Foreclosure Issues in Vertical Healthcare Mergers

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There has been an increase in consolidation and vertical integration in the U.S. healthcare industry. For example, one study found that the number of physicians in healthcare providers that have vertically integrated with hospitals has doubled in the past decade, a trend that is expected to continue with an increasing number of Medicare beneficiaries being directly affected by this vertical integration.[1] Another stated that the percentage of primary care physicians working in practices owned by a hospital or health system has risen dramatically in recent years, increasing by 57% over the period from 2010 to 2016.[2] And, an April 2024 report found that as of 2022, 58.5% of physician practices were owned by hospitals/health systems (or other downstream corporate entities), continuing a decade-long trend away from private practice.[3]

This consolidation and vertical integration in U.S. healthcare has been met with increased scrutiny from policymakers and antitrust agencies.[4] The focus on acquisitions involving hospital systems, large insurance companies, health care providers (e.g., physician groups), and pharmacy benefit managers (PBMs) has resulted in high-profile merger investigations and enforcement actions. One area of increased antitrust concern involves the consolidation of upstream healthcare providers with downstream hospitals or large insurance companies into vertically-integrated health systems.

Vertical mergers involve the combination of businesses that operate in different levels of a multi-step supply chain (e.g., a merger between an upstream supplier of an input and a downstream firm that purchases it).[5] Post merger, the new vertically-integrated firm participates in multiple stages of the supply/production chain. Vertical transactions in the healthcare marketplace similarly combine businesses operating at different levels of the healthcare supply chain. These may take the form of downstream hospital systems or health insurance companies merging with or acquiring independent upstream physician groups/practices, healthcare providers, or home health agencies. It is often the case that prior to such an acquisition, the upstream business being acquired is a competitor to an upstream business already owned by the downstream buyer.

This article reviews antitrust issues involving vertical foreclosure that are applicable in the healthcare industry. It then discusses their relevance to merger reviews involving UnitedHealth Group Inc.'s acquisition of DaVita Medical Group (completed in 2019), UnitedHealth Group Inc.'s acquisition of Amedisys (recently cleared by antitrust officials with divestitures), and the vertical integration of health insurers (or other entities) and PBMs.

I. Antitrust Issues of Vertical Mergers

Vertical mergers can harm competition if the newly merged firm has the ability and incentive to reduce or eliminate rival firms' access to upstream inputs or downstream customers/markets. Competitive concerns are amplified if the transaction serves to enhance or entrench the market power of the new firm's upstream or downstream business.[6] The economics of anticompetitive foreclosure, including the effect of a vertical merger between an upstream and downstream business, have been described and developed over decades of research.[7] Anticompetitive foreclosure can occur when a new vertically integrated firm either reduces or eliminates other downstream firms' access to an upstream input needed to effectively compete in the downstream market. This so-called "input foreclosure" will raise these downstream firms' costs or cause them to seek alternative input suppliers. In particular, input foreclosure arises when the newly merged firm's upstream business either completely stops supplying a key input to competing downstream firms (complete input foreclosure), or continues to do so but at a higher price or on less favorable terms compared to the pre-merger situation (partial input foreclosure). This kind of foreclosure is a raising-rivals-cost strategy and it can disadvantage downstream rivals of the newly merged firm. The incentive to engage in input foreclosure increases the more the downstream business of the newly merged firm benefits from sales lost by foreclosed downstream rivals.

Vertical foreclosure also can occur when the downstream business of the newly merged firm reduces or eliminates access of upstream firms to the downstream business' customers or markets. This so-called "customer foreclosure" may allow the downstream business of the newly merged firm to disadvantage rivals to its upstream business by refusing to buy – or reducing its purchases of – inputs from these upstream rivals, possibly impacting their ability to effectively compete. One scenario is that post-merger, the downstream business of the merged firm only buys inputs from its upstream business and stops purchasing inputs completely from upstream competitors (total customer foreclosure). Another is that the downstream business of the merged firm significantly decreases purchases from upstream competitors (or otherwise disadvantages them) thereby reducing their sales opportunities (partial customer foreclosure).

