Exhibit 16 to Plaintiff's
Memorandum of Points and Authorities
in Support of Its Motion for Temporary
Restraining Order and Preliminary
Injunction
(PX01341)
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that payers demanded on behalf of their enrollees. Marketable networks could be assembled with just one of the firms participating. After the merger, a high proportion of plan enrollees would have considered the merged entity to be their most preferred pharmacy chain, leaving PBMs with less attractive options for assembling networks that did not include the merged firm. The merged firm as a result unilaterally could have demanded higher dispensing fees as a condition of participating in a network. The Commission voted to challenge the transaction, after which the parties abandoned it.

Mergers can create or enhance market power on the part of buyers as well as on the part of sellers. The Agencies, therefore, consider the possibility that a merger would produce a significant anticompetitive effect by eliminating competition between the merging firms in a relevant market in which they compete for an input. By eliminating an important alternative for input suppliers, a merger can lessen competition for an input significantly.

***Aetna–Prudential* (DOJ 1999)** Aetna, Inc. proposed to acquire assets relating to health insurance from The Prudential Insurance Co. of America. The acquisition would have eliminated head-to-head competition between Aetna and Prudential in the sale of health maintenance organization ("HMO") and HMO-based point-of-service health plans in Dallas and Houston. The Department challenged the proposed acquisition on the basis of likely anticompetitive effects in the purchase of physicians services for these two types of health plans and on the basis of likely anticompetitive effects in the sale of those plans. The Department concluded that the proposed merger would have allowed Aetna to reduce physician reimbursement rates because it would have significantly increased the number of patients enrolled in Aetna health plans and therefore also the number of patients a physician would have lost by terminating participation in Aetna health plans. The Department's challenge to the acquisition was settled by a consent decree requiring, among other things, the divestiture of interests Aetna had acquired in two other health plans operating in Dallas and Houston.

3. Entry Analysis

As explained by section 3.0 of the Guidelines, an anticompetitive merger can create "sales opportunities available to entrants," and consequently a "merger having anticompetitive effects can attract . . . entry, profitable at premerger prices, that would not have occurred" without the merger. In evaluating the competitive effects of a proposed merger, the Agencies therefore ask whether the merger would attract entry that "would be timely, likely, and sufficient in its magnitude, character and scope to deter or counteract the competitive effects" of the merger, thereby causing "prices to fall to their premerger levels or lower." To address this question, the Agencies examine industry conditions to determine whether a merger is likely to attract entry, as well as whether entry would be likely to prevent, or to reverse in a timely fashion, any anticompetitive effects of a merger.

In evaluating the likely competitive effects of a proposed merger, the Agencies distinguish among different sorts of firms that potentially would supply the relevant product in the event of an attempt to exercise market power. Section 3 of the Guidelines addresses "committed entry," which is defined as "new competition that requires expenditure of significant sunk costs." Costs associated with entry are "sunk" if they cannot be recovered by reversing the entry decision. Section 1.32 of the Guidelines addresses "uncommitted entry," which refers to supply responses not incurring significant sunk costs. Uncommitted entry normally takes the form of incumbent firms using their existing assets to make products or perform services those firms do not currently make or perform.

The focus of this chapter is Section 3 of the Guidelines, which addresses committed entry, referred to here simply as "entry." Other sections of the Guidelines separately consider three specific types of supply responses to mergers: output increases by maverick incumbent firms that potentially would frustrate coordination among the merged firm and its rivals (§ 2.12 & n.20); output increases by market incumbents with excess capacity that potentially would frustrate the unilateral exercise of market power with undifferentiated products (§ 2.22 & n.24); and product repositioning by non-merging firms that potentially would frustrate the unilateral exercise of market power with differentiated products (§ 2.212 & n.23). As with entry, the examination of these supply responses focuses on the likelihood, timeliness, and sufficiency of the supply response.

Entry may be considered successful if the entrant generates sufficient revenue to cover all costs apart from the sunk costs of entry. Such entry succeeds in the sense that the entrant becomes and remains a viable competitor in the market. Defined in this way, successful entry into some markets may require nothing more than the investment of time and money. In such a market, an anticompetitive merger nevertheless will not attract entry if the sunk cost is so great that the entry offers little prospect of a reasonable return on that investment. Significant sunk costs may be associated, for example, with building a manufacturing facility, developing a product, achieving regulatory approvals, and gaining customer acceptance. An anticompetitive merger also will not attract entry if the risk of failed entry, and the associated loss of the entry investment, is so great that potential rewards do not justify making that investment. The Agencies therefore examine the sunk costs and likely returns associated with entry.

In other markets, successful entry may not be possible despite the investment of time and money because success may depend on factors over which a potential entrant has little control. For example, an anticompetitive merger may not attract entry because entry is regulated or even legally barred, or because entrants' efforts would be stymied by the intellectual property rights of incumbents or by the unavailability of essential inputs. An anticompetitive merger also may not attract entry because entrants would suffer significant cost disadvantages in competing with incumbents. This situation can occur for a variety of reasons, but tends to be most important when entrants would be unlikely to achieve the economies of scale (i.e., reductions in average cost from operating at a higher rate of output) and scope (i.e., reductions in cost from producing several products together) already achieved by incumbents. The Agencies therefore examine obstacles to entry and possible cost disadvantages for entrants.

If a merger does attract entry, that entry still may be insufficient to deter or fully counteract the merger's anticompetitive effect, or the entrant may take so long to achieve market significance that the merger nevertheless produces sustained anticompetitive effects. The Agencies therefore examine how long entry would take and how it likely would affect the merger's competitive consequences. The discussion that follows addresses in more detail the Guidelines' concepts of likelihood, timeliness, and sufficiency of entry.

Likelihood of Entry

The Agencies do not assess merely whether firms *could* commit incremental resources to the relevant market, but more importantly whether the proposed merger *would* be likely to induce firms to do so in a timely fashion and in a sufficient magnitude to deter or counteract the merger's anticompetitive effects. Thus, information regarding such factors as technical capability, know-how, sunk costs, and other requirements for successful entry is necessary, but not sufficient, for the Agencies' evaluation of entry conditions. The Agencies must also determine whether firms would have an adequate profit incentive to enter at prices prevailing before the merger, i.e., the prices to which the market likely would return following entry sufficient to deter or counteract the merger's anticompetitive effects. In evaluating the likelihood of entry, the Agencies thus focus on the sales opportunities created by the proposed merger.

Sunk Costs and Risks Associated with Entry

Consumer Products

The Agencies commonly find that proposed mergers involving highly differentiated consumer products would not attract the entry of new brands because entry would not be profitable at pre-merger prices. In a market populated by well-established brands, successful entry usually requires a substantial investment in advertising and promotional activity over a long period of time to build share and achieve widespread distribution through retail channels. Moreover, making such investments by no means assures success.

Nestle–Dreyer's **(FTC 2003)** Nestle Holdings, Inc. proposed to merge with Dreyer's Grand Ice Cream, Inc. The firms were two of the top three rivals in the superpremium ice cream market. Those three combined for 98% of sales. Grocery retailer private label sales accounted for the remaining 2%. Evidence showed entry to be difficult, both because of the need to develop brand equity to compete effectively, and the need to obtain effective distribution, which is difficult in this market because the product must be maintained at a particular freezing temperature throughout the distribution process. The Commission determined that entry was unlikely to prevent or reverse the merged firm's likely unilateral anticompetitive price increase and challenged the merger. To resolve the competitive concerns, the Commission entered into a consent agreement with the parties requiring divestiture of two brands.

Staples–Office Depot **(FTC 1997)** The Commission successfully challenged a merger between Staples, Inc. and Office Depot, Inc., two of the three national office supply superstore retail chains. The Commission found, and the court agreed, that entry was unlikely to prevent anticompetitive effects arising from the merger. Important to this finding was that the three incumbent office superstores had saturated many of the local markets such that a new office superstore entrant would have difficulty in achieving economies of scale in, among other things, advertising and distribution.

Kimberly-Clark–Scott **(DOJ 1995)** The Department found that entry would be unlikely to be attracted by the proposed merger of Kimberly-Clark Corp. and Scott Paper Co., which the Department challenged on the basis of unilateral anticompetitive effects in facial tissue and in baby wipes. Brand recognition was very important for both products, and the Department concluded that the costs and risks associated with establishing new brands likely would prevent the sort of entry that could prevent or reverse the likely anticompetitive effects of the merger. The Department's challenge to the proposed merger was settled by a consent decree requiring the divestiture of assets relating to facial tissue and baby wipes.

Successful prior entry can provide evidence that an anticompetitive merger would attract entry despite the need to make a substantial investment in advertising and promotional activity. Successful prior entry, however, is by no means proof that entry likely would occur following a proposed merger, or that any such entry would be sufficient to prevent significant anticompetitive effects. Evidence of the severity of entry obstacles sometimes is found in an inability of past entrants to gain consumer acceptance.

