

ISSN 1936-5349 (print)
ISSN 1936-5357 (online)

HARVARD

JOHN M. OLIN CENTER FOR LAW, ECONOMICS, AND BUSINESS

ENTRY AND MERGER ANALYSIS

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Forthcoming in *Antitrust Law Journal*

Discussion Paper No. 1092

01/2023

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Entry and Merger Analysis

Louis Kaplow*

January 12, 2023

Abstract

This article explores the many ways that entry is relevant to horizontal merger analysis. Only one, however, is part of the current canon, and it is handled incorrectly. The analysis draws on work in industrial organization economics that examines entry in imperfectly competitive markets. Ex post entry—postmerger entry induced by a merger’s anticompetitive effects—is cast in a different light concerning when and how much entry will take place, the welfare effects of such entry when it does occur, and the implications of postmerger entry for understanding what motivates proposed mergers and thus their likely effects. Ex ante entry—entry induced by the prospect of a subsequent acquisition—is brought into the spotlight. This consideration favors more stringent merger policy in some settings and more permissive review in others. Recent attention, especially in Big Tech, to incumbents’ acquisitions of nascent competitors often improperly takes entrants’ presence and capabilities as given. Analysis should also consider how a merger regime influences ex ante incentives that determine the future flow of such competitive opportunities, although this factor need not favor permissive treatment of such mergers.

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JEL Codes: K21, L22, L41

Keywords: entry, horizontal mergers

*Harvard University and National Bureau of Economic Research. I am grateful to the editorial board and reviewers for helpful comments; Kevin Lie, Bryan Poellot, and Dina Rabinovitz for research assistance; and Harvard University’s John M. Olin Center for Law, Economics, and Business for financial support. This article is part of a larger project, “Rethinking Merger Policy.” Disclaimer: I consult on antitrust matters, and my spouse is a lawyer who mostly represents financial services firms.

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Introduction

This article investigates how considerations of entry should factor into the economic analysis of horizontal mergers. First is a reexamination of ex post entry: postmerger entry induced by permitting a merger that otherwise raises price. Ex post entry is the traditional focus under merger guidelines, which are largely followed by the courts.¹ The main findings are that the relevance of ex post entry is usually mischaracterized and that some of the welfare effects of such entry, should it take place, have been ignored. Indeed, the prospect of postmerger entry can make an otherwise anticompetitive merger worse rather than more benign. Second is an assessment of ex ante entry: entry induced by the prospect of a subsequent acquisition. Consideration of ex ante entry is omitted in conventional merger analysis. Acquisitions of nascent firms by incumbents have increasingly drawn attention, particularly regarding Big Tech.² In some settings, stricter merger policy may be warranted, but not always for the reasons typically proffered, whereas in other circumstances permitting such acquisitions might be valuable.

This article's analysis is grounded in an economic understanding of equilibrium entry. The centrality of entry and exit to the operation of a market economy is featured in Economics 101, known to readers of Adam Smith, and familiar to any who pay attention to the business world. Nevertheless, entry is usually an afterthought in merger analysis, and standard inquiries are circumscribed, often ignoring the basic implications of equilibrium itself.

It is therefore necessary to build on economic foundations, starting with market equilibrium in imperfectly competitive markets and the role that entry and exit play therein. From that starting point, we then need to consider how the prospect of a subsequent acquisition or the ex post fact of a merger of existing firms changes all firms' (including prospective entrants') calculus and alters the market equilibrium. Although prominent industrial organization economists have formally analyzed equilibrium entry in imperfectly competitive markets for half a century—revealing systematic negative and positive externalities therefrom—and a few dynamic models have incorporated mergers, little attempt has been made to derive lessons for the analysis of the broad range of horizontal mergers.³

Conventional analysis of entry in merger assessment has evolved independently and, unfortunately, has not sufficiently benefited from existing economic learning. As already suggested, deeper analysis of the relevance of entry to the analysis of horizontal mergers favors more restrictive policies in some instances and more permissive rules in others. Whatever the

¹See Guidelines on the Assessment of Horizontal Mergers Under the Council Regulation on the Control of Concentrations Between Undertakings, 2004 O.J. (C 31) 5, ¶¶ 68–75 [hereinafter EU Merger Guidelines]; U.S. Dep't of Justice & Fed. Trade Comm'n, Horizontal Merger Guidelines 27–29 (2010) [hereinafter U.S. Merger Guidelines].

²See, e.g., David Emanuelson & Danielle Drory, *The Potential Chilling Effects of Lowering Standards for Tech M&A Enforcement*, ANTITRUST, Spring 2020, at 14.

³Interestingly, an important motivation for many of the articles written in the 1970s, see, e.g., sources cited *infra* note 20, was to displace the naive view that entry is desirable as such or that a free-entry equilibrium tends to be socially efficient in settings with imperfect competition.

implications may turn out to be, it is important to enrich our understanding of the problem in order to guide research, formulate policy, and analyze proposed mergers that pose anticompetitive threats.

Part I analyzes ex post entry. It begins by considering the traditional question of how the prospect of entry induced by an otherwise anticompetitive merger may offset the merger's anticompetitive effects. It develops a key insight that some have noted previously: consideration of the prospect of ex post entry needs to be consistent with entry having been unprofitable before the merger. An implication is that, even when postmerger entry would occur, it typically will not fully offset anticompetitive effects, not only due to delay but also because of the frequent unprofitability of entry of a magnitude sufficient to restore the premerger price. To be sure, when entry is particularly easy and entrants can readily duplicate incumbents' technology, this shortfall will be small.

This Part then introduces two further dimensions. One is that postmerger entry, when it does occur, has welfare effects of its own. In some settings, market equilibrium already involves excessive entry, so merger-induced entry exacerbates inefficiency. In others, equilibrium entry may be insufficient, in which case such entry may raise welfare of its own accord. Second, the relevance of postmerger entry to inferences about a proposed merger's likely effects is often misunderstood. As will be explained, merger guidelines and analysts often focus on whether such entry will be timely, likely, and sufficient to defeat a price increase. However, one of the most important implications of the analysis of entry instead regards the extent to which the prospect of postmerger entry (whether or not these criteria are satisfied) renders the proposed merger unprofitable—that is, in the absence of efficiencies. The reasoning draws on what economists refer to as inference from the merging parties' rationality constraint: firms seek to merge only if they expect their merger to be profitable. Prospective entry's mitigation of postmerger price increases tends to support the inference that the merger is motivated by and thus more likely to generate efficiencies rather than anticompetitive effects.

Part II turns to ex ante entry, including an analysis of incumbent firms' acquisitions of nascent competitors. Analysis of this angle is complex and subtle but quite important. In simple settings—with homogeneous goods, an incumbent monopolist, entry taking particular forms, and no merger synergies—the prospect of a subsequent acquisition induces excessive entry. Interestingly, a tough merger policy, by discouraging entry for buyout, raises total welfare and may boost the incumbent monopolists' expected profits while modestly reducing consumer welfare. In other settings, the prospect of buyout may be small, rendering these effects less important. And in yet others, anticipated buyouts may induce entry or other investment that contributes to variety and innovation or that creates merger-specific synergies with incumbents. In such instances, a permissive policy is warranted. All of these results are predicated on how the anticipation of a post-entry acquisition that will be permitted by the merger authority affects prospective entrants' incentives. Note how this perspective differs from many contemporary discussions of acquisitions of recent entrants by large incumbents in the technology sector, which typically take the entrants' emergence and capabilities as given. However, this endogeneity does not uniformly favor a permissive merger regime: ex ante incentives may be excessive or misdirected, and ex post anticompetitive effects may be more important.

Part III addresses two additional considerations. The first pertains to limitations regarding the information and expertise of agencies and courts. Proper attention to the relevant facets of entry is challenging, and conventional merger analysis, which ignores these matters, is already acknowledged to be difficult. It is not suggested that all of these issues be explored in individual cases. Rather, when formulating proxies, screens, and shortcuts—or in deciding when a deeper dive is warranted—it is helpful to appreciate the correct framework. In addition, both agencies and courts could, through moderate adaptations, enhance their ability to assess individual mergers along these dimensions and others.

Second, some attention is devoted to the differences between consumer and total welfare standards, which often point in opposite directions when a short-run perspective is adopted. Consider the fact that almost any sensible investment is a loser in the short run. Note as well that growing concerns about quashing nascent disruption address anticompetitive effects that would materialize only in the longer run. Hence, focusing on short-run consumer welfare can be systematically misleading in some settings. A long-run view is often more appropriate, at least in formulating proxies and presumptions even if not in assessing the details in particular cases. Interestingly, consumer and total welfare standards diverge less in the longer run.

This article aims to open discussion and motivate research rather than dictate particular revisions to merger guidelines or determine the appropriate disposition of pending and contemplated investigations. Potentially important forces should be identified and understood, their logical relationships ascertained, and gaps in knowledge and institutional capacity recognized if they are to be rectified.⁴

I. Ex Post Entry

Conventional wisdom, reflected in the merger guidelines of the United States and European Union, asks whether postmerger entry will be timely, likely, and sufficient to deter or defeat a significant price increase that might otherwise be caused by a proposed horizontal merger.⁵ This Part addresses ex post entry. The aim is to expose the underlying logic and relate the prospect of such entry to the analysis of the welfare effects of horizontal mergers. This assessment reveals the standard treatment to be incomplete and misleading in important respects.

⁴Although this article highlights many aspects of ex post and ex ante entry and examines their proper roles in merger analysis, it does not examine how particular features of competitive interaction, cost functions, and other factors bear on anticompetitive effects and the nature of entry (ex post or ex ante) that actually would be induced by particular mergers. Aspects of that analysis relate to longstanding debates about the nature of “barriers” to entry and other matters, many of which are reflected, as relevant, in the analysis that follows but none of which are a focus of this investigation. *See, e.g.*, JEAN TIROLE, *THE THEORY OF INDUSTRIAL ORGANIZATION*, ch. 8 (1988); Jonathan B. Baker, *Responding to Developments in Economics and the Courts: Entry in the Merger Guidelines*, 71 *ANTITRUST L.J.* 189, 191–95 (2003); Richard Schmalensee, *Ease of Entry: Has the Concept Been Applied Too Readily?*, 56 *ANTITRUST L.J.* 41 (1987).

⁵*See* EU Merger Guidelines, *supra* note 1, ¶¶ 68–75 (using the language “deter or defeat”); U.S. Merger Guidelines, *supra* note 1, at 27–29 (using the language “deter or counteract”). This focus on ex post entry as well as the merger guidelines’ ex post analysis thereof is also reflected in commentary. *See, e.g.*, John B. Kirkwood & Richard O. Zerbe Jr., *The Path to Profitability: Reinvigorating the Neglected Phase of Merger Analysis*, 17 *GEO. MASON L. REV.* 39 (2009); Schmalensee, *supra* note 4.

Section A considers whether and when a horizontal merger would induce entry. The analysis indicates that such entry typically occurs precisely when the merger is anticompetitive and that it tends not to fully remedy the anticompetitive effects, although when entry is especially easy and fast, it may quash most of them. Section B shows how, in some standard settings, the welfare effects of postmerger entry that the merger does induce may be adverse, sometimes more so than if the entry did not occur—although the opposite result holds in other settings. Section C explains that the prospect of easy entry nevertheless tends to favor allowing a merger, but not because this prospect would be sufficient to defeat a significant price increase. Instead, the prospect of easy entry—in light of the merging parties’ rationality constraint—shifts the proper inferences regarding anticompetitive effects and efficiencies in a manner that makes the merger more likely to be socially beneficial rather than detrimental, all things considered. Section D relates the foregoing analysis to conventional protocols. In a rough sense, the existing approach may often produce the right outcome but for the wrong reasons. Performing the analysis correctly, however, should improve performance.

Before proceeding, it will facilitate exposition to follow certain conventions. Most of the discussion will take anticompetitive effects to be increases in price, although it is understood that they may involve effects on quality, innovation, and other dimensions. Relatedly, entry will be used as a shorthand for other dimensions of response by firms not party to the merger, such as product repositioning.⁶ Finally, effects on price (a shorthand for consumer welfare) and also on overall efficiency (total welfare) will be identified, with further discussion of the welfare standard deferred to Section III.B.

A. Ex Post Anticompetitive Effects

To analyze whether and the extent to which merger-induced entry will mitigate any anticompetitive price increase, it is necessary to answer two related questions. First, why will some horizontal mergers indeed induce entry, specifically, entry that was not profitable before the merger? Second, given that analysis, how high is the postmerger, post-entry price likely to be relative to the premerger price? Following the implicit logic of conventional inquiries (which is in important respects rejected in Section C and discussed further in Section D), the analysis in this Section and in Section B takes as given that a merger is being proposed and examines the entry it would induce and the resulting effects thereof.⁷

For a horizontal merger to induce entry—that is, to cause a firm to enter after the merger that would not have entered otherwise—it must be that the merger makes entry more attractive. Following the aforementioned conventions, this means that the merger must increase price. Moreover, the price must rise sufficiently to make entry profitable after taking account that the

⁶See *infra* note 23.

⁷That is, the implications of the analysis for whether the proposed merger would be profitable and hence, in light of the merging parties’ rationality constraint, would have been proposed in the first place are deferred to Section C. Put another way, Sections A and B offer an ex post analysis of ex post entry, whereas Section C shifts to an ex ante perspective on the prospect of ex post entry.

entry itself will cause the price to fall to some degree.⁸

To elaborate, we are first supposing that entry was not profitable before the merger. This might be so because the premerger price was not sufficient for the entrant to at least break even by providing a sufficient profit margin on sales to cover any fixed costs of entry. Moreover, a prospective entrant would realize that, even if entry would be profitable at the prevailing price, its own entry would tend to reduce the price, so the correct question is whether entry would be profitable after taking that price reduction into account. In a premerger equilibrium, such entry is not profitable because otherwise the entry would have occurred.⁹

A horizontal merger changes this calculus. Horizontal mergers may increase prices because of unilateral effects and the prospect of more successful coordination.¹⁰ The magnitude of such a price increase is considered in the analysis of anticompetitive effects, taking into account as well that possible efficiencies may offset this tendency to varying degrees.¹¹ If, as a whole, the merger would not be expected to raise price, it would not be prohibited in any event.

