entry appropriately lead these to be down-weighted in merger analysis. *See* 2010 HMG, *supra* note 1, at 4 ("Explicit or implicit evidence that the merging parties intend to raise prices, reduce output or capacity, reduce product quality or variety, withdraw products or delay their introduction, or curtail research and development efforts after the merger, or explicit or implicit evidence that the ability to engage in such conduct motivated the merger, can be highly informative in evaluating the likely effects of a merger."). Merger-related reductions in some fixed costs also could exacerbate rather than offset competitive harm over time; for example, reductions in research and development expenditures may reduce future innovations.

91 *E.g.*, Williamson, *supra* note 33.

92 *See, e.g.*, Harold Demsetz, *Industry Structure, Market Rivalry, and Public Policy*, 16 J.L. & ECON. 1, 5-9 (1973) (documenting higher rates of return for larger rather than smaller firms in highly concentrated 3-digit industries, and increases in this gap as concentration rises, and arguing these are consistent with the competitive growth of efficient firms).

93 *Id.* at 9 (concluding these correlations "must increase our doubts, however slightly, about the beneficial effects of an active deconcentration or anti-merger policy"). In equilibrating deconcentration (divestiture) and anti-merger policy, Demsetz commits the logical and economic fallacy of inferring that if greater efficiency makes firms large, it must be that making firms large by merger makes them

The appeal of the Chicago School's simple assertion of the inevitability of competitive markets captivated not only Bork, but increasingly many antitrust enforcers and the judiciary. Unfortunately, the growing belief in the ubiquity of merger efficiencies by the enforcement and judicial community was at increasing odds with economic evidence. As empirically-trained economists focused further on what data revealed about the relationship between mergers and efficiencies, the results cast considerable doubt on post-merger benefits. As discussed at length by Professor Hovenkamp, "the empirical evidence is not unanimous, however, it strongly suggests that current merger policy tends to underestimate harm, overestimate efficiencies, or some combination of the two."[94] The business literature is even more skeptical. As management consultant McKinsey & Company reported in 2010: "Most mergers are doomed from the beginning. Anyone who has researched merger success rates knows that roughly 70 percent of mergers fail."[95]

Two strands of the economic literature are particularly informative on the question of what our working assumption should be about the prevalence and economic significance of efficiencies in mergers, particularly horizontal mergers.

First are merger retrospectives that analyze ex post price, or more rarely, product quality, impacts from mergers. If merger-induced efficiencies—or similar effects from easy entry, product repositioning, powerful customers, and the like[96]—are sufficient to offset any reduction in competition, prices should be stable or falling following a merger, all else equal.[97] Evidence that consummated mergers often are associated with price increases or quality

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efficient. Those citing to Demsetz as proof of efficiencies favoring mergers succumb to this fallacy and overlook the considerably more modest conclusion Demsetz draws from his evidence.

94 Hovenkamp, *supra* note 51, at 726, 727-29. For a review of the extensive literature cited in his discussion, see *id.* at 728-730 nn.146-53.

95 MCKINSEY & CO., PERSPECTIVES ON MERGER INTEGRATION 11 (2010), https://www.mckinsey.com/client_service/organization/latest_thinking/~/media/1002A11EEA40458 99124B917EAC7404C.ashx [https://perma.cc/TC7U-VJ7U].

96 2010 HMG, *supra* note 1, at 20-22, 27-29 (discussing unilateral effects from mergers, the impact of a powerful buyer resulting from a merger, and entry barriers to new firms entering industries).

97 If the merger improves product quality or customer services, this statement would apply to quality-adjusted prices that are stable or falling. This often is difficult to measure well, and it can be even more difficult to establish what the outcome would have been in the absence of the merger, what economists refer to as the counterfactual state and lawyers frequently call the hypothetical and what both often refer to as the "but for" world. Moreover, the assertion that an increase in output accompanied by rising prices is proof of greater consumer value is too frequently misunderstood or misapplied. For an example of the Court's erroneous argument, see *Ohio v. American Express Co.*, in which the court held that the fact that total credit card transactions increased 30% between 2008 and 2013 demonstrated that American Express antisteering provisions neither restricted output nor raised price. 138 S.Ct. 2274 (2018); *see also id.* at 2302 (Breyer, J., dissenting) (correcting the majority's error by stating "the relevant restriction of output is as compared with a hypothetical world in which the restraint was not present and prices were lower . . . a comparison between reality and a hypothetical state of affairs").

degradation is inconsistent with the prevalence of sufficient merger efficiencies. Stable or falling prices do not themselves prove that efficiencies or other antidotes to reduced competition are common. But if merger enforcement is effective, mergers that reduce competition and lead to higher prices should be rare, regardless of whether there generally are merger efficiencies.

Read in this light, results from the merger retrospective literature provide little support for a belief in the prevalence of substantial efficiencies. Published retrospective analyses tend to focus on markets in which detailed price data are readily available to economists, which makes them far from a random sample of all industries, let alone of all mergers.[98] Despite this limitation, there is a rich literature studying consummated mergers across a diverse set of industries, including airlines, appliances, beer, various consumer package goods, electric utilities, hospitals, industrial products, insurance, mobile telephone service, petroleum refining and retail gasoline, publishing, retailing, and many others.[99] A common theme emerges from these studies: consummated horizontal mergers, particularly in concentrated markets, frequently are associated with consumer losses, and infrequently are associated with consumer benefits. This is consistent with market power effects dominating any potential efficiency gains, or no efficiencies at all.

The most thorough meta-analysis of the horizontal merger retrospective literature is provided by John Kwoka, who reviewed more than 200 retrospective studies of horizontal transactions and compares results across a subset curated to ensure quality control and comparability.[100] Of the 101 product prices analyzed in the individual merger studies, sixty-six experienced increases averaging 9.5%, while 35 experienced price declines

98 This is what economists call "sample selection." The data are not drawn from all possible mergers, but only those not successfully deterred or blocked by antitrust enforcement. This selection would tend to bias results toward finding *no* price increases. There may be a second source of potential selection bias, if the mergers economists choose to study are not a random selection of all relevant mergers. These limit the inferences one can draw for the entire universe of possible mergers. In theory, there also could be publication bias if "null" results are less likely to be published by journals, but this is unlikely to tilt the published literature toward either price increases or price decreases, since either finding would be of substantial interest.

99 Many of these are cited and discussed in numerous meta-analyses of merger retrospectives. *See, e.g.*, JOHN KWOKA, MERGERS, MERGER CONTROL, AND REMEDIES: A RETROSPECTIVE ANALYSIS OF U.S. POLICY 87-91 (2015) (showing the results from a curated set of studies meeting certain quality criteria that include single-merger price effect estimates for 49 mergers between 1976 and 2006, with most in the 1990s, and 19 additional multi-merger studies covering hundreds of mergers between 1980 and 2004); Orley Ashenfelter, Daniel Hosken & Matthew Weinberg, *Did Robert Bork Understate the Impact of Mergers? Evidence from Consummated Mergers,* 57 J.L. ECON. S67, S77 (2014) (analyzing "49 distinct studies examining mergers taking place in 21 industries published over the last 30 years"); Malcolm B. Coate, *A Retrospective on Merger Retrospectives in the United States*, 12 J. COMPETITION L. & ECON. 209, 209 (2016) (estimating challenge probabilities arising from merger retrospectives using the FTC's enforcement activity).

100 KWOKA, *supra* note 99, at 6-7.

averaging 3.3%.[101] Seventeen of the industry multi-merger studies reported price estimates, averaging a 5.4% increase across the entire group.[102] These findings, and the weight of evidence from this broad literature suggest greater skepticism toward the assertion of ubiquitous horizontal merger efficiencies, and particularly that they are sufficient generally to offset competitive harm near the enforcement margin.[103] While some recent papers have questioned whether efficiencies might emerge over longer periods of time, their results suggest little reason to believe that accounting for longer-run effects would reverse the conclusion of the overall retrospective literature.[104]

A second strand of literature attempts to measure directly the efficiency changes associated with mergers. Ex post merger efficiencies are challenging to measure and understudied, but a small but growing economics literature has attempted the feat. A number of early econometric analyses of ex post merger performance across sectors used the Federal Trade Commission's 1974-1977 manufacturing Line of Business database. An example is Dennis Mueller's (1985) study that reports substantial declines in market shares for acquired units, suggesting reduced competitiveness and hence competition post-merger.[105] Higher post-merger profitability, even when accurately measured,

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101 *Id.* at 96.