An additional concern in the literature regarding a vertical merger is that it may reduce future horizontal competition if the merger eliminates or diminishes the incentive for one of the merging firms to enter the business that is either upstream or downstream of its current position. Another concern relates to a vertical merger forming a barrier to entry to future firms in one or both of the upstream and downstream markets. For example, vertical integration may present an entry barrier to the downstream market if upstream foreclosure confers a cost advantage on the vertically-integrated firm. Potential entrants may also face higher costs of entry if they have to enter at more than one level of the supply chain in order to effectively compete with the newly merged firm.

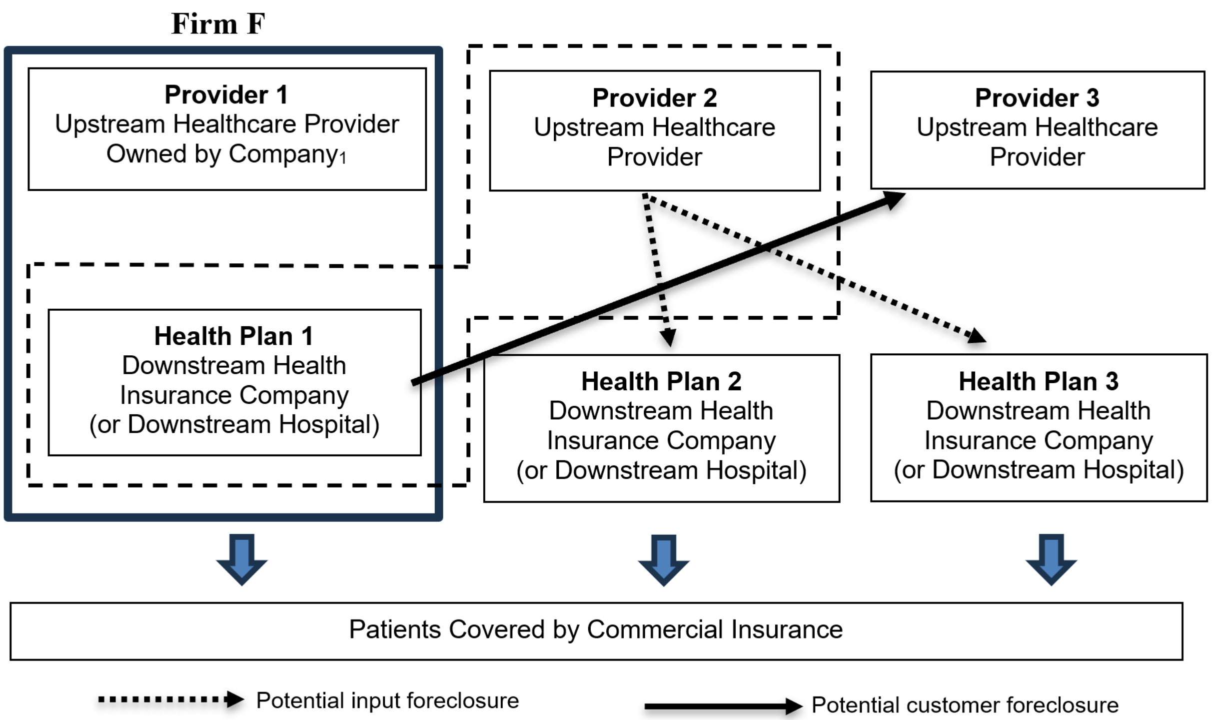
The potential anticompetitive effects of vertical integration can be mitigated or offset by potential merger-specific efficiencies and cost savings. For example, if there is existing market power upstream, a vertical merger that allows the integrated firm to obtain inputs at a lower cost can eliminate double marginalization which can be beneficial for consumers and efficiency. Vertical integration also can solve problems associated with inefficient input substitution, as well as enable the merged firm to realize economies of scope, facilitate synergies, and save on transactions costs.[8]

The anticompetitive effects of a vertical merger depend on the credibility of the theory of harm due to foreclosure. If foreclosure is not credible, then increasing vertical integration is likely to be efficiency enhancing and lead to lower prices. If foreclosure is a valid concern, then harm to competition must dominate any efficiency benefits for the vertical integration to be welfare reducing.

