The 2023 Merger Guidelines:
A Giant Leap in the Wrong Direction

June 2024

Consumer Technology Association®

Executive Summary

The Consumer Technology Association (CTA)® is North America's largest technology trade association. CTA's members are the world's leading innovators – from startups to global brands – helping support more than 18 million American jobs. CTA owns and produces CES®, the world's most influential tech event. CTA members operate in a competitive market to produce innovative products that benefit consumers and power the economy.

CTA has long supported the Federal Trade Commission's (FTC's) efforts to craft sensible merger guidance that promotes predictability for industry and consumers. Companies of all sizes benefit when agencies promote unified, clear, and transparent approaches to review. Legal predictability promotes innovation and investment, which translates directly to consumer benefits. Following the release of the 2023 Merger Guidelines published by the U.S. Department of Justice and FTC in December 2023, CTA commissioned Dr. Daniel P. O'Brien[1, 2] of Compass Lexecon to examine their economic implications.

Key Takeaways:

- The success of the Merger Guidelines, dating to their original publication in 1968, and in each revision prior to 2023, has been their reliance on the principles of economic science and past experience by the agencies in applying the guidelines to proposed transactions. By departing from established antitrust standards, the 2023 Merger Guidelines interject unpredictability and likely substantial additional costs into the market.

- Concludes that the 2023 Merger Guidelines will prevent beneficial mergers that lie at the core of how market economies benefit society. The effect of stopping these transactions will be substantially to harm competition in commerce through higher prices, less innovation, lower quality, lower wages, and other negative effects, thereby reducing GDP.

- Finds that the 2023 Merger Guidelines make incorrect claims about the effects of competition on specific performance variables, and that they focus on performance variables that are poor indicators of the effects of mergers on consumers and society.

- The 2023 Merger Guidelines establish requirements for crediting rebuttal evidence in vertical/complements mergers that is highly restrictive, such that it is unlikely that first-order benefits from many mergers will ever be given proper weight. In many cases, the requirements are demonstrably inconsistent with merger policy that promotes consumer welfare.

- Concludes that the 2023 Merger Guideline appear to give agencies license to stop any merger they deem to extend a "dominant" position defined in whatever nebulous way it chooses, without regard to the economic factors the economic literature has identified as important for determining whether a merger benefits or harms consumers.

I. Introduction

The 2023 Merger Guidelines (hereinafter "New Guidelines"), published by the U.S. Department of Justice and Federal Trade Commission (FTC) in December 2023, take a giant leap in the wrong direction. They substitute nebulous arm-chair reasoning that is inconsistent with fundamental principles of economics for more rigorous and robust reasoning in previous Merger Guidelines that developed from decades of enforcement experience and centuries of economic science. They emphasize effects on variables that are poor indicators of the effects of mergers on consumers and society. They adopt a prima facie/burden-shifting approach for non-horizontal mergers that is not supported by economics and provides nebulous and often incorrect guidance. If enforced as written, the New Guidelines will prevent beneficial voluntary movements of capital that lie at the core of how market economies benefit society. The effect of stopping these movements will be substantially to harm competition in many lines of commerce via higher prices, less innovation, lower quality, lower wages, and other negative effects, reducing GDP. This paper describes the economic bases for this conclusion with references to the economic literature.

II. Overview of Major Changes in the New Guidelines

At a high level, the New Guidelines make four main changes, three of which are the focus of this paper. First, they change the format of previous Merger Guidelines by presenting a series of specific "Guidelines," numbered 1-11, describing how mergers can harm competition (Guidelines 1-6) and evidence the Agencies will examine (Guidelines 1-6 and 7-11) to evaluate them. The shift away from the historical practice of starting with market definition is welcome, as it is consistent with experience and economic science indicating that market definition can sometimes obscure more than it clarifies and frequently does so. This change is not the focus of this paper.

Second, the New Guidelines cover *all* mergers rather than only horizontal mergers as in most previous Guidelines. In doing so, the Guidelines appear to go out of their way to avoid the terms "horizontal" (never appears), "vertical," and "complements" (they appear only when discussing harms or rebuttal evidence). However, all mergers are not the same, and in fact, predictions about the effects of mergers based on economic science depend on factors embodied in these terms. Nevertheless, the New Guidelines largely ignore these distinctions and attempt to adopt a prima facie/burden-shifting approach like that used for horizontal mergers for non-horizontal mergers, even though economic science provides no coherent basis for this approach. This creates a significant problem: because the prima facie/burden-shifting approach is not supported by economic science, the "guidance" provided for non-horizontal mergers is nebulous and unscientific, and in fact, often inconsistent with well-established economics. The drafters had no other options given their attempt to shoehorn a prima facie burden shifting approach where the shoe does not fit.

Third, in the attempt to apply a prima-facie/burden shifting approach to non-horizontal mergers, the New Guidelines relegate first-order effects,[3] many of which involve consumer *benefits*, to rebuttal evidence. There are two problems with this approach: (1) it does not make sense to attempt a prima facie approach that ignores *first-order benefits* unless the mergers are so inherently likely to harm competition that a more detailed and costly investigation is not worth it, which is not close to true for non-horizontal mergers; and (2) first-order benefits and harms interact in ways that make it impossible to reach conclusions by throwing one of them out of the analysis. Ignoring first-order benefits in merger analysis is like an aerodynamicist trying to predict aircraft performance by understanding the coefficient of drag but ignoring the coefficient of lift. It can't work.

Fourth, the Guidelines adopt a more aggressive, share-based approach to merger analysis by reducing the Herfindahl–Hirschman Index (HHI) thresholds, adopting a new threshold for the

merged firm's share (30%), expressing concern about mergers that "entrench or extend a dominant position" without defining the term "dominant," and expressing concern about trends toward concentration and consolidation that add little if anything to information already embodied in the market structure at the time the merger is presented. The New Guidelines reference old, cherry-picked, and in many cases out-of-date and illogical case law that has not been updated based on scientific advances to support much of this agenda. That is a bad idea. It took 100 years to overturn faulty reasoning that made resale price maintenance per se illegal when equivalent (or nearly equivalent) vertical restraints were treated under the rule-of-reason because economic science clearly showed that that was the right approach. Antitrust agencies are bodies of experts who should endeavor to make guidance consistent with economic science, not legal precedent that advances in science have shown to be out of date or simply wrong.

III. Errors that Harm the Analysis of All Types of Mergers

A. Erroneous Description of How Competition Benefits Consumers and Society

As in previous Merger Guidelines, the Overview section outlines the motivation, objectives, and general approach of the New Guidelines. Unfortunately, the Overview errs in connections drawn between competition, market power, and performance variables. These errors are likely to lead to faulty reasoning in investigations and cases.

The New Guidelines state:

> "Competition is a process of rivalry that incentivizes businesses to offer lower prices, improve wages and working conditions, enhance quality and resiliency, innovate, and expand choice, among many other benefits. Mergers that substantially lessen competition or tend to create a monopoly increase, extend, or entrench market power and deprive the public of these benefits." (New Guidelines, p. 1.)

This statement is important because it lays out the Agency's view of what the Guidelines seek to accomplish. However, it has several problems that similar mission statements in previous Guidelines wisely avoided.

