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Your Doctor/Pharmacist/Insurer Will See You Now: Competitive Implications of Vertical Consolidation in the Healthcare Industry

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The topic of this hearing is the "competitive implications of vertical consolidation in the healthcare industry"—a phrase that invokes two terms. First, "consolidation," meaning a merger, acquisition, or other transaction that leads to common control of previously independent businesses. Second, "vertical," meaning the combining firms are part of a common value chain but are not at the same level of production. One recent vertical example is the merger of AT&T, which provides content *distribution*, with Time Warner, which provides content *creation*.[1] Such combinations stand in contrast with horizontal mergers, which combine competitors selling similar goods or services to common customers. An example would be the attempted merger of Anthem and Cigna, which the DOJ successfully blocked.[2]

I will begin with a brief discussion of the role of mergers and acquisitions in a market economy such as ours. These points will apply to both horizontal and vertical transactions. I will then discuss distinctions between horizontal and vertical mergers, particularly as relates to potential anticompetitive harms and procompetitive efficiencies in vertical mergers. In short, the economic effects of any given vertical transaction are case-specific, and no single conclusion applies to them generically. This is largely the same conclusion that applies to horizontal mergers. Next, I will discuss the types of vertical transactions that we are seeing in healthcare markets.

Finally, I will argue that, at least in competitive markets, the form and extent of vertical integration is itself an outcome of the competitive process. That is, competition—where it is sufficient—pushes firms to adopt efficient organizational structures that align with their market strategies. Some may choose not to vertically integrate and realize greater benefits of specialization and economies of scale. Others may choose to vertically integrate in pursuit of benefits from improved coordination across internal divisions or other efficiencies. Neither is inherently better or worse than the other and, in many cases, the two organizational forms coexist and compete intensely.

Valid generalities are few. For policy-makers and antitrust enforcers, the question to ask is not, "*Is vertical integration in healthcare good or bad?*" Either answer would be partly wrong and partly right. Instead, the question to ask is, "*Is this specific vertical healthcare transaction likely to harm competition or not?*"

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1 United States v. AT&T, Inc., No. 18-5214, 2019 WL 921544 (D.C. Cir. Feb. 26, 2019).

2 U.S. Department of Justice, "D.C. Circuit Affirms Decision Blocking Anthem's Acquisition of Cigna," News release, April 28, 2017, https://www.justice.gov/opa/pr/dc-circuit-affirms-decision-blocking-anthem-s-acquisition-cigna.

I. The market for corporate control

Consolidation, whether horizontal or vertical, can be problematic, but neither one is generically so. It is true that mergers may increase consolidation and reduce competition, leading to increased market power that causes increased prices and possibly reduced quality. However, it is also true that mergers can lead to efficiencies, such as cost savings from economies of scale or scope, that benefit both firms and consumers through lower prices, increased quality, and/or increased innovation. These observations reflect basic antitrust tenets, as set forth in the 2010 Horizontal Merger Guidelines jointly issued by the Federal Trade Commission (FTC) and Department of Justice (DOJ):[3]

> The Agencies seek to identify and challenge competitively harmful mergers while avoiding unnecessary interference with mergers that are either competitively beneficial or neutral.

With respect to the potential benefits of mergers, the agencies further advise as follows:[4]

> Competition usually spurs firms to achieve efficiencies internally. Nevertheless, a primary benefit of mergers to the economy is their potential to generate significant efficiencies and thus enhance the merged firm's ability and incentive to compete, which may result in lower prices, improved quality, enhanced service, or new products. For example, merger-generated efficiencies may enhance competition by permitting two ineffective competitors to form a more effective competitor, e.g., by combining complementary assets.

These are the two core elements in the antitrust analysis of a specific merger: competitive effects on the one hand and merger-specific efficiencies on the other. That is true for horizontal mergers and, although the federal antitrust agencies do not currently endorse any official vertical merger guidelines, these are also the key elements analyzed in vertical mergers. I will discuss each element as applied to vertical mergers in more detail below.

Before I do that, I want to discuss the generally procompetitive role of mergers and acquisitions in market-based economies such as ours. Specifically, that one firm can be acquired by another creates both carrots and sticks that drive efficiency, hard work, and innovation.[5] These benefits accrue to the economy, and stakeholders in firms, even *without* actual acquisitions—the key driver is the possibility of acquisition. When we think about policy changes that would make mergers and acquisitions

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[3] U.S. Department of Justice & Federal Trade Commission, *Horizontal Merger Guidelines* (Aug. 19, 2010), § 1 [hereinafter Merger Guidelines], https://www.justice.gov/atr/horizontal-merger-guidelines-08192010.

[4] *Id.*, § 10.

[5] To be clear, this discussion concerns antitrust enforcement in general; none of these points imply that any specific horizontal or vertical merger is procompetitive or anticompetitive.

generally less likely, we should think carefully about the potential for unintended consequences from making our sticks less sharp and our carrots less sweet.

What are the carrots and sticks and how do they act to encourage firms to be efficient and promote innovation? The carrot is the reward of being acquired at a premium by a larger firm with greater resources and access to complementary assets that can allow smaller firms to more efficiently scale up. This possibility encourages entrepreneurs to take risks and work hard. We can look to Silicon Valley startups and small pharmaceutical research companies as examples.[6] Acquisition is not the only path to financial reward for an entrepreneur, but it is an important one.

As for the sticks, if a firm is poorly run then senior management faces the risk that the company will be sold or taken over and they will all be fired. This provides an incentive for senior managers to do their jobs well. And if they do not, it provides an avenue for more effective leadership to take control. Even if such forced takeovers and firings are rare, the threat can still be impactful.[7]

The point of these observations is definitively not that we should relax current antitrust enforcement to open the merger spigot. There is no evidence of an overall dearth of mergers. In fact, more than 2,000 mergers were reported to the FTC and DOJ under the Hart-Scott-Rodino (HSR) Antitrust Improvements Act in 2017, the most recent year for which data are available.[8] As shown in Figure 1, this represents a 12 percent increase from 2016 and the highest level in the last decade. In addition to growing merger filings, the number of deals valued over $10 billion has also increased, with 36 such mergers announced during the first half of 2018.[9]

Instead, the point is that the beneficial economic incentives that actual and potential acquisitions create should be kept squarely in mind when deciding whether or how much policy-makers and antitrust enforcers should act to close the merger spigot. Too many mergers and acquisitions may pose a problem, but so might overly few.

