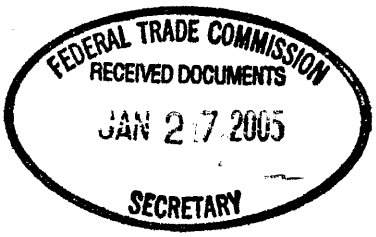

UNITED STATES OF AMERICA
BEFORE THE FEDERAL TRADE COMMISSION
OFFICE OF ADMINISTRATIVE LAW JUDGES

In the matter of	)	
Evanston Northwestern Healthcare Corporation, a corporation, and	)	Docket No. 9315
	)	**Public Record**
ENH Medical Group, Inc., a corporation.	)	

PRETRIAL BRIEF OF RESPONDENT EVANSTON NORTHWESTERN HEALTHCARE CORPORATION

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INTRODUCTION

After suffering a string of losses in federal court challenges to proposed hospital mergers, Federal Trade Commission staff ("FTC Staff") embarked on a series of investigations to identify a consummated hospital merger that it could try to dismantle in an administrative proceeding. FTC Staff purposely focused on consummated mergers so that it could test a new "direct effects" theory of liability under Section 7 of the Clayton Act ("Section 7"), 15 U.S.C. § 18 – an unprecedented theory that, if adopted, would dispense with decades of precedent requiring proof of a relevant market. Rather than identifying a merger that has harmed consumer welfare by creating market power and restricting output, however, FTC Staff singled out perhaps the most successful example of an academic hospital merging with, and improving the quality of, a weakened community hospital. In short, FTC Staff missed its mark when it focused on the transaction at issue in this case.

This action concerns a post-consummation challenge under Section 7 of the Clayton Act ("Section 7") to the January 2000 asset merger (the "Merger") of Evanston Northwestern Healthcare Corporation ("ENH") and Lakeland Health Services, Inc., the parent company of Highland Park Hospital ("Highland Park" or "HPH"). The merged entity is an integrated health care delivery system affiliated with Northwestern University Medical School that includes, among other entities, a faculty group practice with over 475 full-time employed physicians, a research institute and three hospital campuses: Evanston Hospital ("Evanston"), Glenbrook Hospital ("Glenbrook") and HPH. In the more than five years since the Merger, ENH has combined the merging institutions' medical staffs, substantially improved clinical quality at HPH, increased access to new health care programs for residents of Chicago and its northern suburbs, and invested more than $100 million into new technology, equipment and the physical facilities at the HPH campus.

FTC Staff evidently selected this case to test out its novel Section 7 theory because it believed that post-Merger price increases at ENH constituted direct evidence that the Merger allowed ENH to obtain market power ("direct effects"), thus purportedly establishing a Section 7 violation without any need to properly define the relevant product or geographic market within which the market power is supposedly exercised. But FTC Staff rushed to judgment in this case, as reflected in the complaint itself – which characterizes negotiated price increases in the amounts "measured by" large insurance companies, rather than by any analysis conducted by FTC Staff itself. Discovery has confirmed that FTC Staff, in its rush to find a target for its enforcement agenda, recommended suit before it fully understood the facts of the case. In particular, the evidence will show, among other things, alternative explanations for the price increases at issue, as well as pro-competitive quality of care improvements resulting from the Merger that are not taken into account in Complaint Counsel's Section 7 analysis. This and other evidence is fatal to Complaint Counsel's theory of liability as a matter of law, which provides that price increases alone are not direct evidence of market power and do not establish a substantial lessening of competition under Section 7.

The upshot is that Complaint Counsel's novel legal and economic theories drift – absent the moorings of traditional product and geographic market analyses – in an ever-changing search for a theory of competitive harm that would fit the evidence in this case. Complaint Counsel may be credited for its creative allegations, but such allegations provide no legal nor policy basis to dissolve the transaction.

SUMMARY OF ARGUMENT

Throughout this litigation, Complaint Counsel has been continuously searching for viable legal and factual theories to obtain the drastic divestiture relief it requests. Because the evidence did not turn out as Complaint Counsel expected, however, the resulting allegations

are a mixed bag of alternative and conflicting theories that fall far short of demonstrating the elements of a Section 7 violation, namely: (1) proof of the relevant product market, (2) proof of the relevant geographic market, and (3) proof that the transaction will substantially lessen competition in these relevant markets. Nor has Complaint Counsel explained how its requested divestiture would protect the public interest.

I. Complaint Counsel Cannot Satisfy Its Burden Of Proving The Relevant Market

A. Complaint Counsel Offers No Proof Of A Relevant Market In Count II, Which Alleges An Unprecedented "Direct Effects" Theory

As confirmed by Complaint Counsel's interrogatory answers, it attempts to prove a Section 7 violation in Count II without defining *any* relevant market. According to Count II, the purported "direct effects" of the Merger are themselves sufficient to satisfy a Section 7 violation. By focusing on ENH's post-Merger price increases in a vacuum, however, Count II flies in the face of nearly 50 years of Supreme Court precedent holding that a relevant market must be proven in a post-consummation Section 7 case. As demonstrated below, Count II should be rejected as a matter of law.

B. Complaint Counsel And Its Expert Cannot Agree On The Relevant Product Market Alleged In Count I

Complaint Counsel purports to define a relevant market in Count I as an alternative theory of liability, thus tacitly recognizing that its failure to allege a relevant market in Count II is unprecedented in the Section 7 context. But Count I fares no better.

In fact, the product market alleged in Count I is not even favored by Complaint Counsel's own expert. This alleged market, which consists of general acute care inpatient primary and secondary hospital services, has no logical nexus to the bundle of hospital services contracted by the "consumers" alleged in the complaint – *i.e.*, commercial payors and managed care plans and self-insurance plans (collectively "private payors"). In particular, Complaint

Counsel inexplicably excludes tertiary care and outpatient services from its alleged product market even though the "product" sold by ENH to private payors in negotiated contracts routinely includes all services offered by the ENH hospitals, including both tertiary and outpatient services. Even Complaint Counsel's own expert agreed in her deposition that the relevant product market in this case should include tertiary services, but she too provides no rational basis to exclude outpatient services from the alleged product market.

C. The Geographic Market Alleged In Count I Is Gerrymandered To Suit Complaint Counsel's Theory

Complaint Counsel's inability to choose a particular theory extends to the geographic market analysis. To date, Complaint Counsel has made at least two efforts to gerrymander a geographic market to further its ultimate goal of divestiture, but each attempt is unavailing. According to Complaint Counsel's interrogatory answers, its primary alleged geographic market purportedly includes only the three ENH campuses – one of the most narrowly defined geographic markets in the history of hospital merger litigation. This is precisely why Complaint Counsel offers an alternative geographic market in its interrogatory answers that includes five additional hospitals. In the end, however, Complaint Counsel has provided no legal or economic basis to exclude multiple ENH competitor hospitals from the relevant geographic market that are closer to Evanston than HPH, or closer to HPH than Evanston.

II. Complaint Counsel Cannot Satisfy Its Burden Of Proving Competitive Harm In The Relevant Market

This Court never has to reach the third element of a Section 7 violation, proof of sufficient competitive harm, because Complaint Counsel cannot satisfy its relevant market burdens. Regardless, Complaint Counsel also cannot meet its burden of proving under either Count I or Count II that the Merger will substantially lessen competition. The evidence will

show that Complaint Counsel's theory of competitive harm suffers from four independent deficiencies – each stemming from Complaint Counsel's distortion of the circumstances underlying the price increases at issue:

First, Complaint Counsel attempts to use the price increases as proof that the Merger caused competitive harm through "unilateral effects," but Complaint Counsel cannot possibly satisfy its burden of proving such a claim. The evidence at trial will show that ENH and HPH were not sufficiently close competitors before the Merger to support a unilateral effects theory under Section 7.

Second, Complaint Counsel cannot meet its burden of demonstrating that ENH's post-Merger negotiated price increases were necessarily caused by an increase in market power resulting from the Merger. The evidence will show alternative, and more plausible, explanations for the price increases. Perhaps the most obvious alternative explanation for the price increases at issue is that ENH learned more about private payors' demand for its services. Just before the Merger, ENH learned about HPH's surprisingly more favorable contract rates with private payors. At or about this same time, ENH also retained a consulting firm in order to learn more effective negotiation strategies and to help ENH obtain a one-time corrective adjustment in its own negotiated prices. ENH's post-Merger negotiations resulted in new negotiated prices that reached levels more commensurate with those of ENH's true competitors – *i.e.*, tertiary/academic hospitals. This alternative explanation is entirely consistent with documents that Complaint Counsel asserts link the price increases at issue to the Merger. Significantly, neither this explanation nor a host of other alternative explanations for the price increases at issue have anything whatsoever to do with an increase in market power caused by the Merger.

Third, Complaint Counsel overlooks significant pro-competitive quality of care improvements resulting from the Merger in its competitive harm analysis. The complaint alleges that there were no post-Merger quality improvements. Yet Complaint Counsel's own expert concedes that this allegation is factually unsupportable. ENH's quality of care expert, who conducted a multi-faceted approach to assess quality of care improvements resulting from the Merger, will confirm that there were at least a dozen significant areas where HPH's quality of care improved because of the Merger. Complaint Counsel cannot establish a Section 7 violation because its competitive harm analysis fails to take into account the pro-competitive quality implications of the Merger.

Finally, Complaint Counsel cannot meet its burden of showing that HPH would have been a significant market participant but for the Merger. The evidence will show that, before the Merger, HPH was facing severe financial difficulties. Its presence in the market absent a merger was marginal, at best, and its long-term viability dubious. The Merger thus could not have substantially lessened competition in violation of Section 7, as alleged.

III. Complaint Counsel's Proposed Remedy Would Harm, Not Benefit, The Public

Because its proposed remedy is not warranted, Complaint Counsel's endless search for a viable theory of liability ultimately leads to a dead end. The evidence will show that unwinding the Merger would adversely affect patients, physicians and the community as a whole because, if divestiture were ordered, significant quality of care advances at HPH resulting from the Merger would be lost. Moreover, divestiture in this case would not result in any material increase in competition sufficient to outweigh the adverse clinical implications of such a drastic

remedy. There is thus no public policy served by unscrambling ENH's integrated health care delivery system that is serving the health care needs of a satisfied community.[1]

ANALYSIS

The evidence will show that Complaint Counsel *cannot* meet its burden of showing that the Merger – which occurred more than five years ago and resulted in enumerable community benefits – violates Section 7 and should be undone.

I. THE GOVERNING LEGAL STANDARDS UNDER SECTION 7 PLACE A HEAVY BURDEN ON COMPLAINT COUNSEL

Complaint Counsel carries the burden of proving its Section 7 claims (Counts I and II) by a preponderance of the evidence. "Analysis of the likely competitive effects of a merger requires determinations of (1) the 'line of commerce' or product market in which to assess the transaction, (2) the 'section of the country' or geographic market in which to assess the transaction, and (3) the transaction's probable effect on competition in the product and geographic markets." *FTC v. Staples*, 970 F. Supp. 1066, 1072-73 (D.D.C. 1997); *see also New York v. Kraft Gen. Foods, Inc.*, 926 F. Supp. 321, 358-59 (S.D.N.Y. 1995); *see generally* United States Department of Justice & FTC Horizontal Merger Guidelines ("*Merger Guidelines*").

These elements are identical when, as here, the claim relates to a merger or acquisition that has already been consummated. As the Commission stated earlier this month when analyzing the legality of a consummated merger: "We are guided in our assessment of this merger by the case law and the *Merger Guidelines*, both of which set out the general framework

[1] ENH is submitting contemporaneously with this pretrial brief a copy of the Expert Report of Monica G. Noether, Ph.D. ENH is not proffering this expert report into evidence at this time but, instead, is merely providing it to the Court as a reference for its convenience. Pages 6-26 of this report provide background on the health care industry. Pages 26-33 discuss the Chicago health care market. Pages 34-37 briefly discuss the reasons for the Merger. *See* Expert Report of Monica G. Noether, Ph.D (Ex. 1). ENH has notified Complaint Counsel that Dr. Noether's expert report is being provided to the Court under these circumstances. ENH has not attached deposition testimony or potential trial exhibits referenced in this brief. Such materials, however, can be provided to the Court before trial at its request.

for our analysis and provide instruction for the issues raised on appeal." *In the Matter of Chicago Bridge & Iron Co.*, Dkt. No. 9300, at 7 (Op. of Comm'n) (Jan. 6, 2005) ("CB&I") (Ex. 2). If anything, Complaint Counsel's ultimate burden is even higher with respect to a consummated merger, as acknowledged by the most recent former Chairman of the FTC: "I personally think that the FTC has to face a very high hurdle to bring a consummated merger case. If the merged entity has been operating for a while, it's not enough to assert that the transaction was anti-competitive – you have to prove it." Interview with Timothy Muris, *Global Competition Review* (December 21, 2004) (Ex. 3).

At all times, Complaint Counsel retains the ultimate burden of persuasion in this case. *United States v. Baker Hughes, Inc.*, 908 F.2d 981, 982 (D.C. Cir. 1990); *FTC v. Arch Coal, Inc.*, 329 F. Supp. 2d 109, 2004-2 Trade Cas. (CCH) P74,513 at *11 (D.D.C. 2004) ("Accordingly, plaintiffs have the burden on every element of their Section 7 challenge, and a failure of proof in any respect will mean the transaction should not be enjoined."). Additionally, to prevail on a Section 7 claim, Complaint Counsel must show more than some impact on competition – it has "the burden of showing that the acquisition is reasonably likely to have 'demonstrable and substantial anticompetitive effects.'" *Kraft*, 926 F. Supp. at 358 (quoting *United States v. Atl. Richfield Co.*, 297 F. Supp. 1061, 1066 (S.D.N.Y. 1969), *aff'd*, 401 U.S. 986 (1971)). For the reasons discussed below, the evidence that will be presented at trial will demonstrate that Complaint Counsel cannot succeed in proving that the Merger constitutes a Section 7 violation.

II. COMPLAINT COUNSEL CANNOT MEET ITS BURDEN OF PROVING THE REQUISITE RELEVANT MARKET

A. Complaint Counsel Is Required To Prove The Existence Of A Relevant Market Within Which The Alleged Anti-Competitive Effects Will Occur

Market definition is an exercise designed to identify the alternatives available to consumers and whether those alternatives are sufficient to prevent the merging parties from exercising market power. Without the context of a properly defined market, it would be impossible to evaluate the competitive effects of a given transaction and assess the validity of alternative explanations – some pro-competitive and some anti-competitive – for the purported effects.

Notwithstanding these basic tenets of Section 7 jurisprudence, Complaint Counsel takes the unprecedented position "that it is unnecessary to define a product or geographic market for the purposes of a claim under section 7 of the Clayton Act." Compl. Counsel Interrog. Answers at 33 (Ex. 4). This position should be summarily rejected as a matter of law.

1. Section 7 Requires Complaint Counsel To Define And Prove The Relevant Market

The language of Section 7 is crystal clear – it prohibits only those mergers that substantially lessen competition *in a relevant market*:

> [N]o person subject to the jurisdiction of the Federal Trade Commission shall acquire the whole or any part of the assets of another person engaged in commerce or in any activity affecting commerce, *where in any line of commerce or in any activity affecting commerce in any section of the country*, the effect of such acquisition may be substantially to lessen competition, or to tend to create a monopoly.

15 U.S.C. § 18 (emphasis added). According to the legislative history, Congress intentionally viewed a properly defined relevant market as a *necessary* element of a Section 7 Claim. *See, e.g.,* S. Rep. 81-1775 at 6 (1950) ("In determining the area of effective competition for a given

product, it will be necessary to decide what comprises an appreciable segment of the market.") (emphasis added); 51 Cong. Rec. 15830 (1914) ("Notice that the lessening of competition or the tendency to create monopoly in one section or city is not enough. *The line of commerce, taken as a whole, must be substantially involved.*") (statement of Senator Reed) (emphasis added).

