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Vertical Merger Enforcement at the FTC
(as prepared for delivery)

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Contrary to a popular view in the business press (especially prior to the Department Of Justice's recent challenge to the AT&T/TimeWarner acquisition), vertical merger review has been and continues to be a meaningful and important part of FTC (and DOJ) merger enforcement. Although vertical merger challenges are less common than horizontal merger challenges, they are not black swans: since 2000, the FTC and DOJ have challenged 22 vertical mergers – about one per year. We have several investigations involving vertical transactions going on right now, so this topic is timely and very relevant to current enforcement priorities.

That said, vertical merger enforcement is still a small part of our merger workload. Each year, the federal antitrust agencies together bring between 30 and 40 merger challenges (the average since 2000 has been 39, according to annual HSR reports).[2] The vast majority of these actions involve horizontal mergers, and most of those are resolved by a settlement. So one could wonder: what accounts for the lower levels of vertical merger enforcement relative to horizontal merger enforcement? To answer that question, I will address three points: first, what are the key differences—from an enforcement perspective—between horizontal and vertical mergers; second, what facts might cause us to pursue enforcement in a vertical merger; and third, what types of remedies do we look for in vertical mergers?

Before I turn to those three topics, however, let me make a few preliminary remarks. To begin with, while I am going to describe the ways in which vertical merger enforcement is different from horizontal merger enforcement, it is important to recall that in many ways, they are the same. Specifically, the agencies rely on the same broad analytical tools to evaluate

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[1] The views stated here are my own and do not necessarily reflect the views of the Commission or of any Commissioner.
[2] HSR Annual Reports are available at https://www.ftc.gov/policy/reports/policy-reports/annual-competition-reports. See also Steven Salop, Invigorating Vertical Merger Enforcement (Sept. 26, 2017) (30-50 horizontal merger challenges annually), available at https://ssrn.com/abstract=3052332.

horizontal and vertical mergers—we define markets, test theories of harm, and evaluate efficiencies. Each deal is evaluated on the merits, and our review is highly fact-specific, within the framework of the law and our best (and ever-evolving) economic understanding.

Along those lines, it's also worth noting that while it's important for antitrust enforcement to be predictable, predictability is not in and of itself the only measure of effective enforcement. For example, some commentators have recently urged the adoption of more stringent bright-line rules for mergers, including outright prohibitions on many mergers without considering whether those mergers would produce anticompetitive effects. Such a policy would certainly increase predictability, but it would not be good competition policy—rather, it would be harmful to the economy and to consumers. In 1914 when it passed the Clayton Act and the Federal Trade Commission Act, Congress rejected demands to create a laundry list of prohibited conduct, in favor of flexible standards that could adapt to changing markets. In fact, a great strength of U.S. antitrust law is the broad scope of statutes and the resulting ability of enforcement policy to evolve along with developments in legal and economic understanding. As intended, antitrust law has evolved, and while not perfect, our understanding of the risks of harm to competition becomes more sophisticated as economic learning grows in predictive power. We continue to deepen our understanding of how antitrust enforcement enhances consumer welfare by preventing mergers that are likely to result in competitive harm.

Ultimately, antitrust enforcement is law enforcement. As I mentioned a minute ago, it is governed by statutes, and those statutes dictate the focus of our inquiry into mergers. Section 7 of the Clayton Act, the primary statute implicated in merger enforcement, prohibits mergers "where the effect of such acquisition may be substantially to lessen competition, or to tend to create a monopoly." Section One of the Sherman Act, which can also be implicated, prohibits certain agreements "in restraint of trade," and Section Two of the Sherman Act applies to "monopolization." These statutes have in common a core command that the harmful effect we must police is harm to competition—which we analyze in the context of reductions to consumer welfare. In the merger context, anticompetitive effects are those that threaten to directly reduce, or that flow from a reduction in, competition.

Thus, as antitrust enforcers, we are not price police. Nor are we tasked with maintaining any particular market structure. Rather, on a case-by-case basis and through enforcement and common law development, we apply antitrust policy to fit changing markets. Antitrust enforcement is not industrial policy.

With that background, let me turn back to vertical mergers.

What's Different About Vertical Mergers

Horizontal mergers combine competitors. By definition, a merger of competitors directly and necessarily reduces competition by eliminating a substitute. There is a strong theoretical basis for horizontal enforcement because economic models predict at least nominal potential for anticompetitive effects due to elimination of horizontal competition between substitutes.