The key for assessing whether a horizontal merger will induce entry, however, is not a comparison of the postmerger price (assuming no entry) with the premerger price (assuming no entry). Instead (echoing the premerger analysis), the question is whether the postmerger price will be sufficiently high that entry would now be attractive even after taking into account that such entry would reduce that price. In general, because the starting point is higher, entry tends to be more attractive than it was premerger.

If we consider a continuous representation and stick to simple models that capture realistic features of competitive interaction, any merger otherwise generating a higher price would induce some entry.¹² In the more typical case in which entry is at least somewhat lumpy,

⁸These basic ideas were emphasized decades ago in Gregory J. Werden & Luke M. Froeb, *The Entry-Inducing Effects of Horizontal Mergers: An Exploratory Analysis*, 46 J. INDUS. ECON. 525 (1998), but they have received insufficient attention subsequently. See also Baker, *supra* note 4, at 200–01; *infra* note 32 (describing a recent paper pursuing the subject).

⁹More broadly, one can think of a premerger market trajectory. For example, if demand is growing, there may be periodic entry in any event, so the question becomes whether the proposed merger would induce additional or earlier entry than would otherwise have occurred.

¹⁰A more thorough analysis would reflect that the determination of price effects involves prediction, so that there may be some scenarios in which prices would rise by enough to induce entry and others in which they would not. A complete analysis of any merger should consider the overall expected effects. Disaggregation of possible scenarios is required to do that. For example, a merger may not be expected, on average, to raise prices enough to induce entry, but in some states of the world involving larger price increases, entry might be induced. Here, the question is not the overall likelihood of entry but rather the likelihood of entry conditional on a significant merger-induced price increase.

¹¹Under a total welfare standard, a merger might appear overall desirable because the social costs of a predicted price increase would be outweighed by efficiencies that would not be fully passed on to consumers. In such cases, it would still be appropriate to consider much of the analysis to follow about the effects of merger-induced entry.

¹²For those not familiar with this economic modeling approach, the assumption (relaxed below) is that, rather than entry being lumpy—implying that at some point prices will be sufficiently high to induce entry of an additional firm—entry is taken to be gradual, so that somewhat higher prices induce somewhat more entry. This simplification facilitates exposition and delivers similar insights (but not always, as mentioned below). Similar results would be obtained if (lumpy) entry were regarded as more probable when prices were higher, which is often a realistic depiction, particularly from the perspective of a competition agency or reviewing court that is uncertain about entry.

it may be best to view a merger as raising the probability of entry or, in a growing market, making it likely that entry would occur sooner. Because entry predictions involve uncertainty, an assessment of the likelihood and expected effects of entry for the discrete case may be similar to that for the continuous case. For this reason, the exposition to follow often will not distinguish these cases, instead referring simply to increased entry or tendencies for such to occur.¹³

Turn now to our second question of how such entry influences our assessment of the predicted price effect of a merger. Starting with the continuous case, a given merger-generated price increase (before any entry) would induce some entry, but not enough to restore the premerger price. The reason is that, as further entry is induced, that entry will cause the postmerger price to fall. And as this price falls, the expected profit from additional entry will decline: the price will be lower and the share of the market that an incremental entrant would attract will also tend to be smaller because there are more firms already in the market. As price reaches the premerger level, the price a marginal entrant faces is no higher than it was premerger (taken to be an equilibrium), whereas the quantity it can sell will be lower (because of the additional entry that has already taken place), so anticipated profits will be distinctly lower than for a marginal entrant premerger. And since the level of expected profits is zero in the premerger equilibrium, this lower profit level postmerger is negative. Taken together, this implies that postmerger entry will not push the postmerger price all the way down to the premerger level. The degree of this shortfall—that is, the magnitude of the residual postmerger price increase—will depend on the nature of entry costs, production costs, competitive interaction, and demand, all factors that will vary by context.

As suggested just above, when entry is lumpy, analysis of the continuous case is merely suggestive. Compared to the continuous case, when entry is discrete the residual (net of entry) price increase could be higher because, for example, the merger-generated price increase may be insufficient to induce any entry. And it could even be lower because premerger entry may have been barely unprofitable, so that even a small boost in price is enough to induce a sizeable firm to enter the market.¹⁴

If a decision-maker had fairly precise estimates of price effects and entry costs, it might be able to distinguish such cases. However, given uncertainty about both of these magnitudes in

¹³For a formal analysis of the effects of competition policy on entry in the continuous case, see Louis Kaplow, *Competition Policy in a Simple General Equilibrium Model*, 1 J. POL. ECON. MICROECONOMICS (forthcoming 2023) (section 3, analyzing a one-sector model). In some horizontal merger cases, however, explicit consideration of discreteness (what economists refer to as the integer constraint) is necessary. See N. Gregory Mankiw & Michael D. Whinston, *Free Entry and Social Inefficiency*, 17 RAND J. ECON. 48, 53–54, 58 (1986) (analyzing the effect of the integer constraint in a setting with homogeneous goods, but not analyzing mergers).

¹⁴To illustrate this possibility, suppose that the premerger price is 100, that premerger entry would reduce the price to 90, and that the entrant cannot quite cover its fixed costs at that price, so that it would not enter. If the merger would (ignoring entry) boost the price to 105, the postmerger price after entry might then be 95, which would be sufficient to render entry profitable (for example, if a post-entry price of 92 was just high enough to cover fixed costs). Keep in mind, however, that the analysis in this Section sets aside the question of whether the imagined merger would be profitable; a contemplated merger that yielded no synergies and resulted in a lower price would be unprofitable for the merging parties and hence would not be proposed.

most instances, it may be impossible to do much better than grounding predictions in a model for the continuous case.¹⁵ Nevertheless, when the minimum plausible scale of entry is significant and the costs of such entry are quite large, as they are in settings associated with some proposed mergers, more particularized assessment is likely to be appropriate.

The foregoing analysis suggests that many mergers that otherwise would generate higher prices will to some degree induce entry and that such entry will partly but not fully offset the price effects of the merger. In the parlance of merger guidelines, this conclusion bears on the likelihood and sufficiency of entry. Timeliness can be factored in as well. In light of the inherent uncertainty of predictions and the fact that, even without the merger, entry may have occurred in the future with some probability, we should view these three inquiries as boiling down to a single question: What are the expected price effects, over time, of a proposed (and otherwise anticompetitive) merger, in light of how the merger would boost the profitability of entry? And the answer is: otherwise anticompetitive mergers typically still raise price but not by as much as when postmerger entry is ignored.

B. Ex Post Welfare

To assess welfare effects of postmerger entry, it is helpful to consider two postmerger periods—before and after such entry occurs—under the simplifying assumption that there will be a single moment of entry (rather than multiple points of entry or an entrant that starts small and expands gradually). In the first of these postmerger periods, we are supposing that price indeed rises (else entry would not be induced), which will be detrimental to consumers for the duration of that period.¹⁶

Efficiencies would modify this conclusion in a number of ways. Variable cost reductions that are passed on to consumers would mitigate the price increase (but, again, we are focusing on the case in which price nevertheless rises). Cost reductions (including in fixed costs) that are not passed on would be also be relevant under a total welfare standard. Note that, accordingly, it is possible for total welfare to rise in this initial period and yet entry to be induced, making relevant the analysis of period two, which follows.

Finally, as a practical matter and consistent with some empirical evidence, efficiencies may take time to materialize, in which case the foregoing effects may appear only gradually and

¹⁵Keep in mind not only uncertainty but also industry evolution. For example, even with substantial discreteness, entry may have some probability of occurring at various points in time without the merger, and the effect of the merger may best be understood as shifting that distribution forward in time. In addition, dynamic models of firm behavior illuminate endogenous investment decisions that influence scale and hence unit costs as well as learning curve effects, all of which renders a dichotomous view of entry (either it will, or will not, occur) an even greater oversimplification in many settings.

¹⁶For theory and evidence suggesting that in many industries this period would not be brief, see John C. Hilke & Philip B. Nelson, *The Economics of Entry Lags: A Theoretical and Empirical Overview*, 61 ANTITRUST L.J. 365 (1993). See also P.A. Geroski, *What Do We Know About Entry?*, 13 INT'L J. INDUS. ORG. 421 (1995) (surveying empirical research on entry).

commence with a lag.¹⁷ Entrants presumably would take anticipated efficiencies into account in their decisions. Accordingly, when there are sunk entry costs, there may be no entry (or it may be smaller in magnitude) if prices initially rise substantially but this increase is expected to be temporary.

The remainder of this Section analyzes the second postmerger period, after entry has occurred. Conventional analysis considers the likely impact on price—in particular, the overall price effect of the merger taking entry into account. As explained in Section A, we typically would expect there to be some residual price increase. If this were the complete story, we would have, taking a consumer welfare standard, a larger loss in period one (of some duration), followed by a smaller loss in period two but one that may be ongoing. Although the sum of these is less than if entry were not to occur, both postmerger periods do involve losses. The question, then, would seem to be whether that aggregate expected loss is substantial enough to justify blocking the merger despite entry.¹⁸

This familiar conclusion, however, is incomplete, particularly under a total welfare standard but also, as will be explained, in some cases even under a consumer welfare standard. The core omission is that, thus far, entry is taken to be relevant only with respect to its effect on price. However, a longstanding literature in industrial organization economics emphasizes that entry as such is welfare relevant, a point that is largely ignored in the antitrust domain.¹⁹

Key articles in the 1970s, synthesized in a 1986 paper by Gregory Mankiw and Michael Whinston, identify two externalities imposed by entrants.²⁰ First, there is a generic business-stealing externality: when price is above marginal cost, each unit the entrant takes from an incumbent firm harms that firm and accordingly reduces total welfare to the extent of that firm's price-cost margin. In the case of a homogeneous goods industry, this is the only externality, so

¹⁷Most retrospective studies of consummated horizontal mergers focus on the first couple of years postmerger to make identification more credible and accordingly may not fully illuminate efficiencies. Those few studies that do examine longer periods tend to find that realized efficiencies arise later. See, e.g., Orley Ashenfelter, Daniel Hosken & Matthew Weinberg, *Did Robert Bork Understate the Competitive Impact of Mergers? Evidence from Consummated Mergers*, 57 J.L. & ECON. S67, S94–95 (2014); Albert Sheen, *The Real Product Market Impact of Mergers*, 69 J. FIN. 2651 (2014) (finding that mergers of product market competitors reduce prices two to three years after mergers, attributing this to operational efficiencies and lower costs).

¹⁸For a variety of reasons—including administrative costs and difficult-to-quantify efficiencies—mergers are not ordinarily blocked unless there is likely to be a nontrivial price increase, although the requisite magnitude and the underlying justifications for its determination are not well elaborated.

¹⁹The main exception is a brief discussion in Michael D. Whinston, *Antitrust Policy Toward Horizontal Mergers*, in 3 HANDBOOK OF INDUSTRIAL ORGANIZATION 2369, 2388 (Mark Armstrong & Robert H. Porter eds., 2007). For further development that considers competition policy more broadly, see Kaplow, *supra* note 13. This idea has also been noted with regard to the analysis of price fixing, see LOUIS KAPLOW, COMPETITION POLICY AND PRICE FIXING 222–27, 359–60, 364 (2013), and was raised much earlier in Louis Kaplow, *The Patent-Antitrust Intersection: A Reappraisal*, 97 HARV. L. REV. 1813, 1869–73 & n.200 (1984).

²⁰See Mankiw & Whinston, *supra* note 13. Seminal papers include Michael Spence, *Product Selection, Fixed Costs, and Monopolistic Competition*, 43 REV. ECON. STUD. 217 (1976), and Avinash K. Dixit & Joseph E. Stiglitz, *Monopolistic Competition and Optimum Product Diversity*, 67 AM. ECON. REV. 297 (1977). For analysis in a multisector general equilibrium setting, see Kaplow, *supra* note 13 (offering an analysis that extends prior literature on the social optimality of entry by explicitly examining competition policy, incorporating possible effects thereof on firms' cost functions, and examining general equilibrium with multiple sectors).

the implication is that equilibrium entry is socially excessive in imperfectly competitive settings, characterized by price in excess of marginal cost.

To see this point in the merger context, suppose that goods are indeed homogeneous and that (unrealistically) postmerger entry fully and instantaneously restores price to its premerger level. Consumer welfare would be unaffected. But total welfare would fall. In the simple case in which each firm (including the entrant) has the same capacity, a common fixed cost (say, of building a plant), and the same, constant marginal cost, the entrant's incurring of the fixed cost is a pure waste to society. For the entrant to recover that fixed cost, it would have to be true that the premerger (and now postmerger) price is above marginal cost by enough to cover this fixed cost. Note that the entrant's profit recovery, which just equals its (socially wasted) fixed cost, also equals the quasi-rents that it takes from incumbent firms. In this simple, artificial example, the business-stealing measure of the externality imposed by the entrant just equals the fixed cost that it expends to enter.

Taking the more realistic case in which a merger induces some entry but not enough to restore price to the premerger level, we can see that the usual competitive assessment with entry needs to be supplemented by an additional resource cost. Here, under a total welfare standard, the prospect of entry does less to justify the merger than meets the eye. Indeed, entry can result in lower total welfare, postmerger, than if postmerger entry did not occur. This characterization, which takes into account the full social costs of entry, thus casts the relevance of entry to merger analysis in a different light. Indeed, it is possible that the greatest social cost of some mergers is attributable to the subsequent, wasteful entry that they induce.²¹

Note further that this analysis for the homogeneous goods case is particularly relevant to mergers raising the risk of coordinated effects because coordination tends to be most plausible in settings with little product differentiation. When there is the prospect of more effective coordination, entry may reduce the probability or magnitude of such effects.²² However, if merger-generated coordination will be greater to some degree despite entry, the foregoing social costs of entry would be incurred.