The Supreme Court, in a post-consummation case, explained that a relevant market determination is necessary to provide a framework within which to analyze the alleged anti-competitive effects of the merger:

> Determination of the relevant market is a necessary predicate to a finding of a violation of the Clayton Act because the threatened monopoly must be one which will substantially lessen competition 'within the area of effective competition.' *Substantiality can be determined only in terms of the market affected.*

United States v. E.I. du Pont de Nemours & Co., 353 U.S. 586, 593 (1957) (emphasis added). Throughout the years, the Supreme Court has remained steadfast in holding that the definition of the relevant market is a necessary element of a Section 7 claim.[2] This explains why the FTC's own *Merger Guidelines* require the delineation of the relevant product and geographic market before determining whether a particular merger raises competitive concerns:

> A merger is unlikely to create or enhance market power or to facilitate its exercise unless it significantly increases concentration and results *in a concentrated market, properly defined and measured*. . . . Accordingly, for each product or service (hereafter "product") of each merging firm, *the Agency seeks to define a market in which firms could effectively exercise market power if they were able to coordinate their actions.*

Merger Guidelines § 1.0 (emphases added).

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[2] *See Brown Shoe Co. v. United States*, 370 U.S. 294, 334-39 (1962) (holding that "the proper definition of the market is a 'necessary predicate' to an examination of the competition that may be affected by the horizontal aspects of the merger," and construing relevant product and geographic markets "within which the effects of th[e] merger are to be measured"); *United States v. Philadelphia Nat'l Bank*, 374 U.S. 321, 362 (1963); *United States v. Marine Bancorporation*, 418 U.S. 602, 618 (1974); *United States v. Conn. Nat'l Bank*, 418 U.S. 656, 669-73 (1974).

In Count II, Complaint Counsel alleges neither a relevant product market nor a relevant geographic market. Instead, it asks this Court to adopt a theory of Section 7 liability that has never previously been accepted by any court.[3] Such a theory is inconsistent with the plain language of the statute and, if adopted by the Court, would effectively overrule a half-century of merger jurisprudence. There is absolutely nothing novel about this case to justify such a radical overthrow of Section 7 law. To the contrary, case law confirms that a relevant market must be defined in cases involving unilateral effects,[4] consummated mergers[5] and hospital mergers,[6] the three salient features of this case.

This Court's Order denying Respondent's Motion to Dismiss Count II is entirely consistent with the language of Section 7, the Supreme Court case law discussed above, and the *Merger Guidelines* – all of which require Complaint Counsel to carry its burden of defining the relevant market. Although this Court ultimately denied Respondent's motion to dismiss, it did so because Complaint Counsel arguably alleged a relevant market in Count II, not because Complaint Counsel could escape that burden based on its allegations of post-Merger price increases. Accordingly, this Court ruled that "the facts alleged in the Complaint, if taken as true,

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[3] *See* Compl. ¶ 28 (the paragraphs alleging the relevant product and geographic markets in Count I, paragraphs 16-18, are not incorporated by reference into Count II). Rather than alleging the conditions that courts have repeatedly utilized to establish a prima facie merger case, Complaint Counsel purports to invent a new cause of action based solely on direct evidence of market power or actual anti-competitive effects – *i.e.*, vague notions that ENH raised prices after the Merger by an amount that "[p]rivate payers regarded . . . as unwarranted." Compl. ¶ 30.

[4] *See, e.g., United States v. Oracle Corp.*, 331 F. Supp. 2d 1098, 1110, 1123 (N.D. Cal. 2004).

[5] *E.I. du Pont de Nemours & Co.*, 353 U.S. 586; *In the Matter of R.R. Donnelley & Sons Co.*, 120 F.T.C. 36, 53-54 (1995); *Seeburg Corp. v. FTC*, 425 F.2d 124, 128-129 (6th Cir. 1970); *see also United States v. Gen. Dynamics Corp.*, 415 U.S. 486, 510 (1974). Indeed, earlier this month the Commission analyzed a Section 7 challenge to a consummated merger using traditional principles of merger analysis and explicitly declined the opportunity to base Section 7 liability on "actual anti-competitive conduct" that took place after consummation of the merger, stating that "Complaint Counsel argue that CB&I has engaged in several instances of actual anticompetitive conduct since the acquisition and that these instances provide the Commission another reason for finding liability under the antitrust laws. In light of our holdings above, we decline to address these arguments." *CB&I*, at 91 (Ex. 2).

[6] *See, e.g., FTC v. Freeman Hosp.*, 69 F.3d 260, 268 (8th Cir. 1995) ("Without a well-defined relevant market, an examination of a transaction's competitive effects is without context or meaning."); *FTC v. Cardinal Health, Inc.*, 12 F. Supp. 2d 34, 45 (D.D.C. 1998) ("For this Court to consider the likely competitive effects of the transactions, it must first define the relevant product and geographic boundaries of the markets in question.").

and the reasonable inferences therefrom when drawn in favor of Complaint Counsel, the non-moving party, sufficiently allege the relevant product and geographic markets." Order Denying Resp.'s Mot. to Dismiss Count II of Compl. at 5 (June 2, 2004). As indicated above, however, Complaint Counsel has since clarified its position

[REDACTED]

Compl. Counsel Interrog. Answers at 33 (Ex. 4).

Complaint Counsel's truly unique interpretation of Section 7, which has not been adopted in this or any other case, fails as a matter of law. Indeed, the only case Complaint Counsel has attempted to cite as support for its novel theory is *FTC v. Libbey, Inc.*, 211 F. Supp. 2d 34 (D.D.C. 2002). *See* FTC Opp'n to Resp.'s Mot. to Dismiss Count II at 8-9 (Apr. 2, 2004). In reality, *Libbey* simply underscores the futility of Complaint Counsel's effort to re-engineer Section 7 jurisprudence. First, the court in *Libbey* did, in fact, undertake an analysis of the relevant market and engage in a market share analysis. *Libbey*, 211 F, Supp. 2d at 45 ("first step in evaluating whether a merger violates § 7 of the Clayton Act is to define the relevant product market"), 50-52 (noting *Libbey's* market share of 72%, a post-merger HHI of 5251, and questioning the viability of a potential entrant). Thus, the evidence of direct effects did not eliminate the need for market definition and market share analysis, but rather served as merely one piece of evidence that demonstrated the potential competitive effect of the transaction within the defined market. *Id.* at 50.

Second, unlike the present case, which will adjudicate the ultimate question of whether the Merger of ENH and HPH violated Section 7, the sole issue facing the court in *Libbey* was whether it should grant a preliminary injunction to allow the FTC to hold an administrative hearing on the merits of the case. Thus, even if the *Libbey* court did rely only on

evidence of direct effects, which it did not, a determination of whether the merger actually violated Section 7 was to be reserved for another day. As such, Complaint Counsel in *Libbey* faced a far lower standard than that required to establish an actual antitrust violation, which is the issue facing this Court here. *Id.*

2. Even When Market Power Can Be Proven "Directly," A Relevant Market Must Still Be Defined

Unable to find judicial support for its novel Section 7 theory, Complaint Counsel may attempt to rely on cases in other areas of antitrust law, such as Sections 1 and 2 of the Sherman Act. *See, e.g.,* Complaint Counsel's Opp'n to Resp.'s Mot. to Dismiss Count II at 6-9 (April 2, 2004). These cases have no applicability to the present case, however, for two reasons. First, their statutory schemes are different. Simply put, the explicit language of Section 7 requires proof of a relevant product and geographic market, while the provisions of Sections 1 and 2 have no such requirement. Second, even where courts have allowed a Section 1 or Section 2 plaintiff to prove market power or anti-competitive effects directly, the courts have still required the plaintiffs to define a relevant market. *See, e.g., Republic Tobacco Co. v. N. Atl. Trading Co., Inc.*, 381 F.3d 717, 737 (7th Cir. 2004) (direct proof of allegedly anti-competitive effects "is virtually meaningless if it is entirely unmoored from at least a rough definition of a product and geographic market.").[7]

[7] Indeed, a review of the types of evidence used to prove direct effects reveals the need for a relevant market definition even when such evidence is available. The type of direct effects evidence that may be used to prove market power in Section 1 and Section 2 cases include a firm's inelastic demand, restricted output, sustained supra-competitive prices, exclusion of competitors and the ability to discriminate between customers in the prices charged for goods. IIA Areeda & Hovenkamp, ANTITRUST LAW ¶ 519; 1426 PLI/Corp 129 Practicing Law Institute MONOPOLIES AND JOINT VENTURES; *Rebel Oil Co., Inc. v. Atl. Richfield Co.*, 51 F.3d 1421, 1434 (9th Cir. 1995); *W. Duplicating, Inc. v. Riso Kagaku Corp.*, 2000 WL 1780288, at *4 (E.D. Cal. 2000) (Ex. 5). By their nature, these types of direct effects evidence inherently require the context of a relevant market to be of any value in assessing the challenged conduct's purported effect on competition, including a definition of the relevant products, delineation of the area in which the firms compete and identification of actual and potential competitors.

B. Complaint Counsel Cannot Meet Its Burden Of Proving The Alleged Relevant Market

The relevant market has two components – the product market and the geographic market – and their boundaries "must be drawn with sufficient breadth to include the competing products of each of the merging companies and to recognize competition where, in fact, competition exists." *Brown Shoe*, 370 U.S. at 326. As indicated above, Complaint Counsel does not allege a relevant market in Count II and, therefore, that claim fails as a matter of law. Complaint Counsel, however, does allege a relevant market in Count I. The evidence will show that all of Complaint Counsel's various relevant market definitions concerning Count I are overly restrictive.

1. The Evidence Will Show That Complaint Counsel Cannot Meet Its Burden Of Proving The Alleged Product Market

A relevant product market consists of "products that have reasonable interchangeability for the purposes for which they are produced – price, use and qualities considered." *E.I. du Pont de Nemours & Co.*, 351 U.S. at 404. Products will be considered to be reasonably interchangeable if consumers treat them as "acceptable substitutes." *FTC v. Cardinal Health, Inc.*, 12 F. Supp. 2d 34, 46 (D.D.C. 1998) ("[T]he relevant market consists of all of the products that the Defendants' customers view as substitutes to those supplied by the Defendants."). In determining a relevant market, the actual market realities, such as customer preference or industry recognition of a product, are of key significance. *Eastman Kodak Co. v. Image Tech. Serv., Inc.*, 504 U.S. 451, 466 (1992); *Brown Shoe Co.*, 370 U.S. at 325.

It is appropriate to define a relevant product market by a collection of products where they are sold or distributed to consumers as a group, where there is consumer demand for a particular bundle of products, or where other circumstances, such as economies of scope, make collective distribution more efficient, even when the products in the collection are not

substitutable in and of themselves. Areeda & Hovenkamp, ANTITRUST LAW ¶ 565. For example, in *FTC v. Staples*, the court held that the product market consisted of consumable office supplies purchased from an office superstore. 970 F. Supp. 1066, 1074 (D.D.C. 1997). While the individual pens, paper and disks that made up the basket of "consumable office supplies" were not substitutes for each other, customer purchasing patterns confirmed a particular consumer demand for this set of goods as sold by office superstores. *Id.* at 1078; *see also JBL Enters., Inc. v. Jhirmack Enters., Inc.*, 698 F.2d 1011, 1016 (9th Cir. 1983) (product market consisted of lines of beauty supplies to beauty salons and professional outlets); *Bon-Ton Stores, Inc. v. May Dept. Stores Co.*, 881 F. Supp. 860 (W.D.N.Y. 1994) (although department stores compete in a broad sense with other retailers, they constitute their own product market because they offer a collection of products to a different group of customers).

The "customers" or "consumers" at issue in the complaint are the private payors, as opposed to the hospital patients themselves. *See, e.g.,* Compl. ¶¶ 16, 29. Accordingly, both parties here agree that the primary product market focus should be on the services that private payors purchase from hospitals in order to make these services available to their enrollees. As explained by Complaint Counsel:

> [Past hospital merger decisions] are irrelevant to the proper analysis of the competitive effects of the hospital merger at issue here.
>
> Today . . . the private health care delivery system has witnessed the introduction of managed care. . . . *Therefore, . . . it will be necessary for the Court to examine the competitive effects of a hospital merger on the commercial transaction between the managed care plan, as the buyer, and a hospital, rather the transaction between the individual patient (and his or her doctor) and the hospital.*

Complaint Counsel's Opp'n to Resp.'s Mot. to Dismiss Count II of the Compl., at 12 n.12 (emphasis added).

This recognition of private payors as the appropriate consumers in the relevant product market compels inclusion of all inpatient and outpatient hospital-based services, including primary, secondary and tertiary services.[8] It is undisputed that private payors contract with hospitals for the entire bundle of inpatient (including primary, secondary and tertiary) and outpatient services that hospitals provide in the Chicago area. The evidence will also demonstrate that the private payors negotiate and purchase all of these hospital services in the same transaction, which they then combine and market as part of a network or health plan. Similarly, the evidence will further demonstrate that private payors often give concessions in inpatient services for gains in outpatient services, and *vice versa*.

The product market that Complaint Counsel proposes here has been a moving target. The complaint alleges a relevant product market that inexplicably excludes outpatient services, as well as hospitals' sophisticated (or "tertiary") services – such as open heart surgery. Compl. ¶ 16 (emphasis added).

[REDACTED]

The evidence at trial will demonstrate, though, that there is no rational basis to exclude outpatient services from the relevant product market and that Complaint Counsel's purported market definition denies market realities and results in a distorted picture of the actual "product" sold by ENH to the "customers" at issue, *i.e.*, the private payors. A properly defined product market definition must include all

[8] The parties agree that the product involved in this case is a "differentiated product" – *i.e.* "products sold by different participants in the market are not perfect substitutes for one another." *Merger Guidelines* § 2.21. Hospitals may sell similar services, yet the services offered by different hospitals are "differentiated" by quality, geography, as well as many other factors.

acute hospital-based health care services contracted for by private payors – including outpatient and tertiary services.

2. The Evidence Will Show That Complaint Counsel Cannot Meet Its Burden Of Proving The Alleged Geographic Market

The Supreme Court describes the relevant geographic market as "the 'area of effective competition . . . in which the seller operates, and to which the purchaser can practicably turn for supplies.'" *United States v. Philadelphia Nat'l Bank*, 374 U.S. 321, 359 (1963) (quoting *Tampa Elec. Co. v. Nashville Coal Co.*, 365 U.S. 320, 327 (1961)). It is the area "in which the antitrust defendants face competition." *FTC v. Freeman Hosp.*, 69 F.3d 260, 268 (8th Cir. 1995).

While courts do not compel "scientific precision" in defining the geographic market, they do insist that any such market be "well-defined." *See Freeman Hosp.*, 69 F.3d at 268; *Sutter Health Sys.*, 130 F. Supp. 2d at 1120. Consequently, "[t]he geographic market selected must, therefore, both 'correspond to the commercial realities' of the industry and be economically significant." *Brown Shoe*, 370 U.S. at 336-37. Moreover, the focus of the geographic market analysis must be dynamic – *i.e.*, the geographic market must include all *potential* sources of supply to which customers could practicably turn in the event of a price increase, not simply the actual sources to which customers are presently turning.[9]

A geographic market is generally defined not just by distance, but also by travel times – which are affected by roads, traffic patterns and natural impediments such as rivers or

[9] *See Freeman Hosp.*, 69 F.3d at 271 ("[T]he FTC's expert testimony addressed only the question of where patients currently go, rather than where they could practicably go, for acute care inpatient services."); *United States v. Long Island Jewish Med. Ctr.*, 983 F. Supp. 121, 138-39 (E.D.N.Y. 1997) ("The critical question is where can consumers of the product involved practically turn for alternative sources of the product should the merger be consummated and the merged hospitals' prices increase."); *California v. Sutter Health Sys.*, 130 F. Supp. 2d 1109, 1124 (N.D. Cal. 2001) ("[T]he chief task in determining a geographic market is to identify the suppliers to whom consumers could practically turn if faced with anticompetitive pricing.").

mountains. *See, e.g., Sutter Health Sys.*, 130 F. Supp. 2d at 1126 (travel time is relevant to a dynamic analysis of the geographic market). Thus, the geographic market in hospital merger cases has typically been entire counties, or even multiple counties, even in urban and suburban areas.[10]

Complaint Counsel fails to articulate a "well-defined" geographic market and instead ignores all "market realities" in its constant search for a theory to fit the facts. The geographic market proposed by Complaint Counsel has undergone several transformations from the complaint to the deposition of Complaint Counsel's primary economic expert, along the way proposing alternative gerrymandered geographic markets. Complaint Counsel first proposed the following geographic market in the complaint: "[T]he densely populated corridor that runs for about 15 miles north-south along the shore of Lake Michigan, and extends roughly ten miles west of the Lake." Compl. ¶ 17. When asked to clarify this incomprehensible allegation, Complaint Counsel speculated that, hypothetically, the geographic market could be

[REDACTED]

Compl. Counsel Interrog. Answers at 20 (Ex. 4). Nevertheless, Complaint Counsel also asserted that the alleged geographic market encompasses only the three hospitals involved in the merger, and no others:

[REDACTED]

[10] *See, e.g., United States v. Long Island Jewish Med. Ctr.*, 983 F. Supp. at 141-42 (Queens and Nassau Counties); *United States v. Rockford Mem. Corp.*, 898 F.2d 1278 (7th Cir. 1990) (Winnebago County and pieces of several other counties); *Sutter Health Sys.*, 130 F. Supp. 2d at 1123 (geographic market at least as large as Inner East Bay and extends east into Contra Costa County to include several other zip codes); *FTC v. Butterworth Health Corp.*, 946 F. Supp. 1285, 1293 (W.D. Mich. 1996) ("geographic market for general acute care inpatient hospital services is the greater Kent County area" and "relevant geographic market for primary care inpatient hospital services as the immediate Grand Rapids area").