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[6] According to a study by McKinsey, the share of pharmaceutical revenues attributable to "innovations sourced outside of Big Pharma" has grown from about 25 percent in 2001 to about 50 percent in 2016. McKinsey & Company, "What's behind the pharmaceutical sector's M&A push," Oct. 2018, https://www.mckinsey.com/business-functions/strategy-and-corporate-finance/our-insights/whats-behind-the-pharmaceutical-sectors-m-and-a-push.

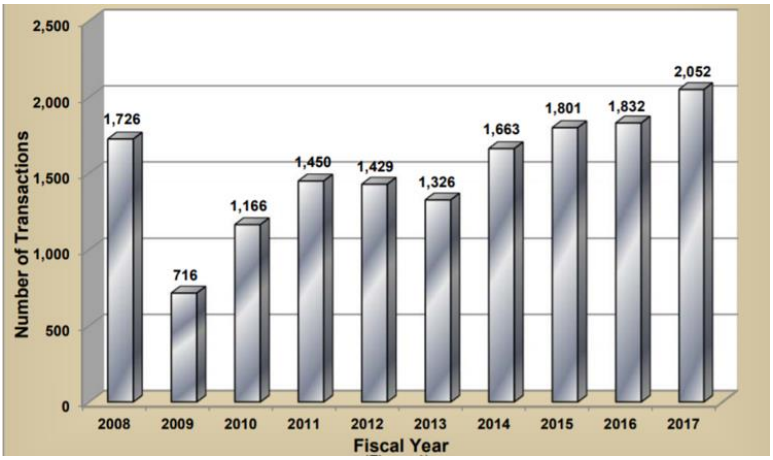
[7] Through both the carrot and stick mechanisms, vertically-related firms may have better knowledge about acquisition targets and have complementary skills and assets. Firms in a different area of the same industry as a potential acquisition target will often be related as customers or suppliers and so may have insight into where a given firm is lacking.

Just as with horizontal and unrelated (i.e., diversifying) acquisitions, vertical integration will not always succeed. If a downstream buyer deems an upstream supplier wanting on important dimensions and decides to acquire it, the buyer will not thereby have solved the deficiencies. Instead, it will have transformed a *market-based problem* (a supplier not meeting expectations) into a *managerial problem* (an internal division that needs to be improved), and that may or may not prove successful.

[8] U.S. Department of Justice and Federal Trade Commission, *Hart-Scott-Rodino Annual Report Fiscal Year 2017*, https://www.ftc.gov/policy/reports/policy-reports/annual-competition-reports, at 1.

[9] Stephen Grocer, "A Record $2.5 Trillion in Mergers Were Announced in the First Half of 2018," *New York Times*, Jul. 3, 2018, https://www.nytimes.com/2018/07/03/business/dealbook/mergers-record-levels.html.

Figure 1. HSR merger transactions reported, fiscal years 2008–2017



Source: FTC & DOJ, Hart-Scott-Rodino Annual Report, Fiscal Year 2017, https://www.ftc.gov/policy/reports/policy-reports/annual-competition-reports.

II. Vertical integration overview

II.A. Business rationales for vertical integration

As with business decisions generally, vertical integration is not a certain path to commercial success. For firms that backwards-integrate (moving earlier in the value chain), integration can bring greater control over inputs and improve the firm's ability to coordinate. For firms that forward-integrate (moving closer to the end consumer), integration can open up new business opportunities or allow for more integrated product offerings. Yet, standard economic theory also cautions that vertical integration may result in a loss of the benefits of specialization. In addition, because vertical integration replaces the discipline of the market with managerial oversight, it may result in inefficiency if management is ineffective.

As an example of the tradeoffs and risks of vertically integrating into a related but different area in the healthcare industry, a 2018 survey of larger hospital systems reported that 27% of them intended to launch a Medicare Advantage health insurance plan within the next four years. That is, these systems reportedly expect to vertically integrate from the provision of healthcare services into the provision of health insurance.[10] Yet, that same survey found that, among the executives who expected

[10] Lumeris, "Survey of Major Health Systems Reveals that 27 Percent Intend Launch of Medicare Advantage, Though Most Lack Confidence in Ability to Succeed," Press release, June 6, 2018, https://www.prnewswire.com/news-releases/survey-of-major-health-systems-reveals-that-27-percent-intend-launch-of-medicare-advantage-though-most-lack-confidence-in-ability-to-succeed-300660381.html.

to enter into Medicare Advantage, just 29% "felt confident in their organization's ability to do so successfully . . . [because] launching a Medicare Advantage plan will be challenging due to the complexities of operating an insurance plan which are far different than the capabilities required to successfully operate a health system."[11] There are certainly examples of unsuccessful vertical integration of hospital systems into health insurance.[12] There are also counter-examples of successful vertically integrated provider-insurers, such as Kaiser, Geisinger, InterMountain, and others.[13]

Firms considering vertical integration also have the option to instead partner more closely with a firm in an adjacent sector of their industry. Perhaps reflecting the mixed results described above, a study of more recent efforts by hospital systems to enter into the business of health insurance found that "all of the new provider-sponsored health plans formed or announced between 2015 and 2017 were joint ventures of provider systems and health insurance companies."[14]

These different approaches, and varied results, reflect strategic choices by firms to either rely on specialization and arms-length relationships, to eschew that in favor of the greater control that ownership brings, or to land somewhere in between the two. Firms that make wise decisions and execute will improve their performance while ones that do not will waste time and money before retrenching. In this respect, vertical integration is not so different from other investment decisions that firms make, such as whether to open a new location or launch a new product. For this reason, we

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11 *Id*.