In contrast, vertical mergers do not combine substitutes, and in fact often involve complements, such as a product plus distribution or a critical input to a complex device. Where horizontal mergers reduce competition on their face—though that reduction could be minimal or more than offset by benefits—vertical mergers do not. Instead, to determine whether a vertical merger threatens competitive harm requires predictions about the post-merger conduct of the merged firm where theoretical predictions are ambiguous.[3] As Professor Steve Salop has catalogued, and as I discuss in more detail in a few minutes, there are plenty of theories of anticompetitive harm from vertical mergers.[4] But the problem is that those theories don't generally predict harm from vertical mergers; they simply show that harm is possible under certain conditions.

Moreover, while efficiencies are often important in horizontal mergers, they are much more intrinsic to a vertical transaction due to the cost-reducing effects of most vertical mergers, at least in the abstract. Due to the elimination of double-marginalization and the resulting downward pressure on prices, vertical mergers come with a more built-in likelihood of improving competition than horizontal mergers.

As a result, the biggest challenge in assessing the likely competitive effect from a vertical merger is forecasting the net price effect. From an economist's point of view, vertical integration reduces or eliminates transaction costs and allows for profit maximizing over a larger set of complementary products. As compared to arms-length contracting, a vertically integrated firm can more readily realize efficiencies in the form of lower costs or improved quality, conditions that greatly benefit customers of the firm. In addition, vertical mergers can eliminate the problem of "double markup," which occurs when two firms, each with market power over a complementary product, set prices independently. Due to the problem of double markup, separate price setting leads to a higher prices and lower levels of output. A vertical merger of these two firms allows for joint price setting over the two products, which leads to higher profits but also increased output. These built-in effects, while not necessarily large or dispositive in all cases, render the starting point for our analysis of vertical mergers more challenging than horizontal mergers.

Unfortunately, compared to horizontal mergers, there are also fewer quantitative theoretical models that we can use to attempt to predict outcomes in vertical scenarios, and the models that exist have a far shorter track record than those used in assessing horizontal mergers.[5] As a result, we mainly rely on standard sources of evidence, that is, documents and witness testimony. However, those sources of evidence, in addition to being highly idiosyncratic for each transaction, also tend to be non-public, and thus difficult for outside observers to assess when attempting to predict or critique our enforcement decisions.

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[3] See D. Reiffen & M. Vita, "Is There New Thinking on Vertical Mergers?" 63 Antitrust L.J. 917 (1995).

[4] See S. Salop and D. Culley, "Potential Competitive Effects of Vertical Mergers: A How-To Guide for Practitioners," (Dec. 8, 2014), available at http://scholarship.law.georgetown.edu/facpub/1392/.

[5] Examples include so-called "vertical arithmetic," which was used in the FCC's review of Comcast/NBC-Universal, and "vGUPPIs," which attempt to score the upward pricing pressure from input foreclosure. See J. Baker, "Comcast/NBCU: The FCC Provides a Roadmap for Vertical Merger Analysis," *Antitrust*, Vol. 25, No. 2 (Spring 2011); S. Moresi & S. Salop, "vGUPPI: Scoring Unilateral Pricing Incentives in Vertical Mergers, 79 Antitrust L.J. 185 (2013).

These theoretical issues are important. But empirical data is also very important. Here, empirical work has tended to show that vertical mergers (and vertical restraints) are typically procompetitive. For example, in a review of multiple studies of vertical mergers and restraints, economists found only one example where vertical integration harmed consumers, and multiple examples where vertical integration unambiguously benefited consumers.[6] I don't want to read too much into a limited number of studies, but the empirical work certainly does not suggest that there is a basis for inherent skepticism toward vertical mergers.

To summarize, overall there is a broad consensus in competition policy and economic theory that the majority of vertical mergers are beneficial because they reduce costs and increase the intensity of interbrand competition. That consensus has support in the empirical research. Does that mean all vertical mergers are benign? No, it doesn't.

What Are Theories of Harm From Vertical Mergers?

So, let me turn now to what facts might lead us to consider enforcement action in vertical mergers. In a broad sense, the antitrust focus in vertical merger review asks if the vertically integrated firm is likely to exclude or collude. Without providing a catalog of all possible theories (because this has been done by others—see former Deputy Assistant Attorney General Jon Sallet's 2016 "The Interesting Case of the Vertical Merger,"[7] and Steve Salop and Daniel Culley's "Potential Competitive Effects of Vertical Mergers: A How-To Guide for Practitioners"[8]), I will focus on three theories of vertical harm the FTC has used to challenge a vertical merger. For antitrust practitioners, much of this will be familiar—a bit of "everything old is new again"—though in a slightly different way.