Turn now to the second type of externality identified in the economics literature, one that cuts in the opposite direction. When there is product differentiation, entry tends to increase variety, which is valued by consumers. Moreover, entrants do not ordinarily capture the full social value of increased variety. The reason is that consumers who purchase an entrant's new offering generally value their purchases more than the price they pay (this is true for all but

²¹In such cases, there is an additional and rather different reason (from the familiar consumer welfare focus) to give greater credit to variable cost efficiencies that are passed on to consumers because, the more this is so, the less wasteful entry would be induced. That is, greater pass-through may raise total welfare, even apart from the direct effect of the price reduction on consumer welfare and (conventional) deadweight loss.

²²Whether and to what extent entry would disrupt merger-induced coordination will depend in part on how the merger facilitates coordination in the first place. Perhaps the merger reduces asymmetry (or, relatedly, involves acquisition of a maverick firm), in which event entry by a new, perhaps asymmetric firm may have an offsetting influence on the effectiveness of coordination. Note that entry may be more attractive when the entrant expects to be able to participate in coordination for the reasons developed in Section A; if, by contrast, an entrant expected to quickly undermine coordination, restoring price to the premerger level, such entry may be unprofitable.

marginal purchases). That is, each variety generates additional consumer surplus that is inframarginal. This value, moreover, is not captured by sellers in the absence of perfect price discrimination, which typically is infeasible. To that extent, entry creates a positive externality, which is a force indicating that too little entry will tend to occur in equilibrium.²³

This point amends the foregoing conclusion regarding the ex post welfare effects of mergers that induce entry. The greater the value of variety, the more any merger-induced entry will benefit consumers, thereby contributing to consumer welfare. (Note that when there is stronger differentiation, a given degree of entry will also tend to cause less moderation in price, which cuts in the other direction.) For this reason, the effect of entry on total welfare is more favorable than is what is experienced in the homogeneous goods case.

Combining the effects of these two externalities, we can see that there is a range of possible welfare effects—taking as given, for ease of exposition, the effect of entry on price. At the homogeneous goods end of the spectrum, entry as such reduces total welfare. As variety becomes more valuable, there is more of a boost to consumer welfare and less of a fall in total welfare. If variety is sufficiently valuable, total welfare will increase as well. Indeed, it is even possible that a merger could be beneficial primarily because the initial price increase it generates causes variety-enhancing entry, specifically, when entry was greatly insufficient beforehand. On a practical note, observe that many of the methods used to predict the price effects of mergers—often assuming the absence of subsequent entry—involve estimating features of consumers’ preferences that bear on how much consumers value variety.

Before concluding this discussion, it is useful to elaborate this second, positive externality along another dimension. As explained, the source of this externality is that an entrant—like incumbent firms—generally does not capture the full value of what it produces. Entry generates additional social value whenever that is true. This can occur, for example, when firms’ innovation or learning generates positive spillovers. When entrants bring new production methods or ways of doing business to a market—a possibility examined further in Section II.B—this will tend to be true.²⁴ Because this too involves a positive externality, entry will tend to be socially insufficient and, accordingly, merger-induced entry will raise welfare on this account.

²³In the presence of product differentiation, a complete analysis of mergers and entry should also take account of product repositioning, reflecting that firms’ choices of which products to offer were endogenous before the merger, that the merging firms may have incentives to reposition their offerings, and that, postmerger, nonmerging incumbents as well as new entrants make endogenous product choice decisions as well. Recent empirical work and simulation analysis has examined repositioning (generally without postmerger entry) and suggests that in some cases welfare losses may be greater and in others less than when product offerings are taken as fixed. See Ying Fan, *Ownership Consolidation and Product Characteristics: A Study of the US Daily Newspaper Market*, 103 AM. ECON. REV. 1598 (2013); Ying Fan & Chenyu Yang, *Competition, Product Proliferation and Welfare: A Study of the US Smartphone Market*, 12 AM. ECON. J.: MICROECONOMICS 99 (2020); Amit Gandhi, Luke Froeb, Steven Tschantz & Gregory J. Werden, *Post-Merger Product Repositioning*, 56 J. INDUS. ECON. 49 (2008); Sophia Li, Joe Mazur, Yongjoon Park, James Roberts, Andrew Sweeting & Jun Zhang, *Repositioning and Market Power After Airline Mergers*, 53 RAND J. ECON. 166 (2022); Michael Mazzeo, Katja Seim & Mauricio Varela, *The Welfare Consequences of Mergers with Endogenous Product Choice*, 66 J. INDUS. ECON. 980 (2018); Thomas G. Wollmann, *Trucks Without Bailouts: Equilibrium Product Characteristics for Commercial Vehicles*, 108 AM. ECON. REV. 1364 (2018).

²⁴One can also imagine scenarios in which there are other, negative externalities.

C. An Ex Ante Perspective on Ex Post Entry

Sections A and B consider how merger-induced entry affects the welfare consequences of a merger that, in the absence of such entry, would nontrivially increase price. In many respects and in a number of settings, ex post entry has a less favorable effect than conventional wisdom imagines—and in some instances, ex post entry may even have a negative impact on total welfare.

This Section instead adopts an ex ante—that is, premerger—perspective on the prospect of ex post entry. Specifically, it elaborates the implications of the anticipation of ex post entry for whether a contemplated merger would be expected to be profitable and hence would be likely to be proposed in the first place.²⁵ In other words, it examines how the interaction between postmerger entry and the merging parties' rationality constraint influences the proper analysis of a proposed merger. Because easier postmerger entry reduces the profitability of mergers that aim to raise prices rather than generate efficiencies, it tends to support the view that the proposed merger is more likely than otherwise to do the latter than the former. From this perspective, the conventional view that easy entry favors allowing mergers tends to be correct, albeit for reasons different from those usually stated.²⁶ Getting the reasoning right is nevertheless important, not only to solidify foundations but also to guide assessments in particular cases, as the following analysis explains. As will be elaborated in Section D, because the primary reason that postmerger entry is relevant to whether prices will increase differs from that ordinarily supposed, the appropriate criteria for whether the prospect of entry is sufficient to justify a merger differ as well.

As elaborated in some recent work, a core challenge in merger review, like in most

²⁵The analysis throughout this article, following convention, assumes that merging parties are motivated purely by profit maximization and that the only ways that mergers affect their profits are through anticompetitive effects and efficiencies. Regarding the former, it is possible that agency problems (leading, for example, to empire-building motivations) or behavioral considerations (such as optimism bias) affect decisionmaking. On the latter, mergers can also be profitable because of stock market misvaluations and tax considerations. Incorporating such considerations may be important but would complicate the exposition without substantially changing the forces examined here. Relatedly, the analysis also assumes that entrants' decisions are ex ante profit maximizing. See Avishalom Tor, *The Fable of Entry: Bounded Rationality, Market Discipline, and Legal Policy*, 101 MICH. L. REV. 482 (2002) (suggesting the possibility of excessive entry due to optimism and related biases).

²⁶Despite the obviousness (at least on reflection) of some of the analysis in this Section, it does not appear in merger guidelines, see *infra* Section D, and is rarely mentioned in commentary. For exceptions, see Robert D. Willig, *Merger Analysis, Industrial Organization Theory, and Merger Guidelines*, BROOKINGS PAPERS ON ECONOMIC ACTIVITY: MICROECONOMICS 281, 307–10 (1991); Werden & Froeb, *supra* note 8 (emphasizing that mergers that induce significant entry are unprofitable in the absence of significant efficiencies); and Whinston, *supra* note 19, at 2388. Interestingly, George Stigler's early paper on mergers to monopoly emphasized the question of whether the acquirer would find its strategy profitable in light of the prospect of entry. George J. Stigler, *Monopoly and Oligopoly by Merger*, 40 AM. ECON. REV.: PAPERS & PROCEEDINGS 23 (1950). This lacuna is also surprising in light of significant economic literature, see, e.g., Joseph Farrell & Carl Shapiro, *Horizontal Mergers: An Equilibrium Analysis*, 80 AM. ECON. REV. 107 (1990), on the interdependence of anticompetitive effects and efficiencies in influencing whether merging parties expect to profit from mergers. See Louis Kaplow, *Efficiencies in Merger Analysis*, 83 ANTITRUST L.J. 557 (2021).

antitrust settings, is one of inference.²⁷ A reviewing body (whether an agency or a court) wishes to predict anticompetitive effects and efficiencies, using its prior knowledge of the relevant phenomena and the information in the case under examination.²⁸ An important consideration is that, compared to outsiders, the merging parties are generally expected to have a superior understanding of the contemplated merger's likely effects. Investigations and assessments can best leverage this recognition both by gathering evidence internal to the merging parties and also by making inferences based on the merging firms' plausible motivations. This Section elaborates this basic logic and then applies it to the prospect of ex post entry.

To make this point more concrete, it is ordinarily supposed that the merging parties collectively expect to profit from a proposed merger through some combination of anticompetitive effects and efficiencies. If anticompetitive effects are likely to be large, the parties would happily merge (if permitted to do so) even if efficiencies were small, indeed, even if they were moderately negative (diseconomies). Conversely, if efficiencies are likely to be large, the parties would happily merge even without significant anticompetitive effects, indeed, even if they were negative—that is, prices would fall.

Large anticompetitive effects do not rule out even greater efficiencies, but such effects make them less likely when one makes appropriate inferences. Similarly, substantial efficiencies do not rule out even bigger anticompetitive effects, but efficiencies make those less likely—that is, independent of reducing any net upward pressure on price.

To begin exploration of how these inferences should be made, suppose that, a priori, the distributions of possible anticompetitive effects and of potential efficiencies are independent. In that case, if one is particularly high in a given case, it is more likely to exceed the level of the (randomly paired) other.

But that is not the end of the story. The merging parties' rationality constraint magnifies this tendency by creating a degree of negative interdependence.²⁹ The reason is that unprofitable mergers will not be proposed. To illustrate the implication, consider mergers that generate negative efficiencies, perhaps diseconomies of scale or difficulties in integrating contrasting corporate cultures. In such cases, profitability requires sufficient anticompetitive effects.

²⁷See Louis Kaplow, *Balancing Versus Structured Decision Procedures: Antitrust, Title VII Disparate Impact, and Constitutional Law Strict Scrutiny*, 167 U. PA. L. REV. 1375, 1410–20 (2019); Kaplow, *supra* note 26.

²⁸This Section adopts the perspective of decision analysis, wherein a reviewing tribunal is presented with a merger and seeks to determine what would be the effects, going forward, of permitting versus prohibiting it. (The analysis simplifies further by abstracting from the possibility of subsequent acquisitions.) A more complete analysis would pursue a mechanism design formulation, which is in part employed in Part II's analysis of how the prospect of an acquisition—and whether it would be permitted—influences ex ante entry. The merger regime also influences the selection of merger proposals among the set of existing firms. Relatedly, the analysis of ex ante effects of all sorts depends on whether an agency is expected to maximize its objective function, ex post, in the case at hand (an assumption of no commitment) or to adopt an optimal regime which it will then apply to the run of proposed mergers (an assumption of commitment). For a general, formal comparison that emphasizes the differences between the approaches, see Louis Kaplow, *On the Optimal Burden of Proof*, 119 J. POL. ECON. 1104 (2011), and for an informal discussion, see Louis Kaplow, *Likelihood Ratio Tests and Legal Decision Rules*, 16 AM. L. & ECON. REV. 1 (2014).

²⁹If there was already negative dependence, this phenomenon would make it stronger, and if there was initially positive dependence, that would be weakened and possibly reversed.

Roughly speaking, we can truncate the lower end of the distribution of anticompetitive effects, which implies that expected anticompetitive effects are higher than they would be a priori. By contrast, if efficiencies are large, all anticompetitive effects including substantial negative ones are admissible, so expected anticompetitive effects would be lower in this case and possibly negative.

We can see that inferences about anticompetitive effects and about efficiencies are intrinsically interdependent through the merging parties' rationality constraint. Hence, even if some evidence pertains directly to only one issue or only the other, it will affect the proper inferences about both. This logic is easiest to see when there are only two hypotheses (as here) and they are mutually exclusive (which is not true with mergers): then, any evidence raising the probability of one explanation necessarily lowers the probability of the other, indeed, by the same amount. More broadly, any interdependence leads to an inference process like that described here.

Let us now use this logic to examine the prospect of ex post entry. First, it is helpful to set aside a source of possible confusion. If all one knew (say, using a crystal ball) was that ex post entry would in fact occur, one might infer that the merger is more anticompetitive, not less. The reasoning derives from Section A, which explains that a larger merger-generated price increase makes entry more likely. That correct point is not, however, the present focus—and it reinforces how misleading many conventional pronouncements can be. After all, it is common to ask how likely, speedy, and substantial ex post entry *will in fact* be—all features that are magnified by greater direct anticompetitive effects, *ceteris paribus*.

Instead, an important question for merger analysis to ask is: For a *given* direct anticompetitive effect (degree of price increase), how likely, speedy, and substantial *would* ex post entry be? Here, greater magnitudes of each entry factor imply that the merging parties' postmerger *profits* will be lower—whatever may be the welfare effects of such entry (which were elaborated in Section B). After all, the merging parties do not care about social welfare or consumer welfare, only about profits—and, specifically, their own profits rather than incumbent competitors' profits or entrants' profits. The inference from the merging parties' rationality constraint concerns the profits that the merging parties expect to earn as a consequence of anticompetitive effects and efficiencies.

