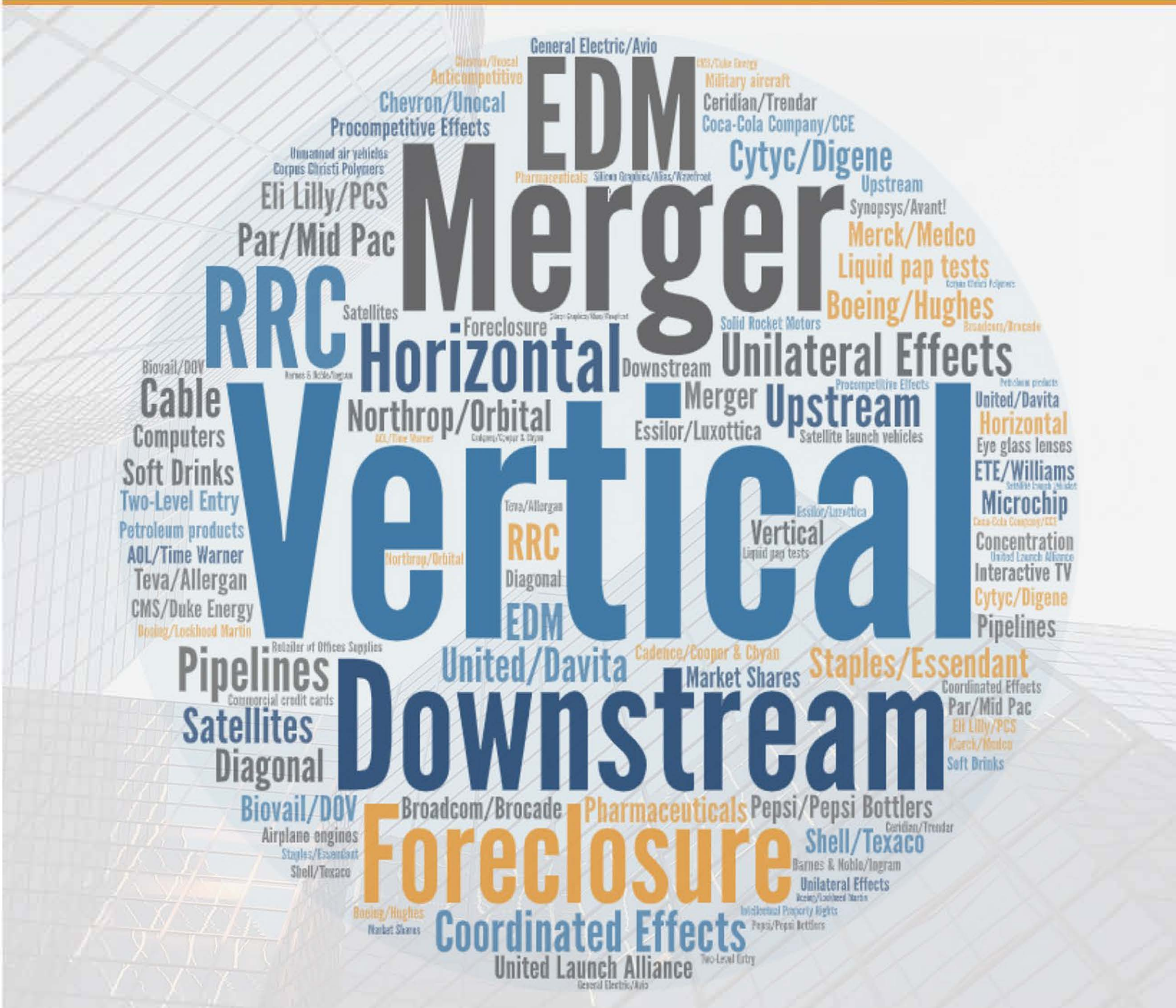
COMMENTARY ON VERTICAL MERGER ENFORCEMENT



FEDERAL TRADE COMMISSION

December 2020

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1. Introduction

The Federal Trade Commission (”Commission” or “FTC”) and the Department of Justice’s Antitrust Division (collectively, “the Agencies”) have issued Vertical Merger Guidelines (”Vertical Merger Guidelines”) describing the principal analytical techniques, practices, and enforcement policies that the Agencies use in evaluating whether vertical mergers violate the antitrust laws.[1] To provide greater transparency to the public regarding its analysis of vertical mergers, the Commission issues this COMMENTARY ON VERTICAL MERGER ENFORCEMENT.

This Commentary describes how the Commission has evaluated vertical issues in the course of its investigations, using the facts, finding, and analyses from specific cases.[2] Although the investigations described below do not reflect an exhaustive list of the circumstances that give rise to vertical concerns, they demonstrate the breadth of the Commission’s investigations and the theories that the FTC applies to analyze vertical transactions.

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[1] U.S. Department of Justice and Federal Trade Commission, Vertical Merger Guidelines (June 30, 2020) (hereinafter “Vertical Merger Guidelines”).

[2] This Commentary does not alter the Vertical Merger Guidelines. Each case discussed herein is fact-specific, and the facts and conclusions described in this Commentary do not predetermine the outcomes of other matters. The summaries describe theories associated with the particular facts presented in those matters and may not be exhaustive of all theories of harm considered or alleged in the matter, and should not be interpreted as such. References to the Commission include the actions of a majority of the Commission where the Commission was not unanimous in its decisions.

2. Overview of Vertical Mergers

Before a merger, parties to the transaction may be upstream, downstream, or diagonal to each other, or may offer complementary products. They may also be competitors in a relevant market, when at least one of the parties is already vertically integrated. Indeed, many transactions have both horizontal and vertical elements, such as when a vertically integrated firm seeks to acquire a firm that is a competitor in one market and a customer or supplier of a related product.

Many of the principles and analytical frameworks used to assess horizontal mergers also apply to vertical mergers. Vertical mergers, however, also raise distinct analytical issues. They involve firms that make products that do not compete in the same market, but they nonetheless may affect competition if the merged firm's ownership of one of the products (the "related product") affects competition involving the other (the "relevant market").

A. Mergers with Solely Vertical Elements

Vertical mergers combine firms or assets at different stages of the same supply chain. A common scenario is a merger between an upstream input manufacturer and one of its downstream customers. The Commission's competitive effects analysis has focused on assessing the merger's impact on competition in the downstream market, through a consideration of the potential for foreclosing or raising the cost of rivals' access to the upstream input. *See, e.g.,* **Northrop Grumman/Orbital ATK** (discussed *infra*, at Section 3). Intellectual property rights may be an upstream input critical to competition occurring in a downstream market. The acquisition of the upstream licensor of intellectual property rights by one of its downstream licensees can raise competitive concerns. See, e.g., **Biovail/DOV Pharmaceuticals** (discussed *infra*, at Section 3) and **Chevron/Unocal** (discussed *infra*, at Section 5). Vertical mergers may involve the combination of an upstream producer and its rivals' downstream distributor; the Commission has investigated acquisitions to assess the impact on competition in the upstream market through customer foreclosure. *See, e.g.,* **Pepsi/Pepsi Bottlers** (discussed, *infra*, at Sections 3 and 4. Vertical effects can also arise in "diagonal" mergers – those combining firms or assets at different stages of competing supply chains. *See, e.g.,* **Staples/Essendant** (discussed, *infra*, at Sections 3 and 4).

Vertical issues also can arise in mergers of producers or sellers of complements. Two products are complements if demand for one increases when the price of the other falls.

Cadence/Cooper & Chyan **(1997)** Cadence Design Systems, Inc. agreed to acquire Cooper & Chyan Technology, Inc. The parties made complementary products used by microchip designers. Cadence was the dominant supplier of integrated circuit layout environments ("ICLE") for microchips (the related product). Cooper was the only firm with a commercially viable constraint-driven, shape-based integrated circuit routing tool (the relevant market). Microchip designers used routing tools to map microscopic electrical component connections on microchips. To be effective for a particular user, routing tools must interface with a circuit layout environment. Integrated circuit designers were less likely to select a routing tool that lacked an interface with Cadence's ICLE than a routing tool that did interface with a Cadence ICLE.

Prior to the proposed acquisition, Cadence did not have a commercially viable constraint-driven, shape-based integrated circuit routing tool, and thus had the incentive to make available a complete set of integrated circuit tools to users of a Cadence ICLE. Post-acquisition, the combined firm would have ownership of the only commercially viable constraint-driven, shape-based routing tool. The Commission investigated the potential harm to routing tool competition from the transaction and alleged that Cadence would be less likely to permit potential suppliers of competing constraint-driven, shape-based integrated circuit routing tools to access Cadence's layout environments. The Commission also alleged that the acquisition would make it more likely that successful entry into the constraint-driven, shape-based integrated circuit routing tool market would require simultaneous entry into the market for ICLEs.

The Commission challenged the proposed acquisition and entered into an order with Cadence.

A transaction may affect competition both upstream and downstream, or for multiple complements.

Silicon Graphics/Alias Research/Wavefront[3] **(1995)** Silicon Graphics ("SGI") had a 90 percent share of the market for workstations that ran sophisticated software, including the products of Alias and Wavefront. Alias's and Wavefront's products were used for special effects in movies and video games, and were "significant, independent sources of entertainment graphics software." SGI intended to acquire both companies. Before the proposed acquisition, Alias had negotiated with other workstation manufacturers to enable or "port" its entertainment graphics software on their computer systems, and SGI had offered an open software interface on its workstations.