[REDACTED] *Id.* at 18-19.[11] This is perhaps the most narrowly defined geographic market in the history of hospital merger litigation. It also makes no logical sense and defies the very market realities that the Supreme Court expressly stated must be considered in such an analysis. Complaint Counsel's alleged market is, in fact, nothing more than "an awkward attempt to conform . . . [Complaint Counsel's] theory to the facts they allege." *Belfiore v. The N.Y. Times*, 826 F.2d 177, 180 (2d Cir. 1987).

For instance, Complaint Counsel's tortured geographic market definition inexplicably excludes sixteen competitor hospitals that are closer to Evanston than HPH – including, among others:

- Saint Francis Hospital (3 miles, 8 minutes from Evanston),
- Rush North Shore Medical Center (3.7 miles, 9 minutes from Evanston),
- Swedish Covenant Hospital (6.8 miles, 19 minutes from Evanston),
- Advocate Lutheran General Hospital (10.2 miles, 21 minutes from Evanston),
- Holy Family Medical Center (11.3 miles, 27 minutes from Evanston),
- Resurrection Medical Center (12.1 miles, 25 minutes from Evanston), and
- Northwestern Memorial Hospital (13 miles, 26 minutes from Evanston).

By way of comparison, HPH is 13.7 miles (27 minutes) from Evanston. The alleged geographic market also inexplicably excludes at least two competitor hospitals that are closer to HPH than Evanston: Lake Forest Hospital (6.1 miles and 23 minutes from HPH) and Condell Medical Center (12.7 miles, 24 minutes from HPH). Thus, the evidence will show that Complaint Counsel's narrowly-defined, three-hospital geographic market excludes hospitals just a few

[11] **[REDACTED]**

miles down the road. Indeed, documents produced in this case by other hospitals, and testimony by private payors, confirm that these other hospitals compete vigorously with ENH and that private payors had, and continue to have, other alternative hospitals to ENH for their respective networks.[12]

Under circumstances similar to those here – a merger of two suburban metropolitan hospitals – one court rejected the government's proposed definition of the geographic market that included only the merging hospitals. *Long Island Jewish Med. Ctr.*, 983 F. Supp. at 140. Accordingly, because "[i]dentification of a relevant market is a 'necessary predicate' to a successful challenge under the Clayton Act," Complaint Counsel has "failed to meet its burden of proving a well-defined geographic market encompassing the practical alternative sources of acute inpatient services to which patients can turn if faced with an anticompetitive price increase." *Sutter Health Sys.*, 130 F. Supp. 2d at 1132.

III. COMPLAINT COUNSEL CANNOT MEET ITS BURDEN OF SHOWING THAT THE MERGER CAUSED COMPETITIVE HARM

It is undisputed that ENH was able to negotiate increases to the prices it charges to certain private payors after the Merger. (ENH, however, did not negotiate a price increase with its largest payor, Blue Cross, which constitutes about half of the revenue received by ENH from private payors.) But it is also undisputed – or, at a minimum, should be undisputed – that mere post-Merger price increases, when viewed in a vacuum, are insufficient as a matter of law to demonstrate a violation of Section 7, under a unilateral effects theory or otherwise. Accordingly, as discussed in the summary of argument, the parties primarily will address at trial

[12] Perceptions of market participants, including the parties' competitors, also inform the geographic market analysis. *See Sutter Health Sys.*, 130 F. Supp. 2d at 1127 ("If hospitals located within the test market perceive a hospital located outside of the test market to be a significant competitor, the implication is that the hospital located outside of the test market may in fact constitute a practical alternative to which patients could turn if faced with an anticompetitive price increase.").

four independent issues pertaining to the alleged competitive harm. Complaint Counsel cannot prevail in this litigation unless it meets its burden as to all four of these issues: (1) its burden of proving a unilateral effects case; (2) its burden of demonstrating that ENH's post-Merger negotiated price increases were necessarily caused by an increase in market power resulting from the Merger; (3) its burden of proving that the Merger is anti-competitive after taking into account the pro-competitive effects on health care quality arising from the Merger; and (4) its burden of showing that HPH would have significantly constrained ENH's market power but for the Merger.

A. Complaint Counsel Cannot Prove That The Merger Will Cause Competitive Harm Through Unilateral Effects

Once the relevant market has been properly analyzed, and the resulting concentration within that market has been determined, the *Merger Guidelines* provide a further analysis to determine whether a given merger may cause adverse competitive effects. The *Merger Guidelines* identify two such types of adverse competitive effects – a lessening of competition through "coordinated interaction" and/or through "unilateral effects." A merger may reduce competition through coordinated interaction "by enabling the firms selling in the relevant market more likely, more successfully, or more completely to engage in coordinated interaction that harms consumers." *Merger Guidelines* § 2.1. Additionally, a merger may diminish competition through unilateral effects "even if it does not lead to increased likelihood of successful coordinated interaction, because merging firms may find it profitable to alter their behavior unilaterally following the acquisition by elevating price and suppressing output." *Id.* at § 2.2.

[REDACTED]

[REDACTED] Rather, Complaint Counsel's theory in this case is that the Merger caused competitive harm through "unilateral effects." When the product produced by the merging parties is appropriately classified as a "differentiated product," which both parties agree is the case here, the *Merger Guidelines* provide that a merger may result in a lessening of competition though unilateral effects when: (1) "each product's market share is reflective of not only its relative appeal as a first choice to consumers of the merging firms' products but also its relative appeal as a second choice," (2) "the merging firms have a combined market share of at least thirty-five percent," and (3) in response to a price increase, rival sellers likely would not "replace any localized competition lost through the merger by repositioning their product lines." *Id.* § 2.211-12; *see also United States v. Oracle Corp.*, 331 F. Supp. 2d 1098, 1117-18 (N.D. Cal. 2004) (four factors that a plaintiff must meet to succeed in a differentiated products unilateral effects claim include differentiated products, products are close substitutes, other products in markets are not sufficiently similar, and other firms cannot reposition); *CB&I*, at 6, n.34 (Ex. 2).

The evidence at trial will demonstrate that Complaint Counsel cannot prove that the Merger caused competitive harm through unilateral effects. Specifically, Complaint Counsel must prove that a "significant share of sales in the market [are] accounted for by consumers who regard the products of the merging firms as their first and second choices[.]" *Merger Guidelines* § 2.21. That is simply not the case here. Before the Merger, HPH was a local community hospital with increasing financial difficulties. ENH, on the other hand, is, and before the Merger was, an integrated health care delivery system with a strong teaching component and an affiliation with Northwestern University's Medical School. No significant part of the market ever considered ENH and HPH as first and second choices before the Merger. Indeed, the

evidence at trial will demonstrate that, prior to the Merger, payors conceded that they did not "play" HPH off of ENH, or *vice versa*, in contract negotiations.

[REDACTED]

No such allegation is contained in the complaint, and the evidence at trial will not support it.[13] In fact, such a theory of unilateral effects is contradicted by market realities, especially given the number of competing hospitals, discussed above, that are closer to Evanston than HPH, or closer to HPH than Evanston (both geographically and in terms of breadth of quality of services).

[REDACTED]

Similarly, Complaint Counsel cannot satisfy the other elements of a unilateral effects case. Thus, under Complaint Counsel's alternative geographic market proposed in its interrogatory answers, as discussed above, the market shares of the merging parties fall below

[13] A similar theory was rejected on the merits in *United States v. Long Island Jewish Med. Ctr.*, 983 F. Supp. 121, 138-39 (E.D.N.Y. 1997).

the 35% threshold necessary for a merger to cause competitive harm through unilateral effects. Finally, the evidence at trial will demonstrate that ENH's competitors are making substantial improvements that will allow them to compete even more aggressively against ENH. Accordingly, for all of these reasons, the evidence at trial will not support Complaint Counsel's theory of competitive harm.

B. Complaint Counsel Cannot Meet Its Burden Of Proving The Requisite Nexus Between The Negotiated Price Increases And An Increase In Market Power Caused By The Merger

Regardless of whether Complaint Counsel proceeds under a traditional *Guidelines* analysis as alleged in Count I or a "direct effects" theory as alleged in Count II, Complaint Counsel still bears the burden of proving that the negotiated price increases at issue were caused by an increase in market power resulting from the Merger. The evidence will show that Complaint Counsel cannot meet this burden.

1. As A Matter Of Law, Mere Evidence Of Price Increases Is Insufficient To Show Competitive Harm

[REDACTED]

Also, under any relevant legal standard, a price increase, by itself, is not enough to prove market power or anti-competitive effects. *See, e.g., Blue Cross & Blue Shield United of Wisconsin v. Marshfield Clinic*, 65 F.3d 1406, 1411-12 (7th Cir. 1995) ("[W]hen dealing with a heterogeneous product or service, such as the full range of medical care, a reasonable finder of fact cannot infer monopoly power just from higher prices[.]); *In the Matter of Schering-Plough Corp.*, at 116, Dkt. No. 9297 (Initial Decision) (June 27, 2002), *overturned on other grounds* 2003 WL 22989652 (F.T.C. Dec. 8, 2003) ("Pricing evidence alone is not sufficient to prove monopoly power.") (Ex. 6); *see generally* Areeda & Hovenkamp, ANTITRUST LAW ¶ 519.

Rather than focusing solely on the fact of a price increase itself, a valid analysis to determine whether a consummated merger increased market power must include an examination of the resulting price levels – *i.e.*, whether the prices are supra-competitive relative to other firms within the relevant market. *Levine v. Central Fla. Med. Affiliates, Inc.*, 72 F.3d 1538 (11th Cir. 1996); *Godix Equip. Export Corp. v. Caterpillar, Inc.*, 948 F. Supp. 1570, 1582 (S.D. Fla. 1996). Indeed, contrary to Complaint Counsel's assertion, it is an inquiry into the relative *level* of the prices being charged – whether such prices are supra-competitive – that is the proper focus of the competitive effects analysis, not merely an inquiry into whether prices increased.[14]

Finally, before a given price increase can be used as evidence of market power, the price increase must be supra-competitive and sustained over a period of time, or accompanied by a reduction of output or the exclusion of competitors to be indicative of market power. *See, e.g., Forsyth v. Humana, Inc.*, 114 F.3d 1467, 1476 (9th Cir. 1997) (proof of higher prices and profits, without a corresponding decrease in output, is not sufficient direct evidence to show market power). As discussed earlier, Complaint Counsel cannot satisfy these legal burdens.

2. The Evidence Will Show Alternative Explanations For ENH's Post-Merger Negotiated Price Increases Other Than An Increase In Market Power Caused By The Merger

Even if a showing of direct effects, without a well-defined relevant market, were sufficient to prove a violation of Section 7 (which it is not), Complaint Counsel still could not prevail here. Complaint Counsel cannot show that ENH's one-time, corrective price increase – the purported direct effect – resulted from the Merger. This is a necessary element of Section 7,

[14] *See, e.g., Levine*, 72 F.3d at 1552 ("In any event, evidence of rising fees is insufficient unless placed in context with evidence about the fees charged by non-Healthchoice physicians, the resource costs underlying the physician services, and the rate of inflation."); *Godix*, 948 F. Supp. at 1582 ("Plaintiffs presented no evidence showing that the increase in price was to a supercompetitive level or out of line with the pricing of the interchangeable, will-fit parts.").

which prohibits acquisitions only where "the *effect* of such acquisition may be substantially to lessen competition, or to tend to create a monopoly." 15 U.S.C. § 18 (emphasis added).

The Clayton Act contains a 4-year statute of limitation for most antitrust actions. Under the so-called "time-of-suit" doctrine, however, the government may bring a post-consummation challenge at such time as the merger evinces alleged anti-competitive effects. The Supreme Court has recognized in the post-consummation context, however, the necessary nexus between the acquisition and the alleged reduction in competition, stating: "We repeat, that the test of a violation of § 7 is whether, at the time of suit, there is a reasonable probability that the acquisition is likely to result in the condemned restraints." *United States v. E.I. duPont de Nemours & Co.*, 353 U.S. 586, 607 (1957); *see also FTC v. Consol. Foods Corp.*, 380 U.S. 592, 600 (1965); *United States v. Philadelphia Nat'l Bank*, 374 U.S. 321, 362 (1963). Accordingly, courts have dismissed Section 7 claims when plaintiffs have failed to tie the diminution in competition to the merger at issue.[15]

[REDACTED]

[15] *Ricchetti v. Meister Brau, Inc.*, 431 F.2d 1211, 1215 (9th Cir. 1970) ("There must be a further showing that, as a result of the post merger acts, the merger has an effect on commerce which is proscribed within the meaning of all elements of Section 7."); *see also Smith-Victor Corp. v. Sylvania Elec. Prod., Inc.*, 242 F. Supp. 315, 320 (N.D. Ill. 1965) ("Section 7 requires more than allegations that there were mergers or acquisitions and a lessening of competition in a relevant line of commerce; it requires that the lessening of competition result from the mergers or acquisitions.").

Accordingly, to the extent Complaint Counsel intends to proceed with a theory of liability based on "direct effects," it carries the burden of eliminating alternative explanations for ENH's post-Merger negotiated price increases – that is, explanations other than an increase in market power caused by the Merger.

The evidence will show that Complaint Counsel cannot meet this burden given the existence of alternative, and more plausible, explanations for the price increases at issue. For example, the post-Merger negotiated price increases can be explained by the fact that ENH did not appreciate the extent of the premerger demand for its services and that it effectively was "leaving money on the table." At about the time of the Merger, however, ENH senior management had become aware that its negotiated prices were under-market and finally sought additional information to enable it to determine the true demand for its high quality services. ENH was driven to this because of declining Medicare reimbursements and other sources of revenue. ENH thus engaged Bain and Company, Inc. ("Bain") to assist in evaluating ENH's existing contracts with private payors and to negotiate upcoming renewals. Although, over the years, Bain had consistently maintained that ENH's negotiated prices were under-market, ENH finally was shocked into action when the due diligence process leading up to the Merger confirmed Bain's position.

Bain reviewed HPH's negotiated prices and, based on that review, concluded that "[t]here are significant differences today in contract terms between ENH and HPH. In many cases, HP has the superior contract."[16] Bain further observed that "[t]he difference between HP and ENH rates has cost ENH approximately $30M over the past 5 years."[17] This price discrepancy was surprising given that ENH was a teaching hospital with a broad range of

[16] RX-0684 at 001499.

[17] *Id.* at 001529.

services, whereas HPH was a local community hospital. The evidence and expert testimony will show that, in reality, ENH's prices resembled those of other "community" hospitals in the area, rather than those of the Chicago tertiary care hospitals that provided more similar ranges of services and infrastructure to ENH. Before the Merger, ENH's contracted rates were below those of many other hospitals that provided a comparable range of services and, in particular, were frequently below those of HPH.