12 Contrast the following headlines—just two years apart—regarding the hospital system Catholic Health Initiatives' entry into Medicare Advantage: *Catholic Health Initiatives adds Medicare Advantage plans* (2014) and *Catholic Health Initiatives to divest health plan operations* (2016). The latter explains that "Hospital system Catholic Health Initiatives' experiment with health insurance has hit the end of the road after a couple years of heavy losses. . . ." Melanie Evans, "Catholic Health Initiatives adds Medicare Advantage plans," *Modern Healthcare*, June 21, 2014, https://www.modernhealthcare.com/article/20140621/MAGAZINE/306219963/catholic-health-initiatives-adds-medicare-advantage-plans; Bob Herman, "Catholic Health Initiatives to divest health plan operations," *Modern Healthcare*, June 30, 2016, https://www.modernhealthcare.com/article/20160630/NEWS/160639998/catholic-health-initiatives-to-divest-health-plan-operations.

More generally, *see* Allan Baumgarten, "Analysis of Integrated Delivery Systems and New Provider-Sponsored Health Plans," Robert Wood Johnson Foundation report, June 1, 2017, https://www.rwjf.org/en/library/research/2017/06/analysis-of-integrated-delivery-systems-and-new-provider-sponsor.html.

13 Baumgarten (2017), *Id*.

14 Allan Baumgarten & Katherine Hempstead, "New Provider-Sponsored Health Plans: Joint Ventures Are Now the Preferred Strategy," *Health Affairs Blog*, Feb. 23, 2018, https://www.healthaffairs.org/do/10.1377/hblog20180216.720494/full/.

Retail clinics provide another example of the ownership versus partnership decision. CVS owns its MinuteClinic operations, whereas Target hosts CVS's MinuteClinics at many locations and has partnered with Kaiser Permanente to offer retail clinics at locations in Southern California. Kaiser Permanente, "Target Clinic Care Provided by Kaiser Permanente," https://www.kptargetclinic.org/. Similarly, in the Chicago area, Advocate Health Care purchased Walgreen's walk-in clinics and continues to operate them at Walgreens locations. Advocate Health Care, "Advocate Locations," https://locations.advocatehealth.com/il/chicago.

should expect the antitrust questions that I will address below to only be at issue in a subset of vertical mergers and acquisitions.[15]

II.B. Strategic pricing and foreclosure incentives

As an initial point, empirical studies not not generally found strong evidence of anticompetitive harm from vertical mergers but rather have largely found vertical integration to be neutral or beneficial to consumers.[16] As the authors of a detailed survey published in 2007 concluded:[17]

> We are therefore somewhat surprised at what the weight of the evidence is telling us. It says that, under most circumstances, profit-maximizing vertical-integration decisions are efficient, not just from the firms' but also from the consumers' points of view. Although there are isolated studies that contradict this claim, the vast majority support it. Moreover, even in industries that are highly concentrated so that horizontal considerations assume substantial importance, the net effect of vertical integration appears to be positive in many instances.

The authors acknowledge that the finding that most vertical mergers have benefits or at least no evidence of harms to consumers does not rule out the possibility that a specific vertical merger would harm competition.[18] The challenge is to distinguish those that are likely to result in competitive harm. I will first discuss the main theories of competitive harm in vertical mergers, which tend to entail raising one or more firms' input prices with adverse effects on end consumers. I will then discuss the largely inter-related pricing incentives that, in many circumstance, push in the opposite direction.

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15 The same is true of horizontal mergers, only a fraction of which raise sufficient concern to be fully investigated by the DOJ or FTC. Only 2.6% of the HSR-reported transactions underwent a full investigation (i.e., received a "second request") by the antitrust agencies in 2017, and 41 transactions were challenged. DOJ & FTC, *supra* n. 8, at 1. *See also*, comments by Bruce Hoffman, currently the Director of the Bureau of Competition at the FTC: "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." Bruce Hoffman, Director, Bureau of Competition, "Vertical Merger Enforcement at the FTC," Remarks before the Credit Suisse 2018 Washington Perspectives Conference, Jan. 10, 2018, https://www.ftc.gov/system/files/documents/public_statements/1304213/hoffman_vertical_merger_speech_final.pdf.

16 A salient exception is vertical integration of hospitals with physicians, which I discuss below in section III and in the appendix.

17 Francine Lafontaine & Margaret Slade, "Vertical Integration and Firm Boundaries: The Evidence," *Journal of Economic Literature* 45 (2007): 629–685, at 677.

18 With respect to policy recommendations, they advise that "faced with a vertical arrangement, the burden of evidence should be placed on competition authorities to demonstrate that that arrangement is harmful before the practice is attacked." *Id*. at 680. This is essentially the same standard applied to horizontal mergers. *See* Joint Statement, *infra* n. 29.

II.B.1. Raising rivals' costs and foreclosure

All else equal, a merger of direct competitors will decrease competition, at least to some degree. Antitrust analysis of horizontal mergers thus focuses on evaluating the degree of competition between the merging firms—the greater the level of competition, the greater the likelihood of harm.[19] The analysis often seeks to quantify the reduction in competition by measuring increases in market concentration resulting from the mergers. In contrast, vertical mergers combine producers at different levels of the industry value chain and so, by definition, do not combine competitors or increase market concentration.

Economic theory identifies circumstances in which a "vertical" merger between a producer of an end product (the downstream division) and a supplier of an input for that product (the upstream division) might result in harm to competition and consumers. The concern is that the merged firm could have a strategic incentive and the ability to disadvantage rivals of its downstream division by (i) raising the price of the input sold to those rivals by its upstream division or (ii) by withholding the production input from the rivals entirely.[20] Commonly, the former is referred to as "raising rivals costs" (RRC) and the latter as "input foreclosure."[21]

These strategies could increase the production costs or lower the quality of the downstream division's rivals, harming their ability to compete. Increased production costs for downstream rivals would likely be passed-through to consumers in the form of higher prices.[22] With a higher price, some portion of the consumers who previously purchased the downstream rival's offering would shift to other sellers, including to some extent, to the downstream division of the vertically-integrated firm.