The Commission alleged, among other things, that the acquisitions "may, individually or in combination," harm competition in the market for entertainment graphics software (one relevant market) by foreclosing or increasing costs to competitors of Alias and Wavefront in developing software for use in future entertainment graphics workstation products developed by SGI. The combined firm might foreclose or raise rivals' costs by ceasing to share advance information about its new products with independent software developers or by degrading the open interface on its workstations (the related product, for effects on competition in entertainment graphics software). The Commission also alleged that the acquisitions "may, individually or in combination," harm competition in the market for workstations with graphics capabilities (another relevant market) by foreclosing workstation firms other than SGI from Alias and Wavefront software (the related product) or by increasing the costs of obtaining that software to independent workstation producers. For example, the combined firm could refuse to make its software compatible with others' workstations. (The Commission also alleged that the acquisitions would eliminate Alias and Wavefront as "substantial, independent competitors" and increase concentration in the market for entertainment graphics software.)

The Commission challenged the proposed acquisitions and entered into an order with SGI.[4]

[3] *Silicon Graphics, Inc.*, 120 F.T.C. 928 (1995).

[4] Decision and Order, *Silicon Graphics, Inc.*, 120 F.T.C. 928, 934 (1995).

B. Mergers May Have Both Horizontal and Vertical Elements

A merger of firms situated vertically may also eliminate current (or future) horizontal competition between the merging firms.

> ***UnitedHealth/DaVita*** **(2019)** UnitedHealth Group ("United") is a vertically integrated health insurer. In addition to marketing and selling health insurance plans, United employs physicians, including primary care physicians and specialists, through its subsidiary Optum, Inc. DaVita Medical Group employed and affiliated with many primary care physicians and a diverse set of specialists. In the Las Vegas area, both DaVita and Optum offered managed care provider organization ("MCPO") services to Medicare Advantage ("MA") health insurers. Health insurers needed to contract with MCPOs, like those of United or DaVita, to create a marketable network of healthcare providers.
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> With respect to competition in and around Las Vegas, the Commission alleged that United's proposed acquisition of DaVita would eliminate direct, horizontal competition between the parties' MCPOs to participate in MA insurers' networks – competition that had spurred each firm to provide more attractive, lower-cost options for MA insurers. Post-merger, United would have gained a near monopoly in MCPOs treating Las Vegas-area MA members.
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> The proposed combination raised vertical concerns, discussed, *infra*, at Section 3, because United marketed and sold health insurance plans, including MA plans. For the reasons discussed therein, the Commission challenged the proposed acquisition and entered into an order with United and DaVita.

Where an acquisition or merger raises both horizontal and vertical concerns, the potential for anticompetitive effects from the vertical transaction may require additional remedial provisions to address the distinct vertical concerns.[5]

[5] See, e.g., Decision and Order, *UnitedHealth/Davita* (August 12, 2019), Decision and Order, *Teva Pharmaceuticals/Allergan PLC* (September 7, 2016); Decision and Order, *Hexion/Huntsman* (November 13, 2008), Decision and Order, *Valero/Kaneb* (July 22, 2005).

C. Vertical Mergers May Eliminate Future Horizontal Competitors

Vertical mergers may raise concerns about the elimination of horizontal competition to one or both of the merging parties that would have flourished but for the merger. One concern is that a merger may eliminate or diminish the incentive for one or both of the merging firms to enter the market that is upstream or downstream of their current operations. The Horizontal Merger Guidelines recognize that "a merger between an incumbent and a potential entrant can raise significant competitive concerns."[6] The Commission will consider whether a merger reduces the likelihood of future competition from a potential entrant, using the methods described in the Horizontal Merger Guidelines. For example, absent the merger, one party to the merger might expand its current product (or service) offerings, and, through this entry, might directly compete with its merger partner.

> ***Barnes & Noble/Ingram*** **(1999)** This proposed transaction would have combined Barnes & Noble, Inc., a large nationwide book retailer, with Ingram Book Group, the United States' largest book wholesaler. The acquisition raised the vertical concern that the combined firm might have the incentive to raise wholesale prices or degrade service to Ingram's downstream bookstore customers, as well as to potential online entrants that might use Ingram, in order to limit their ability to compete with Barnes & Noble stores.
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> The proposed transaction also eliminated (potential) future horizontal competition between Barnes & Noble and Ingram. Before the transaction, Barnes & Noble had publicly announced it might begin to offer wholesaling services to third parties. The transaction would have eliminated this threatened horizontal competition.
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> The Commission informed the parties of these concerns. The parties subsequently abandoned the proposed transaction.[7]

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[6] U.S. Department of Justice and the Federal Trade Commission, Horizontal Merger Guidelines (August 19, 2010) (hereinafter "Horizontal Merger Guidelines"), §5.3.

[7] The Commission's investigation into the proposed transaction is discussed in remarks of FTC Commissioner Sheila F. Anthony, Vertical Issues: The Federal View (March 9, 2000), and remarks of Richard B. Parker, Director, Bureau of Competition, Global Merger Enforcement (September 28, 1999).

Alternatively, but for the merger, one party to the merger may successfully re-position a current product (alone or in combination with another firm) to operate as a substitute – rather than as a complement – to its merger partner's product. In this case, the merger may eliminate the incentive to facilitate entry or repositioning that would enhance competition in the relevant market.

Cytyc/Digene **(2002)** Cytyc Corp. proposed to acquire Digene Corp. The parties manufactured and sold complementary products used to screen women for cervical cancer. Cytyc's product was a liquid-based Pap test that physicians used as a primary, front-line cervical cancer-screening tool (the relevant market). Digene's product (the related product) was a DNA-based test for human papillomavirus ("HPV"), the cause of nearly all cervical cancers, used as a follow-up test when liquid Pap test results did not provide clear results. At the time of the proposed transaction, Cytyc had a 93 percent share in the market for liquid Pap tests (the relevant market), and competed against only one other firm, Tripath.

The transaction raised vertical issues (see discussion in Section 3, *infra*). It also threatened in two ways to eliminate future competition from Digene and its HPV test as a primary screen for cervical cancer. Digene was pursuing (and was expected to receive) FDA approval to use its HPV test as a primary cervical cancer screen in place of (and in competition with) liquid-based Pap smears. Thus, the transaction, if consummated, would have eliminated Digene as a future competitor. In addition, Digene had sought (and was expected to receive) FDA approval for use of its HPV test in combination with a liquid Pap test as a primary screen for cervical cancer. The transaction would eliminate this future competition from Digene and any other liquid Pap test firms operating in combination with Digene if, as the Commission concluded, the combined firm would not have the incentive to pair Digene's HPV test with the liquid Pap test of its competitors for use as a primary cervical cancer-screening test.

The Commission was prepared to allege that the transaction would have anticompetitive effects in the market for primary cervical cancer screening tests – increasing prices, causing innovation to suffer, and compromising patient care – and authorized the Bureau of Competition to seek a preliminary injunction to block Cytyc's acquisition of Digene. However, the parties abandoned the transaction before the Commission filed its complaint.

A vertical merger may also raise horizontal concerns about loss of competition in a future market if both firms would likely have entered a market in competition with each other, absent the merger. The Commission would evaluate this concern using the methods described in the Horizontal Merger Guidelines.[8]

[8] The Commission routinely challenges mergers of horizontal competitors that will eliminate the parties as future competitors in a future market. *See, e.g.*, *Teva Pharmaceuticals/Allergan PLC* (July 26, 2016), Complaint at ¶11.b.; *Nielsen Holdings N.V./Arbitron Inc*. (February 24, 2014) Complaint at ¶12.a.

3. Unilateral Anticompetitive Effects from Foreclosure and Raising Rivals' Costs

Any merger, including a vertical merger, allows previously independent firms to coordinate their business operations to maximize joint profits. For instance, if the prices or terms set by one merging business affect the profits of the other, the merged firm may find it profitable to change those prices or terms unilaterally. The Horizontal Merger Guidelines set out the Agencies' approach to reviewing unilateral effects in horizontal mergers where the merging businesses would otherwise offer competing products.[9] Although vertical mergers involve firms that make products that do not compete in the same market, such transactions may give rise to unilateral effects if the merged firm's strategic decisions with respect to one of the products affect the profits it earns on the other product.[10] For example, a vertical merger may harm competition in the relevant market if the combined firm is likely to withhold the related product from rivals (foreclosure) or to raise its price or decrease its quality (raising rivals' costs).

A. Framework for Evaluating Foreclosure and Raising Rivals' Costs

As part of its assessment of whether harm to competition is likely to arise from foreclosure or raising rivals' costs, the Commission considers the following factors identified in the Vertical Merger Guidelines.[11]

i. Ability

The Commission considers whether the merged firm, by altering the terms on which it provides a related product to one or more of its rivals, would likely be able to cause those rivals to lose significant sales in the relevant market or otherwise compete less aggressively for customers.[12] The assessment of the merged firm's ability to disadvantage its rivals often relies on evidence about whether those rivals could readily switch to alternatives to the related product, including self-supply, without any meaningful effect on the price, quality, or availability of products or services in the relevant market. **Essilor/Luxottica (2018)** is an example where the Commission closed its investigation after examining whether a vertical merger would harm competition through

[9] Horizontal Merger Guidelines, §6.