1. A vertical merger may reduce the likelihood of beneficial entry

In the past, for instance as expressed in the 1984 Non-Horizontal Guidelines,[9] the main concern about vertical mergers was that, post-merger market conditions could deter or prevent entry because it would require firms to enter at both levels—so-called two-stage entry. Today, we are still concerned about how entry could occur post-merger, but now we are interested in cases in which the firms are most likely to enter each other's market—something akin to a special case of potential competition. We look at whether there is something about the markets at issue—something like assets, know-how, or reputation— that indicates that having a presence in another vertically-related market or in another part of the distribution chain makes it inherently more likely or easier for the merging firms to enter each other's markets, as compared to de novo entry by another firm. We also look at entry facilitation; that is, whether prior to the

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[6] J. Cooper, et al, "Vertical antitrust policy as a problem of inference," 23-7 Int. J. of Industrial Org. (2005). See also F. Lafontaine and M. Slade, "Exclusive Contracts and Vertical Restraints: Empirical Evidence and Public Policy," Handbook of Antitrust Economics (2008).

[7] Available at https://www.justice.gov/opa/speech/deputy-assistant-attorney-general-jon-sallet-antitrust-division-delivers-remarks-american.

[8] Available at http://scholarship.law.georgetown.edu/cgi/viewcontent.cgi?article=2404&context=facpub

[9] The Non-horizontal Guidelines were included in DOJ's 1984 Merger Guidelines, and are available at https://www.justice.gov/atr/non-horizontal-merger-guidelines. While the DOJ and FTC have updated the Guidelines as they relate to horizontal mergers several times since then, most recently in 2010, the Non-horizontal Guidelines have not been updated since 1984, and do not provide useful guidance for vertical mergers today.

merger, one firm had an incentive to sponsor entry, and absent the merger, that the firm would have partnered with another company to enter into the markets of the acquiring firm.[10]

As an example of an FTC case involving both types of entry concerns, in 2002 the FTC moved to block the merger of Digene Corporation and Cytyc Corporation, two companies working to develop screening tests for cervical cancer.[11] At the time, Digene was the only company selling a DNA-based test for the human papillomavirus (HPV), the leading cause of cervical cancer. Cytyc sold 93% of U.S. liquid-based Pap tests, which was the principal screening test for cervical cancer. These were complementary products; at the time, the firms did not compete directly. The deal would eliminate Digene's incentive to cooperate with Cytyc's rivals, who needed access to Digene's product and also Digene cooperation to obtain FDA approval. That was the entry facilitation concern. We were also concerned that Digene might enter Cytyc's market on its own, that is, develop a DNA-based test for cervical cancer that would compete with Pap tests. After the Commission voted unanimously to block the merger, purely over vertical concerns, the parties abandoned the transaction.

2. A vertical merger may result in anticompetitive foreclosure

Outside of the merger context, U.S. antitrust law has long been concerned about foreclosure.[12] Since 1950, when Congress amended Section 7 of the Clayton Act to clearly apply to non-horizontal mergers,[13] merger enforcement also targeted acquisitions that created opportunities for the integrated firm to foreclose supplies that were previously available to unintegrated firms. But over time, our understanding of foreclosure has changed due to economic learning in area of vertical restraints.[14] We are no longer concerned about small levels of foreclosure that simply require finding another supplier. Today, we are focused on whether the merger will raise rivals' costs or make it more difficult for entry to occur in such a way that consumers will ultimately be harmed.

There are two basic types of foreclosure we are concerned about in vertical transactions: input foreclosure or customer foreclosure. Input foreclosure involves an upstream firm that supplies an input that downstream firms need to compete. The concern is that post-merger, the upstream firm will either refuse to supply downstream rivals or will provide supply only on disadvantageous terms that favor its own integrated downstream business unit. Of course, this scenario is difficult to assess in the abstract because it is also most likely to involve inherent cost-reducing effects. Those cost-reducing effects take two forms. First, the upstream firm internalizes the cost of transferring the product so it has an incentive to reduce the price downstream. In addition, even if downstream rival firms are paying more for the input, there is an overall downward pressure on price from the integrated firm's incentive to charge a lower

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[10] See, e.g., DOJ's settlement in Monsanto/Delta & Pine Land (transaction would eliminate DPL as a partner independent of Monsanto for competing trait developers, thereby substantially delaying or preventing the development and introduction of cottonseed containing non-Monsanto traits), https://www.justice.gov/atr/case/us-v-monsanto-co-and-delta-and-pine-land-co.
[11] FTC Press Release, "FTC Seeks to Block Cytyc Corp.'s Acquisition of Digene Corp." (June 24, 2002).
[12] See United States v. Terminal Railroad Ass'n, 224 U.S. 383 (1912) (association of all railroads crossing river discriminated against non-affiliated railroads that needed access to its lines).
[13] Brown Shoe Co. v. United States, 370 U.S. 294 n. 30 (1962)
[14] See McWane v. FTC, 783 F.3d 814 (11th Cir. 2015).

price for its downstream product that benefits customers of the final product. In the abstract, it is very difficult to quantify these effects and measure them against the price-increasing effects of foreclosure; as our economists say, it is difficult even to sign the effect, let alone measure its magnitude.