L'Oreal–Carson **(DOJ 2000)** In considering L'Oreal's proposed acquisition of Carson, Inc., the Department found that several brands of hair relaxer kits introduced in recent years had been unable to generate significant sales. That evidence reinforced the Department's conclusion that the proposed merger would not attract entry sufficient to deter or counteract the likely anticompetitive effects of the merger. The Department's challenge to the merger was resolved by a consent decree requiring the divestiture of relevant brands and associated assets, including a manufacturing facility.

Swedish Match–National **(FTC 2000)** Swedish Match North America, Inc., proposed to acquire National Tobacco Company, L.P. The companies were the first- and third-largest producers of loose leaf chewing tobacco in the United States, with shares of 42% and 18%. Swedish Match's loose leaf products included the Red Man premium brands. National Tobacco produced the Beech-Nut line of premium brands. The Commission successfully challenged the merger in district court, asserting that the transaction would result in anticompetitive effects in the U.S. market for loose leaf chewing tobacco. The evidence showed that entry would be thwarted by, among other things, the substantial sunk costs required to overcome strong brand loyalty. The evidence included prior unsuccessful efforts at introducing new brands by established rivals.

Mergers involving differentiated consumer products also may be unlikely to attract entry because no customer has an incentive to sponsor entry. Wholesale customers often are retailers, and there are circumstances under which retailers suffer little from wholesale price increases because they pass the price increases on to final consumers. Moreover, retailers can benefit from a merger of manufacturers if the retailers sell private label products in competition with the merging manufacturers. A merger involving differentiated consumer products also is unlikely to attract entry when its anticompetitive effects would be felt in just a few local markets or if there are important local brands catering to local tastes and traditions.

Interstate Bakeries–Continental **(DOJ 1995)** The Department challenged the proposed purchase of Continental Baking Co. by Interstate Bakeries Corp. on the basis of anticompetitive effects in the sale of white pan bread within five metropolitan areas. Anticompetitive effects in these five metropolitan areas would have been unlikely to attract entry by a national brand because the overall effect of the merger on national price would have been insignificant. In each of the five metropolitan areas, only one of the leading premium brands was sold nationally, while the others were regional or strictly local. Anticompetitive effects in these areas would have been unlikely to attract local entry because the sunk costs of brand development would be spread over relatively few sales and because important media used for advertising and promotion cannot be effectively targeted at limited metropolitan areas. The Department's challenge to the proposed merger was settled by a consent decree requiring divestiture of brands and related assets in the five metropolitan areas.

Industrial Products

The sources of the sunk costs associated with entry into markets for industrial products vary from one market to the next. In many markets, the only significant sunk costs are those associated with the construction or acquisition of productive facilities, such as manufacturing plants. In other markets, substantial investments are required for product development and to establish support organizations for distribution and service. And in some markets, additional sunk costs are associated with demonstrating product performance and reliability to potential customers. The sunk costs from each of these sources can be large or small. Mergers of industrial products manufacturers may be unlikely to attract entry if customers are unwilling to purchase products without a well-established record of satisfactory performance. A merger is especially unlikely to attract entry if product failure imposes a substantial cost on customers.

Ingersoll-Dresser–Flowserve **(DOJ 2001)** The Department challenged the proposed acquisition of Ingersoll-Dresser Pump Co. by Flowserve Corp. on the basis of likely unilateral anticompetitive effects in markets for specialized pumps used in oil refining and electrical generation facilities. The Department found that the design and testing of an array of such pumps would entail substantial sunk costs. The Department also found that an entrant could not effectively compete in the relevant markets without incurring additional sunk costs in the establishment of a network of service and repair facilities. And because pump failure could shut down part of a refinery or electric generation plant, the Department found that many customers in the relevant markets would not purchase from a supplier that had not demonstrated the reliability and efficiency of its pumps in the particular use for which the pump was being sought. This fact added additional sunk entry costs and extended yet further the substantial time successful entry would take. The Department's challenge to the acquisition was settled by a consent decree requiring divestiture of Flowserve brands as well as manufacturing and repair facilities.

Metso Oyj–Svedala **(FTC 2001)** The Commission investigated a proposed merger between leading manufacturers of mining equipment, Metso Oyj and Svedala Industri AB. Both firms made equipment used in mining, including gyratory crushers, jaw crushers, cone crushers, and grinding mills. Operational failure by any of these machines would require shutting down the entire mining circuit. Purchasers would deal only with well-established companies producing equipment with a proven track record of reliability. A new entrant would face significant sunk costs in developing and testing a new piece of equipment and in gaining customer acceptance. Although several potential entrants could manufacture this equipment within two years, it was unlikely that customers would purchase new and untested equipment within this period. The Commission resolved the competitive concerns by requiring divestitures in the relevant markets of concern.

Exxon–Mobil **(FTC 1999)** Prior to merging, Exxon Corp. and Mobil Corp. were leading producers of jet turbine oil. Jet turbine engines require a specialized lubricant that can operate in an extreme environment. Failure by the lubricant could lead to engine failure, requiring the engine to be taken out of service for an extended period of time for repairs or overhaul. This lubricant, although expensive for a lubricating oil, was inexpensive relative to the cost of losing use of an engine for any period of time as well as to the cost of repairing or replacing an engine. To secure sales to customers, jet turbine oil producers submitted their products for extensive product testing, including testing on the customer's specific model engine. After developing a satisfactory lubricant, therefore, a new entrant would have to invest substantial sunk costs in product testing and incur substantial time delay in entering. The Commission, therefore, concluded that entry would not eliminate competitive concerns. The Commission and the parties entered into a settlement that required, among other things, divestiture of Exxon's jet turbine oil business.

Precision Castparts–Wyman-Gordon **(FTC 1999)** Precision Castparts Corp. and Wyman-Gordon Co., two leading manufacturers of titanium, stainless steel, and nickel-based superalloy cast components for jet engine and airframe applications, proposed to merge. Several companies worldwide had the capability of manufacturing these types of cast parts, but customers were not likely to purchase them from companies lacking a proven, years-long track record of producing products that did not fail. The Commission concluded that entry would not be timely, likely, and sufficient to thwart anticompetitive effects from the merger. It resolved its competitive concerns in a consent order that, among other things, required divestiture of a titanium foundry and a large cast parts foundry.

The Agencies have sometimes found that sunk costs did not pose a significant entry obstacle. In such cases, expected returns justified any required investment in new productive facilities, and successful entry typically did not require the establishment of a brand or reputation for quality.

ADS–Hancor **(FTC 2005)** The FTC closed its investigation into the acquisition by Advanced Drainage Systems, Inc. of Hancor Holding Corp. Both firms were major producers of corrugated high density polyethylene ("HDPE") pipe used for underground water drainage. Staff found that demand for HDPE was growing, that a new HDPE manufacturing plant could be constructed at relatively low cost and could be in operation within a short period, that several firms had entered de novo in the prior ten years, and that several fringe incumbents were expanding output. Also, existing manufacturers of certain other, non-HDPE pipes could enter at relatively little sunk cost. Many of them served common customers already and thus did not have to establish a new marketing organization. The Commission concluded that entry conditions were such that anticompetitive effects from the merger were unlikely.

Omnicare–NeighborCare **(FTC 2005)** The largest provider of pharmacy services to long-term care facilities ("LTC pharmacy"), Omnicare, Inc., offered to acquire a large rival LTC pharmacy, NeighborCare, Inc. The combined firm would have under contract more than half of skilled nursing facility beds in multiple states, and the post-merger market structure would be highly concentrated in many areas. The Commission's decision not to challenge the acquisition was based in part on relatively easy entry conditions in the then-current marketplace. Sunk costs were relatively low, illustrated by many historical examples of entry, including entry by former employees of incumbent LTC pharmacies, expansion by retail pharmacies into the LTC business, and vertical integration by skilled nursing facility operators.

Wrigley–Kraft **(FTC 2005)** Wm. Wrigley Jr. Co. proposed to acquire certain confectionary assets from Kraft Foods, Inc., including certain well-known breath mint and chewing gum brands. Commission staff assessed whether sunk costs that would have to be incurred in acquiring the capacity to produce or market breath mints or chewing gum would pose significant impediments to post-merger competitive entry. Staff found that new entrants would have relatively easy access to third-party "co-manufacturers" for the production of the relevant products and thereby could avoid costly expenditures in developing manufacturing expertise or in building a new facility. Entrants also could competitively distribute their products by outsourcing those functions to third-parties. Staff also found evidence of significant recent branded entry. Based in part on this evidence concerning entry conditions, staff closed its investigation.

Playbill–Stagebill **(DOJ 2002)** In its analysis of the consummated acquisition of certain assets of Stagebill Media by Playbill Inc., the Department found that sunk costs of entry were insignificant. Prior to the acquisition, Playbill was the nation's largest publisher of theater programs and Stagebill was its largest competitor in many cities. The Department found that the merger was not likely to be anticompetitive because the printing itself could be out-sourced, so an entrant did not need to incur significant sunk costs. Indeed, the Department found that entry based on out-sourcing had occurred. The Department also found that theaters could contract directly with printers and some had done so. Finally, the Department found that prices of theater programs had not increased. Consequently, the Department took no action against the acquisition.

Although many purchasers of differentiated consumer products are reluctant to switch from brands they know and trust, purchasers of industrial commodities may be more likely to switch and be willing to sponsor entry when they perceive a lack of competition.