[10] Vertical Merger Guidelines, §4.a.

[11] *Id*., §4.

[12] *Id*., §4.a.(1).

foreclosure or raising rivals' costs, in part because the Commission concluded that rivals had adequate alternatives for the related product.

ii. Incentive

The merged firm's incentive to raise its rivals' costs or foreclose rivals from access to the related product depends on the profitability of the strategy.[13] The Commission assesses whether the merged firm will benefit significantly from responsive changes in rivals' behavior or from their lost sales.[14] The potential benefit depends on the extent to which any sales lost by rivals would divert to the merged firm's products in the relevant market. **Staples/Essendant (2019)** and **Essilor/Luxottica (2018)** are examples where the Commission did not allege harm from raising rivals' costs, in part because few sales lost by rivals with increased costs would likely have been diverted to the merged firm. In some cases, the Commission may consider evidence about the merged firm's share of the downstream market when assessing the potential benefit from foreclosure or raising rivals' costs, as it did in **Staples/Essendant (2019)**, **Essilor/Luxottica (2018),** and **Cytyc/Digene (2002).**

The Commission conducts a case- and fact-specific assessment of how any benefit in the relevant market affects the merged firm's incentives to foreclose rivals or to raise their costs.[15] In some enforcement actions, the Commission's concern was foreclosure of the rivals' access to the related product. When that was the case, the Commission considered the significance of the merged firm's potential gains in the relevant market and any potential losses from reduced sales of the related product. **Northrop/Orbital (2018)**, **GE/Avio (2013)**, **Cytyc/Digene (2002)**, **Ceridian/Trendar (2000),** and **CMS/Duke Energy (1999)** are examples where the balance of these two effects on the merged firm's profits likely meant the merged firm had a significant incentive to foreclose rivals.

In other cases, the Commission considers the potential for a vertical merger to raise rivals' costs. When the terms of exchange of the related product are set through bargaining, a vertical merger may make it less costly for the merged firm if negotiations take time, or fail, because it will benefit from additional sales of the related product. The Commission may consider whether the merged firm might have greater incentives to hold out for better terms during the negotiations as a result.

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[13] *Id*., §4.a.(2).

[14] *Id*.

[15] *Id*.

United/DaVita (2019) is an example.

iii. Effects

The Commission is ultimately concerned about the effects of vertical mergers on competition in the relevant market. In some cases, a vertical merger will eliminate a double margin. That is, absent the transaction, the downstream firm would have paid a price for inputs that included a markup over the input suppliers' marginal costs; whereas, if the transaction were consummated, the merged firm would have access to self-supplied inputs at cost.[16] The net effect on competition of the changes to the merged firm's unilateral incentives[17] will depend on both any incentive to foreclose or raise rivals' costs and any incentive to set lower prices for the relevant product due to the elimination of double marginalization ("EDM"). **United/DaVita (2019)** and **Northrop/Orbital (2018)** are examples where the balance of the two effects meant downstream prices would likely be higher, and where the Commission took an enforcement action to prevent the harm. **Essilor/Luxottica (2018), Pepsi/Pepsi Bottlers (2010)** and **Coca-Cola (2010)** are examples where the balance of the two effects meant downstream prices would likely be lower.

B. Barriers to Entry for Future Competitors Through Foreclosure or Raising Rivals' Costs

A vertical merger may eliminate the incentive of the combined firm to facilitate the entry or expansion of one or more firms into or in the market(s) one of the parties operated in prior to the merger, or may create the incentive or ability to discriminate against future competitors to the combined firm. *See, e.g.,* **Teva/Allergan (2016), ETE/Williams (2016), Biovail/DOV Pharmaceuticals (2002), AOL/Time Warner (2001) and Ceridian/Trendar (2000).**

In considering the competitive effects of a merger of firms operating in one or both of the upstream and downstream markets, the Commission has considered whether successfully competing against the merged firm will likely require a new entrant into the relevant market to also enter the market for the related product or service, known as two-level entry. In **Corpus Christi Polymers (2018)** (discussed *infra*, at Section 5), the Commission's evaluation of entry conditions into the relevant market, as part of its competitive effects analysis, recognized that "two-tier entry in both the [polyethylene terephthalate resin] and [purified terephthalic acid] markets would likely be necessary for an entrant to become truly competitive." In **Cadence/Cooper & Chyan (1997)**

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[16] *Id.*, §4.a.

[17] *Id.*

(discussed in Section 2, *supra*), the Commission investigated the combination of two firms producing complementary products. According to the Commission, the transaction would make entry into one market – the "constraint-driven, shape-based integrated circuit routing tool market" – dependent upon simultaneous entry into a second market – the market for "integrated circuit layout environments." Similarly, in **Eli Lilly/PCS Health Systems**[18] **(1995**) (discussed in Section 5, *infra*), the Commission alleged that one effect of pharmaceutical company Eli Lilly's acquisition of pharmacy benefit manager PCS Health Systems would be to make entry into the relevant markets more difficult because entry would be required at more than one level. The Commission also alleged that the combination of **Silicon Graphics** with **Alias Research** and **Wavefront (1995)** would make two-level entry necessary (as discussed in Section 2, *supra)*.

C. Case Examples

The following examples illustrate the Commission's analysis of specific mergers that raised concerns of foreclosure or raising rivals' costs.

> ***United/DaVita*** **(2019)** UnitedHealth Group ("United") is a vertically integrated health insurer that, among other activities, sold health insurance plans, including Medicare Advantage ("MA") plans to individual MA members in the Las Vegas area (the relevant market). MA health insurers in the relevant market needed to contract with managed care provider organizations ("MCPOs"), like those of Optum, United's MCPO, or DaVita, to create a marketable network of healthcare providers for MA plans. Post-transaction, United would control the two largest MCPOs serving MA members (the related service) in the area of and around Las Vegas, a critical input needed by rival Las Vegas-area MA insurers to sell MA plans to individual MA members.
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> The Commission's complaint alleged that United would have the **ability** to harm rival MA insurers' sales by raising its rivals' costs or potentially foreclosing its rivals' access to United's MCPOs. After the acquisition, United's MCPOs would cover over 80 percent of MA members, and other, smaller groups were inadequate substitutes. Insurers that could not use United's MCPOs would be less able to attract members. Moreover, the combined firm would have the **incentive** to negotiate more aggressively, because it would be less costly for the merged firm if a rival insurer did not reach agreement with United's MCPOs, or if there were a delay in reaching an agreement; the rival would lose members,

[18] *Eli Lilly and Company*, 120 F.T.C. 243 (1995).

many of whom would switch from the rival insurers to United. The Commission assessed the likely net **effects** on competition of this change in incentives, and of EDM, and found that on balance prices for MA insurance plans were likely to be higher.

The Commission challenged the proposed acquisition and entered into an order with United and DaVita.

Staples/Essendant **(2019)** Staples, Inc., a leading retailer of office products and related services, sought to acquire Essendant, Inc., the largest U.S. wholesaler of office products. The proposed acquisition was a diagonal transaction because Essendant and Staples operated at different levels in two distinct alternative supply chains. Essendant sold wholesale office supplies (the related product) to independent resellers that competed with Staples in the sale and distribution of office products to midmarket business-to-business customers (the relevant market). By contrast, Staples, unlike the independent resellers, sourced most of its inventory directly from manufacturers and not from Essendant or other wholesalers.

The Commission's investigation considered whether the combined firm would likely raise Essendant's wholesale prices to resellers competing against Staples, and thereby reduce competition in the relevant market. The Commission concluded that Staples would have little **ability** to use its control of Essendant's wholesale service (the related product) to raise the wholesale costs of independent resellers because many would avoid higher prices from Essendant by switching to another wholesaler offering equivalent services, or they would source office supplies from manufacturers directly. The Commission also concluded that the combined firm would have little **incentive** to raise Essendant's wholesale prices. Even if some of Essendant's independent resellers remained after a Staples-imposed price increase, those firms' downstream customers that switched in response to an attempt by the reseller to pass on a price increase would likely not switch to Staples, but rather would move to resellers supplied by other wholesalers or to other sources of supply. Staples had a small share of the downstream market for the sale and distribution of office products to midmarket business-to-business customers, and Staples was not a particularly close alternative for end customers that bought from Essendant-supplied resellers. Staples focused on customers that were less reliant on high-touch services, while the customers of Essendant-supplied resellers tended to value such services more. Because the combined firm would have little incentive to raise Essendant's wholesale prices to downstream resellers, the proposed transaction was unlikely to have substantial anticompetitive **effects**. The Commission did not allege harm to competition from foreclosure or raising rivals' costs.

For other reasons, discussed, *infra*, at Section 4, the Commission challenged the proposed acquisition and entered into an order with Staples and Essendant.

Northrop Grumman/Orbital ATK **(2018)** Northrop Grumman, one of only four companies capable of supplying missile systems to the Department of Defense ("DOD"), sought to acquire Orbital ATK, one of two producers of solid rocket motors ("SRMs"), and the dominant supplier of large SRMs (the related product) used for missile systems (the relevant market). SRMs propel missiles to their intended targets and are an essential input for missile systems. The Commission found that Northrop would have the **ability** to harm rival suppliers of missile systems by foreclosing their access to its SRMs, because its SRMs were superior to others'. The combined firm would have the **incentive** to foreclose rivals, because Northrup was the firm most likely to pick up any sales lost by rivals, and the margins on missile systems were greater than the margins on SRMs. The Commission considered the net **effects** on competition, and found that EDM was unlikely to overcome the harm from foreclosure.