However, whether the merged firm would have the incentive and ability to pursue these types of strategies will depend on multiple factors. In general, if the upstream input is even partially dispensable—meaning downstream rivals can switch in part or in whole to other suppliers—then the

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19 Merger Guidelines, *supra* n. 3, § 5.

20 Often, upstream and downstream firms *bargain* over the prices paid by the downstream firms to the upstream firms. In these cases, a vertically integrated firm may leverage the threat of withholding inputs from downstream rivals to extract higher prices in negotiations. Under Nash bargaining theory, if the vertically integrated firm is able to recoup at least some of the sales lost when it withholds the production input from a downstream rival, the vertically integrated firm will have greater bargaining leverage and may be able to increase its price. In general, this effect will diminish as downstream rivals are more able to substitute towards other suppliers. For a discussion, *see* William P. Rogerson, "A Vertical Merger in the Video Programming and Distribution Industry: Comcast-NBCU," in *The Antitrust Revolution, 6th Edition*, ed. John E. Kwoka, Jr. and Lawrence J. White, 534–575 (Oxford: Oxford University Press, 2014).

21 There are other mechanisms of potential vertical harm. *See, e.g.*, Serge Moresi and Steven C. Salop, "vGUPPI: Scoring Unilateral Pricing Incentives in Vertical Mergers" (working paper, Georgetown University Law Center, Paper 163, Washington, D.C., 2012), https://scholarship.law.georgetown.edu/fwps_papers/163/. I believe that RRC and foreclosure concerns—i.e., altering upstream terms of trade in order to harm downstream rivals—are the variants most commonly raised in vertical transactions in healthcare markets.

22 Downstream rivals might also pass through higher production costs to consumers by lowering the quality of their products. This can be interpreted as an increase in quality-adjusted prices.

integrated firm will be sacrificing some volume of upstream sales and profits for the hope of capturing a more than offsetting amount of downstream sales.[23] Whether that will be profitable in practice depends on upstream and downstream profit margins, as well as the rate at which customers would switch away from the downstream rival and the extent to which the downstream division of the integrated firm will capture customers who leave the downstream rivals. These are very much case-specific questions, making it hard to offer bright lines regarding when a vertical merger might harm consumers. This is true even before accounting for the related but beneficial pricing incentives that I discuss below.

It is possible to say that competitive concern will increase as the upstream or downstream firms have greater market power and decrease as either or both have less market power. First, consider the case in which the upstream firm lacks market power. A lack of market power means the upstream firm faces substantial competition from relatively similar firms. Accordingly, downstream firms would have attractive alternatives to the inputs supplied by the acquired upstream firm. That means that an attempted RRC or foreclosure would likely result in substantially reduced sales and profits for the upstream firm (as downstream rivals turn to that firm's competitors) but would dislodge relatively few of the downstream rival's customers (because, by the assumption of no market power, the inputs available from competing upstream firms are closely substitutable). In this case, the tradeoff is less likely to work out favorably for the integrating firm.

Second, consider the case in which the downstream division lacks market power. That means it faces substantial competition from relatively similar firms who also sell to end consumers. With little market power, the downstream division's profit margin will be low, and that will reduce the profit gain from causing an end consumer to switch from a downstream rival to the vertically integrated firm. In addition, because the downstream firm faces multiple relatively similar rivals, it will expect to capture a smaller proportion of any end consumers who, because of RRC or foreclosure, decide to leave a downstream rival. Both factors reduce the likelihood that an RRC or foreclosure strategy would be profitable for the integrated firm.

Consistent with the result of the survey cited above, the conditions under which vertical mergers are likely to lessen competition and harm end consumers are not likely to be widespread, residing primarily within circumstances where the upstream and downstream markets are both highly

[23] Recovered downstream sales will also restore some of the lost upstream sales, but the extent will depend on the relative degree to which the downstream rival and integrating firm uses the upstream firm's goods or services as an input. When the integrating firm makes greater use of the upstream firm as an input, that can also increase the incentive to lower downstream prices.

concentrated.[24] In addition, concluding that a vertical merger would harm consumer requires also taking into account potential beneficial pricing incentives from integration.

II.B.2. Complementarity and elimination of double-marginalization

Vertical mergers also, in many circumstances, create beneficial incentives for the combined firm. These are rooted in each division's incentives, when combined, to take actions that benefit the other division. For example, when the upstream division is profitable, the downstream division has an incentive to lower the final price so as to increase the sales of the upstream division and, thereby, increase the combined firm's profits. This form of complementarity would benefit both the merged firm and end consumers.

This can also be recast in terms of the elimination of double-marginalization (EDM): suppose the upstream firm has sufficient market power to have a positive mark-up of price over its production cost, meaning the price of the input equals the upstream firm's costs plus its markup. When the downstream firm buys inputs from the independent upstream firm, it will view the entirety of the input price, which includes the upstream firm's markup, as a marginal cost. After a vertical merger with the upstream firm, the downstream firm is able to obtain the input at cost, rather than cost plus the markup. With lower costs, the combined firm will have an incentive to lower price. The term EDM is used to describe this incentive to lower price because absent the vertical merger there are two margins—one for the upstream firm and one for the downstream firm—and the merger eliminates the upstream margin.