National Oilwell-Varco **(DOJ 2005)** Entry considerations were a major factor in the Department's decision not to challenge the acquisition by National Oilwell Inc. of Varco, Inc. Those firms were among the very few significant competitors in the sale of various products and services relating to offshore drilling for oil and gas, and that fact initially gave the Department serious concerns about the competitive effects of the acquisition. Nevertheless, the Department found that several major customers for these products and services believed that they would be able to sponsor successful entry by committing to make purchases from firms with little or no current market presence. The Department also identified sellers of related products and services interested in entering.

In some markets, it is clear that a merger would not attract entry simply because the sunk costs of entry are far too great in comparison to the likely rewards.

General Dynamics-Newport News **(DOJ 2001)** General Dynamics Corp. proposed to acquire Newport News Shipbuilding Inc. These were the only firms that built nuclear submarines for the U.S. Navy. The manufacture of a nuclear submarine requires much highly specialized equipment, personnel, and know-how, all of which combined to make the sunk cost of entry extraordinarily high. As a result, the merger was not likely to attract entry, especially in view of the fact that an entrant might never make a single sale. The proposed acquisition was abandoned after the Department filed suit to enjoin it.

Other Significant Obstacles to Successful Entry

Entry may not be attracted by an anticompetitive merger for many reasons. In some markets, entry is explicitly regulated, and in others, government regulation can effectively bar entry. The Agencies have found legal obstacles to entry to be significant in some instances.

For example, many states have certificate of need ("CON") programs barring entry into health care markets unless a potential entrant makes an expensive and time-consuming demonstration that there is an unmet need for its services. Regulation of this sort increases sunk costs and the time it takes to enter, and it also creates a significant risk that entry ultimately will be prohibited. For several hospital mergers challenged by the Agencies, as well as a merger of outpatient surgical centers, CON regulation was a factor in the Agencies' determination that the mergers would not attract entry.

Mercy Health-Finley **(DOJ 1994)** The Department challenged the formation of a partnership between Mercy Health Services and Finley Tri-States Health Group, Inc. The companies owned the only general acute care hospitals in Dubuque, Iowa, and the Department concluded that Iowa's CON statute would prevent the construction of any new general acute care hospital in Dubuque. That no new hospital would be built was stipulated at trial, but the district court rejected the Department's challenge to the merger on other grounds. The case became moot before the Department's appeal could be decided because the parties abandoned the merger.

Environmental and zoning regulations are other examples of rules that may make entry difficult.

Florida Rock-Harper Bros. **(DOJ 1999)** Florida Rock Industries, Inc. proposed to acquire Harper Bros., Inc. These companies competed in the sale of aggregate and silica sand in southwest Florida and together accounted for at least 60% of the sales of each product. The Department concluded that the acquisition would be likely to lessen competition substantially and challenged the acquisition. The Department found many reasons why the acquisition would not attract entry, including environmental regulation at the local, state, and federal levels that made it very difficult to open a new aggregate or silica sand production facility in the area. The Department's challenge to the merger was resolved by a consent decree requiring the divestiture of a quarry and sand mine.

In the telecommunications and pharmaceutical industries, federal regulation may pose a significant obstacle to entry. Entry into some telecommunications markets is constrained by the need to have a licence from the Federal Communication Commission for use of part of the electromagnetic spectrum, while the introduction of pharmaceuticals requires approval by the Food and Drug Administration.

***Cingular–AT&T Wireless* (DOJ 2004)** Cingular Wireless Corp., a joint venture of SBC Communications Inc. and BellSouth Corp., proposed to acquire AT&T Wireless Services, Inc. Both Cingular and AT&T Wireless provided mobile wireless telecommunications service ("MWTS") throughout the United States. The Department concluded that the acquisition likely would be anticompetitive in ten local MWTS markets and challenged the acquisition partly on that basis. MWTS is provided using electromagnetic spectrum, the rights to which are licensed by the Federal Communications Commission. Among the reasons the Department concluded that the acquisition would not attract entry was difficulty in obtaining licenses to the necessary spectrum. The Department's challenge to the merger was resolved by a consent decree requiring divestitures in particular locations.

***Cephalon–Cima* (FTC 2004)** Cephalon, Inc. proposed to acquire Cima Labs, Inc. Cephalon was the only firm selling a breakthrough cancer pain ("BTCP") drug in the United States. Evidence suggested that Cima was the most likely first entrant with a BTCP drug to rival Cephalon's product, and that entry subsequent to Cima's was unlikely for at least the next four years. The time needed to secure FDA approval was a significant factor in reaching this conclusion. The Commission resolved its competitive concerns with a consent order that required Cephalon, among other things, to grant an irrevocable, fully paid license to a specific third party for the manufacture and sale of a generic formulation of Cephalon's BTCP drug.

Intellectual property rights such as patents can at times pose a significant entry obstacle. Intellectual property can be important in both high-tech and low-tech industries.

***3D Systems–DTM* (DOJ 2001)** 3D Systems Corp. proposed to acquire DTM Corp., a competitor in industrial rapid prototyping systems, which are used to make functional and non-functional prototypes of new products or components. The Department challenged the acquisition in part because the two companies held extensive patent portfolios that likely created an insuperable entry obstacle even for well-established competitors outside the United States. The Department's challenge to the merger was resolved by a consent decree requiring divestiture of a package of intellectual property rights.

***Franklin Electric–United Dominion* (DOJ 2000)** The Department challenged the proposed joint venture between subsidiaries of Franklin Electric Co. and United Dominion Industries because it would have eliminated competition between the only two domestic producers of submersible turbine pumps used for pumping gasoline from underground storage tanks at retail stations. The Department found that the proposed merger would be unlikely to attract entry for several reasons, including the necessity of designing around Franklin Electric's patents. After trial, a district court granted the Department's motion for a permanent injunction.

***American Home Products–Solvay* (FTC 1997)** American Home Products Corp. proposed to acquire the animal health business of Solvay S.A. The Commission found that the proposed acquisition raised serious competitive concerns in three, highly concentrated, relevant product markets for the production and sale of animal vaccines. The Commission found, moreover, that post-merger entry was unlikely to mitigate the competitive concerns because entry would not be likely, timely, or sufficient. For each relevant market, entry would require the expenditure of significant resources over a period of many years with no assurance that a viable commercial product would result. The time required to enter the relevant markets could be further lengthened by the need to obtain U.S. Department of Agriculture approvals to sell the vaccines. Significantly, the existence of broad patents governing the manufacture of each of the relevant products enhanced the difficulty of entry. As a result, the Commission issued a complaint challenging the proposed acquisition, and ultimately reached a settlement with the parties that called for, among other things, divestiture of Solvay's intellectual property rights relating to the three vaccines.

Patents need not impose a significant obstacle to entry, even in a high-tech industry with many important patents. The Agencies may find that the requisite technology is nevertheless reasonably available, for example, because required patents could easily be licensed or invented around.

Cinram–AOL Time Warner **(DOJ 2003)** The Department decided not to challenge the acquisition by Cinram International Inc. of the DVD and CD replication assets of AOL Time Warner Inc. in part because the requisite technology was readily available for license from patent pools. The Department also found that sunk costs were relatively low and that the prospects for recovering them were good due to high demand growth.

A merger may lead to price increases without attracting entry because potential entrants would be unable to obtain a source of supply for essential inputs, for example, when entry requires access to scarce natural resources.

Imetal–English China Clays **(DOJ 1999)** Imetal proposed to acquire English China Clays, plc, both of which produced water-washed kaolin and calcined kaolin. These products are produced from kaolin clay, which is quite scarce. Much of the world's highest quality kaolin is found in a small area within Georgia. Among the reasons why the Department concluded that the proposed merger was unlikely to attract significant entry was that an entrant would have difficulty in acquiring suitable kaolin deposits. The Department's challenge to the merger was resolved by a consent decree requiring divestiture of a plant and associated assets such as kaolin reserves.

Difficulty in securing essential inputs can impede entry in a variety of contexts, particularly when incumbents own or control access to the inputs. In some cases, an entrant might find it difficult to secure a source of supply for a manufactured input product. In other cases, gaining access to physical facilities built and owned by third parties can pose a significant entry obstacle. In addition, access to human resources may pose a significant entry obstacle in some markets.

DaVita–Gambro **(FTC 2005)** DaVita Inc. proposed to acquire Gambro Healthcare, Inc. The firms were rivals in the provision of outpatient dialysis services. The Commission alleged that anticompetitive effects would result from the transaction in 35 local markets where the firms competed. Laws applicable to dialysis clinics required that each such clinic must have a nephrologist as its medical director. In addition, the medical director is the clinic's primary source of referrals and thus is essential to the clinic's competitiveness. A lack of available nephrologists with an established referral stream was an obstacle to entry into each of the relevant geographic markets at issue. To resolve the Commission's concerns, the parties entered into a consent agreement that required, among other things, divestiture of dialysis clinics in the markets at issue.