The Commission challenged the proposed acquisition and entered into an order with Northrop and Orbital ATK.[19]

Essilor/Luxottica **(2018)** Essilor is a leading designer and manufacturer of ophthalmic lenses and is the largest provider of wholesale optical laboratory services in the United States. Its products include progressive lenses and photochromic lens treatments (the related products). Luxottica was, at the time of the proposed acquisition, a leading designer, manufacturer, and distributor of optical frames and sunglasses, and was the largest seller in retail optical store markets (the relevant markets) throughout the United States, competing with LensCrafters and Pearle Vision stores and optical retail operations in Target and Sears stores.

The Commission assessed the **ability** of the combined firm, post-acquisition, to weaken the competition it faced in the relevant market from rival retail optical stores, including independent eye care professionals, by raising the price it charged them for Essilor's progressive lenses and photochromic lens treatments. Even though Essilor was the largest supplier of these types of products, the Commission concluded that the combined firm would likely have no ability to reduce the competitiveness of rivals because, as the rivals

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[19] *See also Statement of Bureau of Competition Deputy Director Ian Conner on the Commission's Consent Order in the Acquisition of Orbital ATK Inc., by Northrop Grumman Corp.* (June 5, 2018).

indicated to the Commission, they had alternative sources for both products. The Commission also concluded that the combined firm would have little **incentive** to raise the price of Essilor's progressive lenses and photochromic lens treatments to rival retailers. Not only would doing so have little effect on rivals' sales, but very few of the customers that rival retailers would lose if their prices increased would switch to Luxottica retail stores. Despite the fact that Luxottica was the largest retailer overall, it had less than a 10 percent share of total U.S. sales, and detailed analysis showed that customers had many other options in the local areas that likely constituted relevant markets.

Regarding **effects**, the Commission modeled the likely price effect of both the incentives to raise rivals' cost and the elimination of double marginalization on retail prices. EDM meant that, after the transaction, Luxottica would have an incentive to offer lower prices at its retail outlets for glasses that used Essilor's progressive and photochromic lenses, as it now benefitted from the upstream margin on those products. FTC staff used a variety of quantitative models to analyze the potential vertical competitive effects, and tested the robustness of its findings using a range of reasonable assumptions. None of these economic models supported a finding that the merging parties would be able to impose higher prices or reduce output on their downstream rivals or ultimately consumers.

The Commission closed the investigation, and issued a Statement of its rationale for closing.[20]

Energy Transfer Equity (ETE)/Williams **(2016)** The proposed merger of the Williams Companies ("Williams") into Energy Transfer Equity ("ETE") raised both horizontal and vertical concerns. ETE had a 50 percent ownership interest in one pipeline used to supply natural gas to central and southern Florida (the relevant market); Williams had a 50 percent interest in the only other pipeline used to supply natural gas to central and southern Florida. The Commission alleged that the transaction would lead to the loss of horizontal competition between ETE and Williams in the relevant market.

[20] *Statement of the Federal Trade Commission Concerning the Proposed Acquisition of Luxottica Group S.p.A by Essilor International* (March 1, 2018).

The Commission also considered vertical effects. Sabal Trail Transmission, LLC was a **potential entrant**. It was developing a third pipeline to supply natural gas to central Florida, in competition with ETE's pipeline. Sabal relied on a leased section of the Transco pipeline (the related product, and owned by Williams), for access to gas. The Commission alleged that the merged firm would be **able** to limit competition from Sabal by limiting the capacity of the leased segment of the Transco pipeline. The merged firm would have a stronger **incentive** to limit the growth of Sabal Trail than Williams had prior to the merger, because it would benefit from weaker competition in the relevant market.

The Commission challenged the proposed merger and entered into an order with ETE and Williams.

Teva/Allergan **(2016)** Teva Pharmaceutical Industries Ltd. ("Teva") is a vertically integrated manufacturer of generic and branded pharmaceuticals (the relevant markets) and a number of active pharmaceutical ingredients ("APIs") (the related products) used by Teva and other companies to make pharmaceuticals. Allergan was a global producer of generic, branded, and over-the-counter pharmaceuticals. The Commission alleged that Teva's proposed acquisition of Allergan's generic pharmaceutical business created the **incentive** and **ability** for Teva to withhold supply of Teva's APIs from current or **future competitors** for 15 generic drugs that Allergan supplied pre-merger.[21] Teva had the ability to foreclose current and future competitors of Allergan because, while other API suppliers were capable of manufacturing the specific API supplied by Teva, most of Teva's API customers could not easily switch to alternative suppliers because a drug manufacturer must use API from a source designated in its ANDA. Post-acquisition, Teva would have the **incentive** to foreclose one or more competitors if the lost API sales would be less than the recouped profits on additional sales gained from the foreclosed competitor(s) and the increased prices.

The Commission challenged the proposed acquisition and entered into an order with Teva and Allergan.

[21] The Commission considered other theories of harm. *See Statement of the Federal Trade Commission in the Matter of Teva Pharmaceuticals Industries Ltd. and Allergan plc* (July 27, 2016).

Par/Mid Pac **(2015)** Par Petroleum ("Par") and Mid Pac Petroleum ("Mid Pac") engaged in the bulk supply and distribution of Hawaii-grade gasoline blendstock ("HIBOB") (the relevant market) in Hawaii. To reach customers, bulk suppliers delivered HIBOB into petroleum terminals for downstream distribution or further shipment (the related product), and they had no other means of accessing the market. Only Par and Chevron produced bulk quantities of HIBOB in Hawaii. Mid Pac and Aloha Petroleum ("Aloha") were the only other firms capable of supplying bulk HIBOB to Hawaii, although, unlike Par and Chevron, they were not capable of producing it. Of the terminals capable of receiving economically viable cargoes of imported HIBOB, Par and Chevron owned all but one, the Barbers Point Terminal. Aloha operated this facility and shared storage and throughput rights with Mid Pac. Access to the Barbers Point Terminal gave Aloha and Mid Pac the ability to source HIBOB from Par's and Chevron's out-of-state competitors, and this placed a competitive constraint on the HIBOB prices each received from Par and Chevron.

The Commission alleged that the proposed acquisition of Mid Pac by Par likely would increase prices for bulk supply of HIBOB and, ultimately, gasoline prices for Hawaii customers. By exercising the Mid Pac storage rights and "parking" product at the terminal, Par had the **ability** to increase Aloha's costs of importing HIBOB. Par had the **incentive** to restrict Aloha from importing HIBOB at lower cost because it would remove or lessen the competitive constraint that imported HIBOB exerted on the prices Par could charge Aloha for the HIBOB that Par produced. Par could accomplish this restriction at a relatively low cost to itself. The likely **effect** of the removal of this constraint would be higher bulk supply and downstream prices. According to the Commission's complaint, the acquisition would weaken the threat of imports as a constraint on local refiners' HIBOB bulk supply prices.

The Commission challenged the proposed acquisition and entered into an order with Par.

General Electric/Avio **(2013)** General Electric ("GE") intended to acquire the AeroEngine division of Avio S.p.A ("Avio"). GE and Pratt & Whitney ("P&W") were the only two firms that manufactured engines for Airbus's A320neo aircraft (the relevant market). Avio manufactured an accessory gearbox ("AGB") that was a key input into P&W's A320neo engine. (The AGB for P&W's A320neo engine was the related product.) P&W had no viable alternatives to Avio's AGB, which was necessary for its A320neo engine to function.

The Commission alleged that GE would have the **ability** to use its control of Avio's development of the AGB for P&W's A320neo engine to delay P&W's readiness to supply A320neo engines. Typically, a supplier will customize AGBs for individual engines. Avio had been designing and developing an AGB for P&W's A320neo engine for some time. At the time of the proposed transaction, P&W did not have the capability to take over design and development of its AGB itself, nor could it transfer design and development of its AGB to another gearbox manufacturer without significant delays to its certification and timeline for production of A320neo engines. Because P&W and GE were each other's direct and only competitors for the supply of A320neo engines, GE had the **incentive** to disrupt P&W's A320neo engine certification since the profit GE could earn from an additional GE engine sale was much greater than the profit GE could earn from an additional AGB sale to P&W. The **effect** of weaker competition from P&W, GE's only competitor in the supply of A320neo engines, would allow GE to raise price, offer lower quality, or delay delivery of engines for A320neo aircraft.

The Commission challenged the proposed acquisition and entered into an order with GE.

Pepsi/Pepsi Bottlers **(2010)** Pepsi produced branded soft drink concentrate (the related product). It sold that concentrate to bottlers who bottled it and distributed it as branded carbonated soft drinks (the relevant market). Pepsi owned a significant but not controlling interest in each of two of biggest distributors, Pepsi Bottling Group and PepsiAmericas, Inc. (collectively, "Pepsi Bottlers"), and sought to acquire the remaining equity interest in each, giving it full ownership of the two distributors. The Pepsi Bottlers had exclusive bottling, distribution and sale agreements with Pepsi in certain geographic areas, and with Pepsi's competitor, the Dr Pepper Snapple Group ("DPSG"), in certain overlapping geographic areas. The DPSG agreement gave the Pepsi Bottlers access to competitively sensitive and confidential information about DPSG's competitive strategies with respect to its marketing and sales of DPSG branded carbonated soft drinks.

