DEPARTMENT OF JUSTICE

"Harder Better Faster Stronger"*: Evaluating EDM as a Defense in Vertical Mergers

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Thank you Judge Ginsburg and thank you to the *George Mason Law Review* for inviting me to this excellent gathering for a discussion about antitrust law.

George Mason University has a distinguished record for bringing together serious scholars of antitrust law, and today is no exception. That reputation is an especially important one in the current climate for antitrust policy and enforcement. What a great honor for me and for all of us to have the benefit of the wisdom and experience of Judge Ginsburg, as well as others, who have dedicated their professional lives to the study and protection of the free markets.

I also want to recognize the many great colleagues here today from across the government, particularly Commissioner Christine Wilson of the FTC and my friend Alden Abbott, the General Counsel of the FTC.

Commentators, politicians, and sometimes even comedians currently are pushing to expand the reach of the antitrust laws. There is today a chorus of calls to bring antitrust enforcement actions to solve problems that are sometimes correlated with, but not necessarily even caused by, concentration in an industry.

We need institutions like yours, and fora like today's gathering, continually to ask the hard questions about whether, in these instances, the competitive process has failed to the detriment of consumers, and whether we would undermine procompetitive incentives if we intervened in the way that some commentators want us to do.

That is why my subject today is the economics of vertical mergers, and specifically the

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[*] DAFT PUNK, DISCOVERY (Virgin 2001).

notion that vertical mergers solve inefficiencies in vertical contracting, making them more likely to be procompetitive than horizontal mergers.

A lot has been written and discussed in the past year about the significance of the Antitrust Division litigating a vertical merger case. It is true that prior to *AT&T/Time Warner*, it had been many decades since the government actually had to litigate a vertical merger case. In those same decades, though, the government consistently scrutinized vertical mergers, and found some of them would have been illegal without the conditions imposed by the government and accepted by the parties.[1] Some transactions were abandoned after the antitrust review.[2]

Looking at consistent themes from those cases, it is clear that one way vertical mergers could harm competition is when a firm with the incentive to harm its competitors combines with a firm that has the ability to harm those competitors.

That ability may come in the form of being able to foreclose access to inputs or to customers; another way is being able to make inputs or distribution more expensive in a merger that harms competition, which is often referred to as raising rivals' costs.[3]

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[1] *E.g.*, Competitive Impact Statement at 2, 8-9, *United States v. Google Inc.*, No. 1:11-cv-00688 (D.D.C. Apr. 8, 2011) (merger would give travel search site control of critical software and pose a significant risk that merged entity would deny or raise the cost of the software to competing sites); Competitive Impact Statement at 23-26, *United States v. Comcast Corp.*, No. 1:11-cv-00106 (Jan. 18, 2011) (merged entity would have strong incentive to raise price of programming to MVPD rivals); *see also* U.S. Dep't of Justice, Press Release, "Lam Research Corp. and KLA-Tencor Corp. Abandon Merger Plans" (Oct. 5, 2016), *available at* https://www.justice.gov/opa/pr/lam-research-corp-and-kla-tencor-corp-abandon-merger-plans.

[2] *E.g.*, U.S. Dep't of Justice, Press Release, "Lam Research Corp. and KLA-Tencor Corp. Abandon Merger Plans" (Oct. 5, 2016), *available at* https://www.justice.gov/opa/pr/lam-research-corp-and-kla-tencor-corp-abandon-merger-plans.

[3] *See* Michael H. Riordan, *Competitive Effects of Vertical Integration*, HANDBOOK OF ANTITRUST ECONOMICS 145 (P. Buccirossi ed., 2008); *see also* Steven C. Salop, *Invigorating Vertical Merger Enforcement*, 127 YALE L.J. 1962 (2018); Oliver Hart, Jean Tirole, Dennis W. Carlton & Oliver E. Williamson, *Vertical Integration and Market Foreclosure*, BROOKINGS PAPERS ON ECONOMIC ACTIVITY: MICROECONOMICS 205 (1990).

In vertical mergers, we scrutinize the combined firm's ability and incentive to impose this sort of harm to competition.

Of course, companies seeking to clear the merger review process deny that they will inflict any harm. They say the purpose of the merger is something else. 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—some of the best EDM, in my opinion.

Of course, for those antitrust geeks like me in the audience, EDM is also the shorthand way 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 that they are each charging consumers a markup—a double margin, so to speak—and that as a single, combined firm the markup would be lower. The 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." I hope you've had your coffee as I get into the next part of the speech.

<u>The Economics of Elimination of Double Marginalization</u>

More than one hundred and fifty years before Daft Punk, another Frenchman—Augustin Cournot—was thinking about EDM, or at least the mathematical underpinnings to the theory.[4]

[4] Augustin Cournot, RESEARCHES INTO THE MATHEMATICAL PRINCIPLES OF THE THEORY OF WEALTH ch. IX (1838) (August M. Kelly ed., 1971).