ENH's pre-Merger contract rates with private payors were under-market because, among other reasons, ENH's negotiation style with private payors was too lenient and ENH did not always renew contracts in a timely manner, leaving ENH laboring under contracts negotiated at a time when costs, and prices, were much lower. Thus, prior to the Merger, ENH had not acquired sufficient information to understand how much private payors were willing to pay for ENH's services. From Bain and the HPH due diligence process, however, ENH realized that even a community hospital such as HPH, with much more limited services, had achieved contractual rates that were higher than ENH's own rates. Through Bain's analyses, ENH also recognized that more aggressive negotiation techniques with managed care payers were increasingly common. Accordingly, documents contemporaneous with the Merger reflect Bain's advice to ENH that "many of ENH's current contracted rates require a one time corrective adjustment."[18]

As a result of the Merger, ENH renegotiated all of its contracts to account for its new single-system identity. It undertook this process with new information about the pre-Merger demand for its services (as opposed to additional market power gained from the Merger) and with new, more aggressive negotiators. Because negotiations can be idiosyncratic depending on

[18] *Id.*

the personalities of the people involved, it is hardly surprising that many private payors were surprised at ENH's new aggressive negotiating techniques. These techniques proved successful in many, but certainly not all, of ENH's post-Merger negotiations. Again, however, this success can be explained by the reality that many private payors would have been willing to pay ENH higher negotiated rates before the Merger, and the Merger provided an opportunity for a necessary "one time corrective adjustment." Complaint Counsel's theory of liability inexplicably, and inappropriately, overlooks this more plausible and appropriate explanation for the post-Merger negotiated price increases at issue.

[REDACTED]

To prevail on its Section 7 claims, however, Complaint Counsel must carry the burden of showing the requisite nexus between its proof of anti-competitive conduct and the Merger – *i.e.*, that the only plausible explanation for the price increases at issue is an increase in market power caused by the Merger. The evidence will show that this burden cannot be satisfied. *See, e.g., Blue Cross & Blue Shield United of Wisconsin v. Marshfield Clinic*, 65 F.3d 1406, 1411-12 (7th Cir. 1995) ("[W]hen dealing with a heterogeneous product or service, such as the full range of medical care, a reasonable finder of fact cannot infer monopoly power just from higher prices – the difference

may reflect a higher quality more costly to provide. . . . Generally you must pay more for higher quality.").

3. The Evidence Will Confirm That ENH's Post-Merger Negotiated Price Increases Were Competitive

The evidence will confirm that ENH's post-Merger prices were consistent with those of its competitors, thus belying Complaint Counsel's assertion that the Merger caused competitive harm.

[REDACTED]

Such prices were substantially below those charged by tertiary care, sophisticated hospitals with teaching involvement (*i.e.*, so-called "academic hospitals"). After the Merger, ENH's prices rose to be more consistent with the "academic hospitals" to which it is most aptly compared.

The evidence will also show that the negotiation techniques used by ENH to obtain its one-time corrective adjustments necessary to achieve pricing levels comparable to those of its academic hospital competitors – *e.g.*, letters threatening termination and requests by hospitals to shift from per diem pricing to the arguably more hospital-friendly, "discount off charges" method – are not, as Complaint Counsel may claim, evidence of an increase in market power. Instead, these negotiation techniques were adopted by ENH at Bain's suggestion and are consistent with those used by competitor hospitals to achieve success in their negotiations with private payors. ENH's more aggressive post-Merger negotiations are not anomalous but, instead, reflect a mere example of a market trend toward hospitals paying more attention to the

negotiated prices charged to private payors to ensure that they can cover the rapidly increasing costs of providing hospital services.

Complaint Counsel will likely mischaracterize documents that attribute price increases to the Merger or otherwise describe the ENH system as having "leverage" after the Merger. The documents at issue are entirely consistent with the discussion above concerning how ENH wanted to abandon its prior practice of "leaving money on the table" and how ENH's learned after the Merger about what private payors were willing to pay for its hospital services. It should hardly be surprising that ENH prepared documents praising its efforts to increase negotiated prices to a more competitive level.

[REDACTED]

C. Complaint Counsel's Competitive Harm Analysis Does Not Take Into Account Pro-Competitive Quality Improvements Resulting From The Merger

Even assuming, for the sake of argument, that Complaint Counsel could meet its burden of showing that the post-Merger negotiated price increases were necessarily caused by an increase in market power resulting from the Merger (which, as demonstrated above, cannot be shown), Complaint Counsel still could not meet its burden of showing that the Merger was anti-competitive. As the Complaint makes clear, this burden can be satisfied only by demonstrating that the negotiated price increases at issue outweigh post-Merger quality of care improvements.

See Compl. ¶¶ 24, 28 (alleging that the increase in rates ENH charged to private payors for general acute care inpatient hospital services "*without a corresponding improvement in quality of care*, further reflects the market power exercised by the hospitals after the merger") (emphasis added). Complaint Counsel, therefore, must account for the substantial pro-competitive quality of care improvements resulting from the Merger – regardless of whether such improvements constitute an alternative *explanation* for the post-Merger negotiated price increases. *See, e.g.*, "Everything Old is New Again: Health Care and Competition in the 21st Century," Prepared Remarks of Timothy J. Muris, then-Chairman, FTC at 18 ("The Commission is always willing to consider arguments about how a particular transaction or conduct will improve quality, and it will pay close attention to such arguments in weighing the competitive implications. *Moreover, because quality is so important in health care, we should err on the side of conduct that promises to improve patient care*") (emphasis added) (pertinent pages attached as Ex. 7).

Applying the most authoritative definition of quality of care – the degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge –

[REDACTED

[REDACTED]

[REDACTED]

[REDACTED]

Moreover, Complaint Counsel gives insufficient weight to structural and process measures of quality improvement in a misguided effort to create the illusion that these measures – well accepted in the field of health care quality assessment – are any less reliable than outcome measures.

[REDACTED]

[REDACTED]

But instead of accounting for these and other quality improvements at ENH resulting from the Merger, Complaint Counsel inexplicably asserts that such improvements have no relevance to the competitive effects analysis. There can be no denying the substantial increase in quality of care at ENH resulting from the Merger. **[Dr.**

[REDACTED]

The above clinical areas represent core services for any community hospital. A number of these quality improvements may affect every patient who requires hospital-based medical services. Many patients also require one or more of the specialty medical and surgical services where quality improved.

The evidence will show that systemic improvements in quality could not have been accomplished without the Merger with ENH.

[REDACTED]

Absent the Merger, neither of these mechanisms for change would have been in place. Further, HPH lacked the financial capacity to implement fully the upgrades and expansions to its physical plant, which were accomplished through the Merger.

[REDACTED]

In response, ENH made substantial improvements in each area within two years of the Merger.

[REDACTED]

For example, ENH successfully implemented a high-quality cardiac surgery program in addition to interventional cardiology services. Patient care in the emergency department ("ED") and intensive care unit was improved by increased and improved physician staffing, a major renovation of the ED physical facilities, and improved patient care processes in the ED. ENH opened the Kellogg Cancer Care Center at HPH, which provided coordinated access to multidisciplinary support services, as well as access to a broader array of research protocols for new cancer therapies. In terms of technology, ENH implemented a system-wide electronic

medical record (Epic) that included a computerized physician order entry ("CPOE") system and provided remote access to Epic for all physicians. CPOE systems have been shown to be associated with reductions in medication errors, including serious ones with the potential to do harm. In addition, pharmacy services were greatly enhanced by increased staffing and by the addition of improved procedures to reduce medication errors (including the installation of an automated drug dispensing system (PYXIS)). By closely controlling and accounting for the dispensing of medications in unit dose packages, these computerized stations help reduce the frequency of errors in the distribution and administration phases of medication use. HPH physicians were also given the opportunity to participate in the academic programs operated by ENH, principally at the Evanston campus. Many HPH physicians applied for and were granted faculty appointments through ENH at the Northwestern University's Medical School (Feinberg School of Medicine). The foregoing illustrate only a few of the enhancements that ENH made to HPH's patient care.

[REDACTED]

Additionally, the improvements affected patients whose care required various ancillary services, including laboratory, pharmacy and radiology services. The care of all patients benefited from the introduction of ENH's electronic medical record system.

Complaint Counsel overlooks the Merger's substantial pro-competitive effects related to quality. This oversight renders it impossible for Complaint Counsel to meet its ultimate burden of demonstrating that the Merger was anti-competitive.

D. Complaint Counsel Cannot Meet Its Burden Of Showing Competitive Harm Because HPH's Market Presence Was Declining Before The Merger

The evidence will establish that HPH's financial condition prior to the merger deprived HPH of the ability to provide significant competition had it not merged with ENH. It is clear that HPH lacked the ability to make the necessary investments to remain competitive. For example, HPH could not have afforded to implement all of the upgrades and expansions to its physical plant and technology infrastructure that were made possible by the Merger. A firm that is weak financially has far less competitive significance than its market share or other data would otherwise indicate. *United States v. General Dynamics Corp.*, 415 U.S. 486, 503 (1974); *Dr. Pepper/Seven-Up Cos. v. FTC*, 991 F.2d 859, 864-65 (D.C. Cir. 1993). Thus, the weakness of the acquired firm can "undermine the predictive value" of Complaint Counsel's evidence. *FTC v. Univ. Health, Inc.*, 938 F.2d 1206, 1221 (11th Cir. 1991).

In one recent Section 7 challenge brought by the FTC, the district court took into account the acquired firm's "financial status and future prospects . . . in determining whether substantial anticompetitive effects are likely from the transaction." *FTC v. Arch Coal, Inc.*, 329 F. Supp. 2d 109, 154 (D.D.C. 2004). Notwithstanding the fact that the acquired firm was still "viable," the district court concluded that:

> Although not a failing firm in a technical sense, Triton is plainly a relatively weak competitor in the current SPRB market, with no convincing prospects for improvement. . . . Although defendants cannot avail themselves of a failing firm defense to defeat the FTC's antitrust challenge, Triton's weak competitive status remains relevant to an examination of whether substantial anti-competitive effects are likely from the transactions. The court concludes that based on the evidence before it, plaintiffs' claims of Triton's past and future competitive significance in the SPRB market has been far overstated.

Id. at 157. Similarly, HPH's clearly weakened financial condition overstates HPH's competitive significance pre-Merger and the Merger therefore did not "substantially . . . lessen competition" in violation of Section 7. 15 U.S.C. § 18.

IV. AS SISTER CORPORATIONS, THE MERGER OF ENH AND HPH COULD NOT VIOLATE SECTION 7 AS A MATTER OF LAW

Section 7 of the Clayton Act provides in pertinent part that "[n]o person . . . shall acquire, directly or indirectly, the whole or any part of the stock or other share capital . . . [or] the whole or any part of the assets of another person" when "the effect of such acquisition may be substantially to lessen competition, or to tend to create a monopoly." 15 U.S.C. § 18. The evidence at trial will establish that the Merger of ENH and HPH did not involve two "persons" because at the time of the Merger they were sister corporations owned by the same parent.

The evidence will show that as not-for-profit entities neither ENH nor HPH issues any "stock" or "shared capital," but instead has "membership" interests in accordance with Illinois General Not-For-Profit Corporation Act of 1986, as amended. Since 1989, the Northwestern Healthcare Network ("NHN") had been the *sole* corporate member of both ENH and HPH, pursuant to a Network Affiliation Agreement dated October 23, 1989. Accordingly, an integral element of Section 7 is missing in this case – namely, the existence of two separate "persons" at the time of the merger.

Moreover, because ENH and HPH were sister corporations under the ownership of one entity, the Merger did not result in any "acquisition" that could subject the transaction to Section 7. This analysis is confirmed by the fact that the parties were not required to file a Report and Notification Form ("HSR Form") pursuant to the Hart-Scott-Rodino Antitrust Improvements Act of 1976, as amended ("HSR Act"). The HSR Act provides that "no person shall acquire, directly or indirectly, any voting securities or assets of any other person, unless

both persons (or in the case of a tender offer, the acquiring person) file notification. . . ." 15 U.S.C. § 18a(a). Prior to the merger, the parties asked the staff of the FTC's Premerger Notification Office whether they would be required to file an HSR Form, given the fact that a common parent was the sole corporate member of both merging entities. The parties were advised by staff that "because the parent already holds all of the assets held by the entities it controls," they were not required to file an HSR Form, pursuant to 16 C.F.R. § 801.1(c)(8). *See* FTC Pre-Merger Notification Office Informal Staff Opinion No. 9908002.[19] Given that the transaction was not required to be reported under Section 7A of the Clayton Act because the assets were already deemed commonly owned, it is difficult to understand how the transaction could violate Section 7.

That the Merger of ENH and HPH cannot violate Section 7 of the Clayton Act as a matter of law is a result consistent with – but not dependent upon – the Supreme Court's holding in *Copperweld Corp. v. Independence Tube Corp.*, 467 U.S. 752 (1984). There, the Supreme Court recognized that a parent and its *wholly-owned* subsidiary are not distinct entities that are capable of conspiring as a matter of law. *Id.* at 777. The Court's rationale in *Copperweld* and subsequent case law confirms that a parent and its wholly-owned subsidiary are deemed to have a unity of interests *as a matter of law*. While lower court decisions have engaged in a fact-specific analysis to test this premise in the case of less than wholly-owned subsidiaries, the presumption in the case of the wholly-owned subsidiary is unqualified and does not depend on any analysis of the internal machinations of the relationships between the parent and its wholly-owned subsidiaries. Since *Copperweld*, courts have extended this logic to many other types of corporate affiliations, including two wholly owned subsidiaries of a common

[19] Available at http://www.ftc.gov/bc/hsr/informal/opinions/9908002.htm.

parent.[20] Courts have also extended the logic of *Copperweld* to claims involving Robinson-Patman,[21] Section 3 of the Clayton Act,[22] as well as issues of standing.[23]

V. THE DIVESTITURE REMEDY SOUGHT BY COMPLAINT COUNSEL WOULD HARM CONSUMERS AND FAIL TO CURE THE ALLEGED ANTI-COMPETITIVE EFFECTS.

This Court should never need to reach the issue of remedy because, as discussed above, Complaint Counsel cannot meet its burden of proving that the Merger violated Section 7. Nevertheless, since the trial is not bifurcated, the parties will present evidence that Complaint Counsel's request to undo the Merger – which was consummated more than five years ago and resulted in an investment of more than $120 million to improve HPH's facility and quality of care – would adversely impact patients, medical personnel, employees and the local community as a whole. Moreover, such a belated divestiture would provide a strong disincentive for other non-profit entities to engage in similar merger activities that would benefit the public. As demonstrated below, therefore, the requested divestiture remedy is unwarranted regardless of the Court's holding on liability.

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[20] *See, e.g., Freeman v. San Diego Ass'n of Realtors*, 322 F.3d 1133, 1147 (9th Cir. 2003) (holding *Copperweld's* "single-entity rule . . . applies to . . . subsidiaries controlled by a common parent") (citations omitted); *Advanced Health-Care Servs., Inc. v. Radford Cmty. Hosp.*, 910 F.2d 139, 146 (4th Cir. 1990) ("Applying the Supreme Court's reasoning [in *Copperweld*], we conclude that two subsidiaries wholly owned by the same parent corporation are legally incapable of conspiring with one another for purposes of § 1 of the Sherman Act."); *Directory Sales Mgmt. Corp. v. Ohio Bell Tel. Co.*, 833 F.2d 606, 611 (6th Cir. 1987) ("*Copperweld* precludes a finding that two wholly-owned sibling corporations can combine for purposes of section 1") (citations omitted); *Greenwood Utils. Comm'n v. Mississippi Power Co.*, 751 F.2d 1484, 1497 n.8 (5th Cir. 1985); *see also* VII Phillip E. Areeda & Herbert Hovenkamp, ANTITRUST LAW ¶ 1464f, p. 215 & n.31 (2d ed. 2002) ("post-*Copperweld* decisions are virtually unanimous" that "the *Copperweld* holding also denies conspiratorial capacity to sister corporations' dealings with one another"); ABA Section of Antitrust Law, Antitrust Law Developments 27 (5th ed. 2002) ("Most Courts have held that the *Copperweld* rule extends to conspiracies between sister corporations").

[21] *See, e.g., Caribe BMW, Inc. v. Bayerisch Motoren Werke Aktiengesellschaft*, 19 F.3d 745, 751 (1st Cir. 1994).

[22] *Advanced Health-Care*, 910 F.2d at 152 (extending Supreme Court's analysis to § 3 Clayton Act claims).