The effect of entry on merging firms' expected postmerger profits—continuing to take as given the direct anticompetitive effect—is in principle straightforward. Following Section B, we can think of two postmerger periods: before and after entry. The former period is profitable, considering anticompetitive effects alone. Assuming some entry, the latter period is (per unit of time) less profitable for the merging parties, and possibly even negative relative to the premerger benchmark. There are two reasons for this result: First, entry reduces price. Second, an entrant takes some business from the merging parties, so margins are earned on a smaller base. Speedier entry shortens the first, more profitable period. More likely entry raises the chance that the second, less profitable period occurs. And more substantial entry causes a larger reduction in the

merging parties' profits in that second period.³⁰ A key implication is that, even if entry would not fully restore the premerger price and hence the premerger level of consumer welfare, it could still render the merger unprofitable.³¹

The sharpest way to see the implications of these basic points is to consider an extreme case in which there are no sunk entry costs, no delays, no differences between entrants' and incumbents' cost functions, and constant returns to scale. If a merger would (directly) raise price, entry would be certain, instantaneous, and complete in undermining this price elevation. There is no period one, and period two generates no profits whatsoever from anticompetitive effects because there are none. Moreover, entry tends to reduce the sales of the merging parties because some sales now go to entrants. If this were the entire story, the contemplated merger would be unprofitable to the merging parties. Hence, if such a merger is proposed, the parties' rationality constraint implies that they must expect there to be some efficiencies, which would be the only source of effects of the merger on society.³²

In less extreme cases, the prospect of more timely, likely, and sufficient entry (for a given direct anticompetitive effect) implies lower expected anticompetitive profits and thus shifts the proper inference, all else equal, toward smaller expected anticompetitive effects and greater expected efficiencies. For example, if the analysis of anticompetitive effects is fairly uncertain, as is often the case, that uncertainty is accordingly best resolved toward the lower end of the range.³³ And if efficiencies are uncertain but still plausible, they should be taken more seriously.³⁴ These implications for inferences are the core reason that the ease of entry favors allowing proposed mergers. Correspondingly, when the prospect of induced entry is smaller for a given predicted anticompetitive effect, the inference that the proposed merger is motivated more by anticompetitive effects than by efficiencies is stronger.

³⁰An interesting further implication of this logic is that efficient mergers whose direct effect is to *lower* postmerger prices—in period one—are rendered *more* profitable by highly responsive entry, reinforcing the argument for a more permissive approach to mergers (via inferences from the rationality constraint) when entry is easier. The reason is that a price drop will now tend to induce exit, such exit mitigates the price drop, and the resulting higher price in period two (higher than before the merger-induced exit but still lower than before the merger) generates more profits (because of higher margins on sales and because exit tends to increase the sales of the merging parties). The expectation of that effect, in turn, makes such efficiency-creating mergers more profitable than otherwise (that is, without postmerger exit).

³¹This possibility reinforces the point emphasized in the text that the question of the desirability of ex post welfare effects differs qualitatively from that of ex ante profitability and hence whether we should expect a merger with such effects to be proposed.

³²See Peter Caradonna, Nathan H. Miller & Gloria Sheu, *Mergers, Entry, and Consumer Welfare* (June 27, 2022) (unpublished manuscript) (finding that, in the models examined, mergers producing no efficiencies are almost always unprofitable if entry preserves consumer surplus and, in simulations, that entry typically mitigates consumer losses only partially if mergers that do not generate efficiencies are to be profitable).

³³To take a simple, special case, suppose that it is certain that entry would keep price from exceeding some threshold. Then we could truncate the upper end of the distribution of anticompetitive effects. The complete analysis must go further because, in those cases in which discrete entry would be triggered, the post-entry price would be even lower and, moreover, the entrant would be taking some of the merging parties' sales at the post-entry price, further reducing the merger's profitability.

³⁴Because profits and not welfare bear on what the merging parties will find rational, fixed-cost efficiencies can bear on the correct inference—specifically, concerning the likelihood of anticompetitive effects—even if they would not be passed on to consumers and a consumer welfare test were applicable.

The proper manner of inference, however, is more complex and subtle. As stated so far, it is imagined that a decision-maker would consider evidence about anticompetitive effects and efficiencies, make some inferences, and then revise those inferences in light of evidence that is informative about postmerger entry. In fact, the appropriate inferential process involves fully interactive triangulation, in all directions and among all the components. For example, if efficiencies are fairly confidently negligible or negative, then anticompetitive effects are nearly certain, which implies that timely, likely, and sufficient entry would be unlikely because such would render the proposed merger unprofitable.

Simply put, even if the evidence directly bearing on each of the three considerations was otherwise independent—an assumption that is questioned in Section D—the proper method of ultimate inference is substantially interdependent. Of course, at the end of the day, the decision-maker does not in principle need to make separate determinations on each issue. Rather, it wishes to know the expected effects of the merger on welfare using whatever standard is deemed to be the appropriate objective. It may often be helpful to consider mainly anticompetitive effects at one moment, or to focus on (or write in a section of an opinion about) entry or about efficiencies at another. But the underlying decision should depend on overall expected effects, not standalone assessments of any or all of the factors that feed into that calculus.³⁵

D. Implications for Merger Analysis

It is useful to draw some further lessons from Sections A–C for the analysis of proposed mergers. Most of the correct analysis is inconsistent with conventional protocols articulated in merger guidelines, court cases (which often follow such guidelines), and commentary. Specifically, these tend to adopt an ex post perspective on ex post entry. This view can be seen by merger guidelines’ articulation of the relevant question as asking whether entry would be timely, likely, and sufficient to “deter” or “defeat” (or “counteract”) anticompetitive price increases.³⁶

³⁵Furthermore, as many elements of the preceding analysis suggest, independent conclusions can be misleading or, in respects, meaningless because different possible scenarios involve different combinations of effects, many of which are conditional on others. For example, in scenarios in which price would not increase in the first place, there would be no entry. It is familiar that the expectation of bottom-line effects that are each a product of a number of factors (each of which varies across states) does not equal the product of the expectation of each factor. In addition, many of the pertinent phenomena (such as the relationship between deadweight loss and the magnitude of price elevation) are nonlinear. When one considers as well the high degree of interdependence in the present context and that some factors can have different signs in different states, the potential error from separate assessments, followed by combination, say, of the mean values of each, could be large.

³⁶See U.S. Merger Guidelines, *supra* note 1, at 28 (“The prospect of entry into the relevant market will alleviate concerns about adverse competitive effects only if such entry will deter or counteract any competitive effects of concern so the merger will not substantially harm customers.”); *id.* at 29 (“In order to deter the competitive effects of concern, entry must be rapid enough to make unprofitable overall the actions causing those effects and thus leading to entry, even though those actions would be profitable until entry takes effect. Even if the prospect of entry does not deter the competitive effects of concern, postmerger entry may counteract them. This requires that the impact of entrants in the relevant market be rapid enough that customers are not significantly harmed by the merger, despite any anticompetitive harm that occurs prior to the entry.”); EU Merger Guidelines, *supra* note 1, ¶ 68 (“For entry to be considered a sufficient competitive constraint on the merging parties, it must be shown to be likely, timely and sufficient to deter or defeat any potential anti-competitive effects of the merger.”); *id.* ¶ 74 (“The Commission examines whether entry would be sufficiently swift and sustained to deter or defeat the exercise of market power.”).

This framing, as explained in Section C, eschews the ex ante perspective that makes use of the merging parties' rationality constraint. Instead, it focuses on the ex post effects examined in Section B. To be sure, those ex post effects are relevant as well because a decision-maker wishes to know, for ex ante profitable mergers, what their ex post welfare effects are likely to be. The analysis there, along with that in Section A, however, suggests a number of shortcomings in how that is understood as well.

Consider directly the standard formulation. First, the notion that ex post entry would *deter* a price increase may sometimes be useful but does not go to the core. For mergers to monopoly and in some other cases, an entry deterrence framing may have some force.³⁷ But in most merger cases, the postmerger competitors would face a free-rider problem in coordinating on an entry deterrence strategy. Moreover, it is familiar that what typically matters most are the post-entry (in Section B's parlance, period two) prices. Those, in turn, are determined not by postmerger prices that precede postmerger entry (that is, period one prices) but by competitive interactions post entry (which determine period two prices). As already emphasized in Section A, such analysis often fails to appreciate that the very act of postmerger entry tends to push prices down and hence may render the entry unprofitable. More broadly, this tendency reduces the degree to which entry can be expected to occur. But this phenomenon differs significantly from the idea that the prospect of (period two) entry would deter the merging parties (and their competitors) from raising price (in period one), after the merger takes place.

Second, the analysis in Section A also casts doubt on the suggestion that entry would often *defeat* or *counteract* a price increase. More likely, even if there is entry, the price increase will be mitigated to some extent but not eliminated. The greater that extent, the smaller the detriment to consumer welfare, although total welfare may be harmed more, as explained in Section B. The more important point, from Section C, is that the greater the degree to which entry mitigates a postmerger price increase, the less profitable the merger will be through the channel of anticompetitive effects, which in turn leads to a more favorable inference, via the merging parties' rationality constraint, about the merger's likely direct anticompetitive effects and efficiencies.

Taken together, the foregoing analysis implies that the familiar criteria in merger guidelines (whether entry is timely, likely, and sufficient) are neither necessary nor sufficient conditions for a proposed merger to be benign or beneficial rather than detrimental. On one hand, the criteria may be met but the merger may overall raise price (Section A) and, via excess entry, further reduce welfare (Section B). On the other hand, the criteria may fail but the prospect of modest entry may nevertheless be sufficient to render the merger unprofitable (and hence one that would not be proposed) unless its efficiencies are sufficient to render it overall profitable.

Another implication for merger analysis follows from Section C's discussion of triangulation. To varying degrees, commentators, agencies, and courts tend to adopt or advocate

³⁷See generally TIROLE, *supra* note 4, ch. 8 (analyzing entry and entry deterrence); Steven C. Salop, *Strategic Entry Deterrence*, 69 AM. ECON. REV.: PAPERS & PROCEEDINGS 335 (1979).

for a sequential, structured, siloed approach. Under it, the analysis of anticompetitive effects comes first (whether invoking some form of so-called structural presumption or otherwise), followed by a (separate) analysis of efficiencies. It is less clear where entry fits in: some might place it in the analysis of anticompetitive effects, while others would sequence it afterwards, perhaps with (but parallel to and isolated from) the analysis of efficiencies, as one of a number of (largely separate) defenses the merging parties might offer.

The resultant sequencing and siloing of issues is highly problematic.³⁸ First, it is antithetical to the triangulation process elaborated in Section C. Even considering just anticompetitive effects and efficiencies—that is, ignoring entry for the moment—logical inference from the merging parties’ rationality constraint indicates that the issues are interdependent. For entry, its relevance is substantially through how it, in turn, affects those already interdependent inferences.³⁹ Sequencing and siloing makes no sense, and indeed its practice—at least in analysts’ minds—may help to explain why the core relevance of ex post entry is so often misunderstood.

A second and related point is that sequential analysis is a very poor way to collect information, even if its core elements were entirely distinct. Instead, information collection should prioritize information clusters with the highest diagnosticity/cost ratio, whatever issue(s) they may illuminate. For example, if it is straightforward to determine that entry may be extremely easy, particularly compared to the complexity of predicting anticompetitive effects or ascertaining efficiencies in a given case, then entry analysis is a good place to start. What one might learn may render unnecessary much further analysis. Or if the efficiencies that are proffered by the merging parties at the outset are patently weak, inference from the parties’ rationality constraint already implies that the merger is likely to be anticompetitive, even accounting for the possibility of postmerger entry.

Furthermore, much evidence bears directly on two or more of these three issues. Firms’ cost structure is relevant to competitive interaction (which relates to anticompetitive effects), to efficiencies, and to entry. Of particular note, there is often a close connection between arguments (whether by the merging parties or by the party challenging the merger) regarding efficiencies and entry. If economies of scale are large, or if a merger is necessary to obtain unique synergies (ones not available in the market), then effective entry would seem unlikely. Contrariwise, if it is suggested that outsiders can readily enter with no notable cost disadvantage, typically one would not expect there to be important merger-specific efficiencies.⁴⁰

Finally, even if all of the foregoing is set to the side, there are often synergies in information collection and assessment. Whether hiring or consulting with industry experts, reviewing documents, or taking depositions, common sources will often illuminate many issues.

³⁸See Kaplow, *supra* note 26; Kaplow, *supra* note 27, at 1410–20; Louis Kaplow, *On the Relevance of Market Power*, 130 HARV. L. REV. 1303 (2017).

³⁹As Section C explains, it is not even necessary in principle to reach separate conclusions on anticompetitive effects, entry, and efficiencies.

⁴⁰See Joseph Farrell & Carl Shapiro, *Scale Economies and Synergies in Horizontal Merger Analysis*, 68 ANTITRUST L.J. 685, 703 (2001).

In such instances, it is more effective to intertwine inquiries into anticompetitive effects, efficiencies, and entry.

The points in the latter half of this Section constitute powerful reasons that assessments of proposed mergers should be substantially integrated and that the process of inference should employ triangulation. Although antithetical to some of the sharpest statements of structured decision-making,⁴¹ other depictions of the merger review and decision-making process are more nuanced, and one suspects that, to some degree, agencies, expert witnesses, and even judges operate in a more coherent, consolidated fashion. Nevertheless, it is useful to articulate the proper formulation explicitly rather than to leave it hidden or even contradicted by official protocols. The proper analysis is challenging enough, which makes muddled thinking especially detrimental.⁴²

II. Ex Ante Entry

Part I focuses on the prospect that entry would take place after a proposed merger has been approved and, in particular, entry that would be induced by the merger's direct effect of raising price, which makes postmerger entry more profitable than it would have been premerger. This Part shifts attention to an earlier point in the timeline and a qualitatively different phenomenon. Here, the question is how a prospective entrant may be encouraged by the possibility of its subsequently being acquired by an incumbent that offers a buyout premium which would make entry more profitable than otherwise. It is necessary to take this ex ante inducement into account when determining the overall welfare effects of policies regarding the permissibility of such subsequent mergers. This formulation of the problem contrasts with much discussion of mergers involving the acquisition of startups because it is commonplace to take the recent or nascent entrant's existence and capabilities as given.⁴³

The analysis of ex ante entry has received modest attention in industrial organization economics and even less in more applied work on competition policy, including that addressed

⁴¹The analysis here is also implicitly critical of suggestions that artful allocations of (strong) proof burdens—such as placing a steep burden on the government to prove anticompetitive effects (or almost none at all, with the aid of a structural presumption), while shifting the burden to the merging parties on efficiencies—are helpful in merger analysis. See Louis Kaplow, *Replacing the Structural Presumption*, 84 ANTITRUST L.J. 565 (2022). For commentary advocating burden-shifting regarding entry in particular, see, for example, Kirkwood & Zerbe, *supra* note 5, at 87–103. Because information does not separate that way and, in any event, because proper analysis recognizes significant interdependencies, these suggestions are, in respects, incoherent (depending on how they are interpreted) and in any case are antithetical to the application of sound economic analysis. See Kaplow, *supra* note 26, at 599–618.