Specifically, the claim that competition "incentivizes businesses to offer lower prices, improve wages and working conditions, enhance quality and resiliency, innovate, and expand choice" contains many imprecisions and inaccuracies. If more competition involves an entrant offering a higher quality product, price may rise, and in fact, *perfect* competition ensures that it will rise if the higher quality product has higher marginal cost.[4] If more competition involves firms offering better working conditions, the working conditions may serve as a compensating differential that decreases the wage.[5] If current wages and the quality of working conditions exceed the competitive level, more competition in the output market (e.g., from a merger or policy that facilitates imports) may reduce wages, benefitting consumers. If more competition involves entry by firms offering lower quality products at lower prices, it may reduce average quality. More generally, more competition may increase or decrease quality, or leave it unchanged.[6] It is well-known that more competition may increase or decrease innovation.[7] And if more competition involves a better product than those currently sold, it may lead to the exit of inferior products and reduce consumer choice in the sense that they have fewer products from which to choose.

These points are not mere quibbles; they highlight serious errors that previous Merger Guidelines, which evolved to reflect agency experience and paid close attention to advances in economic science, took care to avoid. Compare the following statement from the 2010 Guidelines Overview section:[8]

> "The unifying theme of these Guidelines is that mergers should not be permitted to create,

enhance, or entrench market power or to facilitate its exercise. For simplicity of exposition, these Guidelines generally refer to all of these effects as enhancing market power. A merger enhances market power if it is likely to encourage one or more firms to raise price, reduce output, diminish innovation, or otherwise harm customers as a result of diminished competitive constraints or incentives." (2010 Guidelines, p. 2.)

Notably, the 2010 Overview statement does not erroneously claim that less competition raises price, reduces output, diminishes innovation, or has other specific effects. Instead, it states that *mergers that raise price, reduce output, diminish innovation or otherwise harm customers as a result of diminished competitive constraints or incentives* should not be permitted. Having participated in discussions that led to the 2010 version of the Guidelines, I can attest to the care taken in crafting the Guidelines to avoid statements inconsistent with established economics and misleading statements that could lead merger policy down the wrong track. The reason the 2010 Guidelines focused on whether mergers have various negative effects rather than making blanket claims about how competition affects performance metrics is that economic analysis shows that the blanket claims are simply wrong.

Precision in language matters in Guidelines, especially when decision-makers are non-specialists who tend to be rewarded for aggressive enforcement.[9] While no document is perfect, the language in previous Merger Guidelines reflect a deep understanding, based on decades of experience and centuries of economic science, of the relationship between competition, market power, and various performance metrics used to assess benefits from competition and harms from reducing it through merger. The New Guidelines, regrettably, frequently fail to exhibit this understanding.

B. Unsupported and Erroneous Prima Facie/ Burden-Shifting Approach

The New Guidelines Overview section states:

> "When companies propose a merger that raises concerns under one or more Guidelines, the Agencies closely examine the evidence to determine if the facts are sufficient to infer that the effect of the merger may be to substantially lessen competition or to tend to create a monopoly (sometimes referred to as a "prima facie case").
> ...
> Specifically, Guidelines 1-6 describe distinct frameworks the Agencies use to identify that a merger raises prima facie concerns, and Guidelines 7-11 explain how to apply those frameworks in several specific settings."
> ...
> [T]he Agencies will also examine relevant evidence to determine if it disproves or rebuts the prima facie case and shows that the merger does not in fact threaten to substantially lessen competition or tend to create a monopoly." (2023 Merger Guidelines, p. 2)

Thus, the framework for the analysis of *all* mergers (horizontal and non-horizontal) involves two steps: (1) assessing whether evidence *other than that classified as rebuttal evidence* is sufficient to infer that the merger may substantially lessen competition or tend to create a monopoly—the prima facie case; and, if so, (2) shifting the burden to defendants to give them the opportunity to rebut the prima facie case.

According to Black's Law Dictionary, the term "prima facie" is Latin for "At first sight; on the first appearance; on the face of it; so far as can be judged from the first disclosure."[10] A "prima facie case" is one "[s]uch as will prevail until contradicted and overcome by other evidence ... [a] case which has proceeded upon sufficient proof to that stage where it will support finding if evidence to the contrary is disregarded."[11] Thus, the Agencies' framework is based on a belief that a sensible approach for *all* mergers is to develop "first-appearance" evidence

that, if rebuttal evidence were ignored (the “other,” “contrary” evidence), would establish a presumption of harm sufficient to stop the merger, and then shift the burden to the defense to prove that rebuttal evidence contradicts the first-impression evidence before allowing the merger to proceed.

The prima facie/burden-shifting approach can be justified for purely horizontal mergers, where (i) in the absence of offsetting production cost savings, economic theory and empirical evidence create a reasonably strong presumption of harm from such mergers when they substantially increase concentration in highly concentrated markets; (ii) efficiencies from production cost savings are not a first-order benefit that arises from changes in incentives due to changes in ownership and control—they need to be demonstrated; and (iii) researchers have shown that a rigorous methodology exists for determining in a separate analysis the size of production marginal cost savings sufficient to offset competitive harm.[12] However, the prima facie/burden-shifting approach does not work at all (and is an ill-advised idea) for assessing mergers where (a) economic theory and empirical evidence do not indicate a reasonably strong presumption of harm, in fact, it suggests the opposite;[13] (b) the merger generates first-order benefits that interact with potential harms in ways that affect whether any harms are even likely; and (c) no analysis of these benefits conducted independently of the analysis of harms can establish whether the merger has net procompetitive or anticompetitive effects. Each of points (a)-(c) is true for non-horizontal mergers. Some examples follow.

Complements Mergers. Mergers between producers of complements (including vertical mergers) generate first-order benefits (discussed further below) from changes in incentives due to changes in ownership and control that are relegated to rebuttal evidence. Doing so makes it impossible to reach conclusions about potential harmful effects of complements mergers. The reason is that the post-merger incentives of the merged firm depend in complex ways on the interaction of all first-order effects, including first-order benefits and any first-order harms. Any prediction about strategies deemed harmful must account for this interaction. For this reason, the New Guidelines prima facie/burden-shifting approach, which relegates first-order benefits to rebuttal evidence, cannot work for complements mergers.

Mergers Involving Innovators. Mergers involving new innovators often are not purely horizontal mergers. They frequently occur in innovation markets where innovators develop new or better products with the intention of selling them to entities who are better at producing and marketing them to consumers. Such mergers combine complementary inputs into production—the innovated product, and inputs into production and marketing required to bring the product to market. Concentration indices used to outline the boundaries of prima facie cases for purely horizontal mergers are not appropriate for mergers involving innovators who invest expecting to exploit complementarities between their innovations and the production and marketing assets of existing firms.

Tying/Bundling Concerns. There is no basis in economic theory for shifting the burden to the defense based on a theory of post-merger tying/bundling, whether the merger is horizontal, combines complements, or combines products that are independent in demand. Such a theory would have to establish that post-merger tying/bundling is likely *and* that it is likely to be harmful. Economic literature shows that tying/bundling can have many benefits[14] and does not establish that tying/bundling is “likely” to be harmful. Examples exist where tying can deter entry and maintain market power or extend it into additional markets (although the welfare effects of tying can be ambiguous even in those examples),[15] and examples exist where tying/bundling can expand output, benefitting consumers.[16] Empirical evidence shows that full-line forcing—a form of post-merger tying/bundling—increased welfare in the video rental market,[17] consistent with the predictions of economic theory for buyer-specific bundling in intermediate markets.[18] There is no body of empirical evidence showing that

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mergers are likely to harm competition via post-merger tying/bundling effects.