II. Vertical Foreclosure in the Healthcare Industry

The rise in vertical integration in the U.S. healthcare industry has raised concerns about market foreclosure.[9] For example, large hospital systems that acquire upstream physician practices may steer patient demand toward their own downstream hospital services and away from rival hospitals, or large insurance companies acquiring upstream healthcare providers may steer demand toward their own downstream insurance networks. Figure 1 presents a simplified diagram illustrating how

Figure 1



input and customer foreclosure can arise in vertical mergers in the healthcare industry.[10] Here, Firm F (denoted by the solid box) is a vertically integrated firm comprised of an upstream healthcare practice (Provider 1) and a downstream health plan (Health Plan 1).[11] In this industry, the upstream healthcare providers produce the services, the downstream health insurers offer a bundle of upstream products via their health plans, and consumers purchase their preferred plan which gives them access to the provider network within the chosen plan.

Suppose Firm F proposes to acquire upstream healthcare practice Provider 2, a popular healthcare provider. This transaction is denoted by the hashed shape. In this context, the potential for input foreclosure might arise if post-merger, two things were to happen: (a) Firm F no longer allowed Provider 2 to participate in the competing downstream insurance networks offered by Health Plans 2 and 3, and (b) contracting with Provider 3 is not sufficient to enable Health Plans 2 and 3 to compete in the downstream market. This could lessen the attractiveness of Health Plans 2 and 3 to insureds, perhaps driving some of them to enroll with Firm F's Health Plan1. The potential for input foreclosure would also be present if Firm F were to allow Provider 2 to participate in the competing downstream networks offered by Health Plans 2 and 3, but at higher contracted reimbursement rates. For example, input foreclosure also might result if post-merger, (a) Provider 2 charges Health Plans 2 and 3 higher reimbursement rates, and (b) Health Plans 2 and 3 have substantially inferior alternatives such that they must pay those higher rates to Provider 2. This could force Health Plans 2 and 3 to raise premiums, thereby making them less competitive with Firm F and Health Plan 1. Either type of vertical input foreclosure could decrease the pre-merger horizontal competition among Health Plans 1, 2, and 3, possibly raising prices to insurance customers. Input foreclosure is represented by the two dashed arrows in Figure 1.

Customer foreclosure could arise post-merger if Health Plan 1 no longer included a competing upstream healthcare provider (such as Provider 3) in its insurance network. Because

Provider 3 would no longer be in Health Plan 1's insurance network, this might cause some of Provider 3's patients to switch to healthcare providers under contract with Health Plan 1 (i.e., Providers 1 and 2), perhaps reinforcing the market power of Firm F. Moreover, if Provider 3 becomes less of a competitive force post-merger, the transaction could further reduce the pre-merger upstream competition among Providers 1, 2, and 3 over and above having Provider 2 removed as an independent healthcare provider. This may result in higher prices for patients of these healthcare providers. Customer foreclosure is represented by one dark arrow in Figure 1.

The literature recognizes that successful input and customer foreclosure depends on several factors. Specifically, foreclosure will likely be more anticompetitive if 1) the market shares of the merging upstream and downstream businesses in the geographic and product markets are relatively high; 2) there are few (if any) viable and readily available outside options for downstream firms to source the foreclosed input or for upstream firms to sell the foreclosed input; 3) the merged firm has the ability and incentive (i.e., it is feasible and profitable) to engage is such foreclosure based on the relevant margins and the volume of business diverted to it from foreclosed rivals, and 4) the expected or likely anticompetitive effects outweighed the expected or likely cost savings and/or other procompetitive effects.

There also are recognized potential benefits associated with vertical integration in the healthcare industry such as eliminating double marginalization and duplicative costs, providing incentives for increased investment, realizing benefits of quality-of-care coordination, aligning incentives within the vertical chain to achieve operational efficiencies, and generating economies of scale or scope.[12] The analysis of the ability and incentive of a vertical merger to likely result in anticompetitive foreclosure, as well as the weighing of potential anticompetitive effects against potential efficiencies, needs to be empirically investigated on a case-by-case basis.