These beneficial incentives will not apply in all circumstances. If complementarity or EDM apply, that means that total profits for the combined firm are higher than the sum of the profits for the two firms when separate. This implies that, pre-merger, the two firms were transacting in a way that left profits on the table. If the upstream and downstream firms can practically enter into more complex pricing arrangements—something beyond specifying a set price for each unit of the input purchased—then a vertical merger would not be needed to realize the pricing efficiency.[25] Thus, one part of the inquiry in a vertical merger investigation is to understand the structure and rationale of pricing in the industry. For instance, the fee-for-service payment model that predominates in much of the healthcare industry amounts to charging a fixed price for each good or service that providers

[24] High concentration in the upstream and downstream is more of a necessary than a sufficient condition, meaning establishing concentration at both levels in a vertical merger does not suffice to show that a merger would be harmful to competition or consumers. As described below, DOJ recently explained that "Unlike in horizontal mergers, where market concentration statistics can establish a presumption of harm, in vertical merger cases[,] which do not involve an increase in market concentration, no such presumption is available." Joint Statement, *infra* n. 29.

[25] Steven C. Salop, "Invigorating Vertical Merger Enforcement," *Yale Law Journal* 127, (2018): 1962–1994, https://scholarship.law.georgetown.edu/facpub/2002/.

render, which is essentially a simple linear price.[26] EDM would, all else equal, likely apply with fee-for-service pricing.

Overall, whether a specific vertical merger is likely to substantially lessen competition depends not only on whether an RRC or total foreclosure strategy would be profitable for the merged firm, but also on whether beneficial incentives from integration would apply, and if so, would outweigh any incentives to raise price.

Notably, it is possible for vertical mergers to both benefit consumers and harm the integrated firm's downstream rivals. As one concrete example, if a vertical merger creates a more efficient firm that lowers downstream prices, consumers will benefit but downstream rivals will not, precisely because they now face a stronger competitor. One immediate implication is that harm to a downstream rival cannot, on its own, establish that a vertical merger is anticompetitive.[27] This is one example of why antitrust analyses focus on harm to competition rather than harm to competitors.[28]

II.C. Implications

To summarize, empirical research finds that evidence of harm from vertical mergers is rare but not absent. Economic theory identifies a potential for harm in some circumstances but also the potential for countervailing incentives to reduce prices. This means that, putting aside cases where market power is limited, it will take careful, case-specific analysis to determine whether a specific vertical merger is likely to substantially lessen competition. This, however, is not a novel proposition. It largely, though not entirely, coincides with the way the antitrust agencies investigate and, when they deem warranted, challenge horizontal mergers.

In the DOJ's AT&T/Time Warner vertical merger challenge, DOJ and the defendants agreed upon the following parallels and contrasts with horizontal merger review standards:[29]

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[26] Examples of simple linear pricing that are common in the healthcare industry include a hospital charging a price per day, per admission, or per each service rendered; physicians charging a price per patient visit; and insurers charging a health insurance premium per enrollee.

[27] As a parallel illustration of the distinction between harm to rivals versus harm to consumers, consider a firm that introduces a new product that is popular with consumers. That firm's rivals will be harmed, because they will lose sales. But consumers will benefit because the lost sales represent consumers selecting a new, more-preferred alternative over what had previously been available. One stark example is Apple's introduction of the iPhone and the resulting dramatic fall of the Blackberry.

[28] Steven C. Salop, "Question: What is the Real and Proper Antitrust Welfare Standard? Answer: The True Consumer Welfare Standard," *Loyola Consumer Law Review* 22, no. 3 (2010): 336–353, at 343 n. 9, 345. *See also*, John Kirkwood, "Consumers, Economics and Antitrust," *Antitrust Law and Economics (Research in Law and Economics)* 21 (2004): 1–62.

[29] Joint Statement on the Burden of Proof at Trial, U.S. v. AT&T Inc., No. 17-cv-02511-RJL (D.D.C. filed Mar. 13, 2018), https://www.justice.gov/atr/case-document/file/1043756/download.

> The United States agrees with defendants that, in a vertical merger case, there is no shortcut way to establish anticompetitive effects, as there is with horizontal mergers. Unlike in horizontal mergers, where market concentration statistics can establish a presumption of harm, in vertical merger cases which do not involve an increase in market concentration, no such presumption is available. Rather, the government must prove its prima facie case by a fact-specific inquiry into whether there is an appreciable danger of anticompetitive effects.

The similarity is that, whether a given merger is horizontal or vertical, the government bears the burden of proof and a "fact-specific inquiry" is necessary to meet that burden. One distinction, smaller than it at first seems, is that "market concentration statistics can establish a presumption of harm" in horizontal mergers, but there are no vertical presumptions. In practice this is not a large distinction because the market definition analysis required to reach "market concentration statistics" in horizontal mergers is itself a fact-specific inquiry that is commonly very intensive—the "shortcut" is not actually all that short.

III. Vertical integration in healthcare

Although longer term statistics are not available, there seems to be a sense that vertical mergers in healthcare are on the rise. In part, that could reflect DOJ's and FTC's successes blocking horizontal healthcare mergers over the last decade. For its part, DOJ successfully challenged two large health insurer mergers, the proposed combinations of Aetna and Humana and of Anthem and Cigna.[30] The FTC has, likewise, successfully blocked a number of horizontal provider mergers.[31] Vertical mergers may provide a lower risk alternative for some large firms, as evidenced by Cigna's and Aetna's actions after their horizontal mergers were blocked: Cigna merged with the pharmacy benefits manager (PBM) Express Scripts and Aetna has reached an agreement with DOJ that would allow it to complete its proposed merger with CVS, which operates pharmacies, a PBM (itself the result of a prior vertical merger of CVS and Caremark), and retail clinics.[32]

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30 Aaron Smith and Jacki Wattles, "Aetna-Humana & Anthem-Cigna: Two mergers die in one day," CNN, Feb. 14, 2017, https://money.cnn.com/2017/02/14/investing/aetna-humana/index.html.

31 Cory Capps, Laura Kmitch, Zenon Zabinski, and Slava Zayats, "The continuing saga of hospital merger enforcement," *Antitrust Law Journal* 82, no. 2 (2019): 441–496.