Central Parking–Allright **(DOJ 1999)** The unavailability of facilities that had to be provided by others made entry unlikely after the proposed merger of Central Parking Corp. and Allright Holdings, Inc. Both companies operated off-street parking facilities in the central business districts of many U.S. cities. In these areas, land was scarce and typically had uses higher-valued than parking lots, so adding additional parking spaces typically required the construction of a new office building, and higher parking rates were not likely to spur the construction of new office buildings. The Department's challenge to the merger was resolved by a consent decree requiring divestiture of parking facilities in many cities.

Cost Disadvantages of Entrants

A merger may lead to price increases but not attract entry because entrants would suffer a significant cost disadvantage relative to incumbents. The most common reason for a cost disadvantage is the presence of significant economies of scale and scope. In other situations, entrants may be significantly disadvantaged by economies of density in route delivery systems (i.e., reductions in cost from increasing volume, holding the size of a network fixed).

Waste Management–Allied **(DOJ 2003)** Waste Management, Inc. agreed to acquire the assets Allied Waste Industries, Inc. used in small container commercial waste hauling in Broward County, Florida. This portion of the municipal solid waste business entails the collection, transportation, and disposal of waste generated by commercial establishments. The Department challenged the acquisition in part because an entrant would be unable to operate efficiently and provide meaningful price competition. To be efficient, a competitor must achieve a high route density by contracting with a large number of commercial establishments in a relatively small area. Doing so was found to be exceptionally difficult for an entrant because incumbents had secured many existing customers through long-term contracts. The Department's challenge to the merger was resolved by a consent decree requiring divestiture of specified routes and the assets used on them.

Federal-Mogul–T&N **(FTC 1998)** In the merger of Federal-Mogul Corp. and T&N PLC, one of the markets the staff examined was the manufacture and sale of engine bearings to the aftermarket for repairing and overhauling engines. Each engine bearing is designed for and used in a particular truck or car engine, and each engine can use only bearings designed and built to its specifications. The parties acquired the tooling for their broad line of aftermarket bearings when engines were first in production, allowing them to amortize the cost of that tooling over a longer time and over a larger number of bearings. A new entrant that attempted to match an incumbent's product line would have been able to amortize the tooling for many bearings only over a portion of the engine's life, and would necessarily have higher relative costs. This would have put any entrant in the aftermarket at a substantial cost disadvantage to the incumbent firms. Thus, the Commission found that entry would not be timely or likely to prevent anticompetitive effects. The Commission resolved the matter with a consent order that required, among other things, divestiture of T&N's engine bearing business.

Timeliness of Entry

Section 3.2 of the Guidelines states that entry generally is considered timely only if "achieved within two years from initial planning to significant market impact." Even if a proposed merger likely would attract entry that eventually reverses any likely anticompetitive effect from a merger, the Agencies nonetheless would challenge the merger if they determined the entry would not be timely. For many of the proposed mergers discussed in this chapter, the Agencies found that entry having a material effect on competition would take significantly longer than the two-year period specified by the Guidelines.

Alcan–Pechiney **(DOJ 2003)** The Department challenged the proposed acquisition of Pechiney, S.A. by Alcan, Inc. on the basis of likely anticompetitive effects in the production and sale of a class of aluminum alloys called "brazing sheet." Manufacturing brazing sheet requires an expensive rolling mill, which the Department found would take at least three years to construct. The Department also found that successfully selling brazing sheet requires the mastery of alloy technologies and that it likely would take several additional years after a new mill commenced production to "qualify" its output with major customers and begin making significant sales. Thus, the Department concluded that entry was unlikely and would necessarily take far longer than two years if it did occur. The Department's challenge to the merger was resolved by a consent decree requiring divestiture of Alcan's brazing sheet business, including a smelting facility, rolling mill, and associated intellectual property.

Healthtrust–Holy Cross **(FTC 1994)** In a merger between Healthtrust, Inc. - The Hospital Co. and Holy Cross Health Services of Utah, there was no CON regulation that would preclude or delay entry into the market, and prior entry of hospitals had occurred in the geographic market. Nonetheless, the Commission concluded that timely entry was unlikely to prevent anticompetitive effects from the merger under investigation because it takes many years to plan and build a new hospital. The Commission resolved its competitive concerns arising from the transaction by reaching a consent agreement with the parties that, among other things, included an order requiring divestiture of one of the acquired firm's hospitals.

In evaluating the timeliness of entry, the Agencies include the time to complete any necessary preliminary steps, such as establishing a reputation or the development of specialized inputs into the production of the product in question.

Federal-Mogul–T&N **(FTC 1998)** Federal-Mogul Corp. and T&N PLC, which proposed to merge, competed in selling thin-wall engine bearings, light-duty engine bearings, and heavy-duty engine bearings to original equipment manufacturers ("OEMs") and to customers in the aftermarket. These bearings required specialized alloys developed for specific applications. Entry required time to develop such alloys, to design the specific bearings for particular applications, and to test and qualify in particular applications. For each type of bearing, as to both OEM and aftermarket customers, FTC staff found that timely entry would not prevent anticompetitive effects in the relevant markets. Further, in the aftermarket, effective entry required brand name recognition that took additional time to develop. The Commission resolved the matter with a consent order that required, among other things, divestiture of T&N's engine bearing business.

Sufficiency of Entry

Section 3.0 of the Guidelines states that "[e]ntry that is sufficient to counteract the competitive effects of concern will cause prices to fall to their premerger levels or lower." Thus, even if the evidence suggests that timely entry into the relevant market is likely, the entry analysis is not complete. The entry must also be of a character and magnitude that it would "deter or counteract the competitive effect of concern."

Chicago Bridge–Pitt-Des Moines **(FTC 2005)** The Commission ruled that the consummated acquisition by Chicago Bridge & Iron Co. of certain assets from Pitt-Des Moines, Inc., violated Section 7 of the Clayton Act and Section 5 of the FTC Act. The merging parties designed, engineered, and built storage tanks for liquified natural gas ("LNG"), liquified petroleum gas ("LPG"), and liquid atmospheric gases such as nitrogen, oxygen, and argon ("LIN/LOX"). They also designed, engineered, and built thermal vacuum chambers ("TVC"). TVCs and field-erected tanks for LNG, LPG, and LIN/LOX are custom-made to suit each purchaser's needs, and customers place great emphasis upon a supplier's reputation for quality and service. For each of the relevant products, customers generally seek competitive bids from several suppliers.

The Commission found that some timely entry into each of these markets might occur, but that it was unlikely to be sufficient to prevent anticompetitive effects from the merger. Although new firms had appeared and fringe firms had the intent to compete, these firms were not found to be significant competitors capable of replacing the competition lost due to the merger. With respect to the LNG tank market, the Commission found that new entrants lacked the reputation and experience that most customers demand, and they lacked the requisite personnel skills. With respect to the LPG and the LIN/LOX tank markets, the Commission found that, although the merging parties identified a number of actual and potential entrants, entry of those firms would not prevent the anticompetitive effects of the merger because the firms would not have the attributes desired by most customers. The record evidence showed no attempted entry into the TVC tank market by any suppliers. The Commission ordered, among other things, divestiture of assets and other remedial action to restore the competition lost as a result of the transaction.

The Agencies' reasons for concluding that entry would not face significant obstacles also can be relevant to determining whether entry would be sufficient.

Sherwin-Williams–Duron **(FTC 2004)** The Sherwin-Williams Co., the nation's largest manufacturer of architectural paint, proposed to acquire Duron, Inc., a leading architectural paint manufacturer in the eastern United States. The firms were head-to-head competitors in several metropolitan areas where each had a relatively large number of store locations. A focus of the Commission's investigation was on the potential effects of the merger on professional contractors, which in significant numbers patronize architectural paint stores rather than other retailers of paint (such as home improvement stores and other big-box retailers). Staff concluded that this class of customers made purchasing decisions largely based on local market conditions that determine price and service, rather than on national or regional contracts with paint suppliers.

The investigation assessed whether entry would require a network of store locations to compete effectively for professional painters' business. Data analysis revealed that even professional painters who use numerous company stores during a year spend the vast majority of their dollars at a limited number of favored stores. Thus, the evidence showed that professional painters did not rely on an extended store network and would not likely pay a premium to do business with firms that operate a network of stores in a region. In addition, even if a network of some size were required, the requirements to open additional stores did not pose an entry barrier. Few significant obstacles appeared to prevent firms with established brand names from opening paint stores to serve professional painters. No Commission action was taken.

4. Efficiencies

Merging parties may reduce their costs by combining complementary assets, eliminating duplicate activities, or achieving scale economies. Mergers also may lead to enhanced product quality or to increased innovation that results in lower costs and prices or in more rapid introduction of new products that benefit consumers.

As the Guidelines state, efficiencies "can enhance the merged firm's ability and incentive to compete, which may result in lower prices, improved quality, enhanced service, or new products." Guidelines § 4. Moreover, when a merged firm achieves such efficiencies, it may induce competitors to strive for greater efficiencies in order to compete more effectively. Consumers benefit from such increased competition.