⁴²Interestingly, the entry sections of the U.S. and EU Merger Guidelines precede the efficiency sections and make no reference to them, whereas the analysis here suggests that a core reason that entry analysis is relevant is because it bears on inferences about efficiencies. Relatedly, despite the point in the text about evidence overlap and possible tensions between the two considerations, no cross-references (in either direction) appear in either set of merger guidelines. Moreover, the sections on efficiencies discuss how their presence may negate (offset, via pass-through) anticompetitive effects but do not suggest that their existence tends to negate the likelihood of anticompetitive effects in the first place, via inference from the merging parties' rationality constraint.

⁴³As will emerge, particularly in Section C on merger synergies, ex ante incentives for what are referred to here as entrants apply more broadly to incentives for investments of all sorts, including by existing firms that face choices regarding expansion or innovation.

to horizontal mergers. Incorporating ex ante entry—which makes endogenous which firms exist before merger proposals are formulated—is a complex and subtle endeavor. Section A begins with the homogeneous goods setting and assumes that there are no merger synergies, which makes the analysis more stark by ruling out a number of considerations. Section B addresses entry that expands the variety of products or introduces innovation along other dimensions, and Section C examines merger efficiencies of the sort that tend to be most relevant when nascent firms are acquired by established incumbents. Section D reflects on how the analysis relates to contemporary discussion of such acquisitions, particularly by large incumbent firms in technology sectors.

A. Homogeneous Goods

To begin our analysis of the homogeneous goods case, it is useful to recall traits of the premerger equilibrium. Specifically, entry occurs up until the point at which the marginal entrant (taking the continuous case) just breaks even—which is to say, any post-entry quasi-rents from pricing above marginal cost are just sufficient to cover the fixed costs of entry. This equilibrium implicitly undertakes this profitably calculation on the assumption that there will be no subsequent mergers, an assumption that is obviously contrary to fact when one is analyzing and possibly permitting such a merger. It is this implicit assumption that will momentarily be relaxed.

Recall further that, in the homogeneous goods setting, the resulting market equilibrium involves a socially excessive number of firms. A prospective entrant expects to capture some business from incumbent firms that are pricing above marginal cost, so entry would thereby impose a negative externality on those rivals. Therefore, when entry is, at the margin, breakeven for the entrant, it is negative in terms of total welfare.⁴⁴ Now, if the prospect of a subsequent merger would be profitable to the acquired firm—which it will be if the merger offer is one that would be accepted—this added source of profit would make ex ante entry more attractive. That, in turn, would induce even more entry, which would be even more socially costly.

This situation was initially analyzed by Eric Rasmusen in a 1988 article entitled “Entry for Buyout.”⁴⁵ To elaborate the core idea, consider the case of a prospective entrant that would not expect to profit under the assumption that no subsequent mergers would be allowed, an implicit benchmark in much economic analysis of entry. That is, in the prevailing equilibrium, a new entrant would lead to a low enough price, post-entry, that the sales it could make at that price would generate insufficient profits to cover its fixed costs of entry.

⁴⁴The choice of welfare standard is considered in Section III.B. Marginal entry in this setting—regardless of its impact on total welfare—typically reduces price and hence raises consumer welfare. Indeed, an entry subsidy (or regulation forcing entry, if such were feasible) will raise consumer welfare, even when price is below average total cost and even when price is below marginal cost. Of course, any such subsidies would need to be funded, ultimately by individuals (who are also consumers).

⁴⁵See Eric Rasmusen, *Entry for Buyout*, 36 J. INDUS. ECON. 281 (1988). A version of this argument was previously developed in the context of determining whether combinations of competing patents should be permitted—which would induce wasteful expenditures devoted to inventing around patents without benefitting consumers. See Kaplow, *supra* note 19, at 1869–73 & n.200.

Observe next that, despite this fact, if the entrant did in fact enter and these fixed costs were at that point sunk, it may be profitable for the entrant to remain in the market at that point. That is, the subsequent flow of quasi-rents might be sufficient to cover its variable costs even though there is insufficient surplus beyond that to fully recoup its sunk fixed costs. The entrant's continuing presence, in turn, erodes incumbent firms' profits by lowering price and by reducing their collective sales at a given price.

Suppose further that there is a single incumbent, that is, a monopolist (aside from the entrant). Given that such an entrant has arrived, under these circumstances the incumbent would find it profitable to buy out the entrant. By restoring a monopoly, industry profits would be higher; hence, there exists a buyout price that would make both firms better off.

Finally—and Rasmusen's punch line—note the implications of this post-entry acquisition for whether the entrant would find entry profitable *ex ante*. Such entry was taken to be unprofitable if no buyout occurred: quasi-rents from operation would not fully cover entry costs. But here the entrant can expect to be bought out, yielding some premium in excess of what it would otherwise have expected to earn. Hence, it is possible that entry that would not otherwise have been profitable will become so precisely because of the prospect of subsequent buyout.

When this scenario prevails, two implications should be noted. First, recall that the market equilibrium already involved excessive entry even when such entry for buyout was implicitly taken not to occur (that is, if there was some entry to begin with). Hence, further entry induced by the prospect of buyout augments this source of inefficiency. Second, regarding consumer welfare alone, the subsequent buyout tends to restore price to its monopoly level, eliminating the post-entry competitive benefit as well, although perhaps not immediately or entirely.⁴⁶

Suppose instead that such acquisitions were prohibited. In that event, the imagined entry for buyout would not transpire and the above consequences would not arise. Specifically, if this merger prohibition were anticipated by prospective entrants, then the otherwise-unprofitable entry would not occur in the first place. In turn, there will be no actual buyouts that would need to be assessed by the merger authority.

Note further that a restrictive merger rule of this sort would increase the profits of the incumbent monopolist. Because it would be prevented, post-entry, from acquiring such entrants, those entrants would never show up in the first place, and thus they would not reduce prices and take some of the incumbent's business in the interim. Nor would the incumbent have to pay premiums to buy out such entrants in order to eliminate such competition going forward. Hence, *ex ante* an incumbent monopolist would favor a restrictive merger rule in this type of situation.⁴⁷

⁴⁶If the post-entry buyout is not instantaneous, pricing in the interim will be more competitive. And if the entrant brings added capacity, some of which allows units to be produced at lower marginal cost, the post-acquisition profit-maximizing (monopoly) price will be lower and quantity accordingly higher.

⁴⁷The incumbent would like to be able to commit, *ex ante* and publicly, not to acquire such entrants. However, it may well be unable to do so credibly. Note that a policy of not acquiring such entrants post-entry, in order to establish a reputation for being tough in this respect, fails because then the entry occurs and, moreover, the incumbent must

Taken together, if all of these assumptions hold, a strict merger prohibition would raise total welfare, raise the incumbent monopolist's profits, and cause only modest losses to consumers. Note that consumers actually lose somewhat rather than benefit from this strict anti-merger policy: by prohibiting mergers that would conventionally be regarded as anticompetitive (taking the then-existing set of firms as given), the (temporarily) competition-enhancing entry never occurs, so consumers get no associated benefit.

The foregoing scenario entails a number of simplifying assumptions that significantly restrict the practical domain of these conclusions. As will be elaborated below, a prospective entrant may in fact be uncertain about its future prospects, and entrants as well as incumbent monopolists may make additional strategic decisions, such as regarding levels of investment. Moreover, the analysis thus far contemplates a single entrant followed by a single buyout that the merger authority may allow or prohibit.

In light of these and other limitations, economists have developed rather complex—although in key respects, still rather basic—dynamic models of this phenomenon.⁴⁸ These efforts are designed to take into account that firms' entry, investment, merger, and exit decisions will be made so as to maximize expected profits that themselves reflect anticipated future decisions that they and other firms will subsequently find it optimal to make, as well as the nature of competitive interactions, resolutions of uncertainty, and an appreciation of the merger regime that will be applied to any contemplated buyouts.⁴⁹ A central lesson of these analyses is that, in the type of setting under consideration, a fairly strict merger policy may be optimal largely because it discourages entry for buyout that is socially inefficient. Relatedly, it may be that easier entry in certain respects favors a tougher merger policy, the opposite of conventional wisdom, precisely because entry tends to be socially excessive to begin with and this tendency is exacerbated by the entry-for-buyout phenomenon.⁵⁰

The foregoing analysis of entry for buyout is, however, subject to important qualifications (some presented in Rasmusen's original article), even in the confines of a model with homogeneous goods and no merger efficiencies, assumptions that will be relaxed in the next two Sections. First, the analysis assumes that there is a monopolist incumbent rather than, say, a

persistently suffer the profit loss from such entry. That may still be less unprofitable than a continuing sequence of entry and buyout, but it would not be as profitable as full commitment. By contrast, a rule prohibiting such mergers, if anticipated by prospective entrants, would achieve the incumbent monopolist's preferred result. See Rasmusen, *supra* note 45, at 282, 298.

⁴⁸In these models, both ex ante and ex post entry (using the terms of this article) are intermingled. For example, a merger may make postmerger entry more profitable, but that may not alone be sufficient to induce entry unless the prospective entrant anticipated a buyout premium.

⁴⁹Previously, all of these features except for mergers had been analyzed in Richard Ericson & Ariel Pakes, *Markov-Perfect Industry Dynamics: A Framework for Empirical Work*, 62 REV. ECON. STUD. 53 (1995). The first substantial application that incorporated mergers (and possible prohibitions thereof) is Gautam Gowrisankaran, *A Dynamic Model of Endogenous Horizontal Mergers*, 30 RAND J. ECON. 56 (1999). An even more sophisticated effort, which employs merger-neutrality assumptions with regard to costs and investment opportunities in order to focus more on anticompetitive effects (that is, abstracting from efficiencies, the subject of Section C, below), appears in Ben Mermelstein, Volker Nocke, Mark A. Satterthwaite & Michael D. Whinston, *Internal Versus External Growth in Industries with Scale Economies: A Computational Model of Optimal Merger Policy*, 128 J. POL. ECON. 301 (2020).

⁵⁰This final observation is related to the lesson of Section I.B with regard to the inefficiency of ex post entry.

number of substantial firms. This feature is important because of the free-rider problem that multiple incumbents would face in buying out entrants.⁵¹ In standard Cournot models of mergers in homogeneous goods industries, acquisitions are often unprofitable for precisely this reason.⁵² Here, any incumbent that chooses to buy out the entrant would thereby confer benefits on the other incumbents, each of which profits from the resulting higher prices and from not having to share as much of the output at those prices. The incumbent undertaking the buyout has to pay the buyout premium by itself. Moreover, after the merger, the acquirer is the one that reduces its output in order for the industry price to increase. As a consequence, post-entry buyout may not be profitable for any incumbent acting alone. And, anticipating this, prospective entrants would not engage in otherwise-unprofitable entry that would have been rendered profitable only by the prospect of a significant buyout premium. Note that, following the above explanation, we have here that incumbents' free-rider problem actually boosts their collective payoffs because it extinguishes incentives for entry that otherwise would have dissipated their profits.

Second, even when there is an incumbent monopolist or a firm sufficiently dominant not to be subject to an overpowering free-rider problem, the prospect of multiple entrants may render post-entry buyout unprofitable. Clearly, if many entrants arrived on a regular basis—or if only one entrant arrived at a time, but any buyout would quickly be followed by a subsequent entrant—buyout could be rendered unprofitable for the incumbent. Its additional anticompetitive profits from its postmerger price increase may be too short-lived to justify the expense. And if post-entry buyout is anticipated to be unprofitable and thus not likely to take place, the resulting inducement to ex ante entry for buyout would be extinguished to that extent.

Third, the foregoing discussion of entry for buyout takes a deterministic outlook: Either entry was profitable without the prospect of buyout or it was not. If it was not, the prospective entrant could confidently predict whether buyout would occur and at what premium. Hence it would know whether the prospect of buyout rendered entry profitable after all. Often, the entrant would face significant uncertainty about all these things, as well as about what its realized costs would be, how the incumbent (in the absence of buyout) would respond to its entry, and more. Accordingly, a more realistic picture is that a prospective entrant would contemplate scenarios in which entry would be profitable even without buyout, others in which buyout may tip the balance, and yet others in which a buyout premium would not be sufficient to render its entry profitable. From such a benchmark, a merger regime that is more permissive toward buyout would tend to make entry more profitable overall on an expected basis by making a buyout premium more likely in some scenarios. Therefore, when entry for buyout may well occur (if such buyouts are permitted)—because there is no insurmountable free-rider problem, incumbents do not fear that too many other entrants would follow, and so forth—a more

⁵¹It is possible that incumbents might be able to coordinate their efforts. However, in addition to the usual challenges of interfirm coordination, in this context successful coordination may reduce incumbents' long-run profits, as explained in the text to follow, which would undermine their incentive to coordinate.

⁵²See, e.g., Stephen W. Salant, Sheldon Switzer & Robert J. Reynolds, *Losses from Horizontal Merger: The Effects of an Exogenous Change in Industry Structure on Cournot-Nash Equilibrium*, 98 Q. J. ECON. 185 (1983); Farrell & Shapiro, *supra* note 26. However, when one considers a dynamic industry model related to those discussed earlier in the text, this familiar point may be overstated once one takes into account merged firms' incentives to reduce investment in subsequent periods. See Steven Berry & Ariel Pakes, *Some Applications and Limitations of Recent Advances in Empirical Industrial Organization: Merger Analysis*, 83 AM. ECON. REV.: PAPERS & PROCEEDINGS 247 (1993).

permissive regime will tend to encourage entry. Note also that in some of these cases a more restrictive regime will be procompetitive in the usual sense because it will not deter such entry due to the fact that entry is sufficiently profitable in any event. In such cases, an incumbent may, as in the usual case, prefer that it be permitted to merge with such entrants.