102 *Id.* at 147. *But see* Michael Vita & F. David Osinski, *John Kwoka's* Mergers, Merger Control, and Remedies*: A Critical Review,* 82 ANTITRUST L.J. 361, 377-81 (2018) (criticizing Kwoka's methodology, which does not provide standard errors on these estimates, making it difficult to determine their precision); Coate *supra* note 99 (identifying authors who criticize Kwoka's work as uninformative on the effectiveness of merger enforcement, due, for example, to the unrepresentativeness of the mergers studied). Most of these critiques are not directly relevant to the question of merger efficiencies sufficient to offset anticompetitive price effects.

103 *See also* Coate, *supra* note 99, at 209 (observing that estimated price effects tend to line up with the probability of a merger challenge, with price increases most likely in markets that are very likely to be challenged based on structural analysis).

104 For an example of a paper arguing that price effects after the first year may be reversed in the second year post-merger, see Franco Mariuzzo & Peter L. Ormosi, *Post-merger Price Dynamics Matters, So Why Do Merger Retrospectives Ignore It?*, 55 REV. INDUS. ORG. 403, 419 (2019). Another study, of two railroad mergers, shows large increases in the price of grain shipments in the year following the merger, with quite variable subsequent price changes, and a long-term trend of slightly higher prices based on traditional differences-in-differences estimates. *See* Clifford Winston, Vikram Maheshri & Scott M. Dennis, *Long-Run Effects of Mergers: The Case of U.S. Western Railroads*, 54 J.L. & ECON. 275 (2011) (explaining that structural model estimates that use of different counterfactuals suggest relatively small adverse long-run impacts on consumer surplus for one merger). One recent study claiming large dynamic efficiencies is based not on post-merger data but on a calibrated theoretical model. Yonghong An & Wei Zhao, *Dynamic Efficiencies of the 1997 Boeing-McDonnell Douglas Merger*, 50 RAND J. ECON. 666, 666 (2019) (finding that "the merger led to lower prices" and "net consumer surplus increased by as much as $5.14 billion," but these are results using a simulated econometric model to infer counterfactual impacts of the merger, and are not based on any data on actual Boeing costs pre- or post-merger).

105 Dennis C. Mueller, *Mergers and Market Share,* 67 REV. ECON. & STAT. 259, 259 (1985) (analyzing data on 5-digit product classes for units of 209 of the largest 1000 manufacturing companies, and finding that by 1972 an unacquired business retained 88% of its 1950 market share,

does not distinguish between market power and efficiencies as a source, but lower post-merger profitability suggests that mergers fail, on net, on both dimensions. While the mergers in David Ravenscraft and F. M. Scherer's 1987 study are disproportionately from the conglomerate merger wave of the 1960s, they conclude "the combination of evidence covering the horizontal subset of our . . . sample suggests that on average horizontal acquisitions, like conglomerate mergers, were followed by deteriorating profit performance."[106] Roughly contemporaneous studies of horizontal mergers in Europe, which had less stringent antitrust enforcement at the time, reached similarly pessimistic conclusions on post-merger performance.[107] Richard Caves, writing in 1989, concluded that "traditional modes of investigating [mergers'] ex post productivity sustain a fragile case for [efficiencies] at best, and several important recent investigations provide strongly negative evidence."[108]

A handful of more recent studies have estimated efficiency effects from production-function based analyses that include more recent mergers. Only those that examine cost efficiencies are informative on the efficiency question relevant to merger enforcement policy; "revenue productivity," financial returns on assets, or similar measures intermingle the effects of price increases with cost savings, and without careful work to disentangle those two, cannot inform the debate on whether merger-specific efficiencies offset increases in market power.[109] This work ranges from studies of a small number

in contrast to only 18% for an acquired business). Note that declining market share could also be a manifestation of market power, exercised through output restriction and higher prices.

106 DAVID J. RAVENSCRAFT & F. M. SCHERER, MERGERS, SELL-OFFS, AND ECONOMIC EFFICIENCY 224 (1987); *see also id.* at 76-77 (analyzing 2955 lines of business for the 1000 largest manufacturing companies in 1950, of which 2238 had been involved in an acquisition).

107 *See, e.g.*, DENNIS C. MUELLER, THE DETERMINANTS AND EFFECTS OF MERGERS: AN INTERNATIONAL COMPARISON (1980) (describing the results of a collection of studies of mergers in Europe and the U.S., which found that merger effects on profitability are at best mixed and tend toward negative); RAVENSCRAFT & SCHERER, *Id.* , at 220 n.7 (citing references that provide examples).

108 Richard E. Caves, *Mergers, Takeovers, and Economic Efficiency: Foresight vs. Hindsight*, 7 INT'L. J. INDUS. ORG. 151, 152 (1989). *See also* Lars-Hendrick Röller, Johan Stennik & Frank Verboven, *Efficiency Gains from Mergers* 9, 43 (Discussion Paper 00-09, Aug. 2000) (describing that "the impact of efficiency gains on price is more than offset by increased market power, at least in the cases studied in the economics literature" and "there *s*eems to be no support for a general presumption that mergers create efficiency gains" although they do sometimes do so).

109 Examples of studies that focus on measures of revenue productivity include Vojislav Maksimovic & Gordon Phillips, *The Market for Corporate Assets: Who Engages in Mergers and Asset Sales and Are There Efficiency Gains?*, 56 J. FIN. 2019, 2040 (2001) (estimating predicted output using a regression of log of the total value of shipments) and Klaus Gugler, Dennis C. Mueller, B. Burcin Yurtoglu & Christine Zulehner, *The Effects of Mergers: An International Comparison*, 21 INT'L. J. INDUS. ORG. 625 (2003). Gugler et al. measure revenues and profits and argue that mergers that increase both must increase what they term efficiencies. Their empirical analysis of more than 2700 mergers worldwide leads them to conclude: "[i]f one categorizes mergers that increase market power or that reduce efficiency as welfare reducing, then a majority of the mergers taking place around the world over the last 15 years appear to be welfare reducing." *Id.* at 651.

of mergers in a particular well-defined industry to those aggregating evidence from hundreds of mergers across broad sectors and time periods.

One of the most expansive studies, by Bruce Blonigen and Justin Pierce, uses plant-level data from the 1997-2007 Census of Manufacturing to separately identify mark-up and productivity effects from plant-level acquisitions across the entire manufacturing sector. They find that while post-merger mark-ups rise considerably, particularly for horizontal acquisitions, there is no evidence of statistically or economically significant productivity gains: "evidence for increased average markups from M&A activity is significant and robust. In contrast, we find little evidence for plant- or firm-level productivity effects from M&A activity on average, nor for other efficiency gains often cited as possible from M&A activity . . . ."[110] A similar conclusion is reached by John Kwoka and Michael Pollitt in their study of electric utility mergers.[111] Robert Kulnick's analysis of mergers in the ready-mix concrete industry over 1977-1992 finds no evidence of productivity increases in plants acquired prior to the 1982 MG, and increased productivity that is insufficient to offset increased market power, resulting in higher prices, for horizontal mergers after 1982.[112] Overall, the results from efforts to directly measure merger-induced efficiencies provide little support for the propositions that horizontal mergers are either motivated by or effective in producing significant economic efficiency gains.

The empirical designs, markets, and mergers studied vary widely across the empirical economic studies that attempt to measure ex post merger effects. The results reveal heterogeneity in outcomes, and the limitations of this literature suggest that the debate would benefit from further empirical work to both refine the analysis and synthesize the findings. But the conclusions of this broad literature cast significant doubt on an assumption of widespread prevalence of merger-related efficiencies sufficient to overcome the adverse effects of increased market power. The Guidelines may be correct in noting the potential for merger-related efficiencies to improve economic

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110 Bruce A. Blonigen & Justin R. Pierce, *Evidence for the Effects of Mergers on Market Power and Efficiency* 24 (Nat'l Bureau of Econ. Research, Working Paper No. 22750, 2016).

111 *See* John Kwoka & Michael Pollitt, *Do Mergers Improve Efficiency? Evidence from Restructuring the US Electric Power Sector*, 28 INT'L. J. INDUS. ORG. 645, 646, 654 (2010) (providing an analysis of seventy-three electric utility mergers in 1994–2004 and indicating "some of the strongest evidence against the theory of efficient mergers and the market for corporate control," in the finding that "target firms' post-efficiency actually declines" and "[a]cquiring firms record little or no gain to offset these efficiency losses by the acquired firms").