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. It helps me to think concretely, so we'll use the example that Cournot did: a manufacturer of brass needs both copper and zinc as inputs.

If the market for copper and zinc are each perfectly competitive, then the price for each is pushed down toward marginal cost and the brass maker will buy the optimal amount of each to satisfy demand for brass. If the copper producer has market power, though, it will push price above marginal cost. When the cost increases for copper, the brass maker buys less of it and as a result uses less zinc as well.

If the copper and zinc producers *both* have market power, however, and *both* mark up their products to their individual profit-maximizing level, the brass maker will have to pay two markups and therefore must charge a higher price, resulting in reduced sales of brass and reduced usage of copper and zinc to make brass. In this case, the zinc price pushes down the quantity of copper demanded, and the copper price pushes down the quantity of zinc demanded.

The same idea applies in a vertical supply chain. To illustrate this point more clearly, consider the situation where there are two monopolists in the supply chain: a single mining company owns the only copper and zinc mines and the brass maker owns the only brass factory.

The miner can command a large markup because the brass maker can't get the necessary inputs from anywhere else. If the miner charges its profit-maximizing markup to the brass maker, then any profit margin the brass maker adds will reduce the quantity of brass sold below the profit-maximizing amount for the miner.

In this situation, the brass maker, as a monopolist in production, 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 and it shrinks the sales of brass and the overall pie of profits in the brass market.

Both firms would be better off if they could work together to sell consumers more brass 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 can 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 therefore eliminated by only some vertical mergers.

First, both firms have to be able to command a markup over marginal cost. If the miner faces competition for its inputs, 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 brass.

Second, the problem of double marginalization only occurs if the firms are unable to solve the problem by contract.

For example, if the miner and the brass maker can overcome information asymmetries and transaction costs, they may agree to divide the pool of profits derived from selling brass at the profit-maximizing price. 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 brass.

If demand for brass is very sensitive to change in price, neither the miner nor the brass maker will have the independent incentive to mark up their prices very much.

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 brass they will pass back through to consumers in order to increase the quantity sold and reach the profit-maximizing price.

<u>The Antitrust Division's Approach to EDM</u>

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 price pre-merger.

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 effect 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 I just noted, then we, at 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, to say it in more precise legal parlance, we would challenge a merger only if it would substantially lessen competition.

Specifically, we ask whether the merger would create the incentive and ability to harm rivals, and push price up. 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, we look at price effects from raising rivals' costs once existing contracts expire. 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. Indeed, one 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.

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. As Justice Antonin Scalia, the namesake of this school, noted in *Trinko*, collusion is the "supreme evil" of antitrust law.[5]

[5] Verizon Communications v. Law Offices of Curtis V. Trinko, 540 U.S. 398, 408 (2004).

Litigating Elimination of Double Marginalization

The Antitrust Division will also 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, and no court has ever found that efficiencies outweighed harm. 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 general merger synergies that inure to the benefit of the parties should justify an otherwise anticompetitive merger, EDM should be credited when proven. That is because it is a price effect that by its very nature inures directly to the benefit of consumers.

If the defendants present credible evidence that the 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 discussed, however, EDM is not specific to every vertical merger, so courts should not assume consumers will benefit from EDM, or from any other aspect of a vertical merger, until defendants come forward with evidence demonstrating the existence and size of such benefit.

For that reason, the Antitrust Division is not required to present, in its case-in-chief, evidence 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 likely 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 do a comprehensive analysis of short- and long-term effects under Section 7, focusing on the structure of the market and the incentives of the combined firm to be sensitive to consumer preferences.

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In conclusion, many mergers may make the parties "Harder Better Faster Stronger," and that is a great thing for competition and the American consumer. Where a vertical merger threatens to harm competition, though, the parties have to 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."

I would like to take the opportunity to thank our Deputy Assistant Attorney General for Economics, Jeff Wilder; Dr. Greg Werden; and other members of the EAG staff for their assistance with this speech. Our Acting Chief of the Competition Policy and Advocacy section, Daniel Haar, and my counsel, Taylor Owings, were also a great help. Speaking of Daniel and Taylor, you all might be interested to know that Judge Ginsburg is actually in something of a vertical supply relationship, for excellent legal minds, with us at the Division. Daniel and Taylor both clerked for the Judge and it is my privilege to announce also that the inaugural Jim F. Rill Fellow at the Antitrust Division will be Cecilia Cheng, who is currently a clerk for the Judge.

Lastly, thank you for letting me journey into the economic weeds a bit this morning. Our recent experiences at the Division have taught us that it is a worthy endeavor to educate willing audiences about the fundamentals of economic reasoning, so that questions like how to credit EDM will become second nature in sound decision making. Indeed the FTC's ongoing hearings on these topics are a valuable opportunity to share this same sort of economic learning. We are, and must stand, ready continually to improve our understanding of the economic underpinnings of our enforcement functions. Parties, their counsel, enforcers, and judges alike will be better equipped by this sort of reasoned consensus.

Thank you, and I wish you all a productive symposium.