These qualifications suggest that, in many settings, entry for buyout—specifically, entry that would otherwise be unprofitable but for the prospect of obtaining a buyout premium—may not be an important phenomenon. In such circumstances, entry will tend to occur, as discussed in Part I, up until the point that further entry would no longer be profitable, that is, in the absence of a buyout prospect. This Section analyzes homogeneous goods industries in which, as previously explained, entry tends to be socially excessive in equilibrium. We next explore how the analysis may change when entry may contribute to variety, innovation, or synergies with incumbent firms.

B. Variety and Innovation

To the extent that permissive merger policy induces entry for buyout, total welfare falls and consumer welfare rises only modestly in homogeneous goods industries. A central determinant of this outcome is the fact that entry imposes a negative externality on incumbent firms as a consequence of business stealing, whereas there is no offsetting positive externality in this setting. The otherwise prevailing equilibrium, with no prospect of buyout, already involves socially excessive entry.

As Section I.B explains, however, entrants often contribute value in ways that they do not fully internalize, notably, by enhancing the variety of offerings that are valued by consumers (much of this value being inframarginal and hence not captured by the entrants themselves). To that extent, additional entry that may be induced by the prospect of buyouts would not diminish total welfare as much and may increase it if variety is sufficiently valuable. Moreover, inframarginal surplus accrues to consumers, which is distinctively relevant under a consumer welfare standard.

Section I.B notes further that the foregoing logic about equilibrium entry applies not only to the introduction of greater variety but also more broadly to any spillovers that entrants may not fully capture. Innovation of many sorts generates benefits to consumers or to other firms, both incumbents that may compete with the entrant and also possibly firms in other industries. For example, many cost-reducing technologies have this latter feature, and these also may redound to the benefit of consumers because lower costs tend to be passed on to some degree, even when competition is imperfect.⁵³ When this is true, we again have a situation in which additional entry induced by the prospect of buyout may be more socially attractive than in Section A's baseline case with homogeneous goods and (implicitly) no innovation.⁵⁴

⁵³For example, dramatic reductions in computer processing costs have led to similarly dramatic reductions in consumer prices, even when much production is by a dominant firm.

⁵⁴A reservation regarding innovation is that some settings, such as those involving patent races, can involve excessive entry and excessive levels of investment in innovation. See, e.g., Partha Dasgupta & Joseph Stiglitz, *Uncertainty, Industrial Structure, and the Speed of R&D*, 11 BELL J. ECON. 1 (1980); Glenn C. Loury, *Market Structure*

The permissiveness of merger policy may also affect the extent to which prospective entrants choose strategies that contribute to variety versus ones that mimic dominant incumbents.⁵⁵ On one hand, a more permissive regime encourages entrants to invest in variety (and other features, such as those explored in Section C) in order to increase its value to the acquirer. If the entrant's product is worth continuing because it complements existing offerings, an incumbent will be willing to pay a larger buyout premium. On the other hand, activity that most closely copies the incumbent's product may induce the incumbent to pay a larger premium because the nonmerger world is less attractive to the incumbent. Note that the analysis in Section A of the homogeneous goods case, in which ex ante incentives from prospective mergers tended to be excessive, combined with the analysis here may be favorable to a merger policy that is stricter the closer is the entrant's offerings to those of the incumbent. Such a policy might beneficially steer prospective entrants' ex ante investment decisions.

C. Efficiencies

Analysis of possible merger-specific efficiencies is generally relevant to understanding a prospective merger's overall effects, going forward.⁵⁶ Of interest here is the nexus between potential efficiencies and the benefits of premerger entry. Following the analysis of the preceding Sections, particular interest will be devoted to how the prospect of a subsequent acquisition may induce entry that would give rise to subsequent merger synergies.⁵⁷

Consider first a prospective entrant that might create something of value, such as a new product or a complement to an existing product, that it cannot bring to market on its own. Perhaps it has skill at innovation but not at production, marketing, distribution, or obtaining regulatory approval. In such cases, it may have no way to obtain any revenue unless it (or, equivalently, its core asset) is ultimately acquired by an incumbent. More broadly, the expected return to its investment in innovation may be substantially boosted by the prospect of buyout.

Second, a prospective entrant may generate value not by producing something independent but instead by developing a means of enhancing the efficacy of incumbent firms' operations. For example, an entrant might develop a process innovation that reduces production costs or information technology that enhances some aspects of incumbents' operations. Here too, there may be no prospect of any revenue on a standalone basis, and in any event an acquisition may generate much of the potential return to investment in such endeavors.

and Innovation, 93 Q. J. ECON. 395 (1979). This tendency will be greater when a high share of benefits is appropriable by the winner of the race (as assumed in many such models), whereas the scenario envisioned in the text imagines significant spillovers, such as to other firms, possibly including competitors.

⁵⁵See Richard J. Gilbert & Michael L. Katz, *Dynamic Merger Policy and Pre-Merger Product Choice by an Entrant*, 81 INT'L J. INDUS. ORG. 102812 (2022); Abraham L. Wickelgren, *Optimal Merger Standards for Potential Competition: The Effect of Ex Ante Investment Incentives* (Sept. 2021) (unpublished manuscript).

⁵⁶See, e.g., EU Merger Guidelines, *supra* note 1, at ¶¶ 76–88; U.S. Merger Guidelines, *supra* note 1, at 29–31; Kaplow, *supra* note 26 (analyzing merger efficiencies).

⁵⁷Although the exposition is couched in terms of entry, the analysis is more broadly relevant to investments, including by incumbent firms that might, for example, enhance a capability precisely because that creates a synergy that would induce a buyout at a premium.

From familiar analyses of merger efficiencies, there are an array of circumstances in which two firms' assets may be complementary, generating greater value when combined in a single firm. The key point here is that traditional merger analysis tends to take as given the existence of some set of firms, with preexisting sets of capabilities, and then consider whether two of them should be permitted to combine. By contrast, the question here is how the choice of a merger regime—the circumstances in which such mergers would be permitted or blocked—influences ex ante incentives for one of the firms to come into existence or to undertake various investments in the first place.

Entrants' investments that generate greater merger efficiencies lead to larger buyout premiums, *ceteris paribus*. Independent of any incentive an incumbent may have to eliminate an entrant's competitive force, it will reap a further benefit, leading it to pay more, to the extent that the entrant possesses assets that contribute to joint profitability. For this reason, there will be a greater incentive ex ante for prospective entrants to invest more in activities that generate such synergies, assuming that subsequent acquisitions would be permitted.

To elaborate, the magnitude of buyout premiums depends on the nature of the bargaining between the two firms. This surplus division, in turn, will be influenced by whether there are other potential acquirers and the extent to which the target (here, the recent entrant) offers distinctive benefits to the acquirer. Nevertheless, because synergistic gains generally will be shared—and thus not fully captured by the entrant—ex ante investment incentives tend to be too low from a social perspective even when buyouts are freely allowed. Therefore, reductions in these ex ante incentives, which result from a less permissive buyout regime, will be socially detrimental on that account.

However, as with any analysis of merger efficiencies, it is necessary to inquire whether such synergies are merger specific.⁵⁸ Although the appropriate analysis here is similar in general terms, note that the present perspective differs because we are interested in ex ante incentives as well ex post effects on the realization of synergies and on competition. Accordingly, it matters not just whether, taking the entrant's investment success as given, the efficiencies will distinctly be achieved but also the extent to which the entrant captures any profits, the prospect of which induces such investment ex ante.

One alternative to merger is that the entrant might license its innovation to industry incumbents or otherwise enter into contractual relations with them that would enable the synergies to be realized. Sometimes this outcome would be highly profitable and socially preferable, such as when an entrant licenses an industry. Such is most likely to be feasible when the entrant's asset is intellectual property of a type that can be well protected, such as with a patent. But for other assets, and for intellectual property that is difficult to license due to asymmetric information, this route may be inferior or infeasible. Moreover, in some instances the most relevant contractual alternatives to merger may have many of the anticompetitive

⁵⁸See, e.g., EU Merger Guidelines, *supra* note 1, at ¶ 85; U.S. Merger Guidelines, *supra* note 1, at 30. See also *United States v. H & R Block, Inc.*, 833 F. Supp. 2d 36, 89 (D.D.C. 2011) (following Guidelines' requirement of merger specificity); Kaplow, *supra* note 26, at 559–87 (analyzing merger specificity).

effects of the merger itself. For example, when distinctive intellectual property is licensed at the monopoly price, the results may be similar regardless of which firm owns the intellectual property. And other forms of contractual cooperation with competitors may dampen competition, particularly if the contracting competitors need to align their incentives for other reasons.⁵⁹

Another alternative to a particular merger, say, with the largest incumbent, is to require the entrant to find an alternative, less anticompetitive acquirer. It is familiar that, all else equal, the most anticompetitive prospective acquirer will offer the largest buyout premium and thereby win an auction for the entrant. This is both because such an acquisition tends to generate the greatest increase in industry profits and because the largest acquirer tends to reap the greatest share of that bigger pie.

An important qualification is apropos here because, as mentioned, we are concerned with the prospective entrant's ex ante incentives to invest—that is, we are not taking the entrant's efforts as given, as in conventional merger analysis. A regime that would force such entrants to merge instead with less anticompetitive acquirers will accordingly reduce these entrants' ex ante incentives because of the lower buyout premium. The application here is subtle because, from a social perspective, the objective is to induce investments that generate the greatest synergies rather than (contrary to a different part of conventional wisdom) to induce investments that most duplicate incumbents (because, for example, in homogeneous goods industries, those incentives tend to be socially excessive rather than inadequate). Observe that these features will sometimes point in different directions, such as when an entrant generates the greatest synergy with a smaller incumbent, perhaps one that lacks the distinctive assets that the entrant offers, but the largest buyout premium is nevertheless offered by the largest incumbent on account of the profits attributable to the greater anticompetitive effect. That greater anticompetitive effect might even be attributable to depriving the smaller incumbent the boost that its merging with the entrant would generate.

Consider as well the problem of asymmetric information regarding acquirers' ability to determine the value of what an entrant has to offer (a point already alluded to with respect to contracting). On one hand, it may be that a biotech startup has a prospective new drug that many large pharmaceutical companies could develop, obtain regulatory approval for, and bring to market, conditional on success at earlier stages. On the other hand, perhaps only those few incumbents that concentrate their efforts in the entrant's line of research have the capability to distinguish truly valuable drug prospects from the many over-hyped lines of research that are unlikely to prove fruitful. Or perhaps they are better at optimizing further development because of their superior expertise in the relevant domain. As a consequence, these firms might be willing to offer significantly greater premiums—specifically, when what the entrant has to offer is in fact quite valuable. Moreover, it is important in channeling the direction of prospective entrants' research that prospective premiums be aligned with the actual value of their innovations. In the presence of asymmetric information about the value of entrants' assets, buyout prospects and prices will be lower and accordingly ex ante incentives will be diminished,

⁵⁹See Kaplow, *supra* note 26, at 584–87.

all the more so if the most informed prospective purchasers are not permitted to bid. A further implication is that acquirers' asymmetric information may sometimes be greatest when entrants' work is at early stages, making it optimal for both parties to wait.⁶⁰ However, for reasons explored in Section III.A, incumbents may wish to make their acquisitions quite early because at that point a reviewing authority's informational disadvantage in mounting an effective challenge tends to be even larger.⁶¹

Yet another fairly basic alternative to merger is to require the incumbent to go it alone, including when the entrant is left with no substantial contracting or merger partner. The previous analysis of merger synergies supposes that internal development by the incumbent is infeasible, inferior, or slower, which is especially important when technology is evolving rapidly. This possibility is related to the traditional notion that a dominant firm may itself be a plausible potential competitor,⁶² but here in a space occupied by a recent entrant rather than an established firm.⁶³ In considering this question, it is also familiar to ask whether the acquirer might instead take a toehold position, merging with a small player rather than a substantial firm, but here we are considering cases in which the acquirer is doing just that, often because the entrant may have distinctive capabilities.

When that is so, we have returned to where we began. It is well understood that much innovation is generated by startups rather than by established firms that could in principle have come up with the ideas and run with them but often do not. When an entrant appears and its acquisition is under review, it is necessary to assess the extent to which the incumbent already has or could independently generate the entrant's capabilities, in which case there may exist little by way of merger-specific synergies, leaving only the anticompetitive effects. There will often be significant uncertainty about the extent to which this is true. Moreover, we need to consider as well (as emphasized in Sections A and B) whether *ex ante* incentives for the type of entry under examination are likely to be excessive or inadequate and how much those incentives are boosted by the prospect of the sort of buyout reflected in the proposed merger.

⁶⁰This asymmetric information problem—combined with substantial uncertainty even when entrants' knowledge is no better—implies that many acquisitions of nascent firms will eventually be followed by discontinuation of those firms' projects. As discussed in Section D, they may also be discontinued precisely because of competitive overlap, although in such instances profit-maximizing acquirers would tend to continue whichever development paths were superior.

⁶¹These incumbents' asymmetric information problem would, of course, be exacerbated by acquiring startups early on. Relatedly, a reputation for early acquisitions under limited information will induce entry for buyout, as explored throughout this Part, and perhaps a large mass of a particular type: entrants that in fact have little real prospect but that masquerade as potentially disruptive firms, with the result that incumbents will need to make substantial and unnecessary expenditures to defend their turf.

⁶²*See, e.g.,* FTC v. Procter & Gamble Co., 386 U.S. 568 (1967). This topic receives brief attention in EU Merger Guidelines, *supra* note 1, ¶¶ 58–60, but none in the current U.S. guidelines.

⁶³Some recent acquisitions by tech giants have been of established firms in sectors where the acquirer does not yet significantly operate, such as Amazon's acquisition of Whole Foods. *See Press Release, Fed. Trade Comm'n, Statement of Federal Trade Commission's Acting Director of the Bureau of Competition on the Agency's Review of Amazon.com, Inc.'s Acquisition of Whole Foods Market Inc.* (Aug. 23, 2017), www.ftc.gov/news-events/news/press-releases/2017/08/statement-federal-trade-commissions-acting-director-bureau-competition-agencys-review-amazoncom-incs.