112 Robert B. Kulick, *Ready-to-Mix: Horizontal Mergers, Prices, and Productivity* 35 (U.S. Census Bureau Ctr. for Econ. Studies, Working Paper No. CES-WP- 17-38, 2017). The 1982 MG introduced HHI analysis and new, less stringent, concentration thresholds, replacing the stricter approach to merger enforcement taken in 1968. *See supra,* Table 1; *supra* notes 48-52 and accompanying text.

outcomes, but it appears that they have been far too optimistic in believing these are in fact realized as a "primary benefit of mergers."[113]

III. THE MANY: MERGERS THAT DON'T GET A SECOND LOOK

As we have seen, assumptions about the likely existence and impact of efficiencies are embedded in the very definition of anticompetitive harm likely to be caused by horizontal mergers.[114] In this Part we consider the implication that, as a result, some horizontal mergers that should be fully investigated are not.[115]

Under the Hart–Scott–Rodino Act,[116] mergers and acquisitions meeting financial thresholds must notify the federal antitrust agencies of their intent to consummate their transactions, thus triggering the opportunity for agency review.[117] For example, in fiscal year 2018, the most recent year for which data is available, 2,028 notices were filed.[118] Early termination was granted in 1,170, or 58%, of the transactions, leaving 42% potentially available for a full Second

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113 2010 HMG, *supra* note 1, at 29.

114 Hovenkamp, *supra* note 51, at 709 (stating that "[t]oday, the view held by the Agencies and expressed in the Merger Guidelines is that most mergers are socially beneficial because they lead to cost reductions or improved output" and "[a]s a result, a background analysis about efficiencies is built into the initial analysis").

115 A particularly important practical problem needs to be confronted at the outset. The antitrust agencies need greater resources to do their jobs. As noted above, resource allocation may be an important reason for the treatment of some, or even many, of these mergers. KADES, *supra* note 11.

116 *See supra* Section II.A (explaining the changes to antitrust enforcement wrought by the Hart–Scott–Rodino Act).

117 On occasion, the federal antitrust agencies seek to dissolve consummated mergers. *See, e.g.*, *In re* Otto Bock HealthCare N. Am., Inc., Docket No. 9378, 1 (FTC Nov. 1, 2019), https://www.ftc.gov/enforcement/cases-proceedings/171-0231/otto-bock-healthcarefreedom-innovations [https://perma.cc/EK4K-25J9] ("[T]he Commission addresses a host of issues that may be particularly salient in consummated mergers, such as whether an agreement to 'hold separate' the acquired assets eliminated anticompetitive effects and whether a proposed divestiture absolved the merging parties of liability."); J. THOMAS ROSCH, FED. TRADE COMM'N, CONSUMMATED MERGER CHALLENGES—THE PAST IS NEVER DEAD 2-6 (Mar. 29, 2012), https://www.ftc.gov/sites/default/files/documents/public_statements/consummated-merger-challenges-past-never-dead/120329springmeetingspeech.pdf [https://perma.cc/K7F8-3J8U] (discussing premerger notification filing regulations).

118 U.S. DEP'T OF JUSTICE & FED. TRADE COMM'N, HART–SCOTT–RODINO ANNUAL REPORT: FISCAL YEAR 2018 5 n.9, app. A [hereinafter 2018 HSR REPORT] (describing "Adjusted Transactions In Which A Second Request Could Have Been Issued" which refers to the number of transactions eligible for a second request. It is a subset of the total transactions reported and excludes transactions that were eligible for a list of preliminary exemptions or were otherwise withdrawn). We treat this adjusted number as the universe of applications for the purpose of our analysis.

Request investigation.[119] For present purposes, we assume that all grants of early termination were appropriate.[120]

Of the applications eligible for a Second Request in 2018, only 5.2% received a Second Request.[121] The average between 2007 and 2018 was higher, at 8.5% per year, but in none of these years did more than 11% receive a full investigation.[122] Indeed, while the number of eligible transactions has been steadily increasing over the past six years, the absolute *number* of Second Request investigations has remained largely flat.[123]

The impact of this is illustrated in Figure 2. From the end of the 2007-2009 recession to 2018, the percent of overall eligible transactions that received a second request has decreased at an average of 0.22% per year. This resulted in a drop by roughly half in the probability of a Second Request over this period, from a high of 10.8% in 2009 to just 5.2% in 2018. A similar drop occurred in overall Second Request Rate (reflected in the bottom line).

119 *Id.* at app. A; *see infra* Table A1, Appendix. The percentage of transactions that were not granted early termination (and thus eligible for full-blown investigations) averaged 38% between 2007 and 2018.

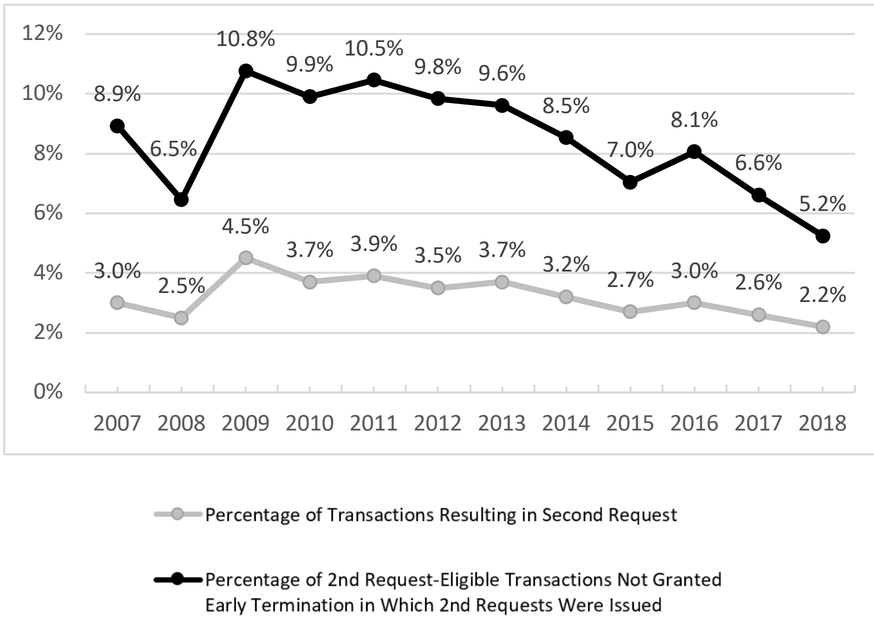
120 It is impossible to know how many early terminations are appropriately granted, making the assumption that all are correctly a conservative one. Even with this favorable assumption, which significantly lowers the universe of applications eligible for a Second Request, the percentage of eligible mergers that were fully investigated averages only 8.5% for the relevant period. *Infra* Table A2, Appendix. An even lower percentage results from comparing all of the HSR transactions (including early terminations) to the percentage of Second Requests. Second Requests are issued for only between 2.2% to 4.5% of total transactions. *Infra* Table A2, Appendix.

121 *See infra* Table A2, Appendix. The decision to issue a Second Request is typically informed by a preliminary investigation. There is no current public data available on the number of preliminary investigations opened in a year.

122 *Infra* Table A2, Appendix.

123 *Infra* Table A2, Appendix. In 2010, the ABA Section of Antitrust Law told the antitrust agencies that "most transactions, even those that combine competitors, ultimately are not challenged, and often are not even extensively investigated." ABA Section of Antitrust Law, *supra* note 67, at 2.