[23] *In re Vitamins Antitrust Litig.*, 2001-2 Trade Cas. (CCH) ¶ 73,325 (D.D.C. 2001).

A. The Law Does Not Require That HPH Be Divested From ENH Even Assuming, For The Sake Of Argument, That The Merger Violated Section 7

Any consideration of Complaint Counsel's requested remedy must begin with the basic premise that "[d]ivestiture is itself an equitable remedy designed to protect the public interest." *E.I. du Pont de Nemours & Co.*, 366 U.S. at 326. As an equitable remedy, "[c]ourts are *not* authorized in civil proceedings to punish antitrust violators, and relief must not be punitive." *Id.* (emphasis added). Consequently, "even in a case of a judicial determination that an acquisition was in violation of Section 7, a claim of hardship attendant upon complete divestiture can be considered in determining the appropriate remedy for the redress of antitrust violations where something short of divestiture will effectively redress the violation." *United States v. Int'l Tel. & Tel. Corp.*, 349 F. Supp. 22, 31 (D. Conn. 1972); *see also Hecht Co. v. Bowles*, 321 U.S. 321, 329-330 (1944) (holding that essence of equity jurisdiction is the tribunal's ability "to mould each decree to the necessities of the particular case").

Because divesture is a "drastic" remedy, it "cannot be had on assumptions"; rather, there must be "factual bases and economic theory as applied to such facts" to support such a remedy. *United States v. Crowell, Collier & MacMillan, Inc.*, 361 F. Supp. 983, 991 (S.D.N.Y. 1973). To obtain the equitable remedy of divestiture, therefore, Complaint Counsel will need to prove, not merely assume, that such a remedy would most effectively restore whatever competition purportedly was lost through the Merger. *E.I. du Pont de Nemours & Co.*, 366 U.S. at 326 ("The key to the whole question of an antitrust remedy is of course the discovery of measures effective to restore competition."); *CB&I*, at 94 ("[T]he relief must be directed to that which is 'necessary and appropriate in the public interest to eliminate the effects of the acquisition offensive to the statute.'") (Ex. 2).

B. HPH Should Not Be Divested From ENH Even Assuming, For The Sake Of Argument, That The Merger Violated Section 7

Divestiture in this case would not protect the public interest. To the contrary, unwinding the Merger at this late juncture would raise serious community and patient welfare concerns given the substantial quality benefits flowing from the Merger. As Luke Froeb, Director of the Bureau of Economics for the FTC, stated, "Once consummated, mergers are very costly to undo[.]" Luke Froeb, Steven Tschantz, & Philip Crooke, *Mergers Among Asymmetric Bidders: A Logit Second-Price Auction Model*, at 10, Mimeo, Vanderbilt Univ. (1999). The evidence here will show that the Merger was entirely consistent with ENH's mission as a non-profit hospital of serving the health care needs of its community.[24] During the past five years since the Merger, ENH invested more than $100 million to improve the quality of care offered by HPH, which was a weakening community hospital before the Merger. And ENH intends to invest millions of additional dollars into HPH.

This case is distinguishable from widget company divestitures in which the only implications of that remedy were financial. The evidence will show that divestiture in this case would have far-reaching clinical implications adversely affecting patients, physicians and the community as a whole. For example, if ENH were required to dissolve the Merger and re-establish HPH as an independent hospital, quality of care at HPH would likely deteriorate. The reversion of HPH's clinical governance to the pre-Merger structure would re-create a system where the hospital's ability to discipline physicians would again be severely limited, and its ability to maintain a collaborative environment for doctors and nurses to work together would be at risk.

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[24] *Butterworth Health Corp.*, 946 F. Supp. at 1295 (merger of not-for-profit hospitals does not have the same potential for anti-competitive effect as for-profit corporations); *Long Island Jewish Med. Ctr.*, 983 F. Supp. at 146 (not-for-profit status of the merging parties is relevant to Section 7 analysis).

The elimination of the substantial benefits accruing from the Merger would substantially outweigh any increase in competition that would be achieved by a divestiture. The evidence will show that ENH and HPH were not close competitors prior to the Merger and, given HPH's weak financial position, HPH lacked the ability to constrain ENH's price or quality decisions to any substantial extent. As a result, not much competition would be gained through reestablishing HPH as an independent institution, particularly if its quality levels reverted to its previous condition.

There is also no reason to expect that the requested divestiture would affect ENH's negotiated prices charged to private payors. As discussed above, ENH substantially underestimated the demand for its services before the Merger. As a result, it accepted rates from private payors that were considerably below levels of its academic and tertiary hospital competitors. A divestiture would not cause corporate amnesia – that is, ENH would not "forget" the competitively neutral information it learned about private payors' willingness to pay for its services. Moreover, reduced margins from Medicare have continued, forcing ENH to spread its fixed costs across private payers. As a result, it is unlikely that a divestiture would restore ENH's negotiated prices to pre-Merger levels.

Additionally, because divestiture is an equitable remedy, it is appropriate for the Court to take into account the historical posture of the case in determining whether HPH must be divested. The fact of the matter is that the parties were advised by the Staff of the Federal Trade Commission that they were not required to file an HSR Form, which would have given the government prophylactic notice of the Merger. Moreover, Complaint Counsel did not file suit until more than four years after the Merger. Even were Complaint Counsel to establish a minor reduction in competition due to the Merger – which it cannot – it would be fundamentally unfair

to force ENH to divest HPH, especially given that whatever extra revenue ENH may receive as a result of the Merger will be poured back into services and facilities that benefit the community. Divestiture in this instance also makes no sense from a public policy perspective given that it would have a chilling effect on other mergers designed to benefit the public.

Finally, Complaint Counsel provides no insight into the criteria that it would use to select a purchaser of the HPH assets. This omission is critical because HPH had considerable trouble finding a suitable acquirer before the Merger. Moreover, it is unlikely that there are any purchasers that could maintain the quality levels achieved by ENH.

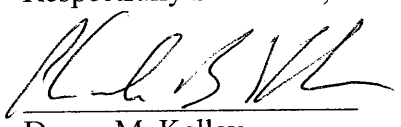
[REDACTED]

None of the area hospitals possesses all of these characteristics.

CONCLUSION

For the foregoing reasons, the evidence will show that judgment ultimately should be entered in Respondent ENH's favor and against Complaint Counsel on Counts I and II of the Complaint.

Respectfully Submitted,



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January 27, 2005

CERTIFICATE OF SERVICE

I hereby certify that on January 27, 2005, copies of the foregoing ***Pretrial Brief of Respondent Evanston Northwestern Healthcare Corporation*** **(Public Record Version)** were served (unless otherwise indicated) by email and first class mail, postage prepaid, on:

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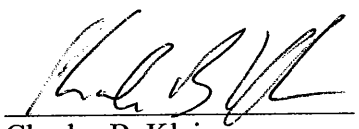

Charles B. Klein

UNITED STATES OF AMERICA
BEFORE THE FEDERAL TRADE COMMISSION
OFFICE OF ADMINISTRATIVE LAW JUDGES

In the matter of	)	
Evanston Northwestern Healthcare Corporation, a corporation, and	)	Docket No. 9315
	)	**Public Record**
ENH Medical Group, Inc., a corporation.	)	

APPENDIX TO PRETRIAL BRIEF OF RESPONDENT EVANSTON NORTHWESTERN HEALTHCARE CORPORATION

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Table of Contents

Exhibit # 1

[REDACTED]

PUBLIC RECORD VERSION

In the Matter of Chicago Bridge & Iron Company, et al.
Docket No. 9300

Opinion of the Commission

By SWINDLE, Commissioner:

I. Introduction and Statement of Issues

This case involves the acquisition of a company by its closest competitor in four relevant markets.[1] On February 7, 2001, in the midst of the Commission's investigation of the acquisition,[2] Respondent Chicago Bridge & Iron (CB&I) acquired certain assets of the Engineered Construction and Water Divisions of Respondent Pitt-Des Moines (PDM). At the time of the acquisition, both parties designed, engineered, and constructed storage tanks for liquefied natural gas (LNG), liquefied petroleum gas (LPG), and liquid atmospheric gases such as nitrogen, oxygen, and argon (LIN/LOX), as well as thermal vacuum chambers (TVCs), which are used to test satellites for the aerospace industry. The Commission's Complaint, issued October 25, 2001, charged that the acquisition may substantially lessen competition or tend to create a monopoly in violation of Section 7 of the Clayton Act, 15 U.S.C. § 18, and Section 5 of the Federal Trade Commission Act, 15 U.S.C. § 45, and that, through the acquisition, the parties engaged in unfair methods of competition in or affecting commerce in violation of Section 5 of the Federal Trade Commission Act, 15 U.S.C. § 45. [3]

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[1] This Opinion uses the following abbreviations for citations:

Tr. – Transcript of testimony before the Administrative Law Judge
ID – Initial Decision (page number)
IDF – Initial Decision Finding of Fact (the number of the factual finding)
CCFF – Complaint Counsel's Finding of Fact (the number of the factual finding)
RAB – Respondents' Appeal Brief
CCACAB – Answering and Cross-Appeal Brief of Counsel Supporting the Complaint
RRCARB – Respondents' Reply and Cross-Appeal Response Brief
OA – Transcript of the Oral Argument on Appeal
CX – Complaint Counsel's Exhibit
RX – Respondents' Exhibit
JX - Joint Exhibit

[2] Tr. at 4079-81.

[3] This Opinion uses the following abbreviations for third-party companies referenced herein: ABB Lummus Global (ABB Lummus), Air Liquide Process and Construction (Air Liquide), Air Products and Chemicals (Air Products), American Tank & Vessel, Inc.

Exhibit 2

A. The Initial Decision[4]

The Initial Decision held that CB&I's acquisition of PDM violated Section 7 of the Clayton Act and Section 5 of the FTC Act in four relevant lines of commerce in the United States: (1) field-erected LNG storage tanks, (2) field-erected LPG storage tanks, (3) field-erected LIN/LOX storage tanks, and (4) field-erected TVCs.[5] Although the Initial Decision rejected Complaint Counsel's proffered Herfindahl-Hirschman Indices (HHIs) as unreliable forecasters

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(AT&V), Atlanta Gas Light Co. (Atlanta Gas), BOC Gases (BOC), Boeing Satellite Systems (Boeing), British Petroleum (BP), Chart Process Systems (Chart), Chattanooga Boiler & Tank (Chattanooga), CMS Energy (CMS), Dynegy, Inc. (Dynegy), El Paso Corp. (El Paso), Enron Corp. (Enron), Fluor, Inc. (Fluor), Graver Tank (Graver), Freeport LNG Development LP (Freeport LNG), Howard Fabrication (Howard), Intercontinental Terminals Co. (ITC), Ishikawa Heavy Industries (IHI), Linde BOC Process Plant LLC (Linde), Matrix Service Co. (Matrix), Memphis Light, Gas & Water (MLGW), Morse Construction Group (Morse), Process Systems International (PSI), S.N. Technigaz (Technigaz), Skanska AB (Skanska), Toyo Kanetsu K.K. (TKK), TRW Space & Electronics (TRW), Whessoe International (Whessoe), Williams Energy (Williams), XL Technology Systems (XL), Yankee Gas Services Co. (Yankee Gas), Zachry Construction Corporation (Zachry). All other references to companies use the particular company's full name or the only name referred to in the record.

[4] The Initial Decision states that when the Commission amended its Rules of Practice for Adjudicative Proceedings, 16 C.F.R. § 3.51, in 2001 it removed the requirement under Rule 3.51(c)(3) that an Initial Decision be supported by substantial evidence. ID at 85. Accordingly, it states that its findings of fact are based on "reliable and probative evidence." *Id.* To clarify, we note that when the Commission removed the word "substantial" from Rule 3.51(c)(3), it did not change the evidentiary standard upon which its decisions must be based.

The Federal Register Notice made clear that, prior to the amendment, the "substantial evidence" language in Rule 3.51(c)(3) referred to the standard for agency decisions under Section 556(d) of the Administrative Procedure Act, 5 U.S.C. § 556(d), which specifies the quantum of evidence (in most cases a preponderance) needed to support findings of fact. FTC Rules of Practice, 66 Fed. Reg. 17,622, 17,626 (Apr. 3, 2001). The Notice also made clear that the amendment removed the "substantial evidence" language merely to eliminate any confusion between Section 556(d) and the more deferential substantial evidence standard for judicial review of agency action. *Id.* Thus, we take it as settled law that regardless of the standard under which a reviewing court must accept the Commission's findings of fact, the Commission (and its ALJ) normally must base findings upon a "preponderance of the evidence." *See Carter Prods., Inc. v. FTC*, 268 F.2d 461, 487 (9th Cir. 1959). Of course, the Commission's factual and legal review of this matter is *de novo*.

[5] IDF 18-19; ID at 126.

of the acquisition's competitive effects,[6] it nonetheless found that Complaint Counsel had established a prima facie case in each of the relevant markets.[7] Specifically, the Initial Decision found that Complaint Counsel demonstrated that "CB&I and PDM were the number one and two competitors . . . and that no other company provides effective competition."[8]

The Initial Decision also held that Respondents' evidence of actual or potential entry did not rebut Complaint Counsel's prima facie case.[9] It found that "potential and actual entry is slow and ineffective and cannot keep [the relevant] markets competitive."[10] For the LNG tank market, the Initial Decision concluded that many of the steps taken by recent or potential entrants are too preliminary to provide a basis for determining whether they can challenge CB&I's market power and that several other projects suggest that the new entrants do not constrain CB&I.[11] Similarly, for the LPG and LIN/LOX tank markets, the Initial Decision concluded that the actual and potential entry identified by Respondents is not sufficient to constrain CB&I's market power.[12] It also found no evidence of actual or potential entry in the TVC market.[13]

In addition, the Initial Decision rejected Respondents' argument that customers in these markets are sophisticated and can thus constrain CB&I's pricing.[14] It found that past pricing is not well known in three of the four relevant markets,[15] and that most customers therefore do not

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6 ID at 89-93.

7 ID at 89.

8 ID at 125.

9 ID at 100-103.

10 ID at 102.

11 ID at 103-105.

12 ID at 105-106.

13 ID at 106.

14 ID at 109.

15 *Id.* The Initial Decision does not delineate in which relevant markets customers lack pricing information. In addition, because it references only those findings of fact related to the LNG tank market and its findings with respect to customer sophistication in other markets do not clearly establish a lack of price information (*see* IDF 204-07), we cannot determine which three markets the Initial Decision means to include in its analysis.

have significant bargaining power.[16] It concluded that Respondents' evidence of customer sophistication did not rebut Complaint Counsel's prima facie case.[17]

Because it found that Respondents did not rebut Complaint Counsel's prima facie case, the Initial Decision concluded that Complaint Counsel carried their burden of persuasion that the merger was likely to substantially lessen competition in violation of Section 7 of the Clayton Act and Section 5 of the FTC Act.[18]

Although not required to do so, the Initial Decision also considered Complaint Counsel's evidence of post-acquisition price increases in the LNG tank, LIN/LOX tank, and TVC markets and concluded that the evidence did not show such price increases.[19]

Finally, the Initial Decision dismissed Respondents' argument that the merger did not harm competition because PDM planned to exit the relevant markets even absent the merger.[20] The Initial Decision found that Respondents did not establish that PDM had made a decision to close the business or that PDM had conducted an exhaustive effort to sell the package of assets sold to CB&I.[21] It thus concluded that even if an exiting assets defense is legally recognizable, Respondents did not establish such a defense in this case.[22]

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16 ID at 109.

17 *Id.*

18 ID at 114-15.

19 ID at 110-114.

20 ID at 115-118. Respondents argued that (1) PDM would have liquidated its EC Division absent the merger; (2) CB&I was the only potential purchaser; and (3) the merger thus did not result in a substantial lessening of competition. ID at 115.