Efficiencies may directly prevent the consumer harm that otherwise would result from a merger. The Agencies thus do not challenge a proposed merger "if cognizable efficiencies . . . likely would be sufficient to reverse the merger's potential to harm consumers in the relevant market, e.g., by preventing price increases in that market." Guidelines § 4. In analyzing mergers, including the likely effects of cost reductions, the Agencies assume that firms maximize profits. Other things equal, a reduction in any cost that depends on a firm's output rate causes a profit-maximizing firm to reduce prices. This effect may be sufficient to counteract a merger's anticompetitive effects.

For example, one potential concern is that a proposed merger would increase the likelihood that competitors will coordinate pricing and output decisions in a way that harms consumers. In the presence of other conditions conducive to coordination, uniform cost structures across incumbent competitors may facilitate coordination. Therefore, some mergers that appreciably reduce the uniformity of costs across competitors may disrupt existing coordination or otherwise make coordination less likely. As a lower-cost producer, the merged firm may find it profitable to reduce prices notwithstanding its rivals' likely reactions. Similarly, sufficiently large reductions in the marginal costs of producing and selling the products of one or both of the merging firms may eliminate the unilateral incentive to raise prices that the merger might otherwise have created. In both of these situations, the Agencies integrate efficiencies into their assessments of competitive effects. In so doing, the Agencies assess the effects of the elimination of competition between the merging firms in light of any cognizable, merger-specific efficiencies.

Efficiencies in the form of quality improvements also may be sufficient to offset anticompetitive price increases following a merger. Because a quality improvement involves a change in product attributes, a simple comparison of pre- and post-merger prices could be misleading. A careful analysis of the effects of changes in product attributes and prices on consumer welfare is likely to be necessary.

Efficiencies the Agencies Consider

Section 4 of the Guidelines provides that, to be considered by the Agencies, an efficiency must be "merger-specific" and "cognizable."

Merger-Specific Efficiencies

Efficiencies are not taken into account by the Agencies if they are not merger-specific. Merger-specific efficiencies are "those efficiencies likely to be accomplished with the proposed merger and unlikely to be accomplished in the absence of either the proposed merger or another means having comparable anticompetitive effects." The Guidelines explain that, although the Agencies ask whether the efficiencies can be achieved by means other than the merger, "[o]nly alternatives that are practical in the business situation faced by the merging firms will be considered in making this determination; the Agency will not insist upon a less restrictive alternative that is merely theoretical."

The Agencies recognize that the merging parties often have information with respect both to how they plan to integrate after the merger and to the effect of the integration on the merged firm. Accordingly, the Agencies give full consideration to the parties' reasonable and well-supported explanations of merger-specific cost savings.

Any efficiency that enables the combined firm to achieve lower costs for a given quantity and quality of product than the firms likely would achieve without the proposed merger is merger-specific. For example, if a merged firm would combine the production from two small or underutilized facilities (one from each of the merging firms) at one facility that has lower costs, and if such a cost reduction could not practically be achieved without the merger (e.g., by one of the merging firms combining two of its own underutilized facilities or through rapid internal growth), this cost reduction is merger-specific. Such a cost reduction benefits consumers to the extent that it makes the merged firm a more vigorous competitor, reduces prices, or expands output.

That an efficiency theoretically could be achieved without a merger—for example, through a joint venture or contract—does not disqualify it from consideration in the analysis. Many joint venture agreements or contracts may not be practically feasible or may impose substantial transaction costs (including monitoring costs). In their assessment of proffered efficiency claims, the Agencies accord appropriate weight to evidence that alternatives to the merger are likely to be impractical or relatively costly.

> ***Alpha–Beta* (Disguised FTC Matter)** A proposed merger of two of the largest gizmo manufacturers ("Alpha" and "Beta") would create a firm with a market share in excess of 30%. In addition to its manufacturing business, Alpha owned a subsidiary company engaged in industrial packaging. At the time of the proposed merger, Alpha's packaging subsidiary had unutilized capacity. Among the subsidiary's customers was Beta, which owned Get-To, Inc., a company that dispenses gizmos to customers located in isolated areas not otherwise served by normal distribution channels. The parties planned to combine Alpha's unused packaging capacity with Get-To's demand for packaging. The parties claimed that this combination would yield significant cost savings. Commission staff concluded that, although such an arrangement may yield savings, the savings would not be merger-specific. Beta already was an Alpha customer, and the evidence suggested that, even in the absence of the merger, Alpha and Beta were in the position readily to expand their existing packaging services contract to achieve the claimed savings. The Commission did not challenge the merger because evidence was insufficient to show that the merger was likely to cause competitive harm.
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> ***Nucor–Birmingham Steel* (DOJ 2002)** Nucor Corp.'s acquisition of substantially all of the assets of Birmingham Steel Corp. raised competitive concerns because the firms owned two of the three mills producing certain types of steel bar in the western United States. The Department concluded, however, that the third western mill and other domestic mills would substantially constrain any post-merger price increases and that the merger likely would generate significant efficiencies. The Department found that the acquisition would allow the merged firm to close some distribution facilities and to supply some customers from a closer mill at a lower delivered cost. The Department also found that the acquisition would provide a Nucor mill with a lower cost input supply from Birmingham, although some of the savings might have been obtainable through a contractual arrangement. Even though some of the latter efficiencies may not have been merger specific, the Department concluded that plausible merger-specific reductions in variable costs were significant relative to the worst case scenario of anticompetitive effects from the acquisition, and the Department granted early termination under HSR.

Competition spurs firms to implement cost reduction initiatives, and those likely to be implemented without a proposed merger do not yield merger-specific efficiencies. For example, the parties may believe that they can reduce costs by adopting each other's "best practices" or by modernizing outdated equipment. But, in many cases, these efficiencies can be achieved without the proposed merger. The presence of other firms in the industry unilaterally adopting similar "best practices" would suggest that such cost savings are not merger-specific. By contrast, if a "best practice" is protected by intellectual property rights, then it could be the basis for a merger-specific efficiency claim.

Merging parties also may claim cost savings from combining sales and realizing economies of scale. These types of economies, however, might be realized from internal growth. If such unilateral changes are likely without the proposed merger (for example, if they have already been planned), they are not merger-specific. Timing can be an important factor in the consideration of such claims. If a merger can be expected significantly to accelerate the achievement of economies of scale due to increased sales as compared to internal growth, the Agencies credit the merger with merger-specific acceleration of the cost reduction.

Cognizable Efficiencies

The Guidelines define cognizable efficiencies to be "merger-specific efficiencies that have been verified and do not arise from anticompetitive reductions in output or service." Moreover, "[c]ognizable efficiencies are assessed net of costs produced by the merger or incurred in achieving those efficiencies." Guidelines § 4.

The parties can facilitate the Agencies' assessment of whether efficiency claims are cognizable by providing documentation that is logical, coherent, and grounded on facts and business experience. It is in the parties' interest to provide detailed information on the likelihood, magnitude, and timing of claimed efficiencies. They may, for example, draw on a detailed business plan that describes how the merged firm intends to achieve the efficiencies. If not already included in the business plan, the parties should also consider providing supporting evidence that justifies the planning methods and shows the reasonableness of applied assumptions.

When efficiencies are an important business motive for the merger, information pertinent to verification will often exist prior to the Agencies' antitrust review of the merger. In other situations—particularly when projected efficiencies are not a principal motive for the merger and evidence to substantiate claims has not been prepared prior to the merger agreement—the parties can elect to develop and submit to the reviewing Agency evidence (e.g., documents, data, consultant reports, or evidence from past experiences) to substantiate the claimed efficiencies.

Arch Coal–Triton **(FTC 2004)** Pursuant to a Commission action in federal district court to enjoin the proposed merger of Arch Coal, Inc. and Triton Coal Co. LLC, the parties claimed merger-specific efficiencies totaling $130 million to $140 million over a five-year period. The parties' efficiency claims included cost-savings from equipment and operator reductions, the ability to extract additional coal through redeployment of coal mining equipment, insurance premium reductions, and safety improvements. Commission staff found that Arch Coal failed to substantiate many of its claimed savings and, in some instances, employed a methodology that overstated savings. Therefore, the staff determined that a substantial portion of Arch's claimed savings were not cognizable. For example, staff found that claims related to the ability to extract additional coal through redeployment of coal mining equipment were overstated because staff believed Triton would recover the additional coal absent the merger, just not as quickly as Arch would be able to in the combined operation. The court denied the Commission's preliminary injunction request and, after further investigation, the Commission decided not to pursue further administrative litigation.

Oracle–PeopleSoft **(DOJ 2004)** Oracle Corp. made an unsolicited tender offer for PeopleSoft, Inc. Oracle and PeopleSoft competed in the sale of Enterprise Resource Planning software, which provides tools for automating essential operating functions within large organizations. Oracle Corp. claimed that the proposed takeover would produce cost reductions of more than $1 billion per year. Although these claims were based on projections made by a high ranking executive, the Department's attempts to verify these claims revealed that they were predicated on little more than unsupported speculation with no allowance having been made for the costs of integrating the two companies. Moreover, the Department concluded that at least a significant portion of the projected cost savings were a consequence of projected reductions in sales that would be the result of eliminating the R&D and sales staffs of PeopleSoft. The Department found that, for the most part, the cost reductions would stem from anticompetitive reductions in innovation, service, and output, and therefore did not reflect cognizable efficiencies. The Department filed suit to block the transaction, but the district court declined, on other grounds, to enjoin it.