Figure 2: Percentage of Transactions Receiving Second Requests as Portion of Total Transactions and of Eligible Transactions after Early Termination Review, 2007–2018, by Year[124]



In deciding whether to initiate a full-fledged investigation, the agencies consider the degree of competitive threat that a merger is likely to pose. For example, agencies commonly interview business customers to assess their reaction to a proposed merger between companies that make commercial sales (for example, sale of office supplies to businesses). Such early-stage reviews

124 U.S. DEP'T OF JUSTICE & FED. TRADE COMM'N, HART–SCOTT–RODINO ANNUAL REPORT: FISCAL YEAR 2016 6 [hereinafter 2016 HSR REPORT] (presenting the percentage of transactions resulting in second requests for all fiscal years between 2007 and 2016); *id.* at app. A (presenting the number of transactions eligible for second requests, the number of transactions requesting early termination, number of transactions not granted early termination requests, and number of transactions in which a second request was issued for all fiscal years between 2007 and 2016); 2018 HSR REPORT, *supra* note 118, at 6 (presenting the percentage of transactions resulting in second requests for all fiscal years between 2009 and 2018); *id.* at app. A (presenting the number of transactions eligible for second requests, the number of transactions requesting early termination, number of transactions not granted early termination requests, and number of transactions in which a second request was issued for all fiscal years between 2009 and 2018). The percentage of second request-eligible transactions not granted early termination in which second requests were issued was calculated by removing the number of transactions that were granted an early termination request from the total number of second request-eligible transactions, then dividing the number of second requests made in each year by resulting number of second request-eligible transactions not granted early termination in that year. 2016 HSR Report, *supra,* at app. A; 2018 HSR Report, *supra* note 118, at app. A.

typically inquire into the merging parties' respective market share and, to the extent possible, apply the market concentration standards established by the 2010 HMG to assess whether a proposed merger is likely to harm competition.[125] Despite the admonition of the 2010 HMG that mergers falling short of the structural presumption may nonetheless create a risk of competitive harm, such mergers seem to garner little attention.[126]

In their informational requests that precede the decision whether to open a full investigation, the agencies do seek information about efficiencies. For example, the HSR filing requires merging parties to include then-existing efficiencies/synergies documents.[127] The Department of Justice further seeks

125 As discussed above, the 2010 HMG provides that mergers resulting in highly concentrated markets, which are defined as having an HHI above 2500, and in which the merger would cause an increase of more than 200 points "will be presumed to be likely to enhance market power." 2010 HMG, *supra* note 1, at 19. This is the so-called structural presumption, which the agencies state "may be rebutted by persuasive evidence that the merger is unlikely to enhance market power" and that traces its origin back to *United States v. Philadelphia National Bank*. *Id.; supra* notes 29-31 and accompanying text. *See generally* Herbert Hovenkamp & Carl Shapiro, *Horizontal Mergers, Market Structures, and Burdens of Proof*, 127 YALE L.J. 1996 (2018) (arguing that the structural presumption is strongly supported by economic theory and evidence and suggesting ways to strengthen the presumption).

126 Markets with an HHI between 1500 and 2500 are "moderately concentrated" and mergers resulting in a moderately concentrated market that increase HHI by more than 100 points "potentially raise significant competitive concerns and often warrant scrutiny." 2010 HMG, *supra* note 1, at 19. The information available in public reports and our understanding of the internal review processes suggest that moderately concentrated markets do not often trigger Second Requests. *See*, *e.g.*, 2016 HSR REPORT, *supra* note 124, at app. A; U.S. DEP'T OF JUSTICE & FED. TRADE COMM'N, HART–SCOTT–RODINO ANNUAL REPORT: FISCAL YEAR 2017 app. A, [hereinafter 2017 HSR REPORT]; 2018 HSR REPORT, *supra* note 118, at app. A (demonstrating the relatively low rate of second requests relative to the overall number of transactions); *see also* Coate, *supra* note 99, at 13, 19, 36 tbl.5 (briefly describing the merger catalog analysis, explaining the author's use of merger data to analyze the number of pre-merger rivals and the Herfindahl statistics, and demonstrating the significantly lower rate of challenges of transactions in markets with five or more rivals with HHI figures of less than 3000). Mergers that result in a highly concentrated market but without an increase of HHI of more than 200 are to receive the same scrutiny, although it is not clear that they do. *See* 2010 HMG, *supra* note 1, at 19 (stating that "[m]ergers resulting in highly concentrated markets that involve an increase in the HHI of between 100 points and 200 points potentially raise significant competitive concerns and often warrant scrutiny").

127 *See* ITEM 4(C)TIP SHEET, FED. TRADE COMM'N (2012), https://www.ftc.gov/sites/default/files/attachments/hsr-resources/4ctipsheet.pdf [https://perma.cc/VS6R-NNJC] (analyzing competition factors); *Item 4(d) Tip Sheet*, FED. TRADE COMM'N, https://www.ftc.gov/enforcement/premerger-notification-program/hsr-resources/pno-guidance-item-4d [https://perma.cc/ZTD2-QEHF] (last visited May 12, 2020) (discussing synergies); *see also* U.S. DEP'T OF JUSTICE, ANTITRUST DIVISION MANUAL ch. 3, at 34 (5th ed. 2012). Per the Department of Justice's Antitrust Manual,

> For proposed merger investigations, staff should discuss the transaction itself (including any complaints received or concern expressed in the press); theory(ies) of competitive harm; possible product markets; possible geographic markets; best estimate of market shares; ease or difficulty of entry and potential barriers; *possible efficiencies*; the significance of the matter (including any unusual reasons to pursue or

evidence that validates claimed efficiencies,[128] and the FTC encourages firms to provide evidence that claimed efficiencies are cognizable.[129]

Even still, antitrust agencies spend little time formally analyzing the existence of efficiencies before deciding whether to issue a Second Request for a simple reason—detailed information sufficient to support an analysis is seldom available at that stage.[130] One legal commentator suggests that the FTC lawyers are more skeptical of efficiencies claims than are their economist colleagues and that "[t]o the extent the agencies ultimately cite efficiencies considerations in clearing mergers, antitrust practitioners report that they are often treated as 'icing on the cake' in cases where there are no serious concerns about anticompetitive effects."[131]

In fact, a review of FTC merger investigations from 1989-2016 shows a very strong relationship between challenging a horizontal merger and market structure. Not surprisingly, mergers to monopoly "are almost always challenged,"[132] with clear ease-of-entry evidence, well-situated power buyers, or unique facts on efficiencies required for the merger to be cleared. This analysis by Malcolm Coate reports that an average of 36.7% of the complete sample (1989-2016) of mergers and 27.5% of the restricted (1993-2016) sample fall into

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> not to pursue it); the initial investigative approach; and the outcome of any past investigations in the industry.

Id. at 9 (emphasis added). The Department of Justice states in addition that

> [a]s early as the preliminary investigation phase of a merger investigation, staff may find it advantageous to issue CIDs. While interviews are the primary tool available to staff at the preliminary investigation phase, in limited instances, CIDs—even CIDs for oral testimony—are the proper tool and necessary to help staff make significant progress toward resolving important issues (*e.g.*, market definition, competitive overlaps, entry, *efficiencies*, and failing firm defenses).

Id. at 38-39 (emphasis added).

128 *United States Department of Justice Model Voluntary Request Letter*, U.S. DEP'T OF JUSTICE 3, https://www.justice.gov/atr/page/file/1111341/download [https://perma.cc/FP9P-PAK9] (last updated Nov. 2018) ("Submit documents analyzing, describing, or quantifying the efficiencies or synergies that the company believes will be generated by the transaction."). *But see Guidance for Voluntary Submission of Documents During the Initial Waiting Period*, FED. TRADE COMM'N, https://www.ftc.gov/enforcement/premerger-notification-program/hsr-resources/guidance-voluntary-submission-documents [https://perma.cc/7UED-BHE8] (last visited May 12, 2020) (showing that the public version of the Federal Trade Commission counterpart does not reference information about efficiencies).

129 *See* Malcolm Coate, The Merger Review Process at the Federal Trade Commission from 1989 to 2016 14 (2018), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2955987 [https://perma.cc/QZJ5-KABN] ("[F]irms can facilitate the staff review of efficiencies by directly providing the appropriate cognizability documentation.").

130 *See* Darren Tucker, *A Survey Of Evidence Leading to Second Requests at the FTC*, 78 ANTITRUST L.J. 591, 602 (2012) (indicating that in studies of pre-Second Request FTC investigations from 2008-2012, merging parties supplied detailed efficiencies claims in only five of the fifty-eight cases in which efficiencies were asserted).

131 Daniel A. Crane, *Rethinking Merger Efficiencies*, 110 MICH. L. REV. 347, 364 (2011).

132 Coate, *supra* note 129, at 16.

this category, absorbing a substantial share of the enforcement agencies' limited investigation and litigation resources.[133] In addition, over 80% of three to two firm mergers were challenged; a majority of four to three firm mergers were challenged; but under less than a third of five to four firm mergers were challenged.[134]

In sum, relatively few proposed mergers are fully investigated. A key methodology used to determine whether a Second Request should be issued is whether a proposed merger would result in significant increase of concentration in a highly concentrated market—an analysis that uses market concentration levels that the agencies have concluded support application of the structural presumption of competitive harm.[135]

But that screen, in turn, rests on a belief that efficiencies are generally present in horizontal mergers and generally large enough to meaningful.