D. Acquisitions by Big Tech and Beyond

An unfortunate feature of the analysis in this Part is that the ex ante analysis of mergers and entry, focusing on prospective entrants' incentives to invest, is complex, subtle, and shrouded in uncertainty, even more so than is conventional analysis that takes the existing set of firms as given. Section III.A will elaborate ways to partially mitigate this challenge, but at best it will remain formidable. Ignoring important dimensions of the problem, however, does not make them disappear. Relatedly, it is important to address the increasing concern that some of the most consequential incumbent firms—particularly giants in technology—may be entrenching their positions through anticompetitive acquisitions of nascent entrants that threaten disruption.⁶⁴

Note first that many policy discussions take entrants' presence and disruptive potential as given.⁶⁵ By contrast, the analysis here emphasizes that firms' incentives to undertake investments in order to put themselves in such positions are endogenous, reflecting in part whether they will be subsequently permitted to be acquired by incumbents (and which ones). As we have seen, the anticipation of such buyouts in some instances creates socially excessive ex ante incentives—so that a more restrictive merger regime that discourages such investment may promote welfare more than otherwise—whereas in other cases ex ante incentives may be inadequate, in which case the boost to investment from the prospect of permissive buyouts will be advantageous.⁶⁶ Moreover, if a regime is more permissive with respect to target firms that have undertaken the sorts of investments we would like to encourage, there may be the further benefit of channeling ex ante investment in more socially valuable directions. Conventional analysis of anticompetitive effects of prospective mergers, going forward—that also examines merger-specific efficiencies, the prospect of ex post entry (see Part I), and other factors—needs to be undertaken, but that assembles only some of the pieces of the puzzle.

⁶⁴For a commentary on recent debates, academic literature, legislative proposals, agency proceedings, and cases, see David Emanuelson & Danielle Drory, *supra* note 2, and C. Scott Hemphill & Tim Wu, *Nascent Competitors*, 168 U. PA. L. REV. 1879 (2020). See also Colleen Cunningham, Florian Ederer & Song Ma, *Killer Acquisitions*, 129 J. POL. ECON. 649 (2021).

⁶⁵In recent years, a variety of models focused on ex ante incentives have emerged that emphasize different aspects of the problem. Some examine how the permissibility of subsequent acquisitions affects incumbents' and entrants' incentives for innovation. See, e.g., Gilbert & Katz, *supra* note 55; Michael L. Katz, *Big Tech Mergers: Innovation, Competition for the Market, and the Acquisition of Emerging Competitors*, 54 INFO. ECON. & POL'Y 100883 (2021); Igor Letina, Armin Schmutzler & Regina Seibel, *Killer Acquisitions and Beyond: Policy Effects on Innovation Strategies* (Univ. of Zurich, Working Paper No. 358, 2021). Another suggests that a permissive regime may discourage entry if the prospect of lucrative buyouts dissuades potential customers who are subject to lock-in from making the effort to deal with entrants that they expect to be acquired by the dominant platform. See Sai Krishna Kamepalli, Raghuram Rajan & Luigi Zingales, *Kill Zone* (NBER, Working Paper No. 27146, 2022).

⁶⁶Regarding the former setting and focusing on the extreme case of purely homogeneous goods, it is familiar that competition to become a monopolist or to replace an existing monopolist can be beneficial. Consider, for example, the case in which strong network effects imply that there is a natural monopoly. If the same good is offered in any event, social gains arise mainly by providing them at the lowest cost, both because that saves total resources and because even a monopolist tends to offer a lower price when it is more efficient. Nevertheless, for the sorts of reasons developed in Section I.B and elaborated in Section A of this Part, incentives can still be excessive in this case.

By contrast, if an entrant offers a new variety or an entirely new product, greater ex ante incentives are more likely to be socially valuable. In this case, buyout may be attractive on that account. Note further that an incumbent acquirer would generally have an incentive after the acquisition to offer the entrant's new or superior product. If buyout is prohibited, the post-entry result will be more competitive (prices will be lower), while the lower resulting profit for the entrant will, in anticipation, provide less ex ante inducement.

In considering the relevance of ex ante incentives to the formulation of merger policy, it is important to differentiate the distinctive effects of acquisitions by incumbents versus outside acquisitions as well as by contrast to alternative means by which entrants can cash out their investments. Some startups are founded by serial entrepreneurs who wish to move on quickly; others by individuals who lack the wherewithal to bring their fruitful ideas to the next stage; and others by those who simply wish to sell much of their stake in order to diversify their positions. These objectives can often be achieved by other means, particularly in light of the tremendous growth of private equity and other sources of finance. Accordingly, this Part's analysis tends to be relevant primarily to the prospect of entrants' selling out to incumbents, especially dominant ones. The primary caveat is the asymmetric information problem identified in Section C: to the extent that existing firms with overlapping expertise are the only players having the wherewithal to assess entrants' true value, it may be that mergers with incumbents offer unique advantages even when entrants merely seek to cash out.

Second, consider briefly the analysis of prospective anticompetitive effects. This task can be especially challenging when the acquired firm is a recent entrant (or not even that), the future competitive impact of which may as yet be highly uncertain. When a firm enters a homogeneous goods industry employing conventional technology, the analysis is more straightforward. But when a firm deploys a new technology, both its potential competitive significance and the nature of potential synergies may be difficult to ascertain. Regarding the former, a new substitute may enhance competition on a standalone basis whereas a complement may be valuable only when combined with what incumbents offer. But when technological evolution is rapid and difficult even for industry experts to predict, it may not be clear which case prevails. Another concern is that an incumbent's acquisition of a complement may make subsequent entry by firms offering substitutes more difficult. Moreover, what may be a complement today sometimes becomes or facilitates the emergence of a substitute tomorrow.⁶⁷ The earlier the acquisition is, the harder it will be even for incumbents to understand the likelihood that different scenarios will prevail, much less for those reviewing a proposed merger.⁶⁸

III. Additional Considerations

A. Information and Expertise

Merger review poses serious challenges to competition agencies and reviewing courts. Predicting anticompetitive effects even in familiar settings is difficult, and assessing efficiencies may be even harder. Parts I and II indicate that the proper incorporation of ex post and ex ante

⁶⁷This possibility is familiar from earlier cases involving Microsoft and challenges to some recent acquisitions by Facebook, Google, and others.

⁶⁸An uncertain government agency may accordingly find it preferable to allow a merger, wait and see, and subsequently challenge the acquisition if it proves to be anticompetitive. Drawbacks to this strategy include possibly perverse interim incentive effects on the merged firm and also the difficulty of untangling the assets subsequently, which the firms may have an incentive to render infeasible along the way. This tradeoff is apparent in the FTC's recent challenge to Facebook's prior acquisitions of Instagram and WhatsApp. *FTC v. Facebook, Inc.*, No. 20-3590 (D.D.C. Jan. 11, 2022).

entry requires attention to important factors that have been largely off the radar screen and sometimes entail inquiries qualitatively different from those ordinarily undertaken. Hence, properly understood, the task is even more daunting. The complexity, subtlety, and novelty further motivate some retooling.

We have seen that entry can be quite important and may have highly consequential implications, sometimes opposite to what is ordinarily supposed, such as when easier entry may imply a greater social cost from excessive entry that a merger would induce ex post or that the prospect of a merger would encourage ex ante. Moreover, there is greater recognition that incumbents' acquisitions of recent entrants constitute both a central inducement to dynamism because of the ex ante incentives they generate and a possibly critical threat to procompetitive disruption. Accordingly, it is dangerous for competition regimes to pursue either a blindly prohibitive approach or an entirely permissive one. The best we can hope to achieve is to navigate an intermediate course that plausibly gets most decisions right and not many terribly wrong.

Parts I and II offer an analytical framework but one that is not self-executing. The requisite information is hard to come by and requires relevant expertise to process. This challenge is especially great with respect to ex ante entry because it is especially hard to predict nascent firms' future roles, whether as independent players or in generating potential synergies when acquired by an incumbent. This challenge may be accentuated by acquirers strategically buying out potentially disruptive entrants quite early, precisely to make it hard for reviewing authorities to identify competitive threats with sufficient confidence. Either way, when a recent entrant—which may not actually have “entered” in a meaningful sense—is acquired, it may be difficult to determine even what its assets (potential products or processes) are. This makes it all the more difficult to assess whether they are substitutes or complements, are independently viable, can be successfully exploited via licensing or by sale to alternative acquirers, or might generate merger-specific synergies with the acquirer at hand.

Proper assessment would benefit from greater industry-specific expertise that most competition lawyers and economists lack. Agency staffs develop expertise over time, particularly as a consequence of sector specialization. But if one does not have the full repertoire of skills and gets little direct feedback, there are limits to how much can be learned. Moreover, the distinctive expertise of most agency economists is in the modeling of competitive interactions and the estimation of demand systems to apply such models, including through merger simulation. Many of the factors identified in this article are fairly different, a point reinforced by the fact that neither agency guidance documents nor competition policy writing by leading economists who have served in the agencies addresses these topics in depth.

In addition to drawing on a wider range of economic expertise, agencies need to rely more directly on talented individuals with direct industry experience, whether at the sorts of firms proposing to merge, as consultants, or as financiers. For example, many at venture capital firms and private equity shops spend their lives evaluating startups, identifying their future opportunities (including buyout possibilities), and serving on their boards to help guide strategic decision-making. When trying to assess the costs of entry, the density of emerging entrants, future competitive environments, the ability to operate independently in those circumstances,

whether a nascent firm’s core asset is a substitute for or complement to an incumbent’s offerings, and more, it seems that such individuals are likely to know best—which is to say, they are in a position to formulate estimates that are superior to those of outsiders.

To some extent, agencies already draw on such expertise and develop some of this capacity in-house. It probably makes sense to bolster these efforts substantially, both via broadening the composition of permanent staff and by having a cadre of industry experts on call. Sufficient on-demand resources are required to enable prompt assessments at early stages of merger review, when most decisions are made (especially decisions not to pursue a matter) and when input is most needed to guide the further investigation of merger proposals that might pose serious risks. It is helpful, but not nearly as helpful, to employ expertise much later in the process—when reaching final decisions and preparing for litigation in court—because at that stage one may be challenging the wrong mergers and one will have forgone opportunities to extract the most relevant information along the way. Indeed, decisions about what information to collect and how to interpret the initial tea leaves may be the ones most enhanced by relevant expertise.⁶⁹

Courts face all these challenges but without the experience, staff, or other resources possessed by competition agencies. Some judges will be hearing their first merger dispute, and even those who have seen many mergers will often be seeing their first in the industry in question. Tribunals rely on the merging parties’ and the government’s presentations, so the more those reflect the relevant expertise, the better. Nevertheless, judges appreciate their inherent limitations and could benefit substantially from assistance along a number of dimensions: organizing and focusing on the relevant issues, structuring proceedings (it cannot make sense to have complex testimony, rebuttal, and reply on a single topic separated by days or weeks), refining questions, and otherwise helping to separate the wheat from the chaff. Various proposals for court-appointed magistrates, advisors, and experts have been offered.⁷⁰ They seem worth prioritizing because the capacity of the final decision-maker places important constraints on what a conscientious agency can accomplish.⁷¹

B. Consumer Welfare, Total Welfare, and the Long Run

A longstanding debate addresses whether competition regimes should advance consumer

⁶⁹Much of this information can to some degree be obtained from the merging parties themselves by taking depositions and examining internal documents. In this regard, it is appreciated that often the most probative internal information is not what firms generate on the eve of the merger—which may have an eye to merger review—but rather that generated over time in the ordinary course of business. However, when an incumbent is acquiring a nascent firm, this source of information may be limited and more difficult to interpret. In the United States, it is also common for the merging parties’ lawyers to have the firms’ executives present the business case for a merger to the agencies. Here, too, the ability of agencies to scrutinize this information would be substantially improved if other individuals with useful expertise were active members of the government’s team.

⁷⁰*See, e.g.*, SECTION OF ANTITRUST LAW, AM. BAR ASS’N, PRESIDENTIAL TRANSITION REPORT: THE STATE OF ANTITRUST ENFORCEMENT 17–19 (2017); J. Gregory Sidak, *Court-Appointed Neutral Economic Experts*, 9 J. COMPETITION L. & ECON. 359 (2013).

⁷¹Of course, an agency can of its own volition choose not to challenge a merger that it believes should be allowed. In the United States, however, it is possible for others to bring challenges that courts must then resolve.

or total welfare (or be guided by additional or alternative considerations, which will not be examined here).⁷² Merger policy, as reflected in merger guidelines, often articulates a consumer welfare standard.⁷³ This Section briefly considers the relevance of this choice to the analysis of entry in particular and offers two observations regarding which welfare standard seems best.

The analysis in Parts I and II identifies and often distinguishes effects of both *ex post* and *ex ante* entry on consumer and total welfare. Central to this difference is the fact that, in the absence of mergers, the equilibrium level of entry in imperfectly competitive markets does not (conditional on the extant competitive situation) tend to be socially optimal, that is, from a total welfare perspective. Taking the simplest case, at one end of a spectrum, with homogeneous goods (and otherwise homogeneous firms), *ex post* entry tends to mitigate direct anticompetitive effects of approved mergers, but this also tends to reduce total surplus by more than it restores consumer surplus. *Ex ante* entry for buyout in some such settings is excessive, and we saw that, counterintuitively, a strict ban on subsequent mergers may somewhat reduce consumer welfare while significantly increasing total welfare. Hence, the choice of the welfare standard can be consequential with regard to the role of entry in merger analysis—although a given choice does not point unambiguously toward a tougher or more permissive regime.

However, this divergence between the implications of the two welfare standards may be

⁷²See, e.g., Joseph Farrell & Michael L. Katz, *The Economics of Welfare Standards in Antitrust*, COMPETITION POL'Y INT'L, Winter 2006, 2.