Nonetheless, there have been cases in which the FTC determined that the price-reducing effects of vertical mergers were not sufficient to mitigate the potential for harm from foreclosure. For example, in a case involving concerns about input foreclosure, the FTC imposed conditions on the United Launch Alliance, a joint venture between Boeing and Lockheed Martin to consolidate manufacturing and development of space vehicles (i.e., satellites, interplanetary spacecraft, and other payloads) and attendant launch services. The Department of Defense was the only customer, and was supportive of the deal on national security grounds. However, DOD was concerned about vertical foreclosure—namely, that ULA would either favor Boeing or Lockheed vehicles or raise barriers to entry in the launch services market by refusing to buy launch services from a rival, such as SpaceX. To alleviate DOD's concerns, the FTC order requires ULA to cooperate on equivalent terms with all government space vehicle providers seeking to win U.S. government procurement contracts, and to provide equal consideration, information, and resources to any launch services competitors of ULA when bidding on a delivery in orbit contract.[15]

Customer foreclosure is the inverse of input foreclosure: the downstream firm refuses to buy from competitors of the upstream supplier. This was one aspect of DOJ's challenge to the merger of AMC and Carmike Cinemas. Both companies operated movie theater chains, which created horizontal overlaps in 15 local markets that required divestitures. But AMC also owned a significant stake in National Cinemedia and Carmike owned a significant stake in Screenvision, the two largest competitors for preshow cinema advertising. (DOJ blocked a merger of National Cinemedia and Screenvision in 2015). On the vertical aspects of the deal, DOJ alleged anticompetitive effects in the sale of preshow services and cinema advertising in the U.S. because the elimination of an independent Carmike would weaken Screenvision's ability to be a competitive check on NCM, its only other competitor. Screenvision depended on distribution in the Carmike network to obtain deals with advertisers. Post-merger, Screenvision could not rely on Carmike growth, and the number of independent theaters without an exclusive NCM contract would decline. [16]

3. A vertical merger may lead to anticompetitive behavior due to information sharing about a rival

Another common concern with vertical mergers is that the integrated firm gains access that it didn't previously have to competitively sensitive business information of an upstream or downstream rival. For example, in a vertical merger of an upstream manufacturer and a downstream distributor, the upstream business may not know much about its competitors' sales and margins, but the distributor would likely have significant information on those issues. This creates two concerns. First, the integrated firm might use the information about its competitor to

[15] In re The Boeing Company, Dkt. C-4188 (complaint filed Oct. 6, 2006).
[16] U.S. v. AMC Entertainment Holdings, Inc. and Carmike Cinemas, Inc., https://www.justice.gov/atr/case/us-v-amc-entertainment-holdings-inc-and-carmike-cinemas-inc.

make it harder for that firm to compete, which could reduce competition in the upstream market. Alternatively, the firms could use that information to facilitate coordination.

For instance, in 2010 when The Coca-Cola Company and PepsiCo, Inc. bought their largest bottlers—a pair of cases I'll call "Fear of Dr Pepper"—the Commission was concerned that each transaction would give Coke and Pepsi information either would not otherwise have about the business and marketing plans of their rival soft drink maker, Dr Pepper Snapple Group. The FTC orders created a firewall within each company to prevent bottling employees from sharing competitively sensitive information with employees involved in the manufacture of soft drink concentrate.[17]

More recently, the Commission imposed a firewall in the vertical merger of Broadcom and Brocade. Broadcom is a global developer and supplier of semiconductors and Brocade is the leading manufacturer of fibre channel switches, which are used to transfer data between servers and storage arrays in data centers. Brocade and Cisco are the only two competitors in the worldwide market for fibre channel switches, and Broadcom supplies both companies with ASICs to make fibre channel switches. The FTC alleged that the vertical acquisition could harm worldwide competition in the fibre channel switch market because as Cisco's supplier, Broadcom has extensive access to Cisco's competitively sensitive confidential information. The FTC order requires Broadcom's business group responsible for providing Cisco with fibre channel ASICs have separate facilities and a separate information technology system with security protocols that allow access only to authorized individuals.[18]

I would note that there are some concerns that are sometimes raised to us that are not viable theories of anticompetitive harm. For example, we do not generally consider arguments that a vertical merger will make a firm a more effective competitor to be an anticompetitive effect. Reduced costs are not anticompetitive even if they make it more difficult for rivals to compete (leaving aside foreclosure issues). I am skeptical of arguments that vertical mergers cause harm due to an increased bargaining skill; this is likely not an anticompetitive effect because it does not flow from a reduction in competition. I would contrast that to the elimination of competition in a horizontal merger that leads to an increase in bargaining leverage that could raise price or reduce output.