The Commission found that the merged firm would have the **ability** to use Pepsi Bottlers to disadvantage DPSG by, for example, raising the retail price or refusing to carry new lines. Moreover, the merged firm would likely have an **incentive** to do this in order to divert sales of DPSG brand carbonated soft drink products to Pepsi brand carbonated soft drink products. However, when assessing likely **effects** on consumers, the Commission also took into account the likely effects on downstream prices of EDM, and concluded that, on balance, prices would be lower. The Commission had evidence that the merger would lead to EDM, and concluded that the merger would not have the **effect** of increasing branded carbonated soft drink prices because the downward pricing pressure created by EDM would outweigh the upward pricing pressure created by Pepsi's **ability** and **incentive** to raise its rivals' costs. To predict the merger's effect on branded carbonated soft drink prices, the Commission relied on a merger simulation model. (To test for robustness, the Commission's analysis incorporated different assumptions of demand elasticity.)

The Commission did not allege harm from foreclosure. However, as discussed in Section 4, *infra*, the Commission challenged the proposed acquisitions on other grounds and entered into an order with Pepsi.

Coca-Cola/Coca-Cola Enterprises **(2010)** Coca-Cola sought to acquire its largest bottler, Coca-Cola Enterprises, Inc. Because Coca-Cola Enterprises had exclusive rights to bottle and distribute DPSG's branded soft drinks in certain areas of the United States, the acquisition raised similar concerns to Pepsi's acquisition of its bottlers.

As in the **Pepsi** matter, the Commission did not allege harm from foreclosure. However, as discussed in Section 5, *infra*, the Commission challenged the proposed acquisitions on other grounds and entered into an order with Coca-Cola.

Cytyc/Digene **(2002)** Cytyc Corp. proposed to acquire Digene Corp. The parties manufactured and sold complementary products used to screen women for cervical cancer. Cytyc's product was a liquid-based Pap test that physicians used as a primary, front-line cervical cancer-screening tool (the relevant market). Digene's product (the related product) was a DNA-based test for human papillomavirus ("HPV"), the cause of nearly all cervical cancers, used as a follow-up test when liquid Pap test results did not provide clear results. At the time of the proposed transaction, Cytyc had a 93 percent share in the market for liquid Pap tests (the relevant market), and competed against only one other firm, Tripath.

The Commission evaluated Cytyc's **ability**, post-acquisition, to weaken its only existing competitor, and to make potential entry by another competitor less likely through foreclosure of access to Digene's HPV test. Digene's HPV test was most often and efficiently conducted using cellular samples collected during a liquid Pap test, like Cytyc's, but doing the test this way required FDA approval. After the acquisition, Cytyc could refuse to provide access to the Digene HPV test, or could charge a higher price for access, to customers who did not buy Cytyc's liquid Pap offering. The combined firm might also disadvantage Cytyc's liquid Pap rivals by refusing to assist with gaining FDA approval to use a competitor's liquid Pap samples to conduct the Digene HPV test.

Without access to Digene's HPV test, competing liquid Pap test companies would likely lose sales. Moreover, the Commission was concerned that the combined firm would likely have an **incentive** to foreclose. A foreclosure strategy was likely to be profitable in light of Cytyc's 93 percent share of liquid-based Pap tests; Cytyc would likely capture nearly all of the lost sales of its rivals.

The Commission was prepared to allege that the transaction would have anticompetitive **effects** in the market for primary cervical cancer screening tests – increasing prices, causing innovation to suffer, and compromising patient care – and authorized the Bureau of Competition to seek a preliminary injunction to block Cytyc's acquisition of Digene. However, the parties abandoned the transaction prior to the Commission's filing of its complaint.

Biovail/DOV Pharmaceuticals **(2002)** The Commission challenged Biovail's acquisition, from DOV Pharmaceuticals, of an exclusive license to the intellectual property rights (the related product) – the "'463 patent" – underlying Biovail's manufacturing and sale of Tiazac. (Tiazac is an extended-release, diltiazem-based drug used to treat hypertension. Tiazac, and its generic bioequivalent versions, were the relevant market.) DOV's '463 patent covered a unique formulation of diltiazem (the active pharmaceutical ingredient in Tiazac) that combines both an immediate-release and an extended-release form of diltiazem.

The Commission's complaint alleged that Biovail, through its acquisition of the exclusive license, acquired the power – the **ability** – to exclude competition by blocking the entry of any bioequivalent generic drug capable of competing with Biovail's lucrative branded Tiazac product. Biovail's acquisition of the exclusive license to the '463 patent raised substantial **barriers to entry** into the relevant market.

The Commission challenged the acquisition of the exclusive license and entered into an order with Biovail.[22]

[22] After the acquisition of the exclusive license, Biovail listed the '463 patent in the FDA's Approved Drug Products with Therapeutic Equivalence Evaluations ("Orange Book"), wrongfully claiming that the patent covered Tiazac. It subsequently filed patent infringement lawsuits against a third party seeking to market a generic bioequivalent version of Tiazac; under the provisions of the Hatch-Waxman Act, the patent infringement claims limited the ability of the FDA to approve a generic version of Tiazac for up to 30 months. The district court and the Court of Appeals for the Federal Circuit rejected Biovail's claims of patent infringement. In addition to alleging the acquisition was unlawful, the Commission alleged that Biovail's acquisition and the wrongful listing of the patent in the Orange Book, together with other conduct, constituted acts intended to maintain its monopoly. See Complaint, Biovail Corporation, ¶¶ 55,

AOL/Time Warner **(2001)** The Commission alleged that the proposed merger of AOL and Time Warner raised substantive competitive concerns in the market for Interactive Television ("ITV") (the relevant market). ITV combined television programming and internet functionality, and required special hardware and software to blend data with video signals for display on a television screen. AOL had recently launched AOL-TV, a first-generation ITV product. The distribution of future generations of ITV was likely to be over a broadband (cable) connection, including those operated by Time Warner (the related product). Distribution of ITV over broadband was superior to distribution over satellite or digital subscriber line ("DSL"); because of this, the Commission believed that local cable companies such as those operated by Time Warner would play a key role in enabling ITV services. Time Warner was a significant provider of local cable television services and controlled the interactive signals, triggers, and content delivered over its cable system. The Commission recognized that the combined firm would have the **ability** to **prevent or deter entry** by next generation ITV suppliers in competition with AOL's ITV services by denying them distribution over Time Warner's cable services and alleged that the merger would harm competition in the market for ITV, both nationally and in Time Warner's cable service areas.

The Commission challenged the proposed merger and entered into an order with AOL and Time Warner.

Boeing/Hughes Space & Communications Company **(2000)** Hughes was engaged in the research, development, manufacture, and sale of satellites, including commercial geosynchronous earth orbit satellites, commercial medium earth orbit satellites, and government satellites. Boeing provided systems engineering, technical assistance and support services ("SETA Services" (the related product)) to the DOD for a certain classified program, but was otherwise not competing to provide services to the program (the relevant market). Hughes was one of two competing contractors for the classified program. The proposed acquisition would result in Boeing's being both the provider of SETA Services and a competing contractor for the classified program. As the only SETA contractor, Boeing had the **ability** to favor itself and to disfavor the competing supplier by, among other ways, submitting unfair evaluations of its bid proposals. Boeing had the **incentive** to do so, because, as it was the only other competitor for the classified program, it would benefit if its rival lost the bid.[23]

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[23] The Commission alleged similar concerns in other mergers. *See TRW*, 125 F.T.C. 496 (1998) (combined firm would

The Commission also recognized, and its complaint alleged, concerns affecting another market. Boeing was a supplier of launch vehicles (the relevant market) and, through acquisition, a supplier of the types of satellite that Hughes made (the related products). As a result of the merger Boeing would likely have the **ability** to disadvantage or raise the costs of other launch vehicle suppliers by withholding from them satellite interface information necessary to integrate a satellite with a launch vehicle, because there were very few competing satellite suppliers.

The Commission challenged the proposed acquisition and entered into an order with The Boeing Company.

Ceridian/Trendar **(2000)** Ceridian Corporation owned Comdata, the largest supplier in the market for commercial credit cards for trucking fleets ("fleet cards"). Ceridian acquired substantially all of the assets of Trendar Corporation, the largest provider of point-of-sale ("POS") systems used by truck stops to process fleet card transactions. Fleet cards and POS systems are complementary products. (Trendar's POS system was the related product, and fleet cards were the relevant market.)