21 ID at 116-118.

22 *Id.*

B. Legal Standards[23]

Section 7 of the Clayton Act provides, in relevant part, that "no person subject to the jurisdiction of the Federal Trade Commission shall acquire the whole or any part of the assets of another person . . . where in any line of commerce or in any activity affecting commerce in any section of the country, the effect of such acquisition may be substantially to lessen competition, or to tend to create a monopoly."[24] "As its language suggests, [S]ection 7 is 'designed to arrest in its incipiency . . . the substantial lessening of competition from the acquisition by one corporation of the whole or any part of the stock' or assets of a competing corporation."[25] Merger law "rests upon the theory that, where rivals are few, firms will be able to coordinate their behavior, either by overt collusion or implicit understanding, in order to restrict output and achieve profits above competitive levels."[26] Thus, it is settled law that "[s]ignificant market concentration makes it 'easier for firms in the market to collude, expressly or tacitly, and thereby force price above or farther above the competitive level.'"[27] The threat is that "firms in a concentrated market might in effect share monopoly power, setting their prices at a profit-maximizing, supracompetitive level by recognizing their shared economic interests and their interdependence with respect to price and output decisions."[28]

The unifying theme of Section 7 decisional law and economic teaching is that "mergers

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[23] In the present case, the alleged violation of the Federal Trade Commission Act's Section 5 prohibition against unfair methods of competition follows from the alleged violation of Section 7 of the Clayton Act. *See FTC v. Cement Inst.*, 333 U.S. 683, 694 (1948) (conduct that violates other antitrust laws may violate Section 5 as well). Similarly, a seller's participation in an unlawful transaction may violate Section 5 of the FTC Act. *See Yamaha Motor Co. v. FTC*, 657 F.2d 971, 985 (8th Cir. 1981) (upholding, solely on Section 5 grounds, a Commission finding that a sale of stock was unlawful). Accordingly, we determine that the alleged Section 5 violation does not require an independent analysis in this matter.

[24] Clayton Act §7, 15 U.S.C. § 18 (2004).

[25] *FTC v. University Health, Inc.*, 938 F.2d 1206, 1218 (11th Cir. 1991) (quoting *United States v. E.I. du Pont de Nemours & Co.*, 353 U.S. 586, 589 (1957)).

[26] *FTC v. PPG Indus.*, 798 F.2d 1500, 1503 (D.C. Cir. 1986); *see FTC v. Elders Grain Inc.*, 868 F.2d 901, 905 (7th Cir. 1989).

[27] *University Health*, 938 F.2d at 1218 n.24 (quoting *United States v. Rockford Mem'l Corp.*, 898 F.2d 1278, 1282-83 (7th Cir. 1990)).

[28] *Brooke Group Ltd. v. Brown & Williamson Tobacco Corp.*, 509 U.S. 209, 227 (1993).

should not be permitted to create or enhance market power or to facilitate its exercise."[29] A merger or acquisition is illegal under Section 7 if the remaining firm or firms will be more likely to engage in conduct that enables it or them profitably to maintain prices above competitive levels for a significant period of time, even if that conduct would be lawful in itself.[30] In general, unlawful accretions of market power may come about in several ways. First, a merger may result in a single firm that so dominates a market that it is able to maintain prices above the level that would prevail if the market were competitive. While antitrust case law has long recognized that a competitor may achieve and maintain market dominance or monopoly status through its own prowess, or even through "historic accident,"[31] Section 7 expressly forbids acquisitions and mergers that "tend to create a monopoly."[32] Second, a merger may result in only a few firms accounting for most of the sales of a product and thereby enable those firms to exercise market power by explicitly or tacitly coordinating their actions.[33] Third, in some circumstances, a merger may result in a single firm that is not a monopolist but nonetheless is able to exercise market power without the concurrence of – or coordinated responses by – other firms in the market.[34] In each of these circumstances, the exercise of market power results in lower output

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[29] U.S. Dep't of Justice & Federal Trade Comm'n, *Horizontal Merger Guidelines* § 0.1 (1992, as amended 1997), *reprinted in* 4 Trade Reg. Rep. (CCH) ¶ 13,104 (hereinafter *Merger Guidelines*).

[30] Section 7 "is concerned with far more than 'collusion' in the sense of an illegal conspiracy; it is very much concerned with 'collusion' in the sense of tacit coordination not amounting to conspiracy." 4 Phillip E. Areeda, Herbert Hovenkamp & John Solow, Antitrust Law: An Analysis of Antitrust Principles and Their Application, ¶ 916, at 85 (rev. ed. 1998); *see Merger Guidelines* § 2.1.

[31] *United States v. Grinnell Corp.*, 384 U.S. 563, 571 (1966).

[32] 15 U.S.C. § 18.

[33] Areeda, Hovenkamp & Solow, *supra* note 30, ¶ 901b2, at 9; *see, e.g., University Health*, 938 F.2d at 1219 (four firms "easily could collude to [raise prices or reduce output] without committing detectable violations of . . . the Sherman Act").

[34] Such unilateral effects are most likely to result in either of two circumstances. First, a firm might be able to increase prices in markets where competitors are distinguished primarily by differentiated products and the merging firms produce products that a substantial number of customers regard as their first and second choices (or, more precisely, where a substantial volume of sales are to customers who regard the products of the merging firms as their first and second choices). *See FTC v. Swedish Match,* 131 F. Supp. 2d 151, 168 (D.D.C. 2000); *New York v. Kraft Gen. Foods, Inc.*, 926 F. Supp. 321, 333-35 (S.D.N.Y. 1995); *see generally United States v. Oracle Corp.*, 331 F. Supp. 2d 1098, 1113-21 (N.D. Cal. 2004). Second, although no case seems to have dealt directly with such facts, economic learning holds that a firm might be able to increase prices above competitive levels in some markets where

and higher prices and a corresponding transfer of wealth from buyers to sellers or a misallocation of resources. As we discuss in this opinion, CB&I's acquisition of PBM raises the very competitive problem that is the focus of Section 7 – an accretion of market power and a tightening of oligopoly market conditions.

We are guided in our assessment of this merger by the case law and the *Merger Guidelines*, both of which set out the general framework for our analysis and provide instruction for the issues raised on appeal. Under this framework, Complaint Counsel must first establish a prima facie case that the acquisition is unlawful. Typically, this has been accomplished by showing that the transaction will significantly increase market concentration,[35] which in turn establishes a "presumption" that the transaction is likely to substantially lessen competition.[36] Of course, "market share and concentration data provide only the starting point for analyzing the competitive impact of a merger."[37] "That the government can establish a prima facie case through evidence on only one factor, market concentration, does not negate the breadth of this analysis. Evidence of market concentration simply provides a convenient starting point for a broader inquiry into future competitiveness."[38] The strength of the initial presumption also varies according to how high the concentration numbers are. As we will discuss, Complaint Counsel may establish a prima facie case with concentration data and introduce other types of evidence relating to market and entry conditions to bolster their concentration data.

Respondents may rebut the prima facie case by producing evidence that

> "show[s] that the market-share statistics [give] an inaccurate account of the acquisition['s] probable effect[] on competition" in the relevant market. In so doing, the defendant may rely on "nonstatistical evidence which casts doubt on the persuasive quality of the statistics to predict future anticompetitive consequences," such as: "ease of entry into the market, the trend of the market either toward or away from concentration,

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capacity is constrained and competitors may not be able to increase output in response to an output restriction by the merged firm. *See, e.g., Merger Guidelines* § 2.22.

[35] As the D.C. Circuit has observed, "[t]he Supreme Court has adopted a totality-of-the-circumstances approach to [Section 7], weighing a variety of factors to determine the effects of particular transactions on competition." *United States v. Baker Hughes, Inc.*, 908 F.2d 981, 984 (D.C. Cir. 1990).

[36] *Merger Guidelines* §1.51; *FTC v. H.J. Heinz Co.*, 246 F.3d 708, 715 (D.C. Cir. 2001); *Baker Hughes*, 908 F.2d at 982.

[37] *Merger Guidelines* § 2.0.

[38] *Baker Hughes*, 908 F.2d at 984.

and the continuation of active price competition." Additionally, the defendant may demonstrate unique economic circumstances that undermine the predictive value of the government's statistics.[39]

If Respondents are successful in their rebuttal efforts, the evidentiary burden shifts back to Complaint Counsel and merges with the ultimate burden of persuasion, which remains with Complaint Counsel at all times.[40]

C. Issues and Summary of Decision

The relevant product and geographic markets are uncontested in the present case. As the Initial Decision found, they are field-erected LNG storage tanks, field-erected LPG storage tanks, field-erected LIN/LOX storage tanks, and field-erected TVCs (all four built in the United States).[41] Respondents also do not contest that CB&I and PDM were the dominant suppliers of the products in these four relevant markets prior to the acquisition. Rather, at the heart of this case are Respondents' arguments that post-acquisition entry has occurred in the LNG tank market and that smaller incumbents have expanded their presence in both the LPG and the LIN/LOX tank markets.[42] Respondents contend that this entry and expansion make the parties' former dominance irrelevant, that the Commission should focus solely on this post-acquisition period, and that the Commission should find that the acquisition does not violate the antitrust laws.

Established antitrust principles hold that entry must be not only likely to occur in a timely manner but also sufficient to constrain post-merger price increases to pre-merger levels.[43] In our assessment of whether the entry in these markets meets this standard, we have considered both

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[39] *University Health,* 938 F.2d at 1218 (citations omitted).

[40] *Id.* at 1218-19.

[41] The Complaint initially pled the relevant lines of commerce as TVCs, LNG tanks, LNG peak-shaving plants, LNG import terminals, LPG tanks, and LIN/LOX/LAR tanks (which are also known as LIN/LOX tanks). However, the Initial Decision found the four relevant markets we identify, and the parties have not contested these markets. IDF 18-19.

[42] Although Respondents characterize both the LIN/LOX and the LPG tank markets as attracting new entry post-merger, we find that a more accurate characterization of the phenomenon to which Respondents point is an attempted expansion by smaller incumbents.

[43] *Merger Guidelines* §§ 3.2-3.4.

the post-acquisition bidding evidence in the relevant markets[44] and the bidding history of those markets. The history of these markets reveals that they have not been characterized by easy entry and expansion and have been dominated by Respondents for decades.[45] Despite the fact that suppliers have come and gone in these markets over the years and have, on occasion, been awarded a bid and constructed a tank, the evidence demonstrates that the real competition in these markets has been between CB&I and PDM. The evidence strongly suggests that this dynamic would have continued absent the merger, and Respondents' own strategic planning documents predicted that the merged firm would "dominate" the relevant markets.[46] Thus, to determine whether the entry Respondents suggest is likely to restore the competition lost from the merger, we must determine whether a sea-change has occurred in these markets so as to render inapplicable the competitive conditions that have held for so long. Based on the evidence, we conclude that such is not the case and that the entry and expansion alleged by Respondents are not sufficient to constrain CB&I's conduct in the foreseeable future (and thus offset the harm to competition resulting from the acquisition).

In Part II of this Opinion, we discuss the product markets and review the conditions that

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[44] Some post-acquisition evidence may not necessarily receive as much weight as other types of evidence. *See United States v. General Dynamics Corp.*, 415 U.S. 486, 504-05 (1974) ("If a demonstration that no anticompetitive effects had occurred at the time of trial . . . constituted a permissible defense to a §7 divestiture suit, violators could stave off such actions merely by refraining from aggressive or anticompetitive behavior."); *Hospital Corp. of America v. FTC,* 807 F.2d 1381, 1384 (7th Cir. 1986) ("Post-acquisition evidence that is subject to manipulation by the party seeking to use it is entitled to little or no weight."); *B.F. Goodrich Co.,* 110 F.T.C. 207, 341 (1988) (same). *See also FTC v. Consolidated Foods Corp.,* 380 U.S. 592, 598 (1965) (finding that the court of appeals gave too much weight to post-acquisition evidence that, among other things, showed a declining share).

[45] Areeda, Hovenkamp & Solow have commented that "[t]he only truly reliable evidence of low barriers is repeated past entry in circumstances similar to current conditions." 2A Phillip E. Areeda, Herbert Hovenkamp & John Solow, Antitrust Law: An Analysis of Antitrust Principles and Their Application, ¶420b, at 60 (2d ed. 2002). *See also FTC v. Cardinal Health, Inc.*, 12 F. Supp. 2d 34, 56 (D.D.C. 1998) ("[T]he history of entry into the relevant market is a central factor in assessing the likelihood of entry in the future.").

[46] *See* CX 74 at PDM - C 1005941(PDM document evaluating a possible acquisition of CB&I and stating that it would result in "[m]arket dominance in [the] Western Hemisphere"); CX 648 at PDM-HOU 000267 (recommendation to PDM's Board that states that acquiring CB&I will result in "[m]arket dominance"); Tr. at 5169 (testimony from Luke Scorsone [now the head of CB&I's Industrial Division] that he believed that an acquisition of CB&I by PDM could result in worldwide market dominance for LNG and LPG tanks). *See also* CX 1686 at CBI/PDM-H 4005550 ("When the integration process is over," CBI "will truly be the world leader instorage [sic] tanks").

characterize sales in those markets. Specifically, Part II explains how LNG tanks, LPG tanks, LIN/LOX tanks, and TVCs are constructed and how bidding takes place in each of these markets.

Part III of the Opinion examines the sufficiency of Complaint Counsel's prima facie case, deals with the Initial Decision's exclusion of the HHI evidence, and explains the role of such evidence in our assessment of Complaint Counsel's case. We also examine the bidding history in each of the relevant markets and conclude, contrary to the Initial Decision, that this history not only bolsters the HHI evidence but also provides an independent reason for finding that Complaint Counsel met their burden. Finally, we examine evidence related to entry conditions in each of the relevant markets and conclude that entry in each market is extremely difficult.

In Part IV, we examine Respondents' rebuttal case. We first reject Respondents' argument that the small size of the relevant markets precludes finding liability under Section 7 of the Clayton Act. We also examine Respondents' evidence of entry in the LNG, LPG, and LIN/LOX tank markets and conclude that the entry and expansion identified by Respondents are inadequate to restore these markets to their premerger state. Because we find that entry into the relevant markets is difficult and that effective entry and expansion are not likely to occur in the foreseeable future, we also reject Respondents' potential competition argument. Finally, we examine evidence related to whether customers can constrain a price increase by CB&I and determine that they cannot. We conclude that Respondents have not rebutted Complaint Counsel's prima facie case.

Part V of the Opinion discusses the likely competitive effects of the acquisition and concludes that the acquisition is likely to lessen competition substantially in the relevant markets.

In Part VI, we explain why, given our conclusions in Parts III, IV, and V, we do not need to consider the issues raised by Complaint Counsel's cross-appeal to the extent it argues that the ALJ erred in not finding that the acquisition resulted in actual anticompetitive effects.

In Part VII, we consider and reject Respondents' argument that competition in the relevant markets was not harmed because PDM would have exited the four relevant markets absent the acquisition.

Part VIII sets out the remedy that we are ordering in this matter and addresses the issues raised by Respondents' and Complaint Counsel's respective objections to the ALJ's order.

In sum, we adopt the Initial Decision's holding that the acquisition violated Section 7 of the Clayton Act and Section 5 of the Federal Trade Commission Act in all four relevant markets, and we adopt the findings set out in the Initial Decision to the extent they are not inconsistent with our Opinion. We also make a number of new factual findings based upon our de novo

review of the record.[47] We order Respondents to divest such assets and take such actions as are necessary and appropriate to establish a viable competitor to the market that will restore the competition lost from this acquisition.

II. Industry Background

A. LNG Tanks

LNG tanks are field-erected tanks that can store between 2.5 million and 42 million gallons of natural gas (primarily comprising methane)[48] at cryogenic temperatures (-260° F). These tanks are very large, potentially having a diameter of 200 feet or more[49] and a height of 100 to 150 feet, and can cost approximately $35 million to $50 million.[50] Because they store the gas cryogenically, LNG tanks must have inner walls made of 9 percent nickel steel.[51] The metallurgical properties of this 9 percent nickel steel require special welding techniques to ensure against cracking and other problems. If LNG leaks through the tank due to faulty welding, the consequences can be disastrous,[52] and although this result is unlikely given the quality checks now in place, faulty welding can result in significant construction delays and substantial economic and financial losses.[53]

There are three types of LNG tanks currently produced: (1) single-containment tanks, (2) double-containment tanks, and (3) full-containment tanks. A single-containment tank is a double-walled steel tank that comprises one 9 percent nickel steel tank surrounded by insulation

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[47] Throughout this Opinion, our legal conclusions and findings of fact are intermixed according to subject matter.

[48] Tr. at 537, 1560, 4452, 4964. The transcript describes LNG tank capacity in terms of both gallons and barrels. For consistency, we have converted all capacity figures to gallons. There are 42 gallons in a barrel. Tr. at 320, 5007.