III. Examples of Healthcare Mergers that Raised Vertical Foreclosure Issues

Three transactions reviewed by U.S. antitrust regulators involving the health insurance industry are discussed next. These acquisitions involved upstream physician groups, home healthcare/hospice providers, and PBMs. Each featured the type of vertical foreclosure issues discussed in this paper as a theory of potential competitive harm.

a. Health Insurer Acquisitions of Physician Groups

UnitedHealth Group Inc. ("UHG"), the largest U.S. health-services company by revenue, announced in December 2017 that it would acquire DaVita Medical Group ("DMG"), a large physician network. This acquisition raised both horizonal and vertical antitrust issues in the relevant product and geographic markets identified by the FTC.[13] In Las Vegas, UHG was described as a vertically integrated health insurer marketing/selling downstream health insurance plans while also employing upstream physicians/specialists through its Optum business. DMG also employed or affiliated with many upstream physicians/specialists in the Las Vegas area. In particular, the FTC alleged that DMG and UHG's Optum were the two largest providers of upstream managed care provider organization ("MCPO") services to downstream Medicare Advantage ("MA") health insurers in the Las Vegas area. These health insurers needed to contract with MCPOs, like those of UHG's Optum business and DMG, to create a "marketable" network of healthcare providers for their enrollees.

The FTC claimed that UHG's vertical merger with DMG would eliminate horizontal competition in Las Vegas between the parties' upstream MCPOs (like Providers 1 and 2 in Figure 1) that participated in downstream MA insurers' networks. The FTC claimed that this upstream MCPO competition had spurred each firm to provide more attractive, lower-cost options for downstream MA insurers, and that the proposed merger would diminish this pre-merger upstream competition. The FTC also alleged that the post-merger combination of UHG and DaVita's MCPO's for MA members in Las Vegas would result in an 80% market share, resulting in a highly concentrated upstream market.

The FTC also raised vertical foreclosure concerns regarding UHG's downstream health insurance plans, noting that its MA plans had over 50% market share in the Las Vegas area. The FTC alleged that because the merger would lead to input foreclosure by giving UHG control over DaVita's (upstream) physician group (like Provider 2 in Figure 1), this "competitively significant input" would not be available for rival downstream insurers to UHG offering MA plans in Las Vegas (like Health Plans 2 and 3 in Figure 1), or only available on less favorable terms. That is, the FTC alleged that UHG could have negotiated higher rates with rival MA plans (i.e., a raising-rivals'-costs strategy due to partial input foreclosure), or have refused to contract with them altogether (i.e., complete input foreclosure), thereby reducing competition in the provision of MA plans in the Las Vegas area. The FTC also alleged that post-merger, the combined company would have a greater ability and incentive to raise its own MA rates and/or have reduced incentive to improve the quality and benefits of its MA plans. While the FTC initially challenged this merger, it entered into a Consent Agreement in 2019 allowing it but with divestitures in Nevada.

b. Health Insurer Acquisitions of Home Health Care and Hospice Providers

Another proposed transaction in the healthcare industry that also raised foreclosure concerns involves (forward) vertical integration into home health agencies. In February 2023, UHG acquired LHC Group, a nationwide home health and hospice provider, which joined UHG's upstream health services division Optum. This transaction was not challenged by antitrust agencies presumably because UHG was not present in the home health and hospice marketplace at that time.[14] In June 2023, UHG announced plans to acquire Amedisys, another nationwide home health and hospice service provider (this is like the transaction described in Figure 1). On November 12, 2024, the US DOJ's Antitrust Division and the state Attorneys General (AG) of Maryland, Illinois, New Jersey, and New York filed a complaint challenging the transaction, alleging that the pre-merger competition between UHG's LHC (part of Optum) and Amedisys in "hundreds of local markets across America" would be eliminated.[15] Amedisys initially moved to dismiss the complaint citing a failure to properly define the geographic markets in which anticompetitive effects might occur regarding home health and hospice providers.[16] The merging parties subsequently dropped this motion after the DOJ and state AGs provided more detail about the geographic markets where competition allegedly would be affected by the proposed transaction.[17] On August 7, 2025, the DOJ announced a Proposed Final Judgement allowing UHG's acquisition of Amedisys but requiring the companies to sell at least 164 facilities across 19 states.[18]