The Commission recognized that Ceridian, through the acquisition, gained the **ability** to make rival fleet cards less valuable to trucking fleets – and therefore less competitive against Comdata – by preventing their acceptance at truck stops that used Trendar's POS system. Moreover, Comdata, as the largest provider of fleet cards, stood to benefit substantially if its rivals' cards became less competitive. On the other hand, denying access to rival fleet cards could be costly if, as a result, fewer truck stops purchased Trendar's POS system. However, the investigation revealed that Comdata had already delayed or denied some fleet card competitors' access to Trendar, and had raised Trendar's access fees to other fleet card competitors. This evidence indicated that the merged firm had an **incentive** to foreclose and raise rivals' costs, and that the benefit from doing so outweighed any costs from reducing the value of Trendar to truck stops. Upon this evidence, the Commission alleged that the acquisition had the **effect** of increasing the likelihood that customers of fleet card services to over-the-road trucking companies

participate in the market for the research, development, manufacture, and sale of a Ballistic Missile Defense System for DOD and, prior to the merger, one of the parties was a provider of SETA Services to the Ballistic Missile Defense Organization); *Lockheed Martin*, 122 F.T.C. 161 (1996) (combined firm would be engaged in the market for the research, development, manufacture, and sale of air traffic control systems and the provision of SETA Services to the Federal Aviation Administration). The Commission obtained remedies in these matters before allowing the transactions to proceed.

would pay higher prices, and, similarly, increasing the likelihood that customers of truck stop "fuel desk automation systems" would pay higher prices. The Commission also alleged that the acquisition raised **barriers to entry** in the markets for fleet card services and truck stop "fuel desk automation systems."

The Commission challenged the consummated acquisition and entered into an order with Ceridian.

CMS/Duke Energy **(1999)** CMS Energy Corp. sought to acquire the Panhandle Eastern Pipe Line Company, the Panhandle Storage Company, and the Trunkline LNG Company from Duke Energy Co. CMS, through its subsidiary Consumers Energy Company ("CEC"), generated, purchased, transmitted, and distributed electricity and natural gas in all or portions of 54 counties in Michigan. (It also stored natural gas.)

CEC operated the only intrastate natural gas transmission system in the area (the related product). Customers within the CEC services area were able to purchase natural gas from other suppliers, but needed access to CEC's transmission system. Pipelines owned by Duke (Trunkline and Panhandle), ANR Pipeline Co., Great Lakes Transmission, L.P., Michigan Consolidated Gas Co., and other companies transported natural gas consumed in CEC's service area through CEC's natural gas transmission system. CMS would acquire Duke's Trunkline and Panhandle pipelines.

The Commission defined the relevant market as the pipeline transportation of natural gas into portions of the Lower Peninsula of Michigan. Companies offering gas transportation in the relevant market needed interconnection with CMS's local distribution system; otherwise their customers would be unable to deliver gas to its final destination. The Commission recognized that CMS had the **ability** to disadvantage rival gas transportation companies by limiting the interconnection capacity between the rivals' pipelines and CMS's local distribution system. The Commission alleged that CMS, after the acquisition, would have an **incentive** to limit rivals' interconnection because limiting interconnection with rival pipelines would force rivals' customers to increase purchases on the Panhandle and Trunkline pipelines. Customers that switched their transportation from rival pipelines to the Panhandle and Trunkline pipelines would require gas transportation on the CMS local distribution network. Thus, CMS would not forgo sales of the related product if it limited interconnection for rivals, making it likely that the strategy would be profitable. Weaker competition from rivals' pipelines would have had harmful **effects**, by allowing CMS to increase transportation rates on the Panhandle and Trunkline pipelines.

The Commission challenged the proposed acquisitions and entered into an order with CMS.

Shell/Texaco **(1998)** In connection with a proposed joint venture between Shell Oil Company and Texaco Inc., the Commission investigated potential horizontal effects in various West Coast fuel markets and vertical effects in the Bay Area asphalt market (the relevant market). Heated pipelines transport undiluted heavy crude oil (the key input for asphalt) to asphalt producers. (The transportation of undiluted heavy crude oil to the San Francisco, California area (the “Bay Area”), was the related product.) Texaco owned the only such pipeline to the Bay Area, and it was contributing the pipeline to the joint venture. The Commission alleged that the joint venture, through its control of Texaco’s heated pipeline, would have the **ability** to raise the heavy crude oil transportation costs of asphalt producers competing in the relevant market. Shell/Texaco would be the only heated pipeline transportation option for both Shell and Huntway Refining Company (“Huntway”). Huntway and Shell together accounted for 85 percent of Bay Area asphalt production. Given Huntway’s and Shell’s substantial shares in the relevant market, Shell, one of the owners of the joint venture, would likely benefit from any price increase or loss of sales by Huntway. This gave the joint venture an **incentive** to raise heavy crude oil costs, as Huntway would have to reduce supply or raise asphalt prices to recover the increased heavy crude oil costs. This reduction in supply or increase in prices would reduce the competitiveness of Huntway in the relevant market and have the **effect** of harming asphalt consumers through higher prices.

The Commission challenged the proposed joint venture and entered into an order with Shell and Texaco.

4. Unilateral Effects from Access to Competitively Sensitive Information

A transaction may harm competition in a relevant market if the transaction gives the combined firm access to and control of sensitive business information about its upstream or downstream rivals that was unavailable to it before the merger.[24] This may create a disincentive for those upstream or downstream firms to attempt procompetitive initiatives. The threat of the merged firm's access to proprietary information also might cause rival firms to end their trade relationships with the merged firm and accept lower quality or more expensive goods or services as substitutes, resulting in harm to downstream customers. Additionally, access to competitively sensitive information about its rivals may also facilitate or cause reduced competitive responses from the merged firm that harm consumers.

Staples/Essendant **(2019)** Staples, Inc., a leading retailer of office products and related services, sought to acquire Essendant Inc., the largest U.S. wholesale distributor of office products. Staples competed against Essendant-supplied resellers in the downstream market for the sale and distribution of office products to midmarket business-to-business customers (the relevant market). The Commission alleged that Staples would gain access to commercially sensitive information about Essendant-supplied resellers competing against Staples in the relevant market through its control of Essendant's wholesaling activities (the related product). Specifically, with knowledge of an Essendant-supplied reseller's cost of goods, Staples may have been able to offer higher prices than it otherwise would when bidding against that reseller for an end customer.

The Commission challenged the proposed acquisition and entered into an order with Staples and Essendant.

Boeing/Lockheed Martin **(2007)** Boeing Corp. and Lockheed Martin Corp. proposed to form a joint venture (United Launch Alliance) consolidating their operations in the upstream market for space vehicles (the relevant market) and consolidating their downstream operations for medium-to-heavy launch services (the related product). The transaction was a merger to monopoly for medium-to-heavy launch services. The Commission's complaint alleged that the joint venture and joint venture partners could gain access to the competitively sensitive information of rival space vehicle firms, which

[24] Vertical Merger Guidelines, §4.b.

would no longer be able to use the downstream competition between Boeing and Lockheed to negotiate effective firewalls.

The Commission challenged the formation of the United Launch Alliance joint venture and entered into an order with The Boeing Company and Lockheed Martin.

Boeing/Hughes Space & Communications Company **(2000)** The Commission alleged, among other concerns, that the acquisition might lead to diminished competition in the markets for various launch vehicles and satellites. Hughes was a significant supplier of various satellites (*e.g.*, medium earth orbit satellites, low earth orbit satellites, geosynchronous earth orbit satellites). Boeing was a significant supplier of launch vehicles used to launch satellites. Launch vehicle suppliers and satellite suppliers work closely together and share a substantial amount of proprietary and competitively sensitive information to integrate the two products. The Commission alleged that the combination of Boeing and Hughes could provide Boeing with information on competing satellite providers; if shared with Hughes's satellite division (post-acquisition), such information would improve Boeing's ability to determine the cost and technology involved in its competitors' satellite proposals. The Commission recognized that possession of this information could lead Boeing to compete less aggressively in upcoming satellite procurements.[25] The Commission also recognized that this sharing of information could

[25] The defense industry underwent significant consolidation in the mid-to-late 1990s. The Commission identified competitive concerns in a number of transactions similar to those identified in the *Boeing/Hughes* matter where, pre-acquisition, the combining firms were in a vertical relationship to one another and, often, were on separate teams competing for military or non-military government programs. *See Boeing Company*, 123 F.T.C. 812 (1997) (combined firm would participate in the market for Space Launch Vehicle Propulsion Systems and Space Launch Vehicles, and two teams competing to develop High Altitude Endurance Unmanned Air Vehicles); *Lockheed Martin*, 122 F.T.C. 161 (1996) (combined firm would participate in the market for military aircraft, and the markets for NITE Hawk systems, electronic countermeasures and mission computers, all of which are used in military aircraft, and in the markets for unmanned aerial vehicles and integrated communications systems, which are used in unmanned aerial vehicles); *Raytheon Company*, 122 F.T.C. 94 (1996) (combined firm would participate in two teams – out of a small number of teams – competing in the Department of the Navy's procurement of submarine high data rate satellite communications terminal); *Hughes Danbury Optical Systems*, 121 F.T.C. 495 (1996) (combination of Hughes with Itek Optical Systems would result in the combined entity's participation in both teams competing to develop the Phillips Laboratory Airborne Laser Program, resulting in reduced competition for the development, innovation and quality of the program); *Lockheed Corporation*, 119 F.T.C. 618 (1995) (the merger of Lockheed and Martin Marietta would result in the combined firm's participation in the market for military aircraft and the market for low-altitude navigation and targeting infrared for night systems used on military aircraft, and participating in competing teams for satellites for use in Space Based Early Warning Systems); *Alliant Techsystems*, 119 F.T.C. 440 (1995) (the proposed acquisition would result in the combined firm's participation in the market for propellant or explosives used to propel or activate weapons, and the market for weapons (ammunition or munitions), and would allow Alliant to gain access to competitively significant and non-public information of or concerning other weapons manufacturers, with the effect

reduce the incentives of other satellite suppliers to invest in future technological advancements because of concerns that Boeing would be able to "free-ride" off its competitors' technological innovations.