[49] IDF 24.

[50] Tr. at 4566, 6260.

[51] Tr. at 530.

[52] Tr. at 564-65, 1789, 6234-35.

[53] *See, e.g.*, Tr. at 6285-87 (liquidated damages account for the fact that the revenue stream does not begin until the facility is finished and that delay can result in the loss of "a lot of revenue") (*in camera*).

and a carbon steel tank (to hold the insulation in place).[54] Both of these tanks are enclosed by a concrete or earthen dike.[55] A double-containment tank also consists of an outside container that encloses the inner 9 percent nickel steel and carbon tanks. However, unlike the structure surrounding the nickel-steel tank in a single-containment tank, the outer container in a double containment tank is also capable of holding the LNG so that if the inner tank fails, the liquid will be contained.[56] A full-containment tank has the 9 percent nickel steel tank used in a single-containment tank encased in a layer of concrete, so that both liquid and vapor are contained in the event of a spill.[57] Customers choose between tank types based on the nature of the area (urban versus rural), the land area for the site, the size of the tank, and the Federal Energy Regulatory Commission's (FERC) vapor dispersion and thermal radiation requirements.[58]

The inner 9 percent nickel steel tank for any LNG tank is difficult to make. The sheets constituting these tanks must be curved and beveled correctly, and the design, welding, and erection of the tanks must take account of specific characteristics such as the fact that the thickness of the plate varies from top to bottom.[59] Among other things, the foundation of the tank also must be designed and constructed to protect the ground from the tank's cold temperatures, and piping connections and pumps must be designed and constructed to properly move the fluid in and out of the tank.[60] An LNG tank supplier must also identify, contract with, and supervise traveling field crews and local labor crews and maneuver the project through various federal and local regulatory processes. This entire process must occur in a timely manner, because delays in the project result in unrealized cash flow and economic losses to the

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54 Tr. at 530, 4110.

55 Tr. at 531, 6170.

56 Tr. at 531, 6171.

57 Tr. at 532, 6170.

58 FERC regulations require that the radiation intensity of a potential fire and the vapor dispersion from a potential spill not exceed certain limits at the boundary of the site. Tr. at 533, 6969. A computer model calculates the distance needed from the center of the tank to the site boundary based on the size of the tank. Tr. at 6970. Because full-containment tanks result in lower vapor dispersion and thermal radiation values, they can be placed on smaller parcels of land than can accommodate single-containment or double-containment tanks. Tr. at 533-34. Similarly, double-containment tanks can be placed on smaller pieces of land than comparably sized single-containment tanks. Tr. at 6971.

59 Tr. at 5898.

60 Tr. at 5920-5922.

customer, which may result in liquidated damages for the tank supplier.[61]

LNG storage tanks generally serve two types of facilities: LNG import terminals and peak-shaving plants. LNG import terminals receive LNG from tankers and offload the LNG to storage tanks. As the LNG is distributed, the import terminal pumps the liquid out of the LNG storage tanks, vaporizes and pressurizes the gas, and sends it to the pipeline.[62] In an import terminal, this process usually happens at roughly the same time that the liquid is unloaded from the tanker. A peak-shaving plant, on the other hand, is used by local utilities to store LNG to provide reserves in case of a shortage.[63] Thus, as natural gas is delivered, it is liquefied and stored in the tanks. When the gas is needed, the liquid is vaporized and then sent back through the natural gas pipeline. The two major components of a peak-shaving plant are the liquefaction unit (which brings the gas in, treats the gas so it can be liquefied, and then performs the liquefaction) and the LNG storage tanks.[64] Field-erected LNG tanks at peak-shaving plants tend to have smaller capacity than those used in LNG import terminals.[65]

B. LPG Tanks

LPG tanks are field-erected, refrigerated tanks for liquefied gases including propane, butane, propylene, and butadiene.[66] These tanks store liquefied gases at low temperatures, around $^{-}50°$ F.[67] LPG tanks are also very large, store hundreds of thousands of barrels of LPG, and cost approximately $5 million.[68]

As with LNG tanks, the steel for LPG tanks is fabricated in pieces, shipped to the site, assembled, and welded.[69] The tanks also require proper insulation and a foundation that protects

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61 Tr. at 6184, 6265-66, 6481-82.

62 Tr. at 6170; IDF 25.

63 IDF 26.

64 *Id.*

65 IDF 27.

66 IDF 30; CX 993 at PDM-HOU021479.

67 Tr. at 2722-23.

68 Tr. at 6575, 6719-20, 7281.

69 Tr. at 6567, 6574.

against the very cold temperatures of the stored liquid moving from the tank into the earth.[70] If this temperature migration were to occur, the resulting frost would damage the structure of the tank.[71] Similar to LNG tanks, LPG tanks are a critical component of LPG import/export terminals in that they receive LPG from ships (to be moved through pipelines) and from pipelines (to be placed on ships and exported).[72] An LPG terminal with adequate storage capacity can both import and export LPG.[73]

C. LIN/LOX Tanks

LIN (liquid nitrogen), LOX (liquid oxygen), and LAR (liquid argon) (collectively, LIN/LOX) tanks are field-erected cryogenic tanks that store various liquid gas products at cryogenic temperatures at approximately -300° F or lower.[74] Their design is similar to that of LNG tanks, and they usually include inner and outer shells.[75] However, they are smaller than LNG tanks,[76] holding 300,000 to 1,000,000 gallons of liquid.[77] A typical LIN/LOX tank costs $500,000 to $1.5 million.[78]

LIN/LOX tanks are an essential part of integrated air separation facilities used by major industrial gas firms such as Air Liquide, Air Products, Praxair, BOC, and MG Industries. Air separation facilities separate air into its constituent components of nitrogen, oxygen, and argon.[79] Air separation facility customers use the gases for various industrial applications that require large amounts of storage capacity.[80]

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70 Tr. at 6579-81.

71 Tr. at 6581.

72 Tr. at 6709.

73 *Id.*

74 Tr. at 825, 833-34; CX 650 at CBI/PDM H4019758.

75 Tr. at 833.

76 Tr. at 1346, 4072; CX 170 at CBI-PL009650.

77 Tr. at 1346.

78 Tr. at 1507-08.

79 Tr. at 338, 824-26, 1386.

80 JX 37 at 33.

At ambient temperatures, LIN is used to create inert (non-reactive) environments in applications such as chemical blanketing or purging. In its liquid form, LIN has cooling or freezing applications in the food and manufacturing industries. In manufacturing, LIN can also shrink materials that otherwise would not fit in the fabrication process. LOX, which unlike LIN is a very reactive gas and combines directly with virtually all elements, is used in the medical industry for oxygen treatment and in the steel and glass industries for combustion and melting. LAR is even more inert than LIN and has applications where an extremely inert environment is required, such as high-quality welding (where it is used as a shielding gas) and primary metal furnaces (where it acts to protect the furnace from high temperatures).

D. TVCs

A field-erected TVC is the outer shell of a large vessel that is used to simulate outer space in order to test satellites before they are launched.[81] TVCs also contain a thermal vacuum system composed of an inner shroud, vacuum insulated pipe, a thermal conditioning unit, and cryogenic pumps or other pumping equipment.[82] Together, this highly sophisticated system of temperature and vacuum controls allows the chamber to attain temperature ranges from ⁻292° to ⁻238° F and a range of extreme vacuum levels.[83] Field-erected TVCs can be as large as 45 by 45 by 60 feet[84] and can cost $12 million to $17 million.[85]

Typically, one company builds the shroud and another company builds the surrounding tank.[86] The dominant shroud constructors have been PSI (aka Chart) and XL, which, prior to the merger, formed alliances with the dominant tank constructors – PDM and CB&I, respectively.

E. Bidding

As we further discuss in Part III.B, *infra*, all four relevant markets are characterized by a purchasing process that uses some form of competitive bidding. In the LNG, LPG, and LIN/LOX tank markets, for example, buyers try to create a competitive environment by sending

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[81] Tr. at 1262.

[82] Tr. at 1263.

[83] Tr. at 1262. The testimony characterized the temperature range as ⁻180° to ⁻150° C. For consistency, we have converted these figures to Fahrenheit.

[84] Tr. at 1264.

[85] Tr. at 1891 (*in camera*), 1923 (*in camera*), 2074.

[86] Tr. at 1264.

bid packages to multiple bidders.[87] Both LNG and LIN/LOX customers testified that they prefer to have at least three bidders.[88] In addition, although it appears most prevalent in the LPG and LIN/LOX tank markets, customers in all three tank markets use a second round of bidding to negotiate price so that they can "leverage the competitive environment prior to contract award."[89] Customers in all three tank markets also sometimes inform bidders of the existence of competition in order to reduce the prices bid.[90] Similarly, in the TVC market, customers solicit proposals from multiple bidders and then either select one bidder with whom to negotiate a best and final offer (BAFO)[91] or negotiate BAFOs with multiple bidders.[92]

Bidding for LNG tanks, however, is particularly complicated, because the construction of peak-shaving plants and LNG import terminals can be organized in a number of ways.[93] For example, a facility owner may choose to manage the project and solicit competitive bids for various stages of the project, such as the front-end engineering and design (FEED) work for the facility or the LNG tank. On the other hand, a facility owner may hire an Engineering, Procurement, and Construction (EPC) firm to manage the full breadth of the project. As the name suggests, an EPC contractor engineers the project, procures equipment and material, and constructs (or manages the construction of) the facility. Depending on its abilities and the customer's preference, an EPC contractor can perform the entirety of the work itself, subcontract portions of the work (such as LNG tanks) to other providers, or simply manage the various subcontractors for the owner.[94] In addition, although many LNG tank customers use competitive bids to select an EPC firm, some customers choose to negotiate sole-source contracts with

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87 Tr. at 2302, 2307, 7083.

88 Tr. at 347-38, 4618-19, 6495.

89 Tr. at 2299; *see also* Tr. at 349-50, 1992-93.

90 Tr. at 2304-05, 4954, 5040, 6603, 6626-27.

91 Tr. at 1440.

92 Tr. at 211.

93 Tr. at 704 (*in camera*). In addition to engaging in multiple iterations of bidding, LNG tank customers also employ blind bids, where a bidder has one shot to submit its bid and does not know who its competition is.

94 Where the EPC contractor takes on responsibility for the subcontractor's work or performs the work itself, the contract amounts to a turnkey contract. A turkey contractor for an LNG import terminal or peak-shaving facility is responsible for building the entire plant from the engineering through the start-up of the plant. Tr. at 1323. Suppliers prefer to provide the customer with the entire facility, because such projects have higher margins than stand-alone LNG tanks. Tr. at 2812-13; CX 660 at PDM-HOU005013.

certain suppliers.[95] This practice appears less prevalent in the LPG and LIN/LOX tank markets.[96]

III. Complaint Counsel's Prima Facie Case

A. Herfindahl-Hirschman Index Calculations

At trial, Complaint Counsel presented sales evidence from 1990 to 2001 and asserted that CB&I and PDM accounted for over 70 percent of all sales made in each of the relevant markets (and 100 percent of all sales in both the LNG and TVC markets).[97] Complaint Counsel argue that these sales data translate into HHIs that entitle them to a presumption that the acquisition will lessen competition.[98] Complaint Counsel alleged – and the Initial Decision found – that the acquisition would result in post-acquisition HHIs of 5,845 for the LIN/LOX tank market, 8,380 for the LPG tank market, and 10,000 for the LNG tank and TVC markets.[99] Based on Complaint Counsel's evidence and the Initial Decision's findings, the acquisition resulted in HHI increases of 2,635 for the LIN/LOX tank market, 3,911 for LPG tank market, 4,956 for the LNG tank market, and 4,999 for the TVC tank market.[100]

HHIs measure market concentrations and can indicate market power (or the lack thereof). They have been consistently employed by courts assessing the likely impact of a merger or acquisition.[101] The Initial Decision, however, refused to rely on the HHI data that Complaint Counsel put into evidence. The ALJ reasoned that in markets with sporadic sales, finders of fact must treat concentration data with a fair bit of skepticism, because the numbers may not accurately represent the competitive landscape. The Initial Decision also pointed out that the changes in concentration in this case are sensitive to the time period chosen and therefore

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95 Tr. at 6180-82, 6267.

96 *See* Tr. at 6712-13.

97 CCACAB at 21.

98 *Id.* at 20.

99 Tr. at 3443, IDF 273 (LIN/LOX); Tr. at 3403-04, IDF 218 (LPG); Tr. at 3055, IDF 68 (LNG); Tr. at 3494, IDF 371 (TVC).

100 *Id.*

101 *See, e.g., Heinz*, 246 F.3d at 716; *PPG Indus.*, 798 F.2d at 1503; *Cardinal Health*, 12 F. Supp. 2d. at 53-54.

concluded that the HHIs are arbitrary and unreliable.[102] Specifically, the ALJ noted that because CB&I did not build an LNG or LPG tank or a TVC between 1996 and the acquisition, the change in concentration for that time period would be zero.[103]

We understand the ALJ's point and agree that in markets with sporadic sales, finders of fact must treat concentration statistics with care. However, total disregard of the concentration statistics is an entirely different matter and is a step we are unwilling to take in this case. Were one to look at a snapshot of a particular time, the HHIs taken alone might give the impression that CB&I was not a competitive force at that time. But such a notion is contradicted by other evidence in this case.[104] The ALJ's observation – which reflects a recognition that the sales in these markets are indeed sporadic – simply shows why it is appropriate to consider an extended period of time in analyzing these markets. Therefore, we reverse the ALJ's conclusion and will take account of the HHIs in this case.

We have considered the probative value of the concentration data in this case in light of all other evidence and have concluded that the evidence here corroborates – rather than refutes – the inferences that can be drawn from the HHIs. For example, in all four relevant markets, CB&I and PDM made by far the greatest number of sales, not only for the time period focused on by Complaint Counsel, but also for at least two decades. Indeed, as we noted earlier,[105] Respondents do not contest that they were the dominant suppliers in all four markets prior to the acquisition. In addition, none of the relevant markets is characterized by easy entry, and other firms making tanks in the various markets have not expanded their presence by any appreciable measure. We thus believe the nature of sales in these markets distinguishes the instant case from cases in which courts have given HHIs little weight due to market conditions. In *Baker Hughes*, for example, the government did not present evidence beyond the concentration levels themselves, and the court found those data unreliable given the volatile nature of the market and low entry barriers.[106] Similarly, in *General Dynamics*, the Supreme Court found that the market share data overstated the competitiveness of the acquired firm going forward, because they did

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[102] ID at 91-92.

[103] ID at 91.

[104] Respondents' own economic expert, Dr. Barry Harris, acknowledged that it would be incorrect to conclude that the merger does not hurt competition simply because one Respondent accounted for all the sales in a relevant market over some period of years and the other Respondent accounted for none. Tr. at 7228.

[105] *See* Part I.C, *supra.*

[106] 908 F.2d at 986 (citing *United States v. Baker Hughes*, 731 F. Supp. 3, 11 (D.D.C. 1990)).

not take into account that firm's depleted reserves and commitment contracts.[107]

In a case such as this, where there are very few sales in any given year, the aggregation of sales data over a period of years can present a compromise. On the one hand, aggregating sales over a longer period increases the risk that competitive conditions will have changed significantly over the period. On the other hand, extending the time period in order to enlarge the sample of sales reduces the risk that chance outcomes will obscure the competitive significance of the different firms. In other words, aggregating sales data over a longer period can either increase or decrease the degree to which the corresponding HHIs accurately reflect competitive conditions.

Here, the evidence shows that competitive conditions have not changed sufficiently over an extended period to undercut the HHIs' central implication – that CB&I's acquisition of PDM combined the two principal competitors in these markets and is therefore likely to have harmed competition. Unlike the market described in *Baker Hughes*, the markets in this case are not volatile and shifting. Rather, these two companies are the only competitors that have made significant sales in each of the four markets for at least the past two decades. This fact is unquestionably reflected in the concentration levels presented by Complaint Counsel. Therefore, we believe that an extended time frame is an appropriate period in which to analyze the parties' sales data. Although the 11-year period chosen by Complaint Counsel is not the only option that was available, we are satisfied that the data present a representative picture of the various markets, given Respondents' long history of dominance in these markets preceding the acquisition. We also believe that the 1996-2001 period on which the ALJ focused provides a less reliable barometer than a more extended period.