32 CVS and Aetna both offer Medicare Part D prescription drug plans to seniors covered by Original Medicare in 22 states. The merging parties and DOJ reached an agreement to divest Aetna's PDP plans in those states to WellCare. U.S. Department of Justice, "United States v. CVS and Aetna: Questions and Answers for the General Public," News release, Oct. 10, 2018, https://www.justice.gov/opa/press-release/file/1099806/download. That divestiture agreement under close review by a federal judge; the hearing is complete but no decision has as yet issued. Susannah Luthi, "Judge signals broad CVS-Aetna antitrust concerns," *Modern Healthcare*, June 4, 2019, https://www.modernhealthcare.com/legal/judge-signals-broad-cvs-aetna-antitrust-concerns.

Beyond that, the same incentives and tradeoffs discussed at a general level also apply in healthcare markets. For example, consider primary care physicians (PCPs), who, ideally, manage care for their patients in ways that improve quality and reduce costs. Whether and how they go about that is likely to affect costs and benefits of industry participants throughout the healthcare value chain. If they deliver exceptional and efficient preventive care, other providers, such as specialists and hospitals, could stand to lose business. The patients who receive that care, and the insurers and employers who pay for it, would stand to gain. In most of the country, PCPs are mostly paid on a fee-for-service (FFS) basis, meaning a set payment for each service they render, with the payment amount being either set administratively (e.g., Medicare) or in negotiations (commercial insurance). FFS payments are unlikely to induce clinical decision-making by PCPs that simultaneously maximizes the profits of PCPs and minimizes costs throughout the healthcare delivery system (while maintaining quality). This is because, while FFS payments create strong financial incentives for PCPs to deliver substantial amounts of care, they do little beyond that.[33]

One option is to design more sophisticated payment methodologies that reward PCPs for the value they deliver to their patients and the healthcare system, rather than the volume. This includes many forms of alternative payment models, such as gain-sharing, global risk models, bundled payment models, pay for performance, value-based payment, etc.[34] It can also include accountable care organizations (ACOs), some of which bring together otherwise independent providers to take responsibility for the cost and quality of healthcare delivered to their patients.

The other alternative is for providers and payers to come under common ownership—to vertically integrate—and seek to emulate the more fully integrated models of systems such as Kaiser Permanente and Geisinger Health System. Yet, such emulation will likely bring its own challenges. After all, Kaiser itself has struggled to extend its integrated model beyond its historical base in California.[35] And Geisinger remains relatively small overall, primarily serving patients and enrollees

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[33] Atul Gawande, the surgeon, author, and now CEO of Haven—the joint effort by Amazon, JPMorgan Chase, and Berkshire Hathaway to, it seems, backwards-integrate into the healthcare finance and delivery—wrote about the challenges of designing efficient physician incentives in a 2005 article:

> Over the course of thirty years, Berman [CEO of a physician group/health plan] told me, he'd tried paying physicians almost every conceivable way. He'd paid low salaries and high salaries and still watched them go home at three in the afternoon. He'd paid fee-for-service and watched the paperwork accumulate and the doctors run up the bills to make more money. He'd come up with complicated bonus schemes for productivity and given doctors budgets to oversee. He'd given patients cash accounts to pay their doctors themselves. But no system was able to provide both simplicity and the right balance of thriftiness and reward for good patient care.

Atul Gawande, "Piecework: Medicine's Money Problem," *New Yorker*, Mar. 27, 2005, https://www.newyorker.com/magazine/2005/04/04/piecework.

[34] One effort of this sort is Blue Cross Blue Shield of Massachusetts Alternative Quality Contract. *See* Blue Cross Blue Shield of Massachusetts, "Alternative Quality Contract," https://aboutus.bluecrossma.com/affordability-quality/alternative-quality-contract-aqc.

[35] Katherine Ho, "Barriers to Entry of a Vertically Integrated Health Insurer: An Analysis of Welfare and Entry Costs," *Journal of Economics and Management Strategy* 18, no. 2 (2009): 487–545.

in Northeast Pennsylvania. And, as I describe in the appendix, research shows that vertical integration of hospitals with physicians tends to increase prices and healthcare costs rather than decrease them, indicating that vertical integration will not necessesarily bring greater value.

IV. Competition and organizational form

At present, some industry participants are pursuing vertical integration in an effort to grow their businesses—see Aetna-CVS and Cigna–Express Scripts. Others are pursuing more nuanced contracting among vertically-related but separately owned industry participants—see Blue Cross and Blue Shield of Massachusetts' Alternative Quality Contract and certain ACOs.[36] This diversity in organizational form is itself one dimension of competition. There is no inherently right, or wrong, degree of vertical integration and, in fact, more and less integrated forms can coexist in close competition. This offers end-consumers, whether viewed as the employers who bear the bulk of commercial health insurance costs or as the patients who share that cost and receive care, differentiated models from which they can choose.

In California, Kaiser's insurance business, which relies on employed physicians and owned hospitals, has long existed alongside and in competition with other insurers that rely instead on contracts with hospitals and physicians.[37] As technology and customer preferences change, volume will likely shift in favor of the delivery model that adapts more quickly and effectively. The role of competition policy and merger enforcement, in my view, is not to favor more vertically integrated organizational forms over less integrated ones, nor the other way around. Instead, as it has long been, the objective it is to prevent those transactions that would create or enhance market power such that the competitive pressures on industry participants would be reduced to the detriment of consumers. In other words, if competition is protected, competitive pressure will drive firms towards more efficient organizational forms.

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[36] Regarding the AQC, *see supra* n. 34. For details on ACOs participating in the Medicare Shared Savings Program (MSSP), *see* McWilliams et al., "Medicare Spending after 3 Years of the Medicare Shared Savings Program," *New England Journal of Medicine* 379 (Sep. 20, 2018), 1139–1149. They find that, on average, surviving physician-group ACOs (i.e., ones that did not exit) generated savings for the Medicare program but hospital-integrated ACOs did not.