The Commission challenged the proposed acquisition and entered into an order with The Boeing Company.

Pepsi/Pepsi Bottlers **(2010)** Pepsi produced branded soft drink concentrate (the related product). It sold that concentrate to bottlers who bottled it and distributed it as branded carbonated soft drinks (the relevant market). Pepsi owned a significant but not controlling interest in each of two of biggest distributors, Pepsi Bottling Group and PepsiAmericas, Inc. (collectively, "Pepsi Bottlers"), and sought to acquire the remaining equity interest in each, giving it full ownership of the two distributors. The Pepsi Bottlers had exclusive bottling, distribution and sale agreements with Pepsi in certain geographic areas, and with Pepsi's competitor, the Dr Pepper Snapple Group ("DPSG"), in certain overlapping geographic areas. The DPSG agreement gave the Pepsi Bottlers access to competitively sensitive and confidential information about DPSG's competitive strategies with respect to its marketing and sales of DPSG branded carbonated soft drinks. The Commission considered whether the combined firm's access to competitively sensitive and confidential information of DPSG might deter DPSG or Pepsi from pursuing competitively beneficial initiatives.

The Commission alleged that Pepsi's access to DPSG's information "may substantially lessen competition … by eliminating direct competition between PepsiCo and DPSG, … increasing the likelihood that Pepsi might unilaterally exercise market power or influence and control DPSG's prices" and by "increasing the likelihood of or facilitating coordinated interaction."

The Commission challenged the proposed acquisitions and entered into an order with Pepsi.

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of, among other things, reducing advancements in weapons research, innovation, and quality); *Martin Marietta*, 117 F.T.C. 1039 (1994) (Martin Marietta's acquisition of the assets of General Dynamics Space Systems Division would result in the combined entity's participation in the market for satellites, and the market for Atlas-class Expendable Launch Vehicles, which deliver satellites into orbit; through the acquisition, Martin Marietta might increase its ability to access competitively significant and non-public information concerning other satellite manufacturers, with the effect of reducing direct competition between the company and other satellite manufacturers, and reducing advances in satellite research, innovation, and quality). The Commission obtained remedies in these matters before allowing the transactions to proceed.

5. Coordinated Effects

A vertical merger may diminish competition by enabling or encouraging post-merger coordinated interaction among some or all firms in the relevant market, to the detriment of customers.[26]

One way that a vertical merger may lead to coordinated effects is by undermining the role of maverick firms.[27] For example, an input maker could merge with a disruptive buyer and bring it in line with the acquirer's other customers.[28]

> ***Eli Lilly/PCS Health Systems***[29] **(1995)** and ***Merck/Medco*** **(1999)** Eli Lilly Co. and Merck & Co. each developed, manufactured, and sold pharmaceutical products for the treatment of various conditions (the relevant markets). Pharmacy benefit managers ("PBMs") – including PCS Health Systems, Inc. ("PCS") (a subsidiary of McKesson Corporation) and Medco Containment Services ("Medco") – acted as intermediaries between drug companies and their health insurer customers (the related product). PBMs processed claims, reviewed drug utilization, and managed drug formularies for health insurers that contracted with their pharmacy benefit plans. PBMs' drug formularies listed the names and prices of covered pharmaceuticals, and consumers relied on their health insurer's contracted drug formulary to decide which drugs to purchase. Through these actions, PBMs influenced the prices of pharmaceutical products and the availability of such products.
>
> Merck acquired Medco in 1993. Eli Lilly initiated a cash tender offer for McKesson in 1994. McKesson, through its subsidiary PCS, provided PBM services.
>
> The Commission alleged that Merck's and Eli Lilly's vertical integration into the PBM space could facilitate coordination among drug companies in several ways. First, the acquisitions eliminated Medco and PCS as independent buyers poised to disrupt coordination among pharmaceutical manufacturers. PBMs encouraged drug companies to offer discounts by promoting cheaper drugs on their formularies and excluding or discouraging expensive drugs. An independent PBM that lowered its drug costs would

[26] Vertical Merger Guidelines, §5.

[27] *Id*.

[28] *Id*.

[29] *Eli Lilly and Company*, 120 F.T.C. 243 (1995).

attract more health insurer customers and increase profits. Vertically integrated PBMs faced other incentives. If Merck's PBM lowered its drug costs by disrupting coordination among drug companies, Merck's lost upstream profits on pharmaceutical sales could outweigh the downstream benefit of lower drug costs for its PBM. This would be a disincentive to disrupt coordination among drug companies. Second, the PBM acquisitions allowed Merck and Eli Lilly to punish any rival drug companies that resisted coordination. Merck and Eli Lilly could exclude a maverick drug producer from Medco's and PCS's formularies or discourage use of the maverick's drugs by failing to pass its rebates on to consumers. Finally, Merck's proposed and Eli Lilly's consummated PBM acquisitions would give, or gave, each access to their rivals' confidential information because each major drug producer sold drugs through Medco and PCS. This access could make it easier to reach and maintain a tacit agreement.

The Commission challenged Lilly's consummated acquisition of PCS, and entered into an order with Eli Lilly.[30] The Commission challenged Merck's proposed acquisition of Medco and entered into an order with Merck and its PBM subsidiary, Merck-Medco Managed Care, L.L.C.

Challenges to vertical mergers frequently examine changes in each merging firm's access to competitively sensitive information about each firm that (1) buys inputs from or (2) sells products to the other merging firm. Access to this type of information can facilitate tacit or express coordination.[31]

Broadcom/Brocade ***(2017)*** Broadcom, a semiconductor producer, sought to acquire Brocade. Brocade was the leading manufacturer of fibre channel switches (the relevant market). Data centers use fibre channel switches to transfer large amounts of data between servers. The worldwide market for fibre channel switches was highly concentrated, with a duopoly between Brocade and Cisco. The transaction raised competitive concerns because Broadcom supplied Cisco with application specific integrated circuits ("ASICs") (the related product). ASICS were the most expensive and important input used in fibre channel switches. After the acquisition, Broadcom, as Cisco's sole supplier of a key input, would have access to Cisco's competitively sensitive information.

[30] Decision and Order, *id.*, at 246.

[31] Vertical Merger Guidelines, §5.

The Commission alleged that the supply relationship between Broadcom and Cisco increased the likelihood of coordination in the market for fibre channel switches. Frequent interactions between the two firms and shared access to confidential information could facilitate anticompetitive agreements. Both companies collaborated and shared intellectual property to design the Broadcom ASIC used in Cisco's fibre channel switch, and they continued to work together to oversee ASIC production. Broadcom had insight into Cisco's incentives because ASICs account for a significant portion of fibre channel switches' costs. Further, if Cisco and Broadcom reached a tacit agreement to limit output or innovation, Broadcom could have used its supply relationship to detect cheating, because Cisco must order more ASICs when its fibre channel switch output increases and must work with Broadcom, its sole ASIC supplier, on product changes.

The Commission also identified a horizontal concern and alleged that the transaction could lead to unilateral harm from access to confidential information. With Broadcom's insight into Cisco's variable costs and volumes, post-merger Brocade could have better predicted Cisco's bids and therefore bid less aggressively in the market for fibre channel switches. Post-merger Brocade may have also invested less in innovation if it had Broadcom's knowledge of Cisco's plans.

The Commission challenged the proposed acquisition and entered into an order with Broadcom and Brocade.

Chevron/Unocal **(2005)** Chevron Corporation, a leading refiner of gasoline compliant with California Air Resources Board ("CARB") requirements, sought to acquire Unocal Corporation, which owned a portfolio of five patents relating to CARB gasoline production but did not itself refine or market CARB gasoline. The transaction raised vertical concerns because Chevron and its competitors had to license Unocal's patents (the related product) to refine and market CARB gasoline (the relevant market). As part of these licensing arrangements, Unocal regularly collected detailed reports from licensees about their production of CARB gasoline and other refinery operations. The Commission alleged that Chevron's access to this information would facilitate, or increase the likelihood of, collusion or coordinated interaction between Chevron and its competitors in the relevant market.

The Commission challenged the proposed acquisition and entered into an order with Chevron and Unocal.[32]

Coordinated effects may also arise when changes in market structure facilitate reaching and maintaining a tacit agreement among market participants, particularly when features of the market make it vulnerable to coordination.

Corpus Christi Polymers (DAK/Indorama/FENC) **(2018)** Three polyethylene terephthalate resin ("PET") resin producers (DAK, Indorama, and FENC) formed a joint venture ("JV") to buy the assets of an unfinished PET and purified terephthalic acid ("PTA") production facility after its original manufacturer filed for bankruptcy. PET is a plastic polymer used primarily to make bottles and packaging for food and other products (the relevant market). PTA (the related product) is a key input for PET production. Prior to going bankrupt, the original owner intended to produce both PTA and PET.