Dominance. "Dominance" should never be part of a prima face case in any non-horizontal merger. Mergers by firms deemed "dominant" that increase quality, enhance investment, mitigate double marginalization, lower transaction costs, etc., increase a firm's "dominance" as measured by its market share while benefitting consumers. In the implicit benefit-cost calculus that goes into determining net effects of non-horizontal mergers, the first-order benefit side of the ledger often increases with the merging firms' shares and thus with share-based measures of dominance. For example, a merger between successive "monopolists," who would obviously be deemed "dominant" in their respective markets, has a *bigger benefit* from eliminating double marginalization ("EDM") than a merger between upstream and downstream firms that face intense competition in their respective markets and are not dominant in any sense. And as explained above, these first-order effects interact with any incentives for the merged firm to engage in strategies deemed harmful, making it impossible to predict harms without considering effects that the New Guidelines relegate to rebuttal evidence. For all these reasons, "dominance" should not be part of a prima facie case against any non-horizontal merger.

In sum, the economic literature does not support the prima facie/burden-shifting approach for mergers that have substantial non-horizontal elements. Given this, it is not surprising that while the New Guidelines provide specific guidance for prima facie evidence against purely horizontal mergers based on concentration measures, they provide nebulous and in some cases erroneous guidance (e.g., based on market shares) for prima facie evidence against mergers with substantial non-horizontal elements. The New Guidelines never should have attempted a prima facie/burden-shifting approach for non-horizontal mergers because there is no coherent way to do it.

It should be noted that the difficulties with the prima facie/burden-shifting approach for non-horizontal mergers likely explains why internal efforts over the years at the U.S. agencies to revise the 1984 Non-Horizontal Merger Guidelines were unsuccessful for decades.[19] When Vertical Merger Guidelines finally emerged in 2020 under pressure to produce something, those Guidelines explicitly (and correctly) *did not* identify simple first-impression evidence purporting to establish a prima facie case against vertical/complements mergers. Because no evidence exists that could provide such a case.

IV. Discussion of Specific Numbered Guidelines

A. Horizontal Mergers – Excessive Structural Presumption for Mergers involving Innovators and Successful Incumbents

The New Guidelines make two main changes to the concentration thresholds that define the boundaries for prima facie harm for horizontal mergers; (1) lower the HHI thresholds so that a post-merger HHI greater than 1800 and delta HHI greater than 100 create a presumption of harm (the previous thresholds were 2500 and 200); (2) introduce a merged-firm market share threshold of 30% above which harm is presumed if the merger raises the HHI more than 100 points. The New Guidelines dispense with specific guidance for more moderately concentrating mergers.

While economic theory clearly predicts that horizontal mergers that substantially increase concentration in concentrated markets can pose significant competitive risks,[20] specific concentration thresholds are inherently somewhat arbitrary. Thresholds in previous Guidelines were based largely on Agency experience with concentration levels that were likely to generate merger challenges after many extensive and detailed investigations. Given the thoroughness of typical investigations that go to second request, the reduction in concentration thresholds indicates that the drafters believe the Agencies were too lenient in years prior to the thresholds in the 2010 Guidelines.

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The most rigorous economics discussing concentration thresholds relates the thresholds to "default efficiencies," which are benefits expected from a typical merger before considering specific competitive effects.[21] By presuming some amount of default efficiencies, the Guidelines recognize that free trade of capital typically has benefits that can be hard to identify explicitly and that mergers should not be stopped unless the harm is likely to outweigh those benefits. Under this approach, lower concentration thresholds reflect smaller assumed default efficiencies.

While one can debate the appropriate default efficiencies and safe harbors, the new share threshold of 30% for mergers that raise the HHI by 100 or more points creates a presumption of harm for mergers that have a limited effect on market structure and would not be presumed harmful under all prior Merger Guidelines since 1982. For example, in a market where firm A has a 30% share, firm B has a 1.67% share, and the remaining firms have de minimis shares, a merger between A and B raises the HHI by 100 points to slightly more than 1000 and is presumed to be harmful. In recent decades, the agencies have rarely challenged such mergers, and the New Guidelines do not explicitly explain the rationale for presuming that such mergers may be harmful. A hint is the presence of Guideline 4, which states that "Mergers Can Violate the Law When They Eliminate a Potential Entrant in a Concentrated Market," and Guideline 6, which addresses mergers that may entrench or extend dominant positions, including via the acquisition of nascent competitors. If the B side is a potential entrant with an expected share of 1.67% and the A side's share is 30% (as an example), a merger between A and potential entrant or nascent competitor B would be presumed harmful under the concentration thresholds in Guideline 1.

Why would the Agencies believe that such a merger is sufficiently likely to harm competition to justify shifting the burden of proof? Agency rhetoric and policy in recent years suggests that the reason may be a belief that mergers involving potential entrants or nascent competitors raise greater risk to competition than indicated by expected shares. For example, if there is a significant chance that firm B in the foregoing example would enter on its own and become a significantly larger competitor, the structural implications of the merger would be worse than indicated by expected market shares.

However, in markets where it is clear that firms innovate with the purpose of having their assets acquired rather than entering the market directly, mergers are not purely horizontal—they also combine complementary assets. The prima facie/burden-shifting approach based on small concentration effects is not warranted for such mergers.

B. Vertical and Conglomerate Complements Mergers

Guideline 5 and to some extent Guidelines 6-9 deal with vertical mergers and mergers between producers of complementary products that are not in a vertical relationship ("conglomerate complements").

1. Misclassification of First-Order Benefits

A first-order effect of merging two complements is downward pressure on price or, analogously, upward pressure on complementary investment.[22] This effect—identified 185 years ago by Augustin Cournot;[23] a core result in textbooks more than a century later;[24] and an effect with rigorous empirical support the economic literature[25] —is relegated to rebuttal evidence in the New Guidelines. This relegation is mind boggling. For reasons described below, this approach all but guarantees that when the agency decides (based on incomplete evidence) they have a *prima facie* case against a vertical/complements merger (possibly based on invalid approaches, as discussed below), the Agency will seek to stop the merger.

This first-order benefit of merging two complements comes out of the same analytical framework the Agencies have used for half a century to evaluate

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horizontal mergers. A horizontal merger internalizes the positive value of sales diverted from one merging partner to the other, which gives the merging firm a benefit from *raising* price post-merger that is absent pre-merger, and thereby causes the merger to put upward pressure on price. A complements merger internalizes the negative value of sales diverted from one merging firm to the other, which gives the merging firm a benefit from *lowering* price post-merger that is absent pre-merger and causes the merger to put *downward* pressure on price. These predictions are mirror images that differ only because the diversion ratio between the merging products is positive for horizontal mergers and negative for complements mergers. An analogous statement holds for competing investments in horizontal mergers and complementary investments in complements mergers—they have the opposite effects, both predicted from the same economic framework that has appeared in textbooks for centuries. Ignoring this fact about first-order effects of vertical/complements mergers is as bad as an aerodynamicist denying gravity.