The difficulty is that, as Part II demonstrates, the economics and business literatures cast doubts on the widespread prevalence of merger-related efficiencies. This calls into question the standard efficiency credit and suggests that the current concentration thresholds for defining problematic mergers, as they are applied, are too high. A similar conclusion is reached by recent work by Professors Nocke and Whinston, who suggest that under common models of competition, "prevention of consumer harm likely requires much more stringent thresholds than in the agencies' current 2010 *Guidelines*. Indeed, with synergies of less than 5%, consumer harm occurs

133 *Id.*

134 *Id.*, at 1, 27, 36 tbl.5 (2018) ("Most three-to-two and many four-to-three mergers end up as challenged, while other transactions often pass through the review process."); *id.* at 27 ("Merger challenges are likely under either unilateral or collusion analyses for investigations with three pre-merger rivals, but become unlikely when five or more pre-merger rivals exist."); *see also id*. at 16 (explaining that mergers to monopoly are almost always challenged and comprised 36.7% of the challenged mergers between 1989 and 2016).

135 There is another important variable. The more narrowly that a product market is defined, the higher the market concentration impact is likely to be if the firms are in fact in the same narrow market. For example, Coca-Cola undoubtedly has a higher market share of a hypothetical product market of carbonated drinks than it would of a product market consisting of all beverages available at a supermarket (including, say, bottled water, milk and coffee). This helps explain why antitrust litigation so often focuses on the appropriate definition of a market. *See, e.g.*, FTC v. Whole Foods Market, Inc., 548 F.3d 1028, 1037-41 (D.C. Cir. 2008) ("In this case . . . the FTC itself made market definition key. It claimed '[t]he operation of premium natural and organic supermarkets is a distinct 'line of commerce' within the meaning of Section 7,' and its theory of anticompetitive effect was that the merger would 'substantially increase concentration in the operation of [the premium natural and organic supermarkets market].'"); *id.*, at 1043-1049 (Tatel, J. concurring) ("I agree with the district court that this 'case hinges—almost entirely—on the proper definition of the relevant product market,' for if a separate natural and organic market exists, 'there can be little doubt that the acquisition of the second largest firm in the market by the largest firm in the market will tend to harm competition in that market.'"). Had the implementation of the 2010 HMG resulted in narrower product markets, the impact of the market-concentration measures would be expected to capture a higher percentage of mergers. *See* Email from Carl Shapiro *infra* note 152.

when the merging firms' shares are much like those in the 1968 *Guidelines*' thresholds."[136] Ensuring that enforcement policy protects consumers from problematic mergers requires the agencies to re-visit their assumptions about the existence and magnitude of efficiencies, and likely roll back structural presumption thresholds for market concentration and changes in concentration that identify the mergers are that presumed (subject to rebuttal) to be anticompetitive.[137]

IV. THE FEW: INVESTIGATIONS AND LITIGATION

The failure to consider how few mergers are fully investigated and the extent to which those that are investigated focus on highly concentrated markets has led to erroneous criticism of the manner in which efficiencies are assessed by the agencies and courts in the second class of mergers—the only ones that the federal agencies litigate. Here we examine two specific assertions, first that the antitrust agencies and courts should consider "out-of-market" benefits even if participants in a specific market suffer harm that those benefits do not offset; second, that merging parties are forced to bear an "asymmetric" burden when they are put to the test of demonstrating that efficiencies are cognizable.

Both theories must be understood in context. Second Request investigations invariably focus on the mergers viewed by the antitrust agencies as most troublesome, as shown by the outcomes of mergers subject to these full-blown investigations.[138] Over the 2007-2018 period, few mergers subject to a Second Request investigation proceeded; of an average 48 Second Request investigations opened each year, only nine (20%) were closed without a litigated challenge, consent decree settling the anticompetitive concerns, or abandonment by the parties.[139] Not surprisingly, one study reports that over

136 Nocke & Whinston, *supra* note 58, at 2. Their analysis also suggests that the change in levels of concentration may be a more relevant indicator of competitive harm, which may occur at delta HHIs that are substantially smaller than the delta HHI of 200 used in the 2010 HMGs. *See* Kaplow, *supra* note 11, at 45 n.123 (providing analysis suggesting "that an efficiency credit does not make sense or, perhaps, should be set at a fairly low level".); *id.* at 43 ("this credit is fairly large").

137 Or otherwise compensate for the under-inclusiveness of the current screen applied to apply the structural presumption. Louis Kaplow raises similar concerns about the informal use of a standard efficiency credit, asking, for example, "Is there one credit for all mergers? Regardless of the industry? The size of the merging parties?". Kaplow, *supra* note 11, at 44.

138 2018 HSR REPORT, *supra* note 118, at 2-6 (describing the outcome of horizontal merger investigations).

139 U.S. DEP'T OF JUSTICE & FED. TRADE COMM'N, HART–SCOTT–RODINO ANNUAL REPORT: FISCAL YEAR 2007 3 [hereinafter 2007 HSR REPORT] ("[T]he Commission challenged twenty-two transactions . . . . [and] [t]he Antitrust Division challenged twelve merger transactions . . . ."); U.S. DEP'T OF JUSTICE & FED. TRADE COMM'N, HART–SCOTT–RODINO ANNUAL REPORT: FISCAL YEAR 2008 1 [hereinafter 2008 HSR REPORT] ("[T]he Commission challenged 21 transactions . . . ."); *id.* at 7 ("[T]he Antitrust Division challenged 16 merger

the last decade-and-a-half, FTC staff support for claimed efficiencies in full-fledged investigations declined.[140]

One could read these results in two ways. On the one hand, the agencies' success in blocking or modifying mergers they flag for investigation may seem high. But, of course, the cases are not randomly selected—they are chosen precisely because the agencies believe them to carry the most serious threats of competitive harm. Thus, given the likelihood that too generous a "standard efficiency credit" has led to market concentration thresholds that are too high, the conclusion that efficiencies are typically adjudged to be insufficient following an in-depth investigation is not surprising. The narrower the aperture, the more likely it is that an overwhelming percentage of fully investigated mergers will ultimately prove to be problematic.

Although not binding on the judiciary, courts have tended to embrace the Agencies' approach to efficiencies, despite the ongoing debate as to whether

transactions . . . ."); U.S. DEP'T OF JUSTICE & FED. TRADE COMM'N, HART–SCOTT–RODINO ANNUAL REPORT: FISCAL YEAR 2009 1 [hereinafter 2009 HSR REPORT] ("[T]he Commission challenged 19 transactions . . . ."); *id.* at 7 ("[T]he Antitrust Division challenged 12 merger transactions . . . ."); U.S. DEP'T OF JUSTICE & FED. TRADE COMM'N, HART–SCOTT–RODINO ANNUAL REPORT: FISCAL YEAR 2010 1 [hereinafter 2010 HSR REPORT] ("[T]he Commission challenged 22 transactions . . . ."); *id.* at 2 ("The Antitrust Division challenged 19 merger transactions."); U.S. DEP'T OF JUSTICE & FED. TRADE COMM'N, HART–SCOTT–RODINO ANNUAL REPORT: FISCAL YEAR 2011 2 [hereinafter 2011 HSR REPORT] ("[T]he Commission challenged 17 transactions . . . . [and] [t]he Antitrust Division challenged 20 merger transactions."); U.S. DEP'T OF JUSTICE & FED. TRADE COMM'N, HART–SCOTT–RODINO ANNUAL REPORT: FISCAL YEAR 2012 2 [hereinafter 2012 HSR REPORT] ("[T]he Commission brought 25 merger enforcement actions . . . . [and] the Antitrust Division challenged 19 merger transactions . . . ."); U.S. DEP'T OF JUSTICE & FED. TRADE COMM'N, HART–SCOTT–RODINO ANNUAL REPORT: FISCAL YEAR 2013 2 [hereinafter 2013 HSR REPORT] ("[T]he Commission brought 23 merger enforcement actions . . . . [and] the Antitrust Division challenged 15 merger transactions."); U.S. DEP'T OF JUSTICE & FED. TRADE COMM'N, HART–SCOTT–RODINO ANNUAL REPORT: FISCAL YEAR 2014 2 [hereinafter 2014 HSR REPORT] ("[T]he Commission brought seventeen merger enforcement challenges . . . . [and] the Antitrust Division challenged sixteen merger transactions."); U.S. DEP'T OF JUSTICE & FED. TRADE COMM'N, HART–SCOTT–RODINO ANNUAL REPORT: FISCAL YEAR 2015 2 [hereinafter 2015 HSR REPORT] ("[T]he Commission brought 22 merger enforcement challenges . . . . [and] the Antitrust Division challenged 20 merger transactions."); 2016 HSR REPORT, *supra* note 124, at 2 ("[T]he Commission brought 22 merger enforcement challenges . . . . [and] the Antitrust Division challenged 25 merger transactions."); *id. at* app. A (demonstrating the number of transactions receiving second requests in each year between 2007 and 2016); U.S. DEP'T OF JUSTICE & FED. TRADE COMM'N, HART–SCOTT–RODINO ANNUAL REPORT: FISCAL YEAR 2017 2 [hereinafter 2017 HSR REPORT] ("[T]he Commission brought 23 merger enforcement challenges . . . . [and] the Antitrust Division challenged 18 merger transactions."); 2018 HSR REPORT, *supra* note 118, at 2 ("[T]he Commission brought 22 merger enforcement challenges."); *id.* at 3 ("[T]he Antitrust Division challenged 17 merger transactions."); *id.* at app. A (demonstrating the number of transactions receiving second requests in each year between 2009 and 2018).