The DOJ's theory of harm centered on the horizontal upstream pre-merger competition between Optum's LHC Group and Amedisys that would be impacted post-merger (like the pre-merger competition between Providers 1 and 2 in Figure 1). However, the framework presented in Figure 1 also suggests several vertical foreclosure possibilities of the UHG-Amedisys transaction similar to those in the UHG-DMG transaction. For example, one vertical concern could be partial or complete input foreclosure if Amedisys (Provider 2 in Figure 1) harms downstream competition post-merger by either cutting off access or raising reimbursement rates to UHG's downstream competitors (Health Plans 2 and 3 in Figure 1) in certain areas. Another concern could revolve around customer foreclosure in that UHG's downstream entity (Health Plan 1 in Figure 1) might only (or predominantly) contract with its own upstream home health and hospice providers (LHC and Amedisys) post-merger, and no longer deal with unaffiliated upstream entities (such as Provider 3 in Figure 1).

c. Mergers Involving Health Insurers and PBMs

Vertical foreclosure issues also have arisen in the context of consolidation involving health insurers and PBMs. PBMs serve as the "middleman" between drug manufacturers/distributors and health insurance companies, and their combination into a vertically integrated business is an increasingly more frequent occurrence.[19] One study finds that the share of Medicare Part D beneficiaries enrolled in an insurance plan that is vertically integrated with a PBM increased from about 30% to 80% between 2010 and 2018.[20] This study summarizes the input and customer foreclosure concerns when downstream health insurers and upstream PBMs vertically integrate.

> Input foreclosure occurs when a PBM owned by an insurer increases the costs or reduces the quality of its services provided to insurers who compete with its parent insurer. For example, the PBM could pass through a larger share of manufacturer rebates to its parent insurer than it passes through to rival insurers. The degree of input foreclosure depends on the level of competition in the PBM market. If PBM markets have many competitors, then input foreclosure is less likely as rival health plans experiencing input foreclosure can switch to one of many standalone PBMs. However, if PBM markets are highly concentrated then input foreclosure is more likely as rival plans have limited options to switch to another PBM.
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> Customer foreclosure, by contrast, occurs when the downstream firm of a merged entity no longer purchases inputs from its upstream competitors. For instance, when an insurer and PBM consolidate, the insurer's health plans will always use services from its own PBM, thus reducing the potential number of clients for standalone PBMs. The reduction in the potential customer base could ultimately lead standalone PBMs to exit the market which would further increase the concentration of PBMs.

Such acquisitions are under increased antitrust scrutiny and the FTC is currently investigating the competitive impact of vertically integrated PBMs.[21]

These foreclosure concerns were at issue when CVS Health Corp. – which also owned the country's largest PBM (Caremark) – sought to acquire Aetna Insurance Inc. in December 2017. The DOJ filed a complaint on October 10, 2018 to enjoin the proposed acquisition while at the same time proposing a Final Judgment allowing it to proceed if Aetna divested certain lines of business. Subsequently, numerous public comments were submitted to the DOJ about the proposed Final Judgment, several claiming that it failed to address the vertical concerns raised by the transaction.[22]

The input foreclosure concern was that Aetna's downstream insurer rivals either would not be able to access the CVS PBM (which was said to have a national market share of 25%), or would face higher costs of doing so post-merger. In other words, CVS-Aetna could raise Aetna's rivals' costs for PBM services which would have anticompetitive effects in the downstream insurance market. The customer foreclosure concern was that upstream rivals to the CVS PBM might be foreclosed from having Aetna as a customer. Specifically, several comments claimed that by consolidating with Aetna, CVS would control access to Aetna. This would give the merged firm the ability to cut off rival PBMs' access to Aetna's insurance network thereby impacting competition in the upstream retail pharmacy and PBM markets.