The JV members were three of only four North American PET producers, and controlled approximately 90 percent of North American PET capacity. The JV members DAK and Indorama were two of only three significant PTA producers in North America; after formation of the joint venture, they each would have a greater share of PTA market capacity. The Commission's evaluation of entry conditions into the relevant market as part of its competitive effects analysis recognized that absent modifying the JV Agreement to require the JV entity to market the plant's unused capacity for sales to third parties, the JV partners would likely not supply PTA to rivals. Thus, "two-tier entry in both the PET and PTA markets would likely be necessary for an entrant to become truly competitive." The effect of the merger on entry barriers was important because the Commission alleged that the joint venture, as proposed, facilitated or increased the likelihood of collusive or coordinated conduct among the JV participants, and increased the likelihood that the JV participants, acting alone or in concert, would exercise market power in the relevant market.

The Commission challenged the proposed joint venture and entered into an order with the joint venture participants.

[32] *See also* *Statement of the Federal Trade Commission In the Matter of Union Oil Company of California and In the Matter of Chevron Corporation and Unocal Corporation* (July 27, 2005).

Coca-Cola Company/Coca-Cola Enterprises **(2010)** The Coca-Cola Company ("Coca-Cola"), a large soft drink company, acquired the outstanding shares of its largest bottler, Coca-Cola Enterprises ("CCE"). It subsequently obtained a license to buy Dr Pepper Snapple Group ("DPSG") branded concentrates, and use them to supply DPSG branded store-delivered carbonated drinks in certain territories. Earlier the same year, Pepsi had acquired two of its largest bottlers; those bottlers also distributed the products of DPSG. (*See* discussions at Section 3 and 5, *supra*.) The Commission considered two ways in which the transaction might harm competition through coordinated effects, each affecting a different relevant market.

First, CCE's supply of DPSG branded store-delivered carbonated soft drinks (the related product) meant it received confidential information from DPSG about its marketing plans. The Commission alleged that the merger would give Coca-Cola access to this information, which could facilitate coordination between DPSG and Coca-Cola in the upstream supply of concentrates for carbonated drinks (the relevant market).

Second, the Commission examined whether the acquisition by Coca-Cola would increase the likelihood of coordination in the market for branded store-delivered carbonated soft drinks (the relevant market). Prior to the Pepsi and Coca-Cola transactions, Coca-Cola operated a bottling unit but Pepsi did not. The Commission considered whether, after Pepsi's acquisition of its largest bottlers, Coca-Cola and Pepsi would be more likely to reach terms of coordination because of an alignment of their interests as vertically integrated firms operating in the same relevant markets. It also considered whether Coca-Cola and Pepsi would find it easier to monitor coordination when they controlled the supply of their branded store-delivered carbonated drinks, compared to a situation where they controlled only the supply of their branded concentrates (the related product). The Commission did not allege harm to competition from an increase in coordination. The Commission's investigation found that there was robust competition between Coca-Cola and Pepsi bottlers to maintain market share of their respective products and that the increased risk of coordination from the integration was small, compared to the likelihood that EDM would place downward pressure on price and reduce the risk of coordination.

The Commission challenged the proposed acquisition and entered into an order with The Coca-Cola Company.

6. Procompetitive Effects

Procompetitive effects may arise in transactions from EDM and from efficiencies associated with the combination of complementary assets.

The Commission evaluates efficiency claims by the merging firms using the approach set out at Section 10 of the Horizontal Merger Guidelines. As with horizontal transactions, the Commission is unlikely to challenge a vertical merger if cognizable efficiencies are of a character and magnitude such that the merger is unlikely to lead to anticompetitive effects in any relevant market.

> ***Synopsys/Avant!*** **(2002)** The Commission investigated Synopsys, Inc.'s proposed acquisition of Avant! Corporation. Both firms produced electronic tools used in the computer chip industry by integrated circuit designers. Synopsys had a 90 percent share of all front-end tools (the related products) while Avant had a 40 percent share of the back-end tool market (the relevant market). The Commission investigated whether the transaction would result in the combined firm enhancing its back-end competitive position by making it harder for competing back-end tool producers to communicate with Synopsys's dominant front-end tool.
>
> The evidence regarding Synopsys's likely post-transaction conduct was inconclusive. Further, customers largely supported the deal due to its expected efficiencies. They believed the transaction would allow the combined firm to better integrate its front-end and back-end tools, ultimately resulting in better products that would enable chip designers to more efficiently complete designs for increasingly tiny and densely packed integrated circuits.
>
> The Commission closed the investigation.

The Commission accepted the potential for efficiencies in the formation of the **United Launch Alliance** joint venture by **Boeing** and **Lockheed Martin (2007)**[33] **(**discussed in Section 4, *supra***)**

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[33] *See Statement of Commissioner William E. Kovacic, with whom Chairman Deborah Platt Majoras and Commissioner J. Thomas Rosch Join*, *In the Matter of Lockheed Martin Corporation, The Boeing Company and United Launch Alliance, L.L.C.*, (May 1, 2007) at 2:

> In reviewing defense industry mergers, competition authorities and the DOD generally should apply a presumption that favors the maintenance of at least two suppliers for every weapon system or subsystem. … The decisive factor that overrides this presumption and supports the settlement approved today is the cost of subdividing a small number of launches in the face of a national policy that mandates the maintenance of two families of launch vehicles. The capability of a launch vehicle producer resides chiefly in three places: in teams of engineers who develop designs, in teams of production workers who translate the designs into working hardware, and in teams of launch site personnel who prepare vehicles for launch. Experience increases the ability of these teams to execute

and arising from the combination of **Northrop Grumman** and **Orbital ATK (2018)** (discussed in Section 3, *supra*).[34]

Vertical mergers often benefit consumers through EDM. Mergers of vertically related firms often result in the merged firm's incurring lower costs for the upstream input than the downstream firm would have paid absent the merger. The merged firm will have access to the upstream input at cost, whereas often the downstream firm would have paid a price that included a markup. Because of this, EDM is among the most common procompetitive effect claims by parties to a vertical merger. (For examples of cases with EDM, *see* Section 3.a.iii, *supra,* discussing **Essilor/Luxottica (2018)**, **Pepsi/Pepsi Bottlers (2010)**, and **Coca-Cola Company/Coca-Cola Enterprises (2010)**.)

However, not all vertical mergers result in EDM. For example, if the merging firms use incompatible technologies, or if they would not trade with each other for other reasons, the merger will not affect the merged firm's costs for the input.

> ***Staples/Essendant*** **(2019)** Staples, Inc., a leading retailer of office products and related services, sought to acquire Essendant Inc., the largest U.S. wholesale distributor of office products (the related product). Staples and Essendant operated at distinct levels of the office products supply chain, with Staples competing against Essendant-supplied resellers in the downstream market for the sale and distribution of office products to midmarket business-to-business customers (the relevant market). The Commission concluded that the proposed acquisition was unlikely to produce significant downward price effects from EDM, because Staples only used minimal wholesaling services and would not have started using them more frequently absent the proposed transaction.. Instead, it sourced the vast majority of office supplies directly from manufacturers. The Commission recognized that the transaction was nevertheless likely to lead to lower costs in the related product, because it would enable Essendant to benefit from the lower costs that Staples enjoyed through its scale.

their tasks skillfully. There comes a point at which subdividing a relatively small number of design, production, or launch events between two firms denies each firm the experience it needs to remain proficient. The compelling justification for permitting the ULA transaction to proceed, subject to conditions, is its capacity to improve quality in the performance of design, production, and launch preparation tasks in a discipline in which operational reliability is a paramount objective.

[34] *See Statement of Bureau of Competition Deputy Director Ian Conner on the Commission's Consent Order in the Acquisition of Orbital ATK Inc., by Northrop Grumman Corp.* (June 5, 2018) ("DOD expects substantial benefits from the merger, including increased competition for future programs and lower costs.").

For reasons discussed at Section 4, *supra*, the Commission challenged the proposed acquisition and entered into an order with Staples and Essendant.

A vertical merger will also not result in EDM if the merged firm was already able to self-supply any inputs it needed to make its downstream products.

Par/Mid Pac **(2015)** The Commission alleged that the proposed acquisition of Mid Pac Petroleum, LLC ("Mid Pac") by Par Petroleum Corporation ("Par") was likely to lessen competition in a relevant market for the bulk supply of Hawaii-grade gasoline blendstock ("HIBOB") to Hawaii. Par and other bulk suppliers delivered HIBOB into petroleum terminals, for downstream distribution or further shipment. Mid Pac owned half the storage rights at the Barbers Point Terminal (the related product), the only non-refiner-owned terminal in Hawaii capable of receiving economically viable imports of HIBOB. Aloha Petroleum ("Aloha"), the owner and operator of the Barbers Point Terminal, competed with Par in the relevant market. Aloha sourced bulk HIBOB from refiners in Hawaii, but used the threat of importing out-of-state HIBOB into the Barbers Point Terminal as a means of disciplining the price it paid for locally sourced HIBOB. The Commission alleged that Par could use its control over storage rights at the Barbers Point Terminal to reduce Aloha's ability – and thus weaken its threat – to import bulk HIBOB, potentially leading to higher bulk supply and downstream prices.

EDM would not offset these potential foreclosure effects because Par already had sufficient capacity in its own terminals and did not use the Barbers Point Terminal to move its own bulk supply to market (and would not have done so after the merger).

The Commission challenged the proposed acquisition and entered into an order with Par.

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