140 Coate, *supra* note 129, at 24-26 (noting that the probability of efficiency findings declined).

federal law recognizes an efficiency defense.[141] Thus, for example, federal courts have required merging parties to demonstrate verifiable efficiencies that are merger-specific and that will benefit consumers.[142] The Department of Justice has insisted that the examination of claimed efficiencies by courts be rigorous.[143] "The trend among lower courts has thus been to recognize or at least assume that evidence of efficiencies may rebut the presumption that a merger's effects will be anticompetitive, even if such evidence could not be used as a defense to an actually anticompetitive merger."[144]

Despite this consideration, the operation of the current efficiencies standard has been criticized. The legal system has been characterized as unsympathetic to an efficiencies defense, and some have argued that the test for assessing efficiencies must be defective in some respect given that no merging parties have been able to sustain that defense in litigation.[145] This premise is not strictly true: the 2020 district court decision in *New York v. Deutsche Telekom* held that a horizontal merger between Sprint and T-Mobile did not violate Section 7 of the Clayton Act despite the presence of the structural presumption, by relying in part on efficiencies that the court found to be cognizable.[146] Recognition of efficiencies also played a role, albeit a

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141 *See, e.g.*, United States v. Anthem, Inc., 855 F.3d 345, 353 (D.C. Cir. 2017) ("Despite, however, widespread acceptance of the potential benefit of efficiencies as an economic matter . . . it is not at all clear that they offer a viable legal defense to illegality under Section 7.").

142 *See* St. Alphonsus Med. Center-Nampa Inc., v. St. Luke's Health Sys., Ltd., 778 F.3d 775, 790-91 (9th Cir. 2015) ("The defendant must also demonstrate that the claimed efficiencies are merger-specific, which is to say that the efficiencies cannot readily be achieved without the concomitant loss of a competitor.") (internal quotation marks and citations omitted); *see also* FTC v. H.J. Heinz Co., 246 F.3d (D.C. Cir. 2001) 721-22 (finding that the district court's inquiry into the verifiable efficiencies was insufficient because "the district court failed to make the kind of factual determinations necessary to render the appellees' efficiency defense sufficiently concrete"); FTC v. Univ. Health, Inc., 938 F.2d 1206, 1222 (11th Cir. 1991) ("[A] defendant may rebut the government's prima facie case with evidence showing that the intended merger would create significant efficiencies in the relevant market.").

143 *See, e.g.*, Proposed Conclusions of Law of the United States at 44, United States v. AT&T, Inc. (D.D.C. 2018) (No. 1:17-cv-02511-RJL) 2017 WL 6329012, https://www.justice.gov/atr/case-document/file/1061066/download [https://perma.cc/88KE-ZUES] ("To the extent the Court entertains Defendants' efficiencies defense, the Court 'must undertake a rigorous analysis' of the claimed efficiencies. . . . The requirements for a successful efficiencies defense are [very] rigorous . . . .") (internal citation omitted).

144 New York v. Deutsche Telekom AG, No. 1:19-cv-05434-VM-RWL, slip op. at 57 (S.D.N.Y. Feb. 10, 2020).

145 *E.g.*, Crane, *supra* note 131 (noting the asymmetrical imbalance between the lower threshold of proving potential harms and the greater hurdles of showing offsetting efficiencies); Erin L. Shencopp & Nathaniel J. Harris, *Using Efficiencies To Defend Mergers: The Current Legal Landscape*, THE ANTITRUST SOURCE, Apr. 2019, at 2 (claiming that no case to date has held asserted efficiencies were sufficient to overcome establish anticompetitive effects of a merger).

146 *See Deutsche Telekom*, slip op. at 83 ("[T]he Court concludes that Defendants' proposed efficiencies are cognizable . . . ."). The court was careful to note that the cognizable efficiencies "do not alone possess dispositive weight in this inquiry." *Id.* In particular, the court separately placed weight on

smaller one, in the only other case in which the government lost a merger challenge after establishing the structural presumption.[147]

Before considering the content of two more specific criticisms—the "out-of-market" and "asymmetry" arguments—it is worth understanding their pedigree. As we have seen, two fundamental views of efficiencies arose in the Williamson-Bork formulations. First, both Williamson and Bork argued for a total welfare approach, which meant that consumers could be subject to higher prices so long as someone else garners benefits greater than the loss suffered by those consumers in the harmed market; an approach that could justify harm to competition in an identifiable market.[148] In the original formulation, indeed in the Williamson graph reproduced in Part I above, that "someone" could be the newly-merged firm itself, in circumstances in which its post-merger increase in profits exceeded the total of higher prices paid by its customers. Second, Bork (but not Williamson) eschewed any attempt to calculate efficiencies individually; he preferred a relaxed, structural approach that would permit most horizontal mergers to proceed. The "out-of-market" and "asymmetry" contentions reflect considerations found in each of these early views. We now examine each in turn.

A. *"Out-of-Market" Efficiencies*

One way to understand the total welfare approach is to recognize that, in essence, it justifies approval of mergers that harm consumers in an identified market as long as a greater amount of benefit appears elsewhere in the system. That argument was rejected by the Supreme Court's 1963 decision in *Philadelphia National Bank*. The Court held that merging parties cannot justify harm to one set of customers by showing that a merger benefits a different set of customers (in that case consumer borrowers versus commercial borrowers).[149] This approach—focusing on efficiency benefits in the markets that may otherwise suffer harm—is employed by the agencies

"Sprint's decreasing competitive relevance," *id.*, at 84, and on remedies that would, for example, work "to establish DISH as a fourth nationwide [carrier] and replacement for Sprint." *Id.* at 106.

147 *See* FTC v. Arch Coal, Inc., 329 F. Supp. 2d 109, 151 (D.D.C. 2004) (stating that the structural presumption was overcome because the court focused on a review of market conditions but did not place weight on the parties' efficiencies defense); *id.* at 153 (recognizing the existence of some cognizable efficiencies, but not enough to "defeat the plaintiffs' claim of anticompetitive effects"—they simply provided "some limited additional evidence" to rebut the FTC's claim of anticompetitive harm); *see also* United States v. Gen. Dynamics, 415 U.S. 486 (1974) (holding that market concentration measures were not determinative in light of other market characteristics).

148 Salop, *supra* note 72, at 350-53 (describing inefficiencies created by the aggregate welfare standard).

149 *See* United States v. Phila. Nat'l Bank, 374 U.S. 321, 371 (1963) ("[A] merger the effect of which 'may be substantially to lessen competition' is not saved because, on some ultimate reckoning of social or economic debits and credits, it may be deemed beneficial.").

today. The 2010 HMG explain that "the Agencies consider whether cognizable efficiencies likely would be sufficient to reverse the merger's potential to harm customers in the relevant market, e.g., by preventing price increases in that market."[150] Thus, the Department of Justice recently emphasized that competitive benefits "must also 'pass[]through to consumers, rather than simply bolstering [the defendant's] profit margin.'"[151]

Some commentators argue that harm to consumers in one market should be balanced against benefits to consumers in some other markets. This argument has been advanced by current FTC Commissioner Wilson. She argues that product markets are being defined too narrowly; a trend she believes increases the importance of recognizing out-of-market efficiencies.[152] Former Commissioner Wright writes bluntly: "[r]ejection of out-of-market efficiencies is an obsolete approach . . . that was born out of an era in which efficiencies justifications in merger cases generally were viewed with considerable skepticism."[153]

This resembles the total welfare approach in the following sense: harm to participants in a properly-defined market is justified by a finding that participants in another market will benefit. In fact, there are economic and jurisprudential reasons to ensure that horizontal mergers do not leave definable classes of market participants harmed.[154]

To begin, the empirical economic evidence does not lend support to any current claim for increased permissiveness of enforcement. Nor is there any basis to believe that efficiencies should be treated generously on the ground

150 2010 HMG, *supra* note 1, at 30-31.