In rejecting these vertical foreclosure concerns, the DOJ claimed they "investigated the potential for vertical harms from the merger" and "concluded that vertical harms were unlikely to occur and did not allege any harm related to vertical concerns in its Complaint."[23] The court also dismissed concerns related to vertical foreclosure, concluding that Aetna's rivals had upstream PBM alternatives other than the CVS PBM, so that "if CVS were to raise its PBM prices, customers like Wellcare could simply switch to a less expensive PBM or stop contracting for those PBM services altogether." The court also stated that if CVS were to raise its PBM prices post-merger, "it would risk losing PBM market share without disadvantaging Wellcare or other competing insurers at all."[24]

IV. Current State of Policy Guidance on Vertical Foreclosure

In 2020, U.S. antitrust agencies updated their guidance on vertical transactions when the DOJ and FTC issued the Vertical Merger Guidelines (replacing the 1984 Non-Horizontal Merger Guidelines), though this was short-lived as the FTC withdrew them the following year. The 2023 Merger Guidelines broadly make reference to vertical foreclosure in Guideline 5, noting that attention will be given to vertical mergers which involve "important inputs" used by rivals to the merged firm, or involve "increase[d] access to rivals' competitively sensitive information" affecting their ability to compete.[25]

Several matters illustrate the unsettled nature of policy enforcement regarding vertical mergers. The 2018 AT&T/Time Warner transaction, the first vertical merger litigated to conclusion by the DOJ since 1977, was allowed to close (upheld by the D.C. Circuit Court of Appeals) and prominently featured the elimination of double marginalization as a procompetitive justification.[26] In 2023, the FTC successfully stopped Illumina, the sole upstream supplier of a popular multi-cancer early detection test, from acquiring Grail, a downstream firm using this input, as the appellate court determined the merged company would have the ability and incentive to foreclose Grail's downstream rivals and substantially lessen competition in the relevant market. Notably, the court dismissed Illumina's claim that the merger would eliminate double marginalization.[27] In February 2025, a federal district court denied the FTC's efforts to stop Tempur Sealy, the largest (upstream) mattress manufacturer, from buying Mattress Firm, the largest U.S. (downstream) mattress retailer.[28] The FTC alleged this vertical merger would allow Tempur Sealy to block or limit access by rival upstream mattress manufacturers to Mattress Firm stores thereby substantially lessening competition. However, the court did not agree with the FTC's analysis regarding the merged firm's ability and incentive to foreclose competition in a product market limited to "premium mattresses." Regarding the healthcare industry, Miller and Hahm (2024) discuss the trend towards increased vertical integration through mergers and affiliations, particularly between payers (e.g., health insurers/plans) and providers. These authors state that "[v]ertical mergers will likely represent the next wave of health care consolidation, but the relatively few Agency enforcement actions provide only limited guidance on some of the nuances of vertical healthcare transactions."[29]

V. Concluding Remarks

Vertical mergers generally raise fewer antitrust concerns than horizontal ones because they do not reduce the number of competitors post-merger and have the potential to be procompetitive. Consequently, proving how foreclosure theories of harm translate into anticompetitive outcomes is often challenging. The foreclosure issues discussed in this article are ones we should expect to see going forward as vertical integration continues in the healthcare industry. However, since vertical mergers do not necessarily provide the ability and/or incentive for foreclosure,[30] whether the new Guidelines or information from recently litigated cases can be used to identify beneficial acquisitions (i.e., efficiency enhancing) from anticompetitive ones remains to be seen.

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[1] Soroush Saghafian et. al. (2023), "The Impact of Vertical Integration on Physician Behavior and Health care Delivery: Evidence from Gastroenterology Practices," NBER Working Paper 30923. See also, "What Have We Learned About the Economic Effects of Vertical Integration?" RAND Center of Excellence on Health System Performance, https://www.rand.org/health-care/centers/health-system-performance/what-have-we-learned/verticalintegration.html; and Li et. al. (2025), "How do Hospitals Exert Market Power? Evidence from Health Systems and Commercial Health Plan Prices," Health Affairs Scholar, 3(1).