⁷³These endorsements are most explicit when indicating that efficiencies are to be credited only to the extent that they offset otherwise anticompetitive price increases. See, e.g., EU Merger Guidelines, *supra* note 1, ¶ 79 (“The relevant benchmark in assessing efficiency claims is that consumers will not be worse off as a result of the merger.”); U.S. Merger Guidelines, *supra* note 1, at 2 (“Regardless of how enhanced market power likely would be manifested, the Agencies normally evaluate mergers based on their impact on customers.”); *id.* at 30–31 (“[T]he Agencies considers 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.”). But see COMPETITION BUREAU, CANADA, MERGER ENFORCEMENT GUIDELINES 44 (2011) (“A merger that results in a price increase generally brings about a negative resource allocation effect (referred to as ‘deadweight loss’), which is a reduction in total consumer and producer surplus within Canada.”). The U.S. guidelines also make a similar pronouncement with regard to the analysis of entry. See U.S. Merger Guidelines, *supra* note 1, at 28 (“The prospect of entry into the relevant market will alleviate concerns about adverse competitive effects only if such entry will deter or counteract any competitive effects of concern so the merger will not substantially harm customers.”).

In the United States, the legislative history of the current version of Section 7 of the Clayton Act, adopted in 1950, refers to a range of social, political, and economic concerns (although not of the modern sort), and the first Supreme Court interpretation, drawing on the legislative history, is widely regarded to reflect more of a concern for small producers’ surplus, even at the expense of consumers and total welfare. See *Brown Shoe Co. v. United States*, 370 U.S. 294, 344 (1962) (“But we cannot fail to recognize Congress’ desire to promote competition through the protection of viable, small, locally owned business. Congress appreciated that occasional higher costs and prices might result from the maintenance of fragmented industries and markets. It resolved these competing considerations in favor of decentralization.”); Derek C. Bok, *Section 7 of the Clayton Act and the Merging of Law and Economics*, 74 HARV. L. REV. 226, 236–37 (1960) (“To anyone used to the preoccupation of professors and administrators with the economic consequences of monopoly power, the curious aspect of the [legislative] debates is the paucity of remarks having to do with the effects of concentration on prices, innovation, distribution, and efficiency. To be sure, there were allusions to the need for preserving competition. But competition appeared to possess a strong socio-political connotation which centered on the virtues of the small entrepreneur to an extent seldom duplicated in economic literature.”). Section 7 refers specifically to “competition” (and “monopoly”), 15 U.S.C. § 18, which are subject to multiple interpretations. See, e.g., Louis Kaplow & Carl Shapiro, *Antitrust*, in 2 HANDBOOK OF LAW AND ECONOMICS 1073, 1132–36, 1165–66 (A. Mitchell Polinsky & Steven Shavell eds., 2007).

less important over a longer time horizon.⁷⁴ In that time frame, a total welfare perspective on a merger under consideration may be a better indicator of long-run consumer welfare than a myopic consumer welfare standard would be. Even with imperfect competition in a sector of the economy, it remains true that, from an ex ante perspective, the expected, risk-adjusted, present value of profits is zero in a range of models that feature endogenous entry, so consumer surplus equals total surplus in equilibrium.⁷⁵ All profits are quasi-rents, typically representing recoveries for prior investments. With free entry and exit (and setting aside the integer constraint⁷⁶), price equals average cost in long-run equilibrium. In that sense all fixed costs are borne by (that is, passed on to) consumers, reflecting that in the long run (or from an ex ante perspective), what are typically regarded as fixed costs are actually variable. These phenomena do not mean that the imperfectly competitive equilibrium is optimal. Taking a single-sector focus, price exceeds marginal cost, and the number of firms, as explained in Section I.B, may be excessive or insufficient. This observation regarding the tendency of the two welfare standards to converge over a longer time horizon is partial and contingent but has significant force.

Most would resist the suggestion that competition agencies and courts should undertake long-run analysis (and comprehensive ex ante analysis) of each merger that is reviewed. That would be too difficult and highly speculative. Nevertheless, the best proxies, screens, and shortcuts should be derived from our understanding of long-run considerations. For example, a truly short-run view would regard all innovation as irrelevant, all investments as pure costs, and ex post entry in all but the simplest settings as immaterial because not it is instantaneous. Even substantial merger synergies would be ignored because they rarely appear immediately. Dynamic considerations are central to rules on monopolization and play an important role, as they should, in shaping merger protocols. This is particularly so with regard to the concern, discussed in Section II.D, that incumbents may extinguish nascent firms that might disrupt their market power in the future. Here the acquired firms' current and near-term competitive threat may be negligible or nonexistent, so any substantial anticompetitive threat is years away. That fact makes the prediction of the proposed mergers' effects more difficult but no less important. Insistence on near-term analysis in such settings guarantees inaction.

Regarding ex post entry specifically, less attention should be given to precisely how quickly such entry would occur.⁷⁷ Ironically, whether entry would in fact take place within, say, two years (a common focal point) may be more difficult to determine with any confidence than whether and how much will happen over a fuzzier time frame and, importantly, what would be the welfare consequences thereof. In some settings, it may be clearer that induced ex post entry would reduce total welfare—and likely consumer welfare over the long run—than whether it will reduce an anticompetitive price elevation by a stated amount by a particular target date.

As Part II indicates, ex ante entry may be even more difficult to analyze in a given case, keeping in mind as well that the correct analysis does not take the existence of the acquired

⁷⁴Cf. Michael L. Katz & Howard A. Shelanski, *Mergers and Innovation*, 74 ANTITRUST L.J. 1, 55 (2007) (advancing this perspective with respect to effects on innovation).

⁷⁵See, e.g., Mankiw & Whinston, *supra* note 13.

⁷⁶See *supra* note 13.

⁷⁷In any event, Hilke & Nelson, *supra* note 16, suggest that entry is likely to take a few years in many industries.

entrant as given but rather focuses on how the prospect of a more or less permissive merger regime will feed back to ex ante incentives. Here too, a broader view is not in all respects harder to implement. For example, one may better be able to develop a sense of how much disallowing the type of merger under consideration would discourage ex ante entry—and whether such discouragement tends to raise or reduce welfare (depending on whether entry incentives are excessive or inadequate)—than to determine whether the particular entrant being acquired would in fact have come into existence (and in precisely what form) if it had anticipated that the subsequent acquisition under review would have been attempted but then prohibited.

A long-run perspective is necessary to appreciate the effects of merger policy on the overall welfare of consumers and society as a whole. How best to implement a chosen welfare standard through rules of law and rules of thumb in the review of individual mergers is not obvious. The suggestion here is that this is the right question for merger policy to address, both generally and with regard to entry.⁷⁸

A further observation on the choice of welfare standard, focusing on the distributive dimension, is that it should also take a high-level view. Just as environmental policy, safety regulation, and much other government action is designed by reference to an efficiency standard (a form of total welfare standard), leaving the problem of income distribution to the tax and transfer system, so too should competition regulation. One justification for such specialization is narrow: competition agencies are staffed by competition experts, not experts in income distribution. Relatedly, the choice of a consumer over a total welfare standard on distributive grounds makes some sense at a gross level—the ownership of profits being much more concentrated at the top of the income distribution than is consumption—but it is crude in practice. Regarding entry, the question at hand, we would need to determine which sorts of excessive or insufficient entry, both judged from a total welfare standard, are passed through to consumers (and over what time frame) to intelligently sort out the difference. Even more broadly, and regardless of the foregoing, one generally can make all income groups better off by maximizing total welfare with competition policy while accomplishing desired distributive objectives through the income tax and transfer system.⁷⁹ If the overall economic pie is larger, it is possible to give everyone a bigger slice.

IV. Conclusion

Entry can be relevant to merger analysis through two channels: ex post entry, which is

⁷⁸The conventional short-term focus of merger analysis is criticized in Michael L. Katz & Howard A. Shelanski, *Merger Analysis and the Treatment of Uncertainty: Should We Expect Better?*, 74 ANTITRUST L.J. 537, 547–48 (2007).

⁷⁹See Louis Kaplow, *On the Choice of Welfare Standards in Competition Law*, in THE GOALS OF COMPETITION LAW 3, 18–25 (Daniel Zimmer ed., 2012) [hereinafter *Welfare Standards*]; Louis Kaplow, *Market Power and Income Taxation*, 13 AM. ECON. J.: ECON. POL'Y 329 (2021). In addition, a conjecture is that, in the long run, political forces will tend to be in some distributive equilibrium, one that may evolve over time but that reflects, perhaps with some lag, the shifting views and forces on the subject. In particular, it may not be plausible to suppose that the same political actor (say, a legislature) would simultaneously wish to inefficiently promote greater redistribution through a specialized channel (like competition policy) while intentionally redistributing less through the more direct tax channel. See Kaplow, *Welfare Standards*, *supra*, at 14–18. The efficient combination can favor all income groups. Of course, special interests and public misunderstandings of various policies' effects can generate different outcomes.

induced by a merger that otherwise would raise price, and ex ante entry, which is encouraged by the prospect of a subsequent acquisition. Both have been underanalyzed and each may have counterintuitive implications.

Ex post entry may result from mergers whose direct effect is to raise price, which makes entry more profitable than it was before the merger. Equilibrium thinking is the key, for mergers can only induce subsequent entry by making entrants' post-entry experience more lucrative. Facially anticompetitive mergers—those that would raise price, even after accounting for efficiencies—tend to generate some entry but not enough to restore the premerger price. Because entry is often discrete (lumpy), it is possible that price will rise significantly and induce no entry, and it is also conceivable that postmerger, post-entry prices would be lower than premerger prices. That said, the general tendency will be for anticompetitive mergers to induce some ex post entry but not enough to erase the anticompetitive effects.

Assessing the consequences of ex post entry should not, however, stop there. Research in industrial organization economics establishes that equilibrium entry (in a world with no mergers) does not tend to be at a socially optimal level when markets exhibit imperfect competition. Instead, entry may be excessive (as it is in homogeneous goods industries), in which event postmerger entry would reduce welfare through this channel. That is, the occurrence of entry could make a merger less socially attractive overall. Entry may also be socially insufficient, which it is when entrants bring sufficient variety or other innovation. In such instances, mergers that induce entry will be more beneficial as a consequence.

The foregoing assessment of ex post entry supposes, however, that the merging parties' rationality constraint is satisfied, which is to say that the proposed merger remains profitable in spite of the prospect of postmerger entry. However, in a significant range of scenarios, the prospect of entry—even if it does not fully restore premerger prices and regardless of whether entry itself raises or lowers total welfare—renders an otherwise anticompetitive merger unprofitable. Hence, the chief relevance of ex post entry often is not that it may deter or defeat postmerger anticompetitive effects—the criterion in merger guidelines and echoed by courts—but that its prospect reduces merging parties' anticipated profits from anticompetitive effects. The implication is that, the more substantial postmerger entry would be if postmerger prices would otherwise rise, the more likely it is that the merger is motivated by efficiencies rather than by anticompetitive effects. Proper merger analysis involves triangulation—an interactive assessment of direct anticompetitive effects, efficiencies, and entry—rather than sequenced or otherwise siloed examination of each independently.

Ex ante entry—that induced by the prospect of a subsequent acquisition—requires a qualitatively different analysis, but one that, like with ex post entry, is grounded in equilibrium analysis of entry in imperfectly competitive markets. In homogeneous goods settings with a dominant incumbent firm (and making other simplifying assumptions), the prospect of acquisitions induces inefficient entry for buyout. In simple cases, a strict merger policy, precisely because it discourages ex ante entry, raises total welfare and boosts an incumbent dominant firm's profits, while modestly reducing consumer welfare. In most realistic contexts, however, the entry inducement due to the prospect of buyout that is supposed in these models may be substantially muted.

In yet other settings, ex ante entry induced by the prospect of a subsequent acquisition can be socially valuable. As with ex post entry, entrants that broaden variety or otherwise introduce innovation—and, as is typical, fail to capture the full surplus thereby generated—can enhance welfare, even if the entrant is acquired by a dominant incumbent firm. Entrants may also generate important synergies that can only be realized through subsequent acquisitions. Such efficiencies need to be merger-specific to justify the merger. For example, technology licensing or being acquired by a different firm (generating smaller direct anticompetitive effects) may be superior. But not always. Moreover, regarding entry induced by the prospect of buyouts, we care not only about postmerger welfare effects compared to those in alternative scenarios but also the profits (via the buyout premium or other mechanisms) accruing to the entrant, for such profits influence whether the entry and other investments occur in the first place.

Welfare may nevertheless be higher with no acquisition, a point emphasized in much recent discussion of acquisitions by firms—particularly tech giants—of nascent disrupters that might otherwise have become a competitive force. This consideration is important, but it is essential not to take the recent entrant’s emergence and capabilities as given. Of course, the entrant is present in a given merger review, but a merger policy that is strict regarding such acquisitions may, when anticipated, reduce the flow of such entrants. It also may affect the channeling of investments by prospective entrants in ways that can be beneficial or detrimental. Hence, a proper analysis needs to take a broader, ex ante view of the matter.

In some respects, the messages in this article are discouraging, for they reveal even greater challenges in the assessment of horizontal mergers. Some suggestions regarding information and expertise for both agencies and courts are offered, but there are significant limits to what can be accomplished.

It should also be emphasized that, although entry is shown to be much more important to proper merger analysis than is currently appreciated, a more in-depth examination of entry does not broadly favor looser or tougher merger review. In many instances, results are contrary to standard intuition. A more complete assessment of entry reveals that some proposed mergers are worse than previously appreciated, but others are more likely to be beneficial. The point, therefore, is not that merger review should be more generous or more stringent, but rather that it should be cognizant of important effects so that it can better determine which mergers should be permitted and which ones blocked.

Despite the emphasis throughout on additional entry-relevant factors and new sources of subtlety, the bottom line is not that a significant number of merger reviews should undertake elaborate ex ante analysis and long-run projections, both of which would be impractical. Instead, the lesson is that we can formulate better policy only if we focus on the relevant questions and undertake the appropriate analysis. Rules of thumb, proxies, and other shortcuts are essential for the everyday operation of agencies and courts, but these tools need to be grounded in a fuller understanding of the problem rather than posited a priori or derived from simplistic reasoning that can be highly misleading. Ignorance is sometimes bliss, but it is not a good way to make policy or to conduct merger review.