The ability to present evidence of first-order benefits from complements mergers in rebuttal evidence does not save the New Guidelines approach to complements mergers. First, the ***Merger Specificity*** requirement for rebuttal evidence credits benefits only if they "could not be achieved without the merger under review." Of course, some notion of merger specificity is a reasonable requirement, but it is easy to take it too far, and in my experience, the agencies have done so. A common argument by the Agencies in many recent vertical merger investigations is that the merging firms could achieve the same benefits with a *complete contract* that leads to the same outcome as the merger. This argument has to pay attention to the significant, multiple-Nobel Prize-awarded economic literature pointing out that contracts are often highly *incomplete* due to information asymmetries,[26] moral hazard,[27] and transaction costs.[28] Indeed, the difficulty in writing complete contracts is one of the primary reasons why firms integrate in the first place.[29]

Even if two independent producers of complements could write a complete contract, they frequently do not have an incentive to write a contract that replicates the integrated outcome. As one specific example, consider an upstream monopolist that can offer observable nonlinear contracts to two downstream oligopolists in an environment with no transaction costs and complete information. Prior to a vertical merger between the upstream firm and one of the downstream firms, the upstream firm's profit-maximizing contract induces the fully integrated outcome by softening competition between downstream firms with marginal transfer prices that exceed marginal cost.[30] After a vertical merger, the integrated downstream firm will purchase the input at cost, avoiding the upstream margin. Because the merged firm typically cannot credibly commit to pretend that its marginal cost is inflated by the pre-merger mark-up, it will behave differently post-merger than it would under the pre-merger contract that charged an input price above marginal cost. Thus, even if a complete, observable, nonlinear contract can be written prior to the merger, it does not necessarily eliminate double marginalization and lead to the same outcome as the merger. In standard cases, a vertical merger in this scenario leads to lower prices that benefit consumers.

Second, the ***Verifiability*** requirement for rebuttal evidence in the New Guidelines credits merger-related benefits only if they are "verifiable, and have been verified, using reliable methodology and evidence not dependent on the subjective predictions of the merging parties or their agents." Of course, some verifiability requirement is reasonable. Because merger effects are prospective, verifying first-order benefits in a complements merger likely requires an economic analysis showing that the merger alters incentives in a way likely to generate the claimed benefits. In recent vertical mergers, the Agencies have failed to present or credit such analyses, even when evidence indicated that input prices exceeded marginal cost and that the merger would likely generate benefits from EDM.[31] It is hard to see how one could verify first-order benefits from

complements mergers when the Agencies dismiss such evidence.

Third the ***Not Anticompetitive*** requirement credits benefits only if they "do not result from the anticompetitive worsening of terms for the merged firm's trading partners." Note first the modifier "anticompetitive" in the quoted statement is redundant. If the thought experiment is a worsening of rivals' terms with other factors held constant, then the worsening of terms is automatically anticompetitive because the rival's costs rise without any offsetting benefit. If the thought experiment is a worsening of terms that occurs when all effects of the merger are accounted for, then the worsening of terms is not relevant because the "anticompetitive" modifier already indicates that the merger is anticompetitive. Therefore, I will ignore the modifier and assume that the agency means to rule out claims of benefits from the merger that involve rivals receiving worse terms.

This restriction on rebuttal evidence effectively imposes a duty-to-deal on the merged firm, requiring it to deal with trading partners after the merger at the same or better terms than it deals with them pre-merger. This may sound reasonable, but suppose a vertical or conglomerate complements merger is profitable because it will lead to a joint investment that produces a new or better input, and that the post-investment profit-maximizing strategy of the merged firm would be to stop producing the old input and replace it with the new one, or license the new technology at a price that compensates the merged firm for its investment. It is entirely possible that if the merged firm were required to continue supplying other trading partners with the old input at pre-merger terms or with the new input at some regulated term, the merger would not be profitable, and consumers would be denied a pro-competitive merger. If so, under the ***Not Anticompetitive*** requirement, the benefits of the merger would not be credited, the firms likely would not pursue the merger, and consumers would be worse off as a result.

Note the irony here—in the example just described, the ***Not Anticompetitive*** requirement is plainly inconsistent with the objective of allowing the competitive process to promote consumer welfare. Other examples that do not involve investment lead to similar irony. For example, some vertical mergers that benefit consumers through the elimination of double marginalization lead to worse terms for trading partners and would not be profitable if post-merger terms were constrained.[32] The ***Not Anticompetitive*** requirement would make it impossible to rebut evidence wrongly deemed to establish a prima facie case in such mergers, preventing them from benefitting consumers.

In sum, for all practical purposes, the New Merger Guidelines requirements for crediting rebuttal evidence in vertical/complements mergers are highly restrictive, such that it is unlikely that first-order benefits from such mergers will ever be given proper weight. In many cases, the requirements are demonstrably inconsistent with merger policy that promotes consumer welfare.

C. Dominance

Guideline 6 states: "Mergers Can Violate the Law When They Entrench or Extend a Dominant Position." This Guideline does not qualify the statement by type of merger, so it applies to all mergers in which the entrenchment or extension of dominance can be established.

Application of this Guideline requires a definition of "dominance," but the New Guidelines fail to provide one. They mention using "direct evidence or market shares showing durable market power," but they do not define "durable market power" or the shares that would indicate dominance. They state: "For example, the persistence of market power can indicate that entry barriers exist, that further entrenchment may tend to create a monopoly, and that there would be substantial benefits from the emergence of new competitive constraints or disruptions," but this statement does not define "durable market power" or the "persistence of market power;" it simply assumes these phrases are understood. This is nebulous guidance.

Pro-competitive strategies, including price reductions and investments to increase quality, create new products, or reduce costs typically increase a firm's market share relative to what it would be absent these strategies. If a firm is not deemed "dominant," price reductions and beneficial investments may make it so, and if a firm is already deemed "dominant," these strategies may increase its dominance. A firm that consistently produces a product with a combination of quality and price consumers prefer over the price/quality combination of other producers may well achieve a "dominant" position that is "entrenched" as long as it keeps producing the price/quality combination that most consumers prefer most.

Guideline 6 appears to recognize the obvious points in the preceding paragraph and states: "At the same time, the Agencies distinguish anticompetitive entrenchment from growth or development as a consequence of increased competitive capabilities or incentives." (New Guidelines p. 18). However, the examples highlighted as to how a merger may entrench or expand dominance—examples that purport to identify how a prima facie case will be developed—do not say anything specific about whether the alleged entrenchment or extension comes about through procompetitive or anticompetitive effects.

1. Example: Barriers to Entry or Competition

The examples highlighted in this section involve acquisitions by firm A of firm B that supplies a complement used by one or more of firm A's rivals. Concerns about the potential anticompetitive effects of such mergers are largely already covered in Guideline 5, and the same criticisms raised in the discussion of that Guideline apply here. Because first-order benefits from complements mergers typically increase with the degree of pre-merger market power as measured by share, measures of "dominance" related to share cannot provide a basis for stopping such mergers. Further, as discussed above, relegating first-order benefits from complements mergers to rebuttal evidence, which Guideline 6 does, makes it all but impossible for other evidence to establish a prima facie case because benefits and harms interact to determine equilibrium effects, which means that ignoring first-order benefits leads to incorrect answers about foreclosure effects.

2. Nebulous Nascent Competitive Threat Concerns

Guideline 6 also raises concern with mergers that could entrench or extend a dominant position by eliminating a nascent competitive threat, e.g., a merger of dominant firm A and nascent threat B where B could become an important input or complement to a rival. The analysis of this issue is conceptually the same as the analysis of the examples in the preceding section, the only difference being that B is "nascent." The effect of such an acquisition depends on whether the merger combines complements or is horizontal. All of the arguments made in the preceding section hold. The "nascency" of B makes it critical to establish not only the nature of the relationship between A and B, but also B's future competitive significance. Obviously, this adds an additional layer of speculation.