[2] James Godwin et. al. (2021), "The Association between Hospital-Physician Vertical Integration and Outpatient Physician Prices Paid by Commercial Insurers: New Evidence," The Journal of Health Care Organization, Provision, and Financing, Volume 58: pp. 1–10. Among other conclusions, these authors found that market-level hospital-physician vertical integration was positively associated with physician prices for select specialties.

[3] PAI (2024). PAI-Avalere Study on Physician Employment-Practice Ownership Trends: 2019-2023. https://www.physiciansadvocacyinstitute.org/PAI-Research/PAI-Avalere-Study-on-Physician-Employment-Practice-Ownership-Trends-2019-2023.

[4] See, e.g., "New Health Care Task Force Will Tackle Competition Problems in Health Care Markets," U.S. Department of Justice, May 9, 2024 (https://www.justice.gov/opa/pr/assistant-attorney-general-jonathan-kanter-announces-task-force-health-care-monopolies-and); "Request for Information on Consolidation in Health Care Markets," U.S. Federal Trade Commission, Docket No. ATR 102, 2024, February 29, 2024 (https://www.ftc.gov/system/files/ftc_gov/pdf/FTC-2024-0022-0001-Request-for-Information-on-Consolidation-in-health-care-markets.pdf); and, "FTC to Study the Impact of Physician Group and Healthcare Facility Mergers," January 14, 2021 (https://www.ftc.gov/news-events/news/press-releases/2021/01/ftc-study-impact-physician-group-healthcare-facility-mergers).

[5] Firms operating before a particular point in the supply chain are 'upstream' and firms operating at subsequent steps are 'downstream'.

[6] A merger (vertical or horizontal) can result in an increase in market power due to either unilateral or coordinated effects. Coordinated conduct is only profitable for a firm post-merger if its rivals accommodate it (e.g., all firms agree to raise prices). Unilateral effects arise when a single firm has sufficient market power (post-merger) to profitably increase prices or engage in other anticompetitive behavior independent of their rivals' pricing or competitive strategy.

[7] A seminal economics paper in this regard is Janusz A. Ordover, Garth Soloner, and Steven C. Salop (1990), "Equilibrium Vertical Foreclosure," The American Economic Review, 80(1), pp. 127-142. See also, Patrick Rey and Jean Tirole (2007), "A Primer on Foreclosure," Chapter 33 in Armstrong, M. and Porter, R., Eds., Handbook of Industrial Organization Volume 3; Riordan, Michael (2008), "Competitive Effects of Vertical Integration," in Buccirossi, P., Ed., Handbook of Antitrust Economics, MIT Press, pp. 145-182, and Steven C. Salop and Culley, Daniel P., "Potential Competitive Effects of Vertical Mergers: A How-To Guide for Practitioners," December 8, 2014, available at https://ssrn.com/abstract=2522179. In other theories of competitive harm discussed in the literature, vertical mergers can also facilitate downstream or upstream collusion.

[8] Economies of scope mean that products are more cheaply produced by one firm than by two or more firms. Transaction costs are those that are incurred when firms use external markets prior to vertical integration to buy inputs (e.g., costs of searching for inputs, negotiating supply contracts, monitoring and enforcing these contracts). Inefficient input substitution may occur when a downstream good is produced using substitutable inputs in variable proportions, and one of the inputs is sold at a price in excess of marginal cost. If so, the downstream firm has an incentive to substitute away from the more expensive input even though this may not be efficient. See, e.g., OECD (2019), "Vertical Mergers in the Technology, Media and Telecom Sector," pp. 27-29. https://one.oecd.org/document/DAF/COMP(2019)5/en/pdf.

[9] Christopher M. Whaley and Xiaoxi Zhao (October 2024), "The Effects of Physician Vertical Integration on Referral Patterns, Patient Welfare, and Market Dynamics," Journal of Public Economics, vol. 238. See also, Ayse Sera Diebel (2017), "Vertical Integration in the U.S. Health Care Market: An Empirical Analysis of Hospital-Insurer Consolidation," The Graduate Center at CUNY, Department of Economics, (who finds that vertically-integrated health systems engage in both upstream and downstream foreclosure). https://www.gc.cuny.edu/sites/default/files/2021-07/AyseSeraDiebel_JMP.pdf.