Verification of Efficiency Claims

After the parties have presented substantiation for their claimed merger-specific efficiencies, the Agencies attempt to verify those claims. The verification process usually includes, among other things, an assessment of the parties' analytical methods, including the accuracy of their data collection and measurement, an evaluation of the reasonableness of assumptions in the analysis, and scrutiny into how well the parties' conclusions stand up to modifications in any assumptions (i.e., the "robustness" of the parties' analysis). To evaluate the parties' efficiency claims, the Agencies typically review the parties' internal documents and data, as well as the statements of knowledgeable company personnel. In some cases, to evaluate further how realistic the claimed efficiencies are, the Agencies also contact third parties, for example, to learn what efficiencies others have been able to achieve and how they have achieved those efficiencies.

The Agencies recognize that assessing a proposed merger's potential efficiency benefits, like its competitive effects, necessarily involves projections about the future. The Agencies do not automatically reject a claim due to minor discrepancies uncovered in the verification process. Nor do the Agencies reject an efficiency claim solely because the efficiency has never before been accomplished. Shortcomings in the substantiation of a particular efficiency claim may cause the Agencies to reduce the magnitude of the efficiencies associated with that claim rather than to reject the claim altogether. Similarly, the fact that one stand-alone efficiency claim cannot be verified does not necessarily result in rejection of other claims.

The stronger the supporting evidence, the more credence the Agencies are likely to give the claimed efficiencies in the competitive effects analysis. Efficiency claims that are vague, speculative, or unquantifiable and, therefore, cannot be verified by reasonable means, are not credited. For example, a general claim that the acquiring firm will save 20% of the acquired firm's expenses, without substantiation, generally would not be credited.

Fine Look–Snazzy **(Disguised FTC Matter)** In a proposed merger of two consumer products packagers, Fine Look and Snazzy, the parties claimed efficiencies from rationalization and consolidation of packaging facilities ("PFs"); elimination of duplicate corporate overhead; and combining specialty packaging operations. Commission staff determined that a portion, but not all, of the savings claimed through consolidation of PFs was merger-specific and cognizable, but rejected the other claims because they could not be reasonably verified and thus were not cognizable. The Commission did not challenge the merger because evidence was insufficient to show that the merger was likely to cause competitive harm. The Commission credited the portion of the parties' efficiency claims that staff found to be merger-specific and cognizable.

First, the staff considered the consolidation of PFs. Fine Look operated 30 PFs and Snazzy operated 20. The parties planned to operate 35 PFs after the merger by closing 15 owned by Fine Look and 10 owned by Snazzy, and by building 10 new PFs. The parties claimed that sales from the closed Fine Look PFs would be shifted to Snazzy PFs and that this shift would result in reduced operating and delivery costs at the Snazzy PFs. Similarly, savings would derive from reduced operating costs at Fine Look PFs because of transferred sales from closed Snazzy PFs. The parties also claimed reduced inventory costs tied to reducing the number of PFs.

In estimating the potential savings from closing PFs, the parties assumed that all PF costs would be eliminated except for certain variable costs that would be shifted to the remaining PFs. In the case of the 15 Fine Look PFs projected to be closed, the parties provided reasonable substantiation of these cost savings derived from Fine Look cost records. Nonetheless, the parties' estimates assumed that, in each case of a closing, the remaining post-merger PFs would retain 100% of the customers of the closed PFs. The parties provided no analysis respecting how sensitive their estimates were to this key assumption.

In addition, at least some of the consolidations for which the parties claimed efficiencies were purely intra-Snazzy (i.e., closing one Snazzy PF in proximity to another Snazzy PF). Staff concluded that such consolidations would not be merger-specific. Furthermore, the claimed savings from closings of the Snazzy PFs were not substantiated from cost records, but instead were conjecture. Staff could not accept these claims.

Based on all of the claims respecting PF consolidation, staff concluded that only savings associated with the 15 Fine Look closings for which substantiation was provided were cognizable. But because no sensitivity analysis was performed regarding the assumption on the retention of customers, staff considered the estimated savings from the closing of the Fine Look PFs to be only an upper bound on the potential savings.

Second, the staff considered the corporate savings. The parties made a very rough calculation of projected savings through consolidation of various corporate functions. They contended that 75% of one party's corporate expenses would be eliminated by this consolidation. The calculation, however, was unsubstantiated conjecture rather than an analysis based on objective data that Agency staff could evaluate. Staff thus found the claim not to be cognizable.

Third, the staff considered the specialty packaging operations. Both Fine Look and Snazzy operated specialty packaging facilities for high-end luxury widgets, independent of their other PFs. The parties planned to consolidate Fine Look's specialty business into Snazzy's specialty business. They claimed that this consolidation would reduce costs because it would yield savings of 50% in operating expenses. In deposition, a senior executive admitted that the 50% figure was merely an unsupported assumption. Staff concluded that the parties' failure to provide sufficient evidence in support of the claim made the efficiency claim unverifiable and therefore not cognizable.

The Agencies may accord less significance to shortcomings in the documentation of claimed efficiencies when the weight of evidence suggests that merger-specific efficiencies appear to be significant and likely to be achieved.

Genzyme–Novazyme **(FTC 2004)** Genzyme Corp. acquired Novazyme Pharmaceuticals, Inc., combining the world's only firms engaged in developing the first enzyme replacement therapy ("ERT") to treat Pompe disease, a rare, fatal disease that affects about 10,000 people worldwide. Whether either firm's Pompe drug would make it to market was not certain, but the acquisition left Genzyme as the only firm engaged in developing Pompe ERT treatments. Genzyme asserted that, even without competition from Novazyme, it had the incentive to bring its Pompe product to market in the fastest possible time frame.

Genzyme also asserted that the acquisition had resulted in significant efficiencies. Genzyme claimed that each firm had unique skills and expertise, and that, by combining, the merged firm could accelerate development of Genzyme's and Novazyme's Pompe drugs. Genzyme asserted that it possessed certain unique capabilities and technologies that it was applying to Novazyme's Pompe drug. The Commission voted to close the investigation without challenging the transaction due, in part, to the evidence supporting the claim that the merger would accelerate development of the drug.

The best way to substantiate an efficiency claim is to demonstrate that similar efficiencies were achieved in the recent past from similar actions. Documentation must be based on appropriate methods and realistic assumptions, and ideally would be grounded on actual experience. For example, a firm that recently combined its own distribution centers, or consolidated distribution centers after a recent merger, could use its actual cost savings experiences in those instances as a basis for, and to substantiate claims made about, efficiency claims arising from combining distribution centers after a proposed merger.

If the parties cannot point to similar efficiencies achieved in the recent past, they should use the best information available to substantiate their efficiency claims. For example, the parties might do an internal study and analysis of expected efficiencies using recent cost records and other pertinent objective data. In addition, some parties have found outside consultants helpful in substantiating efficiency claims.

The Agencies may verify and accept part of an efficiency claim. For example, an acquiring firm might estimate a particular efficiency by assuming that all of the acquired firm's customers and sales will transfer to the merged entity when experience suggests that customers and sales are not likely to transfer completely. Or, a party may estimate the dollar value of a particular efficiency using a discount rate that is significantly different from the discount rate it normally uses, without any justification for the difference. In such cases, the differences between the parties' efficiencies estimates and ones using the more supported assumptions are not verifiable, and those portions of the efficiency claims are unlikely to be credited.

A-1 Goods–Bingo **(Disguised FTC Matter)** In a proposed merger of consumer products companies, A-1 Goods, Inc. and Bingo Co., the parties claimed cost savings of several million dollars from a reduction in the sales force and a combining of certain manufacturing facilities. Commission staff concluded that the parties' estimates were exaggerated. Staff credited some, but not the entire dollar amount of the claims.

First, the staff considered the sales force reduction. The parties claimed that the merger would permit the post-merger firm to eliminate the equivalent of 90% of one of the party's pre-merger sales force, representing approximately 40% of the combined pre-merger sales employees. For calculating the estimated efficiencies, the parties assumed that the combined post-merger output would be the same as that before the merger. They also assumed that pre-merger levels of marketing and selling support to customers would be maintained. Achieving these efficiencies would require one-time costs approximating almost 80% of the projected annual cost savings.

These one-time costs derived from severance payments and relocation expenses. Evidence from the parties suggested that the claims were based on aggressive assumptions. For this reason, Commission staff discounted the parties' estimates. Applying more reasonable assumptions, the staff credited most of the parties' claimed cost savings, from which the one-time cost of achieving the efficiencies was subtracted.

Second, the staff considered the consolidation of manufacturing facilities. The parties claimed several million dollars in projected savings from the expected consolidation of certain manufacturing facilities. The parties planned to shut down an A-1 production facility and consolidate its output into a Bingo plant. The post-merger output rate was to be the same as on a combined, pre-merger basis, but with fewer people needed to run the consolidated manufacturing operations. To maintain the same rate of pre-merger output, the parties envisioned that 70% of A-1's manufacturing equipment in the shut-down facility would be moved to unused space at the Bingo facility, adding to the overall manufacturing capacity of that facility. In addition, a number of A-1 employees would be relocated to the Bingo plant, while other employees would be let go. Certain retooling and capital expenditures related to integrating manufacturing operations would have to be incurred.