3. Nebulous Tying/Bundling/Conditioning/ Linking Concerns

Guideline 6 suggests that "the merger might lead the merged firm to leverage its position by tying, bundling, conditioning, or otherwise linking sales of two products," which for simplicity I will refer to as "bundling." As with the concern about nascent competitive threats, concerns about bundling involve two levels of speculation: (i) that the merged firm will bundle; and (ii) that this will harm competition. I discussed earlier the theoretically ambiguous effects of bundling. The notion that a prima facie case could be made based on concerns about post-merger bundling is not supported by the economic literature. And as discussed earlier, there is no a priori reason to believe that if bundling did occur it would be anticompetitive.

4. Summing Up the Dominance Guideline

Guideline 6 further states: "If the merger raises concerns that its effect may be to entrench or extend a dominant position, then any claim that the merger also provides competitive benefits will be evaluated under the rebuttal framework in Section 3." Yet, the Guideline provides a nebulous definition of "dominance" and what it means to "entrench" or "extend" it; it fails to distinguish mergers by whether they are horizontal and offer no first-order benefits or whether they combine complements and do offer such benefits; and it relegates first-order benefits of complements mergers to rebuttal claims. As written, the Guideline appears to give the Agency license to stop any merger it deems to extend a "dominant" position defined in whatever nebulous way it chooses without regard to the economic factors the economic literature has identified as important for determining whether a merger benefits or harms consumers.

D. Incipiency, Trends Toward Consolidation

Guideline 7 states "When an Industry Undergoes a Trend Toward Consolidation, the Agencies Consider Whether It increases the Risk a Merger May Substantially Lessen Competition or Tend to Create a Monopoly." Like the others, this Guideline also does not distinguish between horizontal, vertical/complements, and independent products mergers, so again the concern applies to all mergers. Thus, the Guideline indicates that trends toward any type of consolidation (horizontal, vertical/complements, independent product) may increase the risk of any type of merger.

The discussion references the Supreme Court's statement that "a trend toward concentration in an industry, whatever its causes, is a highly relevant factor in deciding how substantial the anticompetitive effect of a merger may be." This statement is from a 1966 decision written before the first Merger Guidelines were adopted in 1968.[33] Those Guidelines, and each subsequent revision, recognize the relevance of a trend toward concentration in the level of concentration in the relevant market when the merger occurs, and in the change in concentration from the merger. It is unclear what is gained by highlighting a trend already embodied in current market structure.

For example, suppose A and B propose merging in year 1, and if the merger is allowed, the merged firm (A,B) may propose merging with C in year 2. Suppose the merger between A and B is allowed, reflecting the Agency's belief that the merger will not harm consumers. When the merger between (A,B) and C is before the Agency, the question is whether that merger is likely to harm consumers. The Agency does not need to consider the trend toward concentration implied by the merger between A and B to make this determination, as that trend is already embodied in the set of products (A,B) sells, their shares, and other information about them. They do not need to consider any consolidation that has occurred by other firms in the relevant market beyond what is already captured in the current positions of those firms.

A justification given for greater scrutiny of mergers given a trend toward concentration is that such a trend indicates that "entry may be less likely to replace or offset the lessening of competition the merger may cause." (New Guidelines p. 22.) This inference is not well grounded. If prior mergers generated efficiencies, it would not be surprising that the mergers did not invite entry, in which case the market would show a trend toward consolidation that would not be present in other similar markets where mergers did not generate efficiencies and more entry occurred in response to the mergers. But that trend would be a consequence of efficient mergers, not some nefarious trend caused by mergers.

Guideline 7 also expresses concern about the trend toward vertical integration. The literature on vertical mergers indicates the existing degree of vertical integration can be a relevant factor in assessing the effects of a vertical merger, but again, this trend is embodied in the structure that exists at the time of the proposed merger. In theory, a greater existing degree of integration in an industry can elevate or

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attenuate foreclosure concerns. It may indicate that complementary inputs in the industry can be used more effectively when owned and controlled by the same entity rather owned and controlled separately. An analysis of the equilibrium effects of a vertical merger would take these effects into account.

Guideline 7 also raises concerns about a "cascade" of consolidation driven by an "Arms Race for Bargaining Leverage." An example cited is that "distributors might merge to gain leverage against suppliers, who then merge to gain leverage against distributors, spurring a wave of mergers that lessen competition by increasing the market power of both. This can exacerbate the problems discussed in Guidelines 1-6, including by increasing barriers to single-level entry, encouraging coordination, and discouraging disruptive innovation." Without dismissing the possibility that an example like this could occur, the economic literature does not make a robust prediction that consolidation of distributors has a particular effect on their bargaining leverage in negotiations with suppliers. And in any case, in an environment with or without bargaining, when a merger between suppliers is proposed after a previous merger between two distributors, the structure of distribution would be accounted for in the analysis that is applied (with or without bargaining) to evaluate the merger.

Guideline 8 states that "When a Merger is Part of a Series of Multiple Acquisitions, the Agencies May Examine the Whole Series." The Guideline introduces the term "serial acquisitions," which is not well defined, but appears to refer to a pattern or strategy of multiple acquisitions in the same or related business lines. While it is true that a series of acquisitions in a market can be anticompetitive, the need to examine the whole series rather than the current acquisition confronting the agency would arise only if previous anticompetitive acquisitions went through under the radar or the Agency erred in its assessment, in which case it might make sense to undo previous acquisitions. Beyond such a circumstance, the acquisition history is irrelevant to the current merger except to the extent it provides information about the current merger's likely competitive effects. The Guideline does not explain how the acquisition history does this, so again we have nebulous guidance.

E. Platforms

Guideline 9 discusses multi-sided platforms. The decision to add this Guideline highlights the cost of the New Guidelines' failure to distinguish horizontal, vertical/complements, and independent product effects.

The issues raised by mergers that involve platforms or competitors on one or the other sides of platforms boil down to horizontal and vertical/complements issues, often an amalgam of the two. The discussion of platforms and the burgeoning literature around them makes it appear as if the antitrust issues are somehow different than before, but at a high-level, they are not.

The Guideline discusses protecting competition *between* platforms and competition on platforms. The examples given for merger-induced harm to competition between platforms include:

(A) mergers between platforms (horizontal);

(B) acquisition of a platform participant by a platform operator (vertical/complements or diagonal, as the components or services provided by platform participants are complementary to the service provided by the platform operator);

(C) acquisitions of platform participants that facilitate interoperability between platforms (vertical/complements, but nuanced, as discussed further below); and

(D) mergers that involve acquisitions of suppliers of other inputs to platforms (presumably by platform operators, though not specified), which might be denied to rival platforms (vertical/complements).

Examples A, B, and D all fall into standard merger classes: horizontal, or vertical/complements. Example A is simply a horizontal merger. The fact

that a platform is involved affects the *details* of the analysis, as platforms often exhibit network effects and may have different pricing and cross platform externalities than seen in environments not referred to as "platforms." But unless the platforms are linked (and they may be), the general framework for competitive analysis of a merger between platforms is that of horizontal merger analysis.

Examples B and D involve the same issues raised by vertical/complements/diagonal mergers that involve firms not referred to platforms. The issues are how EDM and foreclosure effects interact to determine equilibrium effects.