[10] For a more detailed discussion of vertical foreclosure issues in the healthcare industry, see Alexis J. Gilman and Akhil Sheth, "Antitrust Analysis of Vertical Healthcare Mergers," Practical Law (April/May 2020); and, Josh Lustig et. al., "Economic Tools for Analyzing Vertical Mergers in Health care," CPI Antitrust Chronicle, May 2020.

[11] Alternatively, Health Plan 1 1 could be a large downstream hospital system that owns or contracts with upstream healthcare provider, Provider 1.

[12] See, e.g., Capps et. al. (May 2021), "Stacking the Blocks: Vertical Integration and Antitrust in the Healthcare Industry," CPI Antitrust Chronicle, 2(1), pp. 14-24.

[13] The FTC case documents can be found at https://www.ftc.gov/legal-library/browse/cases-proceedings/181-0057-unitedhealth-groupdavita-matter. Gilman and Sheth (2020) and Lustig et. al. (2020) discuss the antitrust concerns of this transaction.

[14] For a discussion of the antitrust issues regarding the UHG and other vertical transactions in the healthcare industry, see Kevin Hahm and Brian J. Miller (Fall 2024), "A Framework for Evaluating Vertical Integration Among Payers and Providers," Antitrust, 39(1), pp. 45-51.

[15] The complaint can be found at https://www.justice.gov/opa/media/1376671/dl.

[16] The Amedisys Motion to Dismiss (January 8, 2025) can be found at https://appliedantitrust.com/14_merger_litigation/cases_doj/unitedhealth_amedisys2024/2_dmd/unitedhealth_amedisys_dmd_dismiss_motion2025_01_08memo.pdf.

[17] Matthew Perlman, "UnitedHealth Drops Bid to Toss Home Health Deal Challenge," Competition, Law360, February 6, 2025.

[18] https://www.justice.gov/opa/pr/justice-department-requires-broad-divestitures-resolve-challenge-unitedhealths-acquisition.

[19] José R. Guardado, Ph.D., "Competition in Commercial PBM Markets and Vertical Integration of Health Insurers with PBMs: 2023 Update," Policy Research Perspectives, American Medical Association, 2023.

[20] Gray et. al., "Disadvantaging Rivals: Vertical Integration in the Pharmaceutical Market," NBER Working Paper No. 31536, August 2023.

[21] "FTC Further Expands Inquiry Into Prescription Drug Middlemen Industry Practices," June 8, 2023. See https://www.ftc.gov/news-events/news/press-releases/2023/06/ftc-further-expands-inquiry-prescription-drug-middlemen-industry-practices.

[22] The DOJ case documents, including all comments submitted about the Final Judgement, can be found at https://www.justice.gov/atr/case/united-states-and-plaintiff-states-v-cvs-health-corp-and-aetna-inc. Gilman and Sheth (2020), infra note 9, also discuss the foreclosure concerns of this transaction.

[23] See https://www.justice.gov/atr/case-document/file/1131901/dl?inline.

[24] "Memorandum Opinion," Judge Richard J. Leon, U.S. District Court for the District of Columbia, September 4, 2019. Gilman and Sheth (2020), infra note 9, also discuss the foreclosure issues and legal outcome of the CVS-Aetna transaction.

[25] 2023 Merger Guidelines, pp. 13, 18.

[26] Carlton, Dennis W., Giozov, Georgi V., Israel, Mark A., and Shampine, Allan L. (2022) "A Retrospective Analysis of the AT&T/Time Warner Merger," Journal of Law and Economics: Vol. 65: No. 6, Article 6.

[27] https://cases.justia.com/federal/appellate-courts/ca5/23-60167/23-60167-2023-12-15.pdf?ts=1702686627.

[28] https://law.justia.com/cases/federal/district-courts/texas/txsdce/4:2024cv02508/1965404/515/.

[29] Op. cit., Hahm and Miller, (2024), p. 46.

[30] See, e.g., Alessandro S. Kadner-Graziano "Vertical Mergers Without Foreclosure," Journal of Economics & Management Strategy, 2024.