151 Proposed Conclusions of Law of the United States, *supra* note 143, at 48 (quoting United States v. Anthem, Inc., 855 F.3d 345, 362 (D.C. Cir. 2017)).

152 *See* Christine S. Wilson, Comm'r, U.S. Fed. Trade Comm'n, The Unintended Consequences of Narrower Product Markets and the Overly Leveraged Nature of *Philadelphia National Bank*: Remarks as Prepared for Delivery at the Antitrust Enforcement Symposium 2019 4, 13, 17 (2019) https://www.ftc.gov/system/files/documents/public_statements/1532894/wilson_-_remarks_at_oxford_antitrust_enforcement_symposium_6-30-19_0.pdf [https://perma.cc/TZM8-WST3] (describing the issue of product markets and out-of-market efficiencies in more detail). *But cf.* Email from Carl Shapiro, Professor, Univ. of Cal. at Berkeley, to Nancy Rose and Jonathan Sallet, (Mar. 17, 2020) ("[T]he way to strengthen merger enforcement is to reinvigorate the structural presumption while explaining that narrow markets often are appropriate. The HHI levels in the 2010 HMG would be strong enough, in my view, if markets are defined narrowly, as implied by the HMT.").

153 Jan Rybnicek & Joshua Wright, Outside In or Inside Out?: Counting Merger Efficiencies Inside and Out of the Relevant Market 1, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2411270 [https://perma.cc/QG58-RDUW]. The invocation of two-sided markets, as adopted unfortunately for transactions markets in *Ohio v. American Express Co.*, 138 S. Ct. 2274 (2018), has a similar quality: harm to merchants and to consumers that do not use American Express cards was balanced against benefits to American Express cardholders.

154 Bork himself seems to suggest that balancing consumer harm versus benefit to the firm is beyond the ambit of the courts, although the example he gives assumes a world in which there is "no danger of a monopoly profit" and therefore may reflect his view that extra-economic considerations are for legislatures to consider. *See* Bork, *supra* note 13, at 80 ("Striking the balance is essentially a legislative task.").

that markets will self-correct[155] and that, therefore, it is better to permit than disallow a proposed merger.

The inclusion of out-of-market effects threatens to over-complicate economic analysis. Imagine a world in which two companies A and B supply Product X to a few customers and Products Y and Z to a larger, separate class of customers. Were the two companies to merge, they would have a monopoly in the manufacture of Product X but they claim efficiencies that would deliver slightly lower prices in the more competitive markets that sell to the customers of Products Y and Z. They assert that the sum of the lower prices spread among the customers of Products Y and Z is greater than the sum of the high prices to the customers of Product X.

To analyze that claim would reasonably require an analysis of the general equilibrium effects of the merger; an "unrealistic if not impossible" task.[156] And it is a task with significant distributional implications as some groups lose and others win; indeed Williamson himself highlighted the complexity of assessing redistributional effects as one of the major qualifications to the total welfare approach to efficiency analysis.[157] Moreover, harm stays put: There is no mechanism to require those who benefit to compensate those who are harmed.[158]

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155 *See* Jonathan Baker, Jonathan Sallet & Fiona Scott Morton, *Unlocking Antitrust Enforcement*, 127 YALE L.J. 1916, 1919 (2018) (calling upon antitrust enforcers to recognize how underenforcement might not be corrected).

156 JONATHAN B. BAKER, THE ANTITRUST PARADIGM: RESTORING A COMPETITIVE ECONOMY 191-92 (2019) ("[O]nce the analysis extends beyond the market in which harm is alleged, there may be no principled stopping point short of undertaking what is unrealistic if not impossible: a general equilibrium analysis of harms and benefits throughout the entire economy."). The general equilibrium effects refer to tracing the direct and indirect effects of a merger throughout all parts of the economy.

157 Williamson wrote that

> [i]nasmuch as the income redistribution which occurs is usually large relative to the size of the dead-weight loss, attaching even a slight weight to income distribution effects can sometimes influence the overall valuation significantly. . . . [T]he transfer involved could be regarded unfavorably not merely because it redistributes income in an undesirable way . . . but also because it produces social discontent. This latter has serious efficiency implications that the above analysis does not take explicitly into account. . . . Distinguishing social from private costs in this respect may, however, be the most fundamental reason for treating claims of private efficiency gains skeptically.

Williamson, *supra* note 33, at 28. Jonathan Baker similarly relies upon the importance of maintaining continuing public support for antitrust in his analysis, as a matter of political economy. BAKER, *supra* note 156, at 192 ("It is hard to tell consumers, farmers, workers, and suppliers . . . that they must experience competitive harms in order to permit large firms to lower costs or to allow buyers purchasing in other markets to pay less, without leading those victims of market power to question the benefit of the political bargain.").

158 *See* Herbert J. Hovenkamp, *Antitrust Balancing*, 12 N.Y.U. J.L. & BUS. 369, 370 (2016) ("'Balancing' requires values that can be cardinally measured and weighed against each other. The factors that are supposedly balanced in Sherman Act cases almost never fit this description.").

Recall that cross-market effects would only come into play if and when a complete analysis demonstrates that, even with consideration of efficiencies, the impact of the merger "may be substantially to lessen competition."[159] The likely impact of an "out-of-market" test would thus be to tremendously complicate antitrust enforcement by requiring agencies that have already proven harm in one market to take on a full analysis of other markets. Indeed, courts would not only need to assess the individual outcomes of each market but they would need to assess the causation between outcomes in different markets; as the 2010 HMG explain, "a proffered efficiency cannot arise from anticompetitive effects."[160]

Such an extra burden where harm has been proven is particularly troublesome given the likelihood that merger enforcement is already "under deterrent."[161] Thus, concerns about administrability of an "out-of-market" standard counsel against the introduction of cross-market effects.[162]

A central tenet of antitrust law has been that the law does not accommodate and the courts will not countenance any attempt to say that harming competition is justified by other outcomes.[163] Competition "cannot

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159 Section 7 of the Clayton Act proscribes mergers the effect of which "may be substantially to lessen competition, or to tend to create a monopoly." 15 U.S.C. § 18 (2018).

160 United States v. Anthem, Inc., 855 F.3d 345, 369 (D.C. Cir. 2017) (Millet, J., concurring).

161 Hovenkamp, *supra* note 51, at 705; *see also supra* notes 94-99 and accompanying text.

162 *See* BAKER, *supra* note 156, at 191 ("The judicial prohibition against cross-market welfare trade-offs has an obvious administrability justification: the prohibition reduces the complexity of the reasonableness evaluation under review."); Daniel Crane, *Balancing Effects Across Markets*, 80 ANTITRUST L.J. 397, 409-10 (2015) ("The most convincing justification for a market-specificity rule is that balancing pro- and anticompetitive effects across market boundaries unduly increases the complexity of antitrust decision making."). Both Professor Baker and Professor Crane would be open to the calculation of cross-market effects in certain circumstances; for example, Professor Baker believes that

> a court should allow a cross-market welfare trade-off when it is evident from a qualitative comparison that the harm to competition in one market is small while the benefit to competition in another market is vastly greater and there is no practical way to obtain the benefit without accepting the harm.

BAKER, *supra* note 156, at 192-93. Professor Crane favors "placing on the merging parties the burden of proving that the balancing factors allowing the merger" but not making it a part of the government's prima facie case. Crane, *supra*, at 410. We prefer the reliance on prosecutorial discretion embodied in note 14 of the Horizontal Merger Guidelines and the fashioning of appropriate remedies, such a divestiture in markets where harm would occur in order to permit benefits to accrue in other markets. Such an approach to remedies was taken, for example, in the DOJ approval of the Dow-Dupont merger in 2017. *See generally* Competitive Impact Statement, United States v. Dow Chemical Company, No. 1:17-cv-01176, 2017 WL 7118164 (D.D.C. June 15, 2017).