Example C raises the only issue that is specific to environments with strong network effects, which are often present on platforms. Here, the concern is that a third party may develop a mechanism that allows interoperability between platforms, which can have potentially significant benefits due to network effects, and that the acquisition of the third-party interoperability provider by a platform may lead it to degrade or eliminate interoperability, harming the rival platform. The concept behind network effects is that a given platform is more valuable to each customer that uses it the more other customers use it, either because there is a direct benefit to customers of having other customers on the same platform (direct network effects), or an indirect benefit because suppliers of products complementary to the platform supply more, improve their complements, etc. (indirect network effects). When such network effects are important, interoperability that effectively links the customers of the two platforms can create larger consumer benefits than occur when customers are split between platforms that are not interoperable. The objective of Example C is to prevent acquisitions that would limit interoperability benefits.

The foray of the New Guidelines into policy that affects interoperability between competitors is a major change in how merger policy has operated historically. Absent regulation, firms ordinarily are permitted to deal with whoever they please, and if they refuse to deal with a particular customer or third party that would allow a rival to benefit from the firm's own investment, that would be permitted unless, perhaps, there were a prior course of dealing. For example, if two separate platforms are in the business of matching consumers with advertisers, there is no obligation, absent regulation, for platform A to match its consumers with the advertisers on platform B. If a third-party tool comes along and makes such cross platform matches possible but platform A does not want to do that, it might rightly complain that the third party allows content it created to attract customers to be free ridden upon if platform B can sell ads to those customers. McDonalds presumably does not want a third party to set up a portable grill in its restaurant to cook Burger King hamburgers and sell them to McDonalds's patrons. The obvious way for McDonalds to stop this activity is to require the operator of the Burger King grill to stay out of its stores, but if that were not possible for some reason, it might instead acquire the operator and give them a job as a cook in its own kitchen to produce McDonalds hamburgers.

The analogy may strike the reader as a bit over the top because of the difference between high tech platforms and McDonalds hamburgers, but the analogy is serious. If a platform is free ridden upon by a rival through a third party that it cannot stop other than by acquiring the third party, the platform may want to do so for no reason other than to stop the free riding. If so, should merger policy prevent the acquisition? More likely, the merger not only limits free-riding, but also provides benefits to the merged firm that may be passed on to customers. The merger policy in this example is equivalent to imposing a duty-to-deal on platform A that forces it to deal with a rival platform through a third party, potentially without charging the third party a price for access to the platform's customers.

The use of merger policy in this way is equivalent to regulating the price for accessing a platform. That is, although the platform's profit-maximizing strategy may be to refuse to deal with the rival via the third

party interoperability provider (effectively charging the interoperability provider an access price so high that it cannot continue to operate), the antitrust authority would effectively be saying that that is not allowed, that platform A must deal with platform B via the interoperability provider on whatever terms the interoperability provider has created, possibly at zero price.

This policy has close analogies with the ***Not Anticompetitive*** requirement for rebuttal evidence in the New Guidelines Section 3, which effectively imposes on the merged firm a duty-to-deal with downstream rivals at terms no worse than pre-merger terms. As argued above, such a condition can prevent pro-competitive mergers. In the Example C in this section, the duty-to-deal effectively imposed by the merger policy likely discourages investment.

The ways Guideline 9 aims to protect competition *on* platforms are likewise examples of horizontal and vertical/complements effects that are not specific to markets involving what we call platforms. The Guideline raises concerns about whether a merger between a platform operator and platform participant would give its own products and services an *advantage* over other participants competing on the platform. This is a classic vertical effect. An integrated firm that reaps the full benefit of profits earned from two complementary inputs *always* has an advantage over unintegrated rival complements that do not internalize the full benefits of changes in their price or investment. The *only* way to eliminate this effect is to impose a duty-to-deal on the integrated firm to price at cost any complement when it is used with a rival complement. Again, this is price regulation, and the imposition or threat of such regulation by the antitrust authority could discourage investment by the platform and its participants.

In my opinion, it would be a terrible idea for the antitrust authority to go deeper into the business of price regulation, which is what the ***Not Anticompetitive*** and platform requirements effectively do.

II. Conclusion

In market economies, voluntary exchange tends to move capital to where it is valued most. Absent negative externalities or the creation or enhancement of market power, such voluntary trade, including via merger, benefits society, like any voluntary exchange. The simple, fundamental, and powerful principle behind why is that when two entities trade voluntarily they must be better off, or they wouldn't trade. And if they are better off because the trade allows producing a product at lower cost or of higher quality, third parties (consumers) also benefit. Apart from 250 years of scientific development that adds substantial rigor and nuance to this basic analysis, it has changed little since Adam Smith.

Mergers provide one form of voluntary exchange that allows beneficial movements of capital. Merger law recognizes that while most such movements are beneficial, some mergers may create market power that harms society more than the benefits created by the trade. The goal of antitrust law is to prevent such mergers without impeding capital movements that benefit society.

Merger Guidelines provide the government's roadmap for distinguishing beneficial and harmful mergers. By most accounts, Merger Guidelines have been a huge success, and there are two primary reasons: (1) the roadmap in Merger Guidelines historically has endeavored to apply the principles of economic science, and (2) Merger Guidelines have evolved over time (1968, 1982, 1994, 1997, 2010) to reflect both advances in economic science and agency experience in applying it.

Regrettably, the New Merger Guidelines obscure the roadmap provided by previous Guidelines and frequently fail to reflect agency experience and advances in economic science. If enforced as written, the New Merger Guidelines will inflict substantial harm on consumers and society.

References

[1] Daniel P. O'Brien is founder of Microfoundations and a Senior Consultant for Compass Lexecon. He received his Ph.D. from Northwestern University. He is former Deputy Director of the Bureau of Economics at the U.S. Federal Trade Commission, and former Chief of the Economic Regulatory Section at the Antitrust Division, as well as a former staff member at both agencies. He has been a full-time member of the economics faculty as the University of Michigan and the Kelly School of Business, and has also taught economics at Northwestern University, Georgetown Law School, the University of Verona, Italy, and UC Berkeley. He has been a member of the faculty at the CRESSE Summer School on Competition Policy and Regulation since 2022, where he teaches a course on vertical mergers. His research focuses on industrial organization and regulation and has been published in several leading journals, including the American Economic Review, the Journal of Economic Theory, the Rand Journal of Economics, the International Journal of Industrial Organization, the Journal of Industrial Economics, the Journal of Economics & Management Strategy, the Antitrust Law Journal, and other journals in economics and law.

[2] The views expressed herein are my own and do not purport to represent the views of Compass Lexecon or any of its economists or consultants. This paper provides a limited critical review of 2023 Merger Guidelines with reference to economic literature and concepts. Although the review is highly critical, the author is firm in his belief that Merger Guidelines are important and have been successful, and he supports ongoing efforts to improve them.

[3] By "first-order effects" I mean effects that arise from how the change in ownership and control caused by the merger changes the merging firms' incentives, which is formally captured in how the merger changes their first-order conditions for profit-maximization.

[4] See, e.g., Tirole (1988), Chapter 2, Section 2.2.1, "Product Quality," 100-102.

[5] Lavetti, K., 2023. Compensating wage differentials in labor markets: Empirical challenges and applications. *Journal of Economic Perspectives*, 37(3), pp.189-212.

