"HARDER, BETTER, FASTER, STRONGER"[*]: EVALUATING EDM AS A DEFENSE IN VERTICAL MERGERS

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INTRODUCTION

Commentators, politicians, and sometimes even comedians are currently pushing to expand the reach of the antitrust laws.[1] There is today a chorus of calls for antitrust enforcement actions to solve problems sometimes correlated with, but not necessarily caused by, concentration in an industry. We need institutions like the *George Mason Law Review* and fora like the Annual Antitrust Symposium to continually ask the hard questions like: whether, in these instances, the competitive process has failed to the detriment of consumers; and whether intervening the way some commentators seek would undermine procompetitive incentives. Therefore, my subject today is the economics of vertical mergers—specifically the notion that vertical mergers solve inefficiencies in vertical contracting, making them more procompetitive than horizontal mergers.

Much has been written and discussed in the past year about the significance of the Antitrust Division of the U.S. Department of Justice litigating a vertical merger case.[2] Prior to *AT&T/Time Warner*,[3] it had been many decades since the government actually had to litigate a vertical merger case.[4] In those same decades, though, the government consistently scrutinized vertical mergers and found that some of them would have been illegal without the

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* DAFT PUNK, *Harder, Better, Faster, Stronger*, *on* DISCOVERY (Virgin Records 2001).

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1 *See Last Week Tonight with John Oliver* (HBO television broadcast Sept. 24, 2017), https://www.youtube.com/watch?time_continue=11&v=00wQYmvfhn4.

2 *See, e.g.*, Cecilia Kang, *Why the AT&T-Time Warner Case Was So Closely Watched*, N.Y. TIMES (June 12, 2018), https://www.nytimes.com/2018/06/12/business/dealbook/att-time-warner-trial-antitrust-ruling.html; Koren W. Wong-Ervin, *Antitrust Analysis of Vertical Mergers: Recent Developments and Economic Teachings*, ANTITRUST SOURCE, Feb. 2019, at 1–2.

3 290 F. Supp. 3d 1 (D.D.C. 2018).

4 The government last attempted to block a vertical merger in *United States v. Hammermill Paper Co.*, 429 F. Supp. 1271 (W.D. Pa. 1977).

conditions imposed by the government and accepted by the parties.[5] Some transactions were abandoned after the antitrust review.[6]

In evaluating consistent themes from those cases that required a remedy, it is clear that one-way vertical mergers can harm competition when the combination allows a firm to harm competitors by virtue of its newfound control of an asset that competitors need. That harm may come from being able to foreclose access to inputs or to customers. Another way to harm competition is to make inputs or distribution more expensive in a merger, often referred to as raising rivals' costs.[7] In vertical mergers, we scrutinize not only the combined firm's ability to impose this sort of harm on competition, but also the firm's incentive to do so.[8] For instance, if the firm would have to sacrifice more profits than it would gain by using the new assets as a weapon, we would be unlikely to predict that it would do so.

Of course, companies seeking to clear the merger review process deny that they will inflict any harm.[9] They say the purpose of the merger is something else.[10] The title of this speech is "Harder, Better, Faster, Stronger," the name of a Daft Punk song that sounds a lot like some of the claims we hear from parties about what their mergers are going to accomplish. Daft Punk is a French duo producing electronic dance music ("EDM")—some of the best EDM, in my opinion.

For those antitrust geeks like me, EDM is also shorthand to refer to the "elimination of double marginalization." That is one way parties to a vertical merger sometimes claim they are going to become "Harder, Better, Faster, Stronger." Specifically, companies in a vertical relationship sometimes claim they are each charging a markup to consumers—a double margin, so to speak—and that as a single, combined firm, the markup would be lower. The

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5 *E.g.*, U.S. FED. TRADE COMM'N, FILE NO. 131-0069, ANALYSIS OF PROPOSED AGREEMENT CONTAINING CONSENT ORDER TO AID PUBLIC COMMENT: IN THE MATTER OF GENERAL ELECTRIC COMPANY (July 19, 2013), https://www.ftc.gov/sites/default/files/documents/cases/2013/07/130719generalelectricanalysis.pdf; Competitive Impact Statement at 1–3, United States v. Comcast Corp., 808 F. Supp. 2d 145 (D.D.C. 2011) (No. 11-106) [hereinafter Comcast Impact Statement], https://www.justice.gov/atr/case-document/file/492251/download; Competitive Impact Statement at 2–3, 8–10, United States v. Google Inc., 2011 U.S. Dist. LEXIS 124151 (D.D.C. 2011) (No. 1:11-cv-00688) [hereinafter Google Impact Statement], https://www.justice.gov/file/497671/download.