[37] This is similar to the decades-long competition between Macs and PCs. Apple's integrated approach was to control the hardware and operating system design of its computers. Its chief competitor was "Wintel" PCs, with Intel processors, Microsoft operating systems, and other hardware inputs from a diversity of nonintegrated suppliers of components such as hard drives and mother boards. Apple lost many battles along the way, but appears to have won that war. Now, Apple's more vertically integrated iPhone faces its greatest competition from Android-powered smartphones offered by various non-integrated manufacturers.

V. Appendix. Vertical integration of hospitals and physicians

Perhaps because the transactions are individually smaller, though substantial in aggregate, hospital acquisitions of physician groups seem to draw less general interest than the larger, often multi-billion dollar, transactions described above. But vertical integration of hospitals with physicians is by now one of the more studied categories of vertical integration. The available evidence indicates that it tends to increase rather than decrease prices and healthcare spending. Below, I will summarize that research and then describe how questions of vertical integration and efficiency played out in the FTC's successful challenge to the "diagonal" acquisition of Saltzer Medical Group, a multispecialty physician group in Nampa, Idaho, by St. Luke's, a hospital system that also owned physician groups.

V.A. Empirical research

More than half of U.S. physicians are employed by a hospital or an integrated delivery system.[38] In my work with David Dranove and Christopher Ody, we studied administrative health insurance claims data spanning 2007 to 2013.[39] Over that time period, nearly 10 percent of the physician practices in our sample were acquired by hospitals, allowing us to look at the effects of those acquisitions. By measuring changes in payments for services rendered by these physicians relative to non-acquired physicians, we estimated the effect of hospital/physician integration on unit prices for a variety of physician specialties. By focusing on PCPs and the patients under their care, we measured changes in overall medical expenditures (excluding drug costs and other smaller categories of expenditures not included in our claims data) for patients under the care of acquired PCP groups relative to non-acquired ones.

Our first main result is that, on average, prices for the services provided by acquired physicians increased post-acquisition—by an average of 14.1%. Nearly half of that is related to exploitation of billing rules that can increase payments when services are billed through a hospital rather than a

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[38] Robert Kocher and Nikhil R. Sahni, "Hospitals' Race to Employ Physicians — The Logic behind a Money-Losing Proposition," *New England Journal of Medicine* 364: 1790–1793; Welch et al., "Proportion Of Physicians In Large Group Practices Continued To Grow In 2009–11," *Health Affairs* 32, no. 9 (2013): 1659–1666; Lawton Robert Burns, Jeff C. Goldsmith, and Aditi Sen (2014), "Horizontal and Vertical Integration of Physicians: A Tale of Two Tails," in (ed.) *Annual Review of Health Care Management: Revisiting The Evolution of Health Systems Organization* (Advances in Health Care Management, Vol. 15): 39–117

[39] Cory Capps, David Dranove, and Chris Ody, "The effect of hospital acquisitions of physician practices on prices and spending," *Journal of Health Economics* 59 (May 2018): 139–152. Other researchers have also examined hospital-physician integration and found results consistent with ours. *See* Laurence Baker, M. Kate Bundorf and Daniel Kessler, "Vertical Integration: Hospital Ownership of Physician Practices Is Associated with Higher Prices and Spending," *Health Affairs* 35, no. 5 (2014): 756–763; Laurence Baker et al., "The Effect of Hospital/Physician Integration on Hospital Choice," *Journal of Health Economics* 50 (Dec. 2016): 1–8; Thomas Koch et al., "How Vertical Integration Affects the Quantity and Cost of Care for Medicare Beneficiaries," *Journal of Health Economics* 52 (Mar. 2017): 19–32.

physician group.[40] Our second result addresses overall medical spending among the patients of PCP groups acquired by hospitals: we find an average increase in per enrollee medical spending of 4.9% compared to patients under the care of non-acquired PCP groups.

This evidence that vertical integration of hospitals and physicians tends to increase prices and medical spending has more than one possible explanation. The driver could be inefficiency that would traditionally not constitute an antitrust violation, or it could reflect an increase in bargaining power on the part of the vertically integrated system, which could constitute an antitrust violation. Or it could be some combination of both and other factors.

Especially when it comes to hospital acquisitions of physician groups, many transactions have both a horizontal and a vertical component—diagonal mergers. The horizontal component exists if the hospital already has physicians in the geographic area and specialties of the acquisition target. The vertical component is, of course, the combination of the hospital with the physician. If vertical integration does create efficiencies, then in some cases, that could outweigh the horizontal harm in such mergers. If it does not create efficiencies, then the traditional horizontal framework would apply. If integration creates inefficiencies, then that the traditional horizontal framework would still apply but with the wrinkle that only merger-specific efficiencies net of vertical inefficiencies would count as a potential offset to effects from lessened horizontal competition. These questions featured prominently in the *St. Luke's / Salzter* case.

V.B. Vertical integration in the St. Luke's/Saltzer merger trial

In December 2012, St. Luke's Health System acquired Saltzer Medical Group and entered a five-year contract with Saltzer's physician staff. Saltzer was a large independent, multispecialty physician group based in Nampa, Idaho (about 30 minutes west of Boise) that employed 41 physicians.[41] St. Luke's was a large multihospital system that, prior to the acquisition, operated seven inpatient hospitals and dozens of physician clinics spanning the geography from central Idaho to eastern Oregon, including a physician group in Nampa.

Two close competitors in the Nampa area, St. Alphonsus and Treasure Valley Hospital, sued for a preliminary injunction to halt the transaction.[42] Their private complaint alleged that the transaction

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[40] Kelly Gooch, "7 things to know about provider-based billing," *Becker's Healthcare*, Jun. 13, 2016, https://www.beckershospitalreview.com/finance/7-things-to-know-about-provider-based-billing.html; American College of Physicians, "American College of Physicians Policy on Provider-Based Billing," April 2013, https://www.acponline.org/acp_policy/policies/provider_based_billing_2013.pdf.