163 *See* Nat'l Soc'y of Prof'l Eng'rs v. United States, 435 U.S. 679, 693-94 (1978) (rejecting the asserted defense that minimum prices are a way to guarantee safety of construction and the court's response); *see also* United States v. Topco Assocs., 405 U.S. 596, 611 (1972) ("If a decision is to be made to sacrifice competition in one portion of the economy for greater competition in another portion this . . . is a decision that must be made by Congress and not by private forces or the courts."); Broad. Music, Inc. v. Columbia Broad. Sys., Inc., 441 U.S. 1, 34-35 (1979) ("[A] conclusion that excessive competition

be foreclosed with respect to one sector of the economy because certain private citizens or groups believe that such foreclosure might promote greater competition in a more important sector of the economy."[164]

B. *Asymmetry of Burdens*

The "asymmetry" approach contends that an improperly high burden is placed on merging parties to rebut the government's showing of harm. We understand this approach to argue, in essence, that too much is demanded of merging parties, given the generalized likelihood that efficiencies will occur.[165] Thus, Professor Crane asserts an "asymmetry" in the burden placed on the government to prove its prima facie case and the burden placed upon defendants to rebut it.[166] Commissioner Wilson notes precedent from multiple federal courts of appeals that in highly concentrated markets, "the magnitude of those efficiencies that remain in the relevant market must substantially exceed the magnitude of harms."[167]

But the burden of production requirement flows logically from the fact that it is the merging parties that have the information and incentive to demonstrate efficiencies. Once a prima facie case is established (typically but not necessarily through the structural presumption), the burden of proof appropriately falls on the merging parties. Williamson was resolute in dismissing anything less than this:

> [I]f efficiencies are to be a defense at all, it is clear that the companies which are, presumably, sensitive to the relevant economies in proposing the merger

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would cause one side of the market more harm than good may justify a legislative exemption from the antitrust laws, but does not constitute a defense to a violation of the Sherman Act.").

164 *Topco Assocs.*, 405 U.S. at 610; *see, e.g.,* United States v. Apple Inc., 791 F.3d 290, 298 (2d Cir. 2015) ("[T]he dissent's theory—that the presence of a strong competitor justifies a horizontal price-fixing conspiracy—endorses a concept of marketplace vigilantism that is wholly foreign to the antitrust laws.").

165 Professor Wright labels his "out-of-market" view in terms of asymmetry as well. *See* Rybnicek & Wright, *supra* note 153, at 5.

166 Crane*, supra* note 131, at 347-49. Under established precedent, the government can establish a prima facie case by satisfying the structural presumption. If that is done, then the merging parties must produce evidence to show that other factors, which can include efficiency, negate the threat of anticompetitive harm. If that occurs, then the government has the opportunity to produce additional evidence to support its claim. *See* United States v. Baker Hughes Inc., 908 F.2d 981, 982-83 (D.C. Cir. 1990) ("The basic outline of a section 7 horizontal acquisition case is familiar. By showing that a transaction will lead to undue concentration in the market for a particular product in a particular geographic area, the government establishes a presumption that the transaction will substantially lessen competition. . . . The burden of producing evidence to rebut this presumption then shifts to the defendant. . . . If the defendant successfully rebuts the presumption, the burden of producing additional evidence of anticompetitive effect shifts to the government, and merges with the ultimate burden of persuasion, which remains with the government at all times.") (internal quotation and citation omitted).

167 Wilson, *supra* note 152, at 14.

> in the first place, must be prepared to make the case for them in court. They have the data and these must be supplied.[168]

As the 2010 HMG explain, "[e]fficiencies are difficult to verify and quantify, in part because much of the information relating to efficiencies is uniquely in the possession of the merging firms."[169] Moreover, the ability to achieve efficiencies depends on execution by the new firm and "efficiencies projected reasonably and in good faith by the merging firms may not be realized."[170] Professor Hovenkamp explains that "evidence of efficiencies typically relates to a firm's own internal production and processes. . . . [F]irms almost always know more about their own internal processes and the costs of changing them than any outside, including the merger enforcement Agencies."[171]

Indeed, the burden of showing efficiencies grows with increased threat of harm.[172] Given that the merger cases being brought by the antitrust agencies against horizontal mergers focus precisely on the cases that present the strongest showing of harm,[173] the current requirements placed on merging parties are necessary to ensure that the historic, overly generous view of efficiencies does not override well-grounded predictions of competitive harm.

CONCLUSION

Conventional analysis of the treatment of efficiency claims has paid too little attention to the fact that the overwhelming majority of horizontal mergers that are not fully-investigated and has failed to recognize that the small number that are subject to Second Requests are precisely those in which the risk of harm is likely to be the greatest.

The economic literature demonstrates that efficiencies are neither as ubiquitous nor as uniformly large as the notion of a standard efficiency credit suggests. This provides reason to suspect that market concentration thresholds as they are applied are too lax. Given the challenge of reviewing efficiencies

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168 Williamson, *supra* note 33, at 24.

169 2010 HMG, *supra* note 1, at 30.

170 *Id.*

171 Hovenkamp, *supra* note 51, at 725-26.

172 *See, e.g.,* FTC v. H.J. Heinz Co., 246 F.3d 708, 716 (D.C. Cir. 2001) (finding that a pre-merger HHI score indicating "a highly concentrated industry" combined with a projected 510 point increase in the HHI score after the merger created "by a wide margin, a presumption that the merger will lessen competition"); *see also* 2010 HMG, *supra* note 1, at 31 ("When the potential adverse competitive effect of a merger is likely to be particularly substantial, extraordinarily great cognizable efficiencies would be necessary to prevent the merger from being anticompetitive. In adhering to this approach, the Agencies are mindful that the antitrust laws give competition, not internal operational efficiency, primacy in protecting customers.").

173 *See supra* note 103.

without a full-fledged investigation, it is not realistic to imagine that significantly more could be done to analyze merger-specific efficiencies short of a Second Request. This suggests that market concentration thresholds should be re-examined and, very probably, lowered. Because we believe that the total welfare analysis is incorrect and that customers in properly defined markets should not suffer harm merely because others benefit, proposals to consider "out-of-market" benefits should be similarly rejected.

Additionally, we do not believe too much is asked of merging parties when they must rebut the government's prima facie case. First, the merging firms are the entities with the knowledge and data required to calibrate plausible merger-specific efficiencies. Of even greater import, if the effect of the market concentration standards is to identify mergers that are particularly problematic (because only those are being investigated and challenged), then the criticism of the way agencies and courts approach efficiencies is misplaced. If only the most threatening mergers are being subject to review, these are the mergers where the burden of demonstrating efficiencies should be the most rigorous.

APPENDIX

Table A1: Number of Transactions Reported under the Hart–Scott–Rodino Act and Removed After Early Termination Screening, by Year[174]

Year	Total Adjusted Transactions	Requested Early Termination of Review	Request for Early Termination Granted	Remaining Transactions Eligible for a Second Request	Remaining as % of Eligible Transactions
2007	2,108	1,840	1,402	706	33.5%
2008	1,656	1,385	1,021	635	38.3%
2009	684	575	396	288	42.1%
2010	1,128	953	704	424	37.6%
2011	1,414	1,157	888	526	37.2%
2012	1,400	1,094	902	498	35.6%
2013	1,286	990	797	489	38.0%
2014	1,618	1,274	1,020	598	37.0%
2015	1,754	1,366	1,086	668	38.1%
2016	1,772	1,374	1,102	670	37.8%
2017	1,992	1,552	1,220	772	38.8%
2018	2,028	1,500	1,170	858	42.3%
AVERAGE	**1,570**	**1,255**	**976**	**594**	**38.0%**

174 2016 HSR REPORT, *supra* note 124, at app. A, and 2018 HSR REPORT, *supra* note 118, at app. A.

Table A2: Number of Transactions Receiving Second Requests as Portion of Total Transactions, by Year[175]

Year	Eligible for a Second Request	After Early Termination Review, Remaining Transactions	Investigations in Which Second Requests Were Issued	% of Eligible Transactions Reviewed	After Early Termination Review, % of Remaining Transactions Reviewed
2007	2,108	706	63	3.0%	8.9%
2008	1,656	635	41	2.5%	6.5%
2009	684	288	31	4.5%	10.8%
2010	1,128	424	42	3.7%	9.9%
2011	1,414	526	55	3.9%	10.5%
2012	1,400	498	49	3.5%	9.8%
2013	1,286	489	47	3.7%	9.6%
2014	1,618	598	51	3.2%	8.5%
2015	1,754	668	47	2.7%	7.0%
2016	1,772	670	54	3.0%	8.1%
2017	1,992	772	51	2.6%	6.6%
2018	2,028	858	45	2.2%	5.2%
AVERAGE	1,570	594	48	3.2%	8.5%

175 2016 HSR REPORT, *supra* note 124, at app. A, and 2018 HSR REPORT, *supra* note 118, at app. A.