6 *E.g.*, Press Release No. 16-1165, U.S. Dep't of Justice, Lam Research Corp. and KLA-Tencor Corp. Abandon Merger Plans (Oct. 5, 2016), https://www.justice.gov/opa/pr/lam-research-corp-and-kla-tencor-corp-abandon-merger-plans.

7 *See* Michael H. Riordan, *Competitive Effects of Vertical Integration*, *in* HANDBOOK OF ANTITRUST ECONOMICS 155 (Paolo Buccirossi ed., 2008); s*ee also* Oliver Hart & Jean Tirole, *Vertical Integration and Market Foreclosure*, 1990 BROOKINGS PAPERS ON ECON. ACTIVITY: MICROECONOMICS 256–58; Steven C. Salop, *Invigorating Vertical Merger Enforcement*, 127 YALE L.J. 1962, 1975–78 (2018).

8 *E.g.*, FED. TRADE COMM'N , *supra* note 5, at 3; Comcast Impact Statement, *supra* note 5, at 20–23 (also discussing vertical foreclosure analysis generally); Google Impact Statement, *supra* note 5, at 6.

9 Answer at 3–4, United States v. AT&T Inc., 310 F. Supp. 3d 161 (D.D.C. 2018) (No. 17-2511).

10 Press Release, AT&T, AT&T to Acquire Time Warner (Oct. 22, 2016), https://about.att.com/story/att_to_acquire_time_warner.html.

incentive of the combined firm, they say, is to eliminate double marginalization and lower price to consumers. To evaluate this claim, we need to take a closer look at the economics of the elimination of double marginalization.

By the way, someone suggested I title this speech after another great EDM song by Avicii called "Wake Me Up."[11] I hope you have had your coffee as I get into the next part of the speech.

I. THE ECONOMICS OF ELIMINATION OF DOUBLE MARGINALIZATION

More than 150 years before Daft Punk, another Frenchman—Augustin Cournot—was thinking about EDM, or at least the mathematical underpinnings to the theory.[12] Cournot explained that when two firms independently set prices for complementary goods, they ignore the negative effect that a higher price for one good has on the quantity purchased of the other good.[13]

It helps me to think concretely, so we will use an everyday example: A sandwich maker needs both peanut butter and jelly as inputs. If the markets for peanut butter and jelly are each perfectly competitive, then the price for each is pushed down toward marginal cost, and the sandwich maker will buy the optimal amount of each to satisfy demand for peanut butter and jelly sandwiches. If the peanut butter producer has market power, though, it will push price above marginal cost. When the cost increases for peanut butter, the sandwich maker buys less, and as a result, uses less jelly as well.

If the peanut butter and jelly producers *both* have market power, however, and *both* mark up their products to their individual profit-maximizing level, the sandwich maker will pay two markups and therefore charge a higher price. This will result in reduced sales of sandwiches and reduced usage of peanut butter and jelly. In this case, the jelly price pushes down the quantity demanded of peanut butter, and the peanut butter price pushes down the quantity demanded of jelly.

The same idea applies in a vertical supply chain. To illustrate this point more clearly, consider the situation of two monopolists in the supply chain: A single producer owns the only source of sandwich ingredients, and a single sandwich maker owns the only sandwich shop. The ingredients producer can command a large markup because the shop owner cannot get the necessary inputs from anywhere else. If the producer charges its profit-maximizing markup to the shop owner, then any profit margin the shop owner adds will reduce the quantity of sandwiches sold below the profit-maximizing amount for the ingredient's producer. In this situation, the shop owner, a monopolist

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11 AVICII, *Wake Me Up*, *on* TRUE (Island Records 2013).

12 AUGUSTIN COURNOT, RESEARCHES INTO THE MATHEMATICAL PRINCIPLES OF THE THEORY OF WEALTH ch. IX (The Macmillan Company ed. 1897). For a modern-day primer, see Steven C. Salop & Daniel P. Culley, Potential Competitive Effects of Vertical Mergers: A How-To Guide for Practitioners 33–35 (Dec. 8, 2014) (unpublished manuscript), http://ssrn.com/abstract=2522179.

13 COURNOT, *supra* note 12, at 111–12.

at the retail level, will have the power to charge this additional markup, and doing so will be in its profit-maximizing interest. This, again, is a form of double marginalization that shrinks the sales of sandwiches and the overall profits in the sandwich market.