[41] At the time, Saltzer was the largest independent physician group in Idaho. Findings of Fact & Conclusions of Law at Findings ¶¶ 20, 18, Saint Alphonsus Med. Ctr.-Nampa Inc. v. St. Luke's Health Sys., Ltd., No. 1:12-cv-00560-BLW, 2014 WL 407446 (D. Idaho Jan. 24, 2014), www.ftc.gov/system/files/documents/cases/140124stlukesfindings.pdf.

[42] Complaint for Preliminary and Permanent Injunction and Damages, Saint Alphonsus Med. Ctr.-Nampa Inc. v. St.

would harm competition (and the competitors, St. Alphonsus and Treasure Valley Hospital) through both horizontal and vertical effects. The horizontal concern was overlap in primary care physician services in Nampa; the vertical concern was foreclosure, specifically that the competitors would lose patient referrals—a valuable source of admissions—from the Saltzer physicians. The plaintiffs alleged that the Saltzer physicians were likely to start referring more patients to St. Luke's and that would "very likely increase St. Luke's dominance in the general acute-care services and outpatient surgery services markets."[43]

Six months after the private suit, the FTC and the State of Idaho also sued to block the acquisition.[44] Their complaint alleged echoed the horizontal concerns from the competitors' lawsuit, alleging that the acquisition combined the two largest providers of adult primary care services in Nampa and that the combined system would have increased bargaining leverage over payers, resulting in increased prices.[45] However, the government complaint did not include an analog of the vertical allegation in the private complaint.

The government's suit was consolidated with private suit.[46] Although the trial primarily focused on the horizontal issues that the complaints held in common, the government's economic expert, Dr. Dranove, presented an empirical analysis of the results of St. Luke's more than 20 previous acquisitions of PCP groups. Using regression analysis to compare trends in overall medical expenditures among patients treated by PCP in groups acquired by St. Luke's with the overall medical expenditures among patients treated by PCPs in physician groups that had not been acquired, he found "No evidence of systematic reductions in healthcare costs following St. Luke's past acquisitions of PCP groups" and that the "results suggest that St. Luke's past PCP acquisitions may have resulted in increased healthcare spending." *See* Figure 2.

The court did not specifically reference this analysis, but it did hold that employment of physicians was not a merger-specific efficiency,[47] writing that "while employing physicians is one way to put

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Luke's Health Sys., Ltd.,12-cv-560-BLW (D. Idaho filed Nov. 12, 2012), https://www.courtlistener.com/recap/gov.uscourts.idd.30756.1.0.pdf.

43 *Id.* ¶ 95.

44 Complaint, FTC v. St. Luke's Health Sys., Ltd., 13-cv-116-BLW (D. Idaho filed Mar. 12, 2013), www.ftc.gov/sites/default/files/documents/cases/2013/03/130312stlukescmpt.pdf.

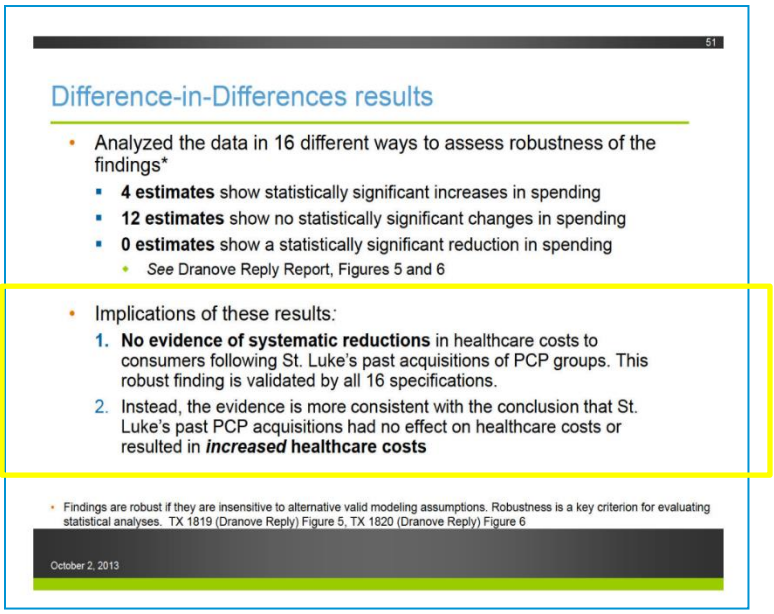
45 *Id.* ¶¶ 1–3, 33. Adult primary care physicians were defined as doctors with specialties in internal medicine, family practice, or general practice. The FTC excluded obstetricians and gynecologists from their proposed market because "[t]hose services generally complement, rather than substitute for, general PCP services." *Id.* ¶¶ 24–25.

46 Order of Consolidation, Saint Alphonsus Med. Ctr.-Nampa Inc. v. St. Luke's Health Sys., Ltd., 12-cv-560-BLW (D. Idaho Mar. 19, 2013), www.ftc.gov/sites/default/files/documents/cases/2013/03/130319stlukeorder.pdf.

47 Findings of Fact & Conclusions of Law at Findings ¶¶ 178–185 and at Conclusions ¶¶ 46–47, Saint Alphonsus Med. Ctr.-Nampa Inc. v. St. Luke's Health Sys., Ltd., No. 1:12-cv-00560-BLW, 2014 WL 407446 (D. Idaho Jan. 24, 2014), www.ftc.gov/system/files/documents/cases/140124stlukesfindings.pdf.

together a unified and committed team of physicians, it is not the only way. The same efficiencies have been demonstrated with groups of independent physicians."[48]

Figure 2. Difference-in-Differences analysis of St. Luke's prior physician group acquisitions



Source: Demonstratives for the testimony of Professor David Dranove, October 2, 2013, *available at* https://www.ftc.gov/system/files/documents/cases/131002stlukedemodranove.pdf, 51.

[48] *Id*. Conclusions ¶ 46.