[6] In a regulated environment where the regulator controls quantity but not quality, a monopoly seller will choose a higher (lower) level of quality for any given quantity than a social planner would choose when the marginal consumer has a higher (lower) value for quality than the average of the inframarginal consumers' valuations at the given quantity. Michael Spence (1975), "Monopoly, Quality, and Regulation," *The Bell Journal of Economics*, pp. 417–429. In an environment without price regulation where quality shifts a constant marginal cost and shifts/rotates a constant curvature demand curve, a monopoly seller will choose the same quality a social planner would choose. See Daniel O'Brien and Doug Smith, "Privacy in Online Markets: A Welfare Analysis of Demand Rotations," FTC Bureau of Economics Working Paper No. 323, July 2014, available at https://ssrn.com/abstract=2477052 or http://dx.doi.org/10.2139/ssrn.2477052. (Privacy in their model is analogous to quality except that it can be either a good or a bad.) If a consumer's willingness to pay for a product can be expressed as an index equal to the product of quantity and a measure of quality, then the quality supplied by an unconstrained market is independent of the degree of competition in that market. This result is sometimes referred to as "Swan Invariance" after the economist who discovered it in context of product durability, which is a type of quality. See Peter Swan (1970), "Durability of Consumption Goods," *The American Economic Review*, 60(5), pp. 884-894; Jean Tirole (1988), op. cit. note 4, p. 102; and Dennis Carlton and Jeffrey Perloff (2005), *Modern Industrial Organization*, 4th Edition, Pearson, pp. 500-503.

[7] There are three main forces that affect firms' incentives to innovate: (1) the replacement effect, which involves cannibalization of the innovator's own sales rather than creating new sales; (2) the appropriation effect, which involves the innovator capturing incremental value created by its innovations; and (3) the business stealing effect, which involves attracting ("stealing") business from rivals. Other factors being equal, incentives to innovate are higher the less the innovation replaces the innovator's existing sales, the more the innovator appropriates the incremental value of its innovation, and the more business the innovator steals from rivals. For details, see Richard Gilbert (2020), *Innovation Matters: Competition Policy for the High-Technology Economy*, MIT Press, and Carl Shapiro (2011), "Competition and Innovation: Did Arrow Hit the Bull's Eye?" in *The Rate and Direction of Inventive Activity Revisited* (pp. 361-404), University of Chicago Press.

[8] The 2010 Guidelines provide the most expansive view among previous Guidelines of the avenues through which greater competition can benefit consumers and society, how reductions in competition can harm them, and the competition concerns that merger law might address. Specifically, Merger Guidelines prior to the 2010 edition only referenced non-price metrics such as quality, service, and innovation, in footnotes or not at all.

[9] In over 20 years at both U.S. antitrust agencies in both management and staff positions, I never saw a lawyer or economist win an Agency-level award for careful analysis that led to a decision to close an investigation.

[10] Black's Law Dictionary (1990), 6th Edition, West Publishing, p. 1189.

[11] *Id.*, pp. 1189-1190.

[12] See, e.g., Gregory Werden (1996), "A Robust Test for Consumer Welfare Enhancing Mergers Among Sellers of Differentiated Products, *The Journal of Industrial Economics*, 409-413; and Volker Nocke and Michael Whinston (2022), "Concentration Thresholds for Horizontal Mergers," *American Economic Review*, vol. 112, 6, pp. 1915-48.

[13] Empirical studies of vertical/complements integration and restraints find more evidence of benefits than harms and do not provide a basis for a prima facie/burden shifting approach. See James Cooper, Luke Froeb, Daniel O'Brien, and Michael Vita (2005), "Vertical Antitrust Policy as a Problem of Inference," *International Journal of Industrial Organization*, 23(7-8), 639-664; Francine Lafontaine and Margaret Slade (2007), "Vertical Integration and Firm Boundaries: The Evidence," *Journal of Economic Literature*, 45(3), 629-685; Marisa Beck and Fiona Scott Morton (2021), "Evaluating the Evidence on Vertical Mergers," *Review of Industrial Organization*, 59(2) 273-302; Francine Lafontaine and Margaret Slade, "Presumptions in Vertical Mergers: The Role of Evidence," *Review of Industrial Organization*, 59(2), 255-272.

[14] A useful survey is Jean Tirole (2005), "The Analysis of Tying Cases: A Primer," *Competition Policy International*, 1(1), 1-25, which lists as possible efficiency benefits from tying/bundling: distribution cost savings, compatibility cost savings, information and liability considerations, protection of intellectual property, and legitimate price responses. See also David Evans and Michael Salinger (2005), "Why Do Firms Bundle and Tie—Evidence From Competitive Markets and Implications for Tying Law," Y*ale Journal on Regulation*, 22, 37.

[15] See Michael Whinston (1990), "Tying, Foreclosure, and Exclusion," *The American Economic Review*, 80(4), 837; and Dennis Carlton and Michael Waldman (1998), "The Strategic Use of Tying to Preserve and Create Market Power in Evolving Industries," *The RAND Journal of Economics*, 33(2), 194-221. These papers show that tying can harm welfare under some assumptions, but Whinston's conclusions are instructive: "While the analysis vindicates the leverage hypothesis on a positive level, its normative implications are less clear. Even in the simple models considered here, which ignore a number of other possible motivations for the practice, the impact of this exclusion on welfare is uncertain. This fact, combined with the difficulty of sorting out the leverage-based instances of tying from other cases, makes the specification of a practical legal standard extremely difficult." (pp. 855-856.) Patrick Greenlee, David Reitman, and David Sibley (2008), "An Antitrust Analysis of Bundled Loyalty Discounts," I*nternational Journal of Industrial Organization*, 26(5), 1132-1152 show that a monopolist over A that cannot use nonlinear pricing may tie competitive independent product B (via requirements tie or bundled discount) to gain market power in B to be able to extract surplus it cannot otherwise capture from the sale of A. The negative welfare effects from this strategy disappear in their model if nonlinear pricing is feasible in A, and welfare effects of tying are ambiguous if the buyers of A and B have private demand information. Frank Matthewson and Ralph Winter (1997), "Tying as a Response to Demand Uncertainty," *The RAND Journal of Economics*, 566-583, showed in an earlier paper that if there is demand uncertainty in a model more general than that of Greenlee, Reitman, and Sibley's full information case, the welfare effects of tying are ambiguous.

[16] When the same prices and/or bundles are offered to many heterogenous consumers, bundling can increase or decrease welfare, depending on the circumstances. See James Adams and Janet Yellen (1976), "Commodity Bundling and the Burden of Monopoly," *The Quarterly Journal of Economics*, 90(3), 475-498. When bundling occurs in intermediate markets with buyer-specific contracts, it often expands output and benefits final consumers. See Greg Shaffer (1991), "Capturing Strategic Rent: Full-line Forcing, Brand Discounts, Aggregate Rebates, and Maximum Resale Price Maintenance," *The Journal of Industrial Economics*, 557-575; Thibaud Vergé (2001), "Multi-Product Monopolist and Full-Line Forcing: The Efficiency Argument Revisited, Economics Bulletin, 12(4), 1-9; Daniel O'Brien and Greg Shaffer (2005), "Bargaining, Bundling, and Clout: The Portfolio Effect of Horizontal Mergers," *The RAND Journal of Economics*, 573-595; and Daniel O'Brien and Greg Shaffer (2023), "Tying, Bundling, and the Microfoundations of Double Marginalization," https://ssrn.com/abstract=3165280.

[17] Kate Ho and Julie Mortimer (2012), "Analyzing the Welfare Impacts of Full-line Forcing Contracts, *The Journal of Industrial Economics*," 60(3), 468-498.

[18] O'Brien and Shaffer (2023), op. cit. note 16.