Both firms would be better off if they could work together to sell consumers more sandwiches by charging just the single profit-maximizing margin and then share the single pool of profits. We call this the "elimination of double marginalization." Sometimes firms in a vertical supply relationship achieve this goal by contract. Sometimes they achieve it through vertical integration. It is not always a merger-specific phenomenon.

But as you can already see from the hypothetical, double marginalization is present only in some vertical relationships, and is therefore eliminated by only some vertical mergers for three reasons.

First, both firms must be able to command a markup over marginal cost. If the ingredients producer faces competition from other producers, it will not add a markup for fear of losing customers. Depending on the amount of competition each firm faces, the effect of double marginalization can vary from zero to substantially increasing the price for sandwiches.[14]

Second, the problem of double marginalization only occurs if the firms are unable to solve the problem by contract. For example, if the ingredients producer and the shop owner can overcome information asymmetries and transaction costs, they may agree to divide the pool of profits derived from selling sandwiches at the profit-maximizing price.[15] If they can solve the problem by contract, as they are incentivized to do, they can eliminate double marginalization without a vertical merger.

Third and finally, the size of the double marginalization will depend on consumers' demand for sandwiches. If demand is very sensitive to change in price, neither the ingredients producer nor the shop owner will have the independent incentive to mark up their prices very much.[16] Likewise, if the firms solve the double marginalization problem by merging, the shape of the demand curve will determine how much of the combined markup on sandwiches they will pass back through to consumers in order to increase the quantity sold and reach the profit-maximizing price.

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14 *See* Salop & Culley, *supra* note 12, at 6–7.

15 *See id.* at 34. In *United States v. Comcast Corp.*, for example, the DOJ alleged that efficiencies from the elimination of double marginalization were negligible because, premerger, the effect of EDM was "reduced, if not completely eliminated, through the course of contract negotiations between programmers and distributors over quantity and penetration discounts, tiering requirements, and other explicit and verifiable conditions." Comcast Impact Statement, *supra* note 5, at 29–30.

16 This condition is one of the "four laws of derived demand" identified by the great British economists Alfred Marshall and Sir John Hicks: the elasticity of demand for an input depends in part on the elasticity of demand for the downstream market. JOHN RICHARD HICKS, THE THEORY OF WAGES 242 (The Macmillan Company ed., 1963) (1932) (citing A. C. PIGOU, THE ECONOMICS OF WELFARE (1920)); *see also* Soheil Ghili & Matt Schmitt, Risk Aversion and Double Marginalization 3–4, (Cowles Found. for Res. in Econ., Discussion Paper No. 2144, 2018), https://ssrn.com/abstract=3242422.

II. THE ANTITRUST DIVISION'S APPROACH TO EDM

Given all these variables, it is impossible to tell at first blush whether a vertical merger will eliminate double marginalization and, if it does, how large a savings that would create for consumers. Our approach at the Antitrust Division is this: as the law requires for the advancement of *any* affirmative defense, the burden is on the parties in a vertical merger to put forward evidence to support and quantify EDM as a defense.

In particular, we are looking for three types of evidence. First, we require evidence that the characteristics of the relevant markets caused both parties to mark up the price premerger. Second, the parties should show they were unable to reach the joint profit-maximizing arrangement through contract and, therefore, would be unlikely to do so in the future absent a merger. Third, we need evidence of how much the elimination of double marginalization is likely to affect the downstream price to the consumer—that is, the profit-maximizing reduction in price given the shape of the downstream demand curve.

We are, of course, committed to approving mergers in which the overall effect is procompetitive. If a merger is likely to lower the combined firm's price in the market, that is certainly a procompetitive aspect of the merger. If the parties produce the type of evidence outlined above, then the Division may be able to determine that EDM will push price down by a certain amount. When that is the case, the Division will credit the price reduction against any harms likely to flow from the merger.

Ultimately, in more precise legal parlance, we would challenge a merger only if it would substantially decrease competition. Specifically, we ask whether the merger would create the incentive and ability to harm rivals and push up price. The question is whether the tendency toward price increase exceeds the price reduction from EDM.