The parties claimed that no arrangement other than the proposed merger would generate the efficiencies claimed. They contended that any non-merger arrangement would raise insurmountable issues of control, allocation of savings between owners, transfer pricing problems, and issues dealing with the sharing of proprietary knowledge. To buttress this point, the parties presented Commission staff with evidence that the parties considered entering into contract manufacturing arrangements, joint ventures, and other internal measures to save money on production, but concluded that these were impractical or could not bring about the desired level of efficiencies. Based in part on this evidence, Commission staff concluded that the claimed efficiencies were merger-specific and cognizable.

The Commission ultimately decided not to challenge the merger on the grounds that it posed no substantial threat to competition, irrespective of any efficiency claims.

When parties to a merger base an efficiency claim on past experience, the Agencies examine whether the experience is indicative of what is likely to occur with the merger. If the experience was far out of the ordinary (e.g., during bankruptcy, a worker's strike, drought, or war), the Agencies may not credit the claims.

Sufficiency of Efficiencies

As noted in section 4 of the Guidelines, the Agencies seek to determine "whether cognizable efficiencies likely would be sufficient to reverse the merger's potential to harm consumers in the relevant market, e.g., by preventing price increases in that market." Within the integrated analysis framework for evaluating competitive effects, "efficiencies are most likely to make a difference in merger analysis when the likely adverse competitive effects, absent the efficiencies, are not great." Efficiencies are a significant factor in the Agencies' decisions not to challenge some mergers that otherwise are likely to have, at most, only slight anticompetitive effects.

Toppan–DuPont **(DOJ 2005)** Photomasks are the masters from which integrated circuits are produced. Toppan Printing Co., Ltd. was a Japanese company that had recently begun competing in the United States. Toppan was proposing to acquire DuPont Photomasks, Inc., which was one of its three competitors for U.S. sales of the highest technology photomasks. The Department found that competition was best modeled as an auction process, with each auction essentially a separate relevant market. The Department's economists used a formal auction model to estimate the likely price effects of the transaction. This exercise indicated that, even without any efficiencies, the acquisition most likely would lead to, at most, only small price increases. Incorporating the portion of the claimed efficiencies the Department determined to be merger-specific and cognizable indicated that the transaction would not lessen the welfare of U.S. customers under the assumptions considered most plausible. Accordingly, the Department did not challenge the merger.

PayPal–eBay **(DOJ 2002)** PayPal, Inc. and eBay, Inc. provided competing person-to-person payment systems used largely to complete transactions following eBay auctions. Even though the person-to-person payment systems offered advantages over the other means of payment, the Department decided not to challenge eBay's acquisition of Pay Pal principally because other means of payment substantially constrained eBay's ability to increase fees after the acquisition. Efficiencies to be gained by integrating PayPal with eBay were also a factor in the Department's analysis. Integrating the two would make transactions more convenient for eBay buyers and also improve the detection of fraud by combining the information that had been separately amassed by the two companies.

DirecTV–Dish Network **(DOJ 2002)** DirecTV Enterprises Inc. was owned by Hughes Electronics Corp., which was owned by General Motors Corp. DirecTV operated one of two direct broadcast satellite ("DBS") services in the United States. EchoStar Communications Corp., which operated the other DBS service, Dish Network, proposed to acquire Hughes. Economists working for the parties and economists in the Department both engaged in extensive modeling of the competition between the two DBS services and with cable television operators with which the DBS services competed in providing "multichannel video programming distribution."

The Department concluded that this modeling supported the conclusion that the acquisition would substantially harm consumers and filed suit to prevent its consummation. Shortly thereafter, the acquisition was abandoned. The Department's modeling indicated that efficiencies claimed by the parties would be insufficient to prevent the merger from creating significant anticompetitive effects.

One source of claimed efficiencies was the reduction of programming costs. Incorporating the Department's best estimate of those reductions into the modeling only slightly reduced the likely price increase from the proposed acquisition. A second source of claimed efficiencies was a quality improvement; by combining the two services, it would be possible to offer local programming in many additional metropolitan areas with the available satellite bandwidth. The Department's analysis indicated that the consumer benefits from this quality improvement were far from sufficient to prevent the merger from harming consumers and also would be realized without the merger.

Enerco–KleenBurn **(Disguised FTC Matter)** Enerco and KleenBurn Refinery, Inc. were gasoline refining and distribution firms that proposed to merge. The transaction involved the markets for bulk supply of conventional gasoline in the "Plains Corridor" and for bulk supply of reformulated gasoline ("RFG") in Metropolis. The parties claimed that the transaction would create substantial efficiencies in refinery and pipeline operations.

Enerco asserted that the KleenBurn refinery could, with relative ease, be integrated into Enerco's nearby refinery, which, in turn, would enable Enerco to generate substantial operational efficiencies by enhancing its ability to (1) coordinate the acquisition of crude oil and lower raw material costs; (2) align more efficiently the production processes of various light petroleum products, including conventional gasoline and RFG; (3) increase available storage to permit Enerco to manufacture and sell more gasoline grades; and (4) better plan and consolidate shipments. Commission staff concluded that at least some portion of the parties' efficiency claims were likely to be cognizable.

Enerco documents showed that it based a large portion of its bid on the value of expected synergies. When the expected synergies were counted, the refinery's value was estimated to increase four-fold over the KleenBurn refinery's stand-alone value. This estimated increase was about the same amount that Enerco offered to pay. Enerco's willingness to pay upfront for these synergies lent credence to its claims.

Enerco contended that the savings from these efficiencies would enable it to continue operating the KleenBurn refinery beyond the date that the refinery otherwise would have been expected to be decommissioned. Enerco further claimed that its previous efforts to meet new low-sulphur gasoline standards would enable KleenBurn to comply with those standards sooner and at lower cost. Thus, Enerco could, with less investment, maintain or exceed Kleenburn's historical production levels. Enerco financial analyses confirmed that it planned to run the KleenBurn refinery at or above current output rates.

Enerco asserted that it would connect the KleenBurn refinery to Enerco's Metropolis-area refineries, and reallocate Kleenburn barrels for sale in neighboring states, while reserving Metropolis-area barrels for shipment west. The Plains Feeder Line Pipeline tariff was substantially higher from the KleenBurn facility than from Enerco's refineries, and Enerco claimed that it would save over $1 million in variable delivery costs.

Enerco planned to ship several million barrels per day of combined refinery output into the Plains Corridor on Plains Feeder Line under this lower tariff. Because most bulk conventional gasoline shipped into the Plains Corridor was purchased FOB refinery gate in Metropolis, the tariff savings would, in most instances, inure directly to customers in the Plains Corridor. These customers had the existing shipping rights on Plains Corridor gasoline during the summer months when the pipeline is frequently prorated.

The Commission ultimately decided not to challenge the merger on the grounds that it posed no substantial threat to competition, irrespective of any efficiency claims.

"Out-of-Market" Efficiencies

In some cases, merger efficiencies are "not strictly in the relevant market, but so inextricably linked with it that a partial divestiture or other remedy could not feasibly eliminate the anticompetitive effect in the relevant market without sacrificing the efficiencies in the other market(s)." Guidelines § 4 at n.36. If out-of-market efficiencies are not inextricably linked to the relevant market, the Agencies often find an acceptable narrowly tailored remedy that preserves the efficiencies while preventing anticompetitive effects.

***Genzyme–Ilex* (FTC 2004)** Genzyme Corp. proposed to acquire Ilex Oncology, Inc. Ilex had one FDA-approved product, Campath, an oncology product used off-label in the solid organ transplant field. Genzyme did not compete with Campath in oncology but had a drug that was Campath's closest competitor in the market for solid organ transplant acute therapy drugs. The acquisition would have eliminated direct competition between Genzyme's market-leading drug, Thymoglobulin, and Campath.

The companies asserted that the transaction would yield significant efficiencies for oncology treatment and development. The primary efficiency encompassed several diagnostic tests that could aid the expansion of Campath for treatments in leukemia and other oncology and immune-related diseases by identifying patients who are most likely to benefit from Campath treatment.

After investigation and analysis of this efficiency, Commission staff concurred that Genzyme likely would improve Campath's quality and breadth of treatment in oncology. The companies did not demonstrate, however, that credible efficiencies would result in the solid transplant organ area. In light of the efficiencies in oncology and immune-related disease areas, the Commission tailored a remedy to alleviate the competitive concern in the market for solid organ transplant drugs while allowing the merged company to realize the potential efficiencies in oncology and other areas. In a consent order, the Commission required Genzyme, among other things, to divest contractual rights to Campath for use in solid organ transplant.

Inextricably linked out-of-market efficiencies, however, can cause the Agencies, in their discretion, not to challenge mergers that would be challenged absent the efficiencies. This circumstance may arise, for example, if a merger presents large procompetitive benefits in a large market and a small anticompetitive problem in another, smaller market.