What Remedies Are Available for Vertical Mergers?

Now let me turn to my last point—what do we look for to fix problems in vertical mergers? First and foremost, it's important to remember that the FTC prefers structural remedies to structural problems, even with vertical mergers. For example, Par Petroleum Corporation agreed to terminate its storage and throughput rights at a key gasoline terminal in Hawaii to settle FTC charges that its acquisition of Mid Pac Petroleum would likely be anticompetitive. Due to the merger, Par would gain Mid Pac's rights to Aloha's Barbers Point terminal, which it did not need for imports because it produced its own blendstock on the island, but which it could use to impair Aloha's use of its terminal. If Par were to hamper Aloha's import capability, it would

[17] In re PepsiCo, Inc., Dkt. C-4301 (complaint filed Feb. 26, 2010); In re The Coca-Cola Company, Dkt. C-4305 (complaint filed Sept. 27, 2010).
[18] In re Broadcom Limited, Dkt. C-4622 (complaint filed Jul. 3, 2017).

weaken Aloha's ability to negotiate lower bulk supply prices from Par and Chevron, and thus reduce Aloha's ability to compete effectively in the bulk supply market.[19]

But in some cases we believe that a behavioral or conduct remedy can prevent competitive harm while allowing the benefits of integration. For example, in our experience, and as the cases I discussed above suggest, firewalls can prevent information sharing, and non-discrimination clauses can eliminate incentives to disfavor rivals. The Commission's recent Remedy Study included four orders related to vertical mergers, and each one succeeded in maintaining competition at premerger levels.[20] This is a small sample, but it does suggest that we can, and we do, and we have fashioned conduct remedies in vertical mergers that curtail opportunities and incentives for anticompetitive behavior.

As Diana Moss from the American Antitrust Institute noted on a panel earlier today, though, there is a difference between modifying incentives and trying to constrain abilities. We are aware that conduct remedies that only address the ability to engage in anticompetitive behavior post-merger may not be sufficient to prevent competitive harm because people are smart—they will still have the incentive to engage in that behavior and they may find other ways to act on that incentive. As a result, conduct remedies can require constant monitoring (and the FTC often appoints a monitor to ensure compliance, as we did in the Pepsi and Coke orders) to ensure that employees in the firm do not act on those incentives. That is why we prefer structural remedies—they eliminate both the incentive and the ability to engage in harmful conduct, which eliminates the need for ongoing intervention.

This, of course, is nothing new, and some of the surprise over the DOJ's suit seeking to block the AT&T/Time Warner transaction seems to me to have missed the point that both agencies have long raised concerns about the viability of behavioral, or conduct, remedies in vertical merger cases. To illustrate the continuity here, let me quote again from the speech Jon Sallet gave in 2016:

> In vertical transactions, observers sometimes assume that conduct remedies will always be available and sufficient. But that is not the current practice of the Division—if it ever was. . . . Some vertical transactions may present sufficiently serious risks of foreclosing rivals' access to critical inputs or customers, or otherwise threaten competitive harm, that they require some form of structural relief or even require that the transaction be blocked.

I would agree. So no one should be surprised if the FTC looks closely at a vertical merger that raises the concerns I have addressed, and no one should be surprised if the FTC requires structural relief. If we have a valid theory of harm, we start by looking at structural remedies for most vertical mergers. If that can't be achieved without sacrificing the efficiencies that motivate the merger, then we can look at conduct remedies. If those won't work—or will be too difficult and problematic for us to be confident that they will work without an excessive

[19] In re Par Petroleum Corp., Dkt. C-4522 (complaint filed Mar. 15, 2015).
[20] FTC Staff Report, *The FTC's Merger Remedies 2006-2012: A Report of the Bureaus of Competition and Economics* (2017), https://www.ftc.gov/system/files/documents/reports/ftcs-merger-remedies-2006-2012-report-bureaus-competition-economics/p143100_ftc_merger_remedies_2006-2012.pdf.

commitment of FTC resources where we are effectively turned into a regulator—then there should be no surprise if we seek to block the merger.

Thank you.