Additionally, the immediate net effect on price is not the only relevant determination. Longer-term harms to competition may support challenging a merger even if the effect of EDM is greater than the price effect from foreclosure or raising rivals' costs in the short term. For instance, once existing contracts expire, we look at price effects from raising rivals' costs. Additionally, vertical integration may raise barriers to entry, especially in the case of successive monopolists where each firm could withhold the inputs necessary for anyone to enter and provide competition at the other level.[17] Indeed, one

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17 For a discussion of the effects from industry-wide vertical integration, see Christine Siegwarth Meyer & Yijia (Isabelle) Wang, *Determining the Competitive Effects of Vertical Integration in Mergers*, 11 ECON. COMMITTEE NEWSL. 7, 7–9 (2011), https://www.nera.com/content/dam/nera/publications/archive2/PUB_Vertical_Integration_0511.pdf. *See also, e.g.*, Fernando Luco & Guillermo Marshall, *Vertical Integration with Multiproduct Firms: When Eliminating Double Marginalization May Hurt Consumers* 2–30 (Dec. 7, 2018) (unpublished manuscript), https://ssrn.com/abstract=3110038 (stating that the vertical integration of the Coca Cola Company and PepsiCo on average increased the prices of products sold by these firms).

complicating factor in the analysis is that the benefits of EDM are greatest when two successive monopolists merge, but that may be when the chance for harm is greatest as well.[18]

Another example of the potential for long-term harm is the combined firm's access to competitively sensitive information. The upstream level may learn the confidential business plans of its customers who are the rivals of the firm at the downstream level. This information could facilitate coordination, especially in an industry where other vertically integrated firms have similar incentives to coordinate.[19] As Justice Antonin Scalia, the namesake of the law school at George Mason University, noted in *Verizon Communications, Inc. v. Law Offices of Curtis V. Trinko, LLP*[20]: collusion is the "supreme evil" of antitrust law.[21]

III. LITIGATING ELIMINATION OF DOUBLE MARGINALIZATION

The Antitrust Division will urge courts to take an approach similar to the one I have outlined here. The Supreme Court has never recognized an efficiencies defense to a merger that is reasonably likely to harm competition,[22] and no court has ever found that efficiencies outweighed harm.[23] The Division, however, supports a legal test for vertical mergers that takes EDM into account as an affirmative defense. That is and should be the proper approach, particularly for us at the Department of Justice, the only government department, as I have noted before, with a moral ideal in its very name.

Regardless of whether parties benefiting from general merger synergies should justify an otherwise anticompetitive merger, EDM should be credited when proven. EDM is a price effect that by its very nature inures directly to the benefit of consumers. If defendants present credible evidence that elimination of double marginalization is merger specific, and they reliably quantify the effect on price of eliminating the double marginalization, then it is appropriate for a court to consider the net change in price likely to result from a vertical merger. If the only harm alleged is a price effect from raising rivals' costs, then proving EDM may offset that harm.

As I have outlined, however, EDM is not specific to every vertical merger. Courts, therefore, should not assume consumers will benefit from EDM or from any other aspect of a vertical merger until defendants proffer evidence demonstrating the existence and size of such benefit. For that reason, the Antitrust Division is not required to present evidence in its case-in-chief

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18 *See* Salop, *supra* note 7, at 1974–80.

19 *See* Salop & Culley, *supra* note 12, at 25–26.

20 540 U.S. 398 (2004).

21 *Id.* at 408.

22 *See* Robert Pitofsky, *Efficiencies in Defense of Mergers: Two Years After*, 7 GEO. MASON L. REV. 485, 486 (1999).

23 *See id.*

rebutting or anticipating the defendants' affirmative claim that EDM will cause a price decrease.

Of course, short-term price effects are only one aspect of consumer-welfare analysis. Consumer welfare, including quality and innovation effects, ultimately depends on well-functioning competitive markets. So, it is always important to bear in mind that consumers will suffer in the long term if the new structure of the market makes the vertically integrated firm less threatened by competitors or new entrants. Courts, therefore, should continue to comprehensively analyze short- and long-term effects under section 7 and focus on the structure of the market and the incentives of the combined firm to be sensitive to consumer preferences.

CONCLUSION

Many mergers may make the parties "Harder, Better, Faster, Stronger," which is a great thing for competition and the American consumer. Where a vertical merger threatens to harm competition, though, the parties must do more than simply claim that they cannot solve the problem of double marginalization by contract and need to vertically integrate. If they want credit for EDM, then they have to do the work and have the evidence necessary to support it. As the great W. Edwards Deming is often quoted as saying, "In God we trust; all others must bring data."[24]

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24 *W. Edwards Deming Quotes*, W. EDWARDS DEMING INST., https://quotes.deming.org/authors/W._Edwards_Deming/quote/3734 (last visited Sept. 7, 2019).