***Gai's–United States Bakery* (DOJ 1996)** United States Bakery and Gai's Seattle French Bakery Co. proposed a joint venture, which the Department viewed as a merger. The two companies sold bread products in competition with one another in the Pacific Northwest, and the Department was concerned about the competitive effects of the transaction on restaurants and institutional accounts, particularly fast food restaurants, because the two companies accounted for more than 90% of the bread sales to such customers. Supplying such customers required a higher level of service (e.g., much more frequent deliveries) than supplying retail stores, and few bakeries provided that level of service. Without entirely resolving issues relating to competitive effects and entry, the Department decided not to challenge the transaction, concluding that the efficiencies likely would cause the merger to benefit the merged firm's customers as a whole.

Critical to the Department's assessment was the fact that the merger-specific efficiencies would benefit all customers, and the restaurant and institutional customers potentially of concern accounted for only about 20% of the companies' sales. The two groups of customers were buying essentially the same products, produced with the same facilities. Because it was otherwise impossible to preserve the efficiency benefits to all customers, the Department did not challenge the merger.

Fixed-Cost Savings

Merger-specific, cognizable efficiencies are most likely to make a difference in the Agencies' enforcement decisions when the efficiencies can be expected to result in direct, short-term, procompetitive price effects. Economic analysis teaches that price reductions are expected when efficiencies reduce the merged firm's marginal costs, i.e., costs associated with producing one additional unit of each of its products. By contrast, reductions in fixed costs—costs that do not change in the short-run with changes in output rates—typically are not expected to lead to immediate price effects and hence to benefit consumers in the short term. Instead, the immediate benefits of lower fixed costs (e.g., most reductions in overhead, management, or administrative costs) usually accrue to firm profits.

Exceptions to this general rule, however, exist. For example, under certain market or sales circumstances, fixed-cost savings may result in lower prices in the short term. Selling prices that are determined on a "cost-plus basis" (e.g., cost-based contracts) can be influenced by changes in fixed costs. Contractual arrangements also may allow fixed-cost savings to be passed through.

The Agencies consider merger-specific, cognizable reductions in fixed costs, even if they cannot be expected to result in direct, short-term, procompetitive price effects because consumers may benefit from them over the longer term even if not immediately. As with any other type of efficiency, reductions in fixed costs must be substantiated by the parties and verified by reasonable means.

***Verizon–MCI; SBC–AT&T* (DOJ 2005)** In 2005 Verizon Communications, Inc. and SBC Communications, Inc., the nation's two largest regional Bell operating companies, sought to acquire MCI Inc. and AT&T Corp., the nation's two largest inter-exchange (long distance) and competitive local exchange (local service) carriers. To a significant extent, the pairs of firms proposing to merge were engaged in complementary activities. Verizon and SBC dominated local exchange and access service in their respective territories but had limited long-haul networks and only moderate success with large enterprise customers. MCI and AT&T had extensive long-haul networks and were the leading providers of telecommunications services to large businesses. The Department concluded that the proposed mergers would substantially lessen competition only in the facilities-based local private line services to many buildings for which the merging pairs of firms owned the only lines.

The Department investigated the effects of the transactions on competition in residential local and long distance telephone service, internet backbone services, and a variety of other telecommunications services. A significant factor in the Department's decision not to challenge the proposed mergers was that the transactions were likely to produce substantial efficiencies. The merging inter-exchange carriers, AT&T and MCI, sell advanced retail products to enterprise customers and generally have relied on local exchange carriers, such as their merger partners, for customer access. The merging local exchange carriers, SBC and Verizon, similarly have relied on inter-exchange carriers in selling advanced retail products to multi-region and out-of-region enterprises. The merger allowed each of the firms to provide these products at a lower cost to the customers by making inputs and complementary products available at a lower cost.

***IMC Global–Western Ag* (DOJ 1997)** IMC Global Inc. proposed to acquire Western Ag-Minerals Co. The two companies operated the only potash mines and processing facilities in the Carlsbad region of New Mexico, which contains the only known reserves of langbeinite in the Western Hemisphere. Langbeinite is a mineral used to produce an agricultural fertilizer supplying magnesium, potassium, and sulfur, which are important in the production of certain crops and in correcting deficiencies in certain soils. Critically, langbeinite supplies these important elements without also containing significant amounts of chlorine.

It is possible to produce a fertilizer with the same qualities from other minerals, but the Department's preliminary analysis indicated that a single owner of both langbeinite mines would find it optimal to raise prices significantly in the absence of any efficiencies from combining the mines. The Department, nevertheless, decided not to challenge the merger because of substantial merger-specific efficiencies. The parties provided the Department with studies indicating that combining the two mining and processing operations would result in substantial efficiencies that could be achieved in no other way.

To verify these claims, the Department hired a consulting mining engineer to conduct an independent study of both the benefits of combining the two operations and alternative means of achieving particular efficiencies. The independent study concluded that the parties' efficiency claims were conservative. Among other things, the study concluded that IMC would avoid substantial costs by transporting the Western-Ag ore through its mine to its processing plant at the mine mouth. Western-Ag had been shipping the ore to its off-site processing plant. The study found additional efficiencies in combining the mining and processing of the other important mineral, sylvite, found on the adjoining IMC and Western-Ag properties.

The evidence ultimately indicated that the annual dollar savings from the merger would be as much as ten times the likely annual increase in customer costs from the merger, absent any efficiencies. Because the magnitude of the merger-specific cost savings dwarfed any potential effects exclusive of factoring in these savings, the Department did not separately evaluate the extent to which the efficiencies were likely to affect fixed costs versus variable costs.

Supporting Documentation

As with the Guidelines, the Commentary addresses how the Agencies assess the likely competitive effects of horizontal mergers but not the assignment of burdens of proof or burdens of coming forward with evidence. In litigation, the parties have the burden on any efficiencies claim (Guidelines § 0.1 n.5), and it is to their advantage to present efficiency claims (including supporting documents and data) to the reviewing Agency as early as possible. The Agencies, for their part, make a serious effort to assess each efficiency claim made. Early receipt of documentation relating to the nature and size of efficiencies allows the Agencies to factor fully the cognizable efficiencies into an integrated analysis of the likely overall competitive effects of the merger. In particular, the parties may want to highlight significant documents that support their claims and to make their experts (for example, accountants, engineers, or economists) available as early as feasible to discuss specifics regarding efficiencies. Doing so helps underscore the seriousness of efficiency claims and assists the Agencies in according the appropriate weight to efficiency considerations in assessing the mergers before them.

The Agencies recognize that, in many cases, substantiation of efficiency claims requires the collection, compilation, and analysis of competitively significant data and information from both of the merging parties. The sharing between rivals of proprietary information having potential competitive significance necessarily raises concerns about violations of section 1 of the Sherman Act, 15 U.S.C. § 1, and section 5 of the Federal Trade Commission Act, 15 U.S.C. § 45. Furthermore, the Hart-Scott-Rodino Act, 15 U.S.C. § 18a, prohibits changes in beneficial ownership prior to the end of the HSR waiting period.

Although prudent firms are cognizant of so-called "gun jumping" concerns, they can adopt appropriate safeguards to enable them to collect the information necessary to substantiate their efficiency claims. Information exchanges reasonably related to due diligence and integration planning that are accompanied by safeguards that prevent any other pre-merger use of that information are unlikely to be unlawful. The Agencies are mindful of the parties' need to provide sensitive efficiencies-related information and, in that vein, the Agencies note that the antitrust laws are flexible enough to allow the parties to adopt reasonable means to achieve that end lawfully.

Referenced Agency Materials

Horizontal Merger Guidelines (jointly issued April 2, 1992 and revised April 8, 1997), available at http://www.usdoj.gov/atr/public/guidelines/hmg.pdf and http://www.ftc.gov/bc/docs/horizmer.htm

Horizontal Merger Investigation Data, Fiscal Years 1996–2003 (issued by the Commission February 2, 2004 and revised August 31, 2004), available at http://www.ftc.gov/opa/2004/08/fyi0450.htm

Merger Challenges Data, Fiscal Years 1999–2003 (jointly issued December 18, 2003), available at http://www.ftc.gov/os/2003/12/mdp.pdf and http://www.usdoj.gov/atr/public/201898.pdf

Merger Enforcement Workshop proceedings, including transcripts, presentations, submitted papers, and public comments are all available at http://www.ftc.gov/bc/mergerenforce/index.html and http://www.usdoj.gov/atr/public/workshops/mewagenda2.htm

Merger Review Process Initiative (issued by the Department October 12, 2001 and revised August 4, 2004), available at http://www.usdoj.gov/atr/public/9300.pdf

Reforms to the Merger Review Process at the Commission (issued February 16, 2006), available at http://www.ftc.gov/os/2006/02/mergerreviewprocess.pdf

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United States v. Dairy Farmers of America, (E.D. Pa., filed Mar. 31, 2000), 65 Fed. Reg. 44,820 (July 19, 2000), 2001-1 Trade Cas. (CCH) ¶ 73,136, materials available at http://www.usdoj.gov/atr/cases/indx4450.htm	Market Definition
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