[19] The common refrain at the Agencies was that an attempt to provide such guidance would either offer very little guidance or regurgitate the economic literature, which would require too may pages to make Guidelines useful. And there was a concern that guidance that got into the weeds would be fraught with misinterpretation by non-specialists. It appears that in the Agencies attempt to limit page length (although 50 pages is still long), what we now have is hazy guidance with numerous errors. This is far worse than clear but limited guidance or an exhaustive regurgitation of what is and is not known from centuries of scholarship.

[20] See Michael Whinston (2007), "Antitrust Policy Toward Horizontal Mergers." In *Handbook of Industrial Organization*, Vol. 3, edited by Mark Armstrong and Robert H. Porter, 2369–2440. New York: North Holland; Orley Ashenfelter and Daniel Hosken (2010), "The Effect of Mergers on Consumer Prices: Evidence from Five Mergers on the Enforcement Margin." *Journal of Law and Economics* 53 (3): 417–66; Daniel Hosken, Luke Olsen, and Loren Smith (2018), "Do Retail Mergers Affect Competition: Evidence from Grocery Retailing," *Journal of Economics & Management Strategy*, 27 (1): 3–22; Bruce Blonigen and Justin Pierce (2016), "Evidence for the Effects of Mergers on Market Power and Efficiency," NBER Working Paper 22750.

[21] See Frederick Warren-Boulton (1985), "Merger Policy and Enforcement at the Antitrust Division: The Economist's View," *Antitrust Law Journal*, 54, 109 (discussing the "standard deduction" from harm that merger policy implicitly grants); Louis Kaplow and Carl Shapiro (2007), "Antitrust," in *Handbook of Law and Economics*, 1073, 1163 (A.M. Polinsky & S. Shavell eds., 2007); M. Salinger, 2005. "Treatment of Efficiencies in Merger Enforcement," Prepared Remarks Before the Antitrust Modernization Commission, https://www.ftc.gov/sites/default/files/documents/public_statements/treatment-efficiencies-merger- enforcement/051117amcstatement.pdf; and Joseph Farrell and Carl Shapiro (2010), "Antitrust Evaluation of Horizontal Mergers: An Economic Alternative to Market Definition," *The BE Journal of Theoretical Economics*, 10(1) (introducing the term "default efficiencies"). Language in Merger Guidelines explicitly recognizes this basic

economic prediction: "While challenging competitively harmful mergers, the Agency seeks to avoid unnecessary interference with the larger universe of mergers that are either competitively beneficial or neutral." (1992 and 1997 Horizontal Merger Guidelines, Section 0.1). A methodology for inferring the standard deduction associated with the HHI thresholds in the Merger Guidelines is provided in V. Nolke and M. Whinston (2022), "Concentration Thresholds for Horizontal Mergers," *American Economic Review*, 112:6, 1915-1948.

[22] This is not the *only* effect of a merger between complements A and B when customers can combine competing complements with one of merging firms' products. However, it is a *relevant first-order effect* that should never be relegated to rebuttal evidence.

[23] Augustin Cournot (1838), Researches into the Mathematical Principles of the Thoery of Wealth, Kelly Publishers, New York, 1971.; See also Joseph Spengler (1950), "Vertical Integration and Antitrust Policy," *Journal of Political Economy*, 58(4), pp.347-352, who rediscovered the Cournot complements problem (without apparently realizing it) by modeling the successive monopoly problem, which involves vertical contracting between an upstream and downstream firm. The successive monopoly problem can be interpreted as a Stackelberg (sequential) version of Cournot's complements problem. See Daniel O'Brien (2008), "The Antitrust Treatment of Vertical Restraints: Beyond the Possibility Theorems," in The Pros and Cons of Vertical Restraints, Konkurrensverket, Swedish Competition Authority, Stockholm, especially footnote 19 and the surrounding discussion.

[24] See, e.g., Frederick Scherer and David Ross (1990), "Industrial Market Structure and Economic Performance," 3rd ed. Boston: Houghton-Mifflin; Tirole (1988), op. cit. note 8, Xavier Vives (1999), "Oligopoly Pricing: Old Ideas and New Tools," MIT Press; Carlton and Perloff (2007), op. cit. note 19.

[25] See Gregory Crawford, Robin Lee, Michael Whinston, and Ali Yurukoglu (2018), "The Welfare Effects of Vertical Integration in Multichannel Television Markets," *Econometrica*, 86(3), 891-954, who document the elimination of double marginalization from vertical integration in the cable industry.

[26] See Michael Spence (1977), "Nonlinear Prices and Welfare," *Journal of Public Economics*, 8(1), 1-18; Eric Maskin and John Riley (1984), "Monopoly with Incomplete Information," *The RAND Journal of Economics*, 15(2), 171-196; Robert Wilson (1983), *Nonlinear Pricing*, Oxford University Press, USA. Authors of all three works won Nobel prizes. A general conclusion of this literature is that marginal prices exceed marginal cost for most buyers, which means that a vertical merger between the seller and a downstream buyer would reduce the marginal transfer price, eliminating a distortion akin to double marginalization.

[27] See Ronald Coase (1937), "The Nature of the Firm," *Economica*, 4, 16 pp. 386-405; Bengt Holmstrom (1979), "Moral Hazard and Observability," *The Bell Journal of Economics*, pp.74-91; and Bengt Holmstrom (1982), "Moral Hazard in Teams," *The Bell Journal of Economics*, pp. 324-340; and Oliver Hart (2017), "Incomplete Contracting and Control," *American Economic Review* 107(7), 1731-1752, especially the references therein. The authors won Nobel prizes for the referenced work, which establishes that that when contracts between independent firms are incomplete, distortions analogous to double marginalization arise that can be mitigated via integration that places decisions under common control and better aligns incentives.

[28] See Ronald Coase (1937), op. cit. note 37; Oliver Williamson (1979), "Transaction-Cost Economics: The Governance of Contractual Relations," *The Journal of Law and Economics*, 22(2), 233-261; Benjamin Klein, Robert Crawford, Armen Alchian (1978), "Vertical Integration, Appropriable Rents, and the Competitive Contracting Process," *The Journal of Law and Economics*, 21(2), 297-326.

[29] See Jean Tirole (1988), op. cit. note 8, Section 1.4; Bengt Holmstrom and Jean Tirole (1989), "The Theory of the Firm," in Handbook of Industrial Organization, Vol 1., Elsevier, pp. 63-133.

[30] See Frank Mathewson and Ralph Winter (1984), "An Economic Theory of Vertical Restraints," *The RAND Journal of Economics*, 27-38.

[31] While there are conditions under which EDM benefits are lower than indicated by upstream margins, they are zero only in the special case where the diversion ratio to the outside good is zero, which typically is not realistic.

[32] As just one example, in Michael Salinger's (1988) model of vertical mergers between upstream and downstream Cournot oligopolists, the merged firm supplies itself internally and does not buy or sell the input on the open market. In some cases, the result is an increase in the input price paid by downstream competitors even though the merger is procompetitive on balance because the EDM benefit dominates the input price effect. If the merged firm is not allowed to pursue its profit-maximizing strategy post-merger, the merger may become unprofitable, and consumers would be worse off. See Michael Salinger (1988), "Vertical Mergers and Market Foreclosure," *The Quarterly Journal of Economics*, 103(2), 345-356.

[33] Augustin Cournot (1838), Researches into the Mathematical Principles of the Thoery of Wealth, Kelly Publishers, New York, 1971.

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