The HHIs presented by Complaint Counsel for the four relevant markets range from 5,000 to 10,000 post-acquisition, with concentration increases that range from 2,600 to 5,000. They are thus well above the level needed to establish a prima facie case and entitle Complaint Counsel to a presumption that the merger is "likely to create or enhance market power or facilitate its exercise."[108] As we will discuss, however, Complaint Counsel also presented evidence of pre-acquisition bids, contemporaneous documents from the parties, and customer testimony that all suggest that the acquisition will have an anticompetitive effect in each relevant market. We find that this additional evidence not only bolsters the validity of Complaint Counsel's HHIs but also provides ample reason for finding that they established a prima facie case.

B. Pre-Acquisition Competition in the Relevant Markets

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[107] 415 U.S. at 493.

[108] *Merger Guidelines* § 1.51.

In all four relevant markets the evidence establishes that CB&I and PDM were each other's closest competitor prior to the acquisition, and that together they largely dominated the sales of LNG, LPG, and LIN/LOX tanks and TVC tanks. These two companies also closely monitored each other's activities, and customers were frequently able to play one firm off against the other in order to obtain lower prices. The acquisition eliminated this substantial direct competition between them and left CB&I with an "undue" percentage share of each market. In this section, we further examine Complaint Counsel's market share case to consider the conditions that prevailed in each of the four markets. Based on this examination, we conclude that the qualitative evidence leaves no doubt that the acquisition has left CB&I as the dominant player – indeed, the only major player – in all of the markets and, as just noted, provides an independent reason for finding a strong prima facie case of presumptive liability. Accordingly, the evidence "creates, by a wide margin, a presumption that the merger will lessen competition" in each of the four markets.[109]

1. Pre-Acquisition Competition in the LNG Tank Market

The evidence establishes that prior to the acquisition CB&I and PDM had a virtual duopoly in the manufacture and construction of LNG tanks. From 1990 to the acquisition in 2001, these two firms were the only winners of bids to build LNG tanks in the United States. While one could argue (as Respondents do) over whether 1990 to 2001 is the appropriate period to examine, the choice of another period would not dramatically change the results: CB&I and PDM were the only companies with non-trivial sales of LNG tanks for over three decades.[110]

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[109] *Heinz*, 246 F.3d at 716. However, *Baker Hughes* noted that "evidence of market concentration simply provides a convenient starting point for a broader inquiry into future competitiveness." *Baker Hughes*, 908 F. 2d at 984. *See also General Dynamics*, 415 U.S. at 498 (1974) ("[S]tatistics concerning market share and concentration, while of great significance, [are] not conclusive indicators of anticompetitive effects[.]"); *Merger Guidelines* § 2.0 ("[M]arket share and concentration data provide only the starting point for analyzing the competitive impact of a merger."). Nonetheless, where concentration levels are extraordinarily high – as they are in this case – Respondents bear the burden of demonstrating that the HHIs are unreliable in predicting a transaction's competitive consequences. *See Heinz*, 246 F.3d at 715.

[110] From 1975 to the time of the acquisition, PDM and CB&I were the only companies that constructed LNG tanks for import terminals. Similarly, out of the 95 LNG tanks awarded for United States peak-shaving facilities in the 35 years prior to the acquisition, only seven tanks went to companies other than CB&I and PDM, and none went to other companies in the preceding 11 years. CX 125, CX 1645. CX 1645 discusses two additional peak-shaving projects not identified in the 93 projects listed in CX 125 – the 1995 MLGW project and the 1995 Pine Needle LNG project. The Citizen's Gas & Coke and South Carolina Pipeline Corp.

In the 11 years prior to the acquisition, CB&I and PDM were also the only bidders for the vast majority of projects.[111] The evidence reveals that firms other than CB&I and PDM bid in only two projects of nine.[112] Moreover, both of those projects demonstrate that CB&I and PDM did not face significant competition from other suppliers. Although Lotepro teamed with Whessoe and Black & Veatch teamed with TKK, and both groups submitted bids for MLGW's peak-shaving plant in Capleville, Tennessee,[113] their bids were well above that of CB&I. [114] Similarly, evidence suggests that CB&I and PDM were each other's closest competitor in bidding for the Atlanta Gas peak-shaving plant. Although the project was ultimately cancelled, Atlanta Gas evaluated another bidder (Marlborough Enterprises) and deemed its bid inferior to those of CB&I and PDM.[115]

Testimony from customers and industry participants establishes that PDM and CB&I were the only viable LNG tank suppliers prior to the acquisition and that the acquisition

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projects discusses in CX 1645 are peak-shaving plants but CX 125 accounts for them. The Granite State Gas and Atlanta Gas projects were cancelled. CX 1645 at 2. The Enron, Cove Point, and Liquid Carbonic projects were not peak-shaving plants. CX 173 at CBI-PL010403, CX 853 at PDM-HOU011488.

[111] IDF 72-73.

[112] IDF 65, 72.

[113] The bid for this project was awarded in 1995. CX 1645.

[114] Tr. at 560, 3196-98. Although PDM was disqualified from bidding on this project because it did not meet the specifications in the request for proposals, MLGW's project manager testified that once the bids were adjusted for quality, PDM's bid was very close to CB&I's. Tr. at 1876.

Respondents argued at trial that the tank bids themselves were competitive and that the difference in the MLGW bids is mostly attributable to the liquefaction portion of the bid. The evidence indicates, however, that CB&I's tank bid was well below those of Black & Veatch/TKK and Lotepro/Whessoe. CB&I bid $36 million for the facility – $22 million for the liquefaction facility and $14 million allocated to the tank. Tr. at 648, 1809. In contrast, Lotepro/Whessoe's bid was $40 million. Tr. at 1809. Although there is no evidence on the precise breakdown of Lotepro's bid, the project manager for MLGW testified that the tank portion of Lotepro's bid was "quite a bit higher" than CB&I's. Tr. at 1810. Similarly, Black & Veatch/TKK's bid was $47.7 million, of which $31 million was allocated to the liquefaction process and $16.7 million was allocated to the tank. Tr. at 648.

[115] CX 161.

substantially harmed competition.[116] MLGW testified that it was concerned about the competition for its upcoming project in 2006, because post-acquisition it does not "see anyone out there with experience that could come into the market and compete with CB&I/PDM."[117] A representative of another customer, People's Light, Gas & Coke, testified that the acquisition eliminated a choice and would have a "negative impact."[118] He elaborated that "[w]hat makes a vendor bid a lower price is not altruism but a fear that if you do not bid that lower price, you won't get the job."[119] An industry consultant echoed this concern and stated, "[T]here's plenty of people out there that will bid, but I think it will be difficult for anybody to come in and beat a bid from CB&I at this point."[120]

The parties' internal documents also confirm that CB&I and PDM did not consider other firms to be significant competitive threats. In the years prior to the acquisition, CB&I and PDM focused almost exclusively on each other in their assessment of the competitive landscape and paid little or no attention to what other companies were doing. For example, PDM's 1998 President's Report to the Board of Directors devoted two of seven pages to CB&I, with virtually no mention of any other competitor.[121] PDM's 2000 Business Plan also analyzed the "Domestic LNG" market and concluded that "CB&I is PDM EC's domestic competition for LNG tanks."[122] In fact, Luke Scorsone, who now heads CB&I's Industrial Division,[123] candidly admitted that prior to the acquisition he viewed PDM as CB&I's lone competition in the LNG tank market.[124]

2. Pre-Acquisition Competition in the LPG Tank Market

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[116] The testimony discussed in this paragraph of text comes from witnesses who observed first-hand the competition between CB&I and PDM.

[117] Tr. at 1830.

[118] Tr. at 324.

[119] *Id.*

[120] Tr. at 703 (*in camera*).

[121] CX 68.

[122] CX 94 at PDM-HOU017580.

[123] Prior to the acquisition, Mr. Scorsone was head of PDM's Erected Construction Division, which was the division responsible for sales of the various storage tanks and the TVCs at issue in this case.

[124] Tr. at 4851.

Although the LPG tank market appears not to have been a duopoly prior to the acquisition,[125] only two of the 11 projects bid from 1990 until the acquisition were won by firms other than CB&I and PDM.[126] Furthermore, we find that fully crediting these two projects overstates their competitive impact. First, although Morse won a bid in 1994, it was later acquired by CB&I and is no longer in the market.[127] Second, although AT&V won a small project near its Gulf Coast fabrication facilities in 2000, the record suggests that this award was an anomaly given the small size and the proximity of the tank to its facilities.[128] Even if we credit these wins fully, CB&I and PDM still stand as the dominant players and closest competitors, with only an occasional job going to other firms.

We have taken note that CB&I had not won any LPG tank jobs from 1994 until after the acquisition.[129] While this fact, at first blush, seems to undermine the pre-acquisition competitive significance of CB&I and suggests that the acquisition may not have actually lessened competition between CB&I and PDM in LPG tanks, the record shows that CB&I's string of losses after 1993 is not competitively significant. One of the LPG jobs that PDM won during this period (the Sea-3 project) is anomalous because PDM's bid left out a $400,000 piece of equipment that should have been included in the price.[130] It is not clear that PDM would have won the bid absent this error. In addition, during this period, CB&I continued to bid on each of the available LPG jobs, and the evidence suggests that its presence constrained PDM's pricing.[131]

Demand for LPG tanks has been declining,[132] and therefore customer testimony on the potential effect of the acquisition is scant. Nevertheless, Fluor testified that the competitive

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[125] In addition to CB&I and PDM, the record identifies AT&V, Matrix, Wyatt, Morse, and Pasadena Tank as bidders. Tr. at 3750, 5040, 6550, 6561, 7286. *See also* JX 23a at 119-123 (*in camera*), CX 397.

[126] IDF 210.

[127] Tr. at 6546.

[128] Tr. at 7129-31, 7133-34; CX 107 at PDM-HOU005015.

[129] Complaint Counsel's expert calculated the probability of CB&I's losing five straight bids if it were one of two equal bidders as 3.13 percent. Tr. at 3686-87. If it were one of three equal bidders, the probability would be 32/243 (or 13 percent). Tr. at 3688.

[130] Tr. at 4826.

[131] Tr. at 2300, 2306, 3375; CX-63, 68, 94 at PDM-HOU017582, 116, 660.

[132] *See* Tr. at 2309 (Fluor not aware of any field-erected LPG tanks being planned by anyone).

alternatives to Fluor for its Sea-3 project were PDM and CB&I.[133] In addition, as is the case with the LNG market, the parties' own documents reflect that they viewed each other as the primary competition for LPG tanks. PDM strategic planning documents identified CB&I as "PDM EC's only competitor on domestic . . . LPG . . . projects."[134] CB&I's documents echo this sentiment. A presentation for CB&I's Board of Directors examined business conditions for 2000 and remarked that "[t]he combination of CB&I/PDM would be very strong in aggregating technology expertise, field crews and customer relationships."[135] Mr. Scorsone also testified that PDM was a formidable competitor to CB&I in LPG tanks in the Western Hemisphere.[136]

As with the LNG market, Respondents projected that the acquisition would give them market power in LPG tanks. In August 1999, PDM's CEO suggested to the PDM Board that PDM acquire CB&I, with an eye to achieving "[m]arket dominance in [the] Western Hemisphere, . . . LPG worldwide market dominance."[137] Although Scorsone testified that he made these statements merely to elicit enthusiasm from the Board and that it would have been very hard to dominate the domestic market,[138] we find that these statements were more than mere puffery. CX 648 is replete with references to CB&I and makes no reference to the competitive impact of other firms. At his investigational hearing, Scorsone also testified that CB&I was the largest in the world and an "icon for us [PDM] to focus on."[139] He admitted that he had believed that "market dominance" could be an outcome of an acquisition when he made the presentation to PDM's Board in 1999.[140] In addition, testimony from two major LPG customers reflects the

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[133] Tr. at 2307-08. Matrix, a would-be entrant, also stated that CB&I and PDM were the only competitors for LPG tanks. Tr. at 1614.

[134] CX 107 at PDM-HOU005016 (PDM's "Strategic Plan 2000"); CX 68, 94, 648, 660.

[135] CX 216 at CBI-PLO33892.

[136] Tr. at 4263-64; *see also* CX 163 (CB&I document mentioning PDM as main competitor in the low temperature and cryogenic market, which includes LPG); CX 216 (CB&I Board of Directors' September 2000 Strategy Meeting document) at CBI-PL033886 (PDM a "formidable competitor" to CB&I in LPG in Western Hemisphere).

[137] Tr. at 4788-87; CX 648 at PDM-HOU000267 (August 1999 presentation to PDM Board of Directors).

[138] Tr. at 4786-88.

[139] Tr. at 5168.

[140] Tr. at 5168-69. *See also* CX 68 at 8 (August 1998 PDM Board presentation) ("CBI is PDM EC's major competitor in almost all of the significant markets PDM EC serves.").

view that the only competitive alternatives in the LPG tank market were PDM and CB&I.[141]

3. Pre-Acquisition Competition in the LIN/LOX Tank Market

The LIN/LOX tank market includes (and has historically included) several small fringe firms. Thus, like the LPG tank market prior to the acquisition, the LIN/LOX market was not an outright PDM/CB&I duopoly. In addition, Graver manufactured LIN/LOX tanks from 1990 until its exit in 2001.[142] Two additional firms, AT&V and Matrix, entered the market not long before the acquisition.[143] Chattanooga was an active bidder both before and after the acquisition but has yet to win a bid.[144] One additional firm, BSL, bid for a time and then exited the market.[145]

Despite the appearance, and disappearance, of multiple competitors in the LIN/LOX market, our examination of recent market history, customer testimony, and company documents leads us to find that the real competition in LIN/LOX tanks prior to the acquisition consisted of only CB&I, PDM, and Graver – and then of only CB&I and PDM after Graver exited in 2001. From 1990 to the acquisition, 109 LIN/LOX tanks were constructed.[146] Of these tanks, CB&I won 25, PDM won 44, Graver won 34, Matrix won 4, and AT&V won 2.[147] Graver was a well-known competitor in LIN/LOX tanks.[148] Its exit in 2001 was a significant event that further concentrated an already concentrated market.[149] Matrix had just entered the market a few years

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141 Tr. at 2308, 3367.

142 IDF 269-70.

143 IDF 313, 320; Tr. at 4599.

144 IDF 325-27.

145 Tr. at 954-55, 1351-52, 1378-80, 1577-78, 2001.

146 IDF 269; ID at 95.

147 *Id.*

148 *See* Tr. at 479, 1350-51, 1378, 1988-89, 6424-25.

149 *See* Tr. at 1988-89. Before it exited the market in 2001, Graver's performance had been deteriorating following its acquisition by Iteq (several years before CB&I acquired PDM). Tr. at 2425.

prior to the acquisition.[150] Shortly before the acquisition, AT&V also was finally able to win a LIN/LOX bid and has since completed the project and won two additional bids.[151] The section on entry below (Part IV.C.3) discusses in detail why none of these third-party firms has been a sufficient entrant – that is, one that has replaced the competition lost from the acquisition.

Customer testimony supports the conclusion that CB&I and PDM were the two principal competitors in the U.S. LIN/LOX tank market after Graver's exit in 2001 and that the acquisition substantially reduced competition. Air Liquide testified that it was concerned about the acquisition because competition had already been reduced by Graver's exit and because prices would tend to rise with only one viable LIN/LOX tank supplier left.[152] Linde testified that the acquisition drastically reduced its choice to one vendor.[153] Air Products testified that the acquisition eliminated a low-cost, preferred bidder and that it expects prices in LIN/LOX to go up as a result.[154] MG Industries testified that the acquisition took away an aggressive competitive bidder and that it is worse off after the acquisition, without PDM in the market.[155] PDM was the lowest bidder for the last three or four project inquiries for MG Industries, which frequently pitted PDM against CB&I to get better prices.[156]

Documentary evidence related to bids also confirms that PDM was an aggressive competitor in the LIN/LOX tank market and frequently underbid CB&I.[157] Sometimes this dynamic caused both firms to submit bids with negative profit margins.[158] Respondents' documents also confirm that CB&I and PDM viewed each other as their primary competition. For example, CB&I and PDM monitored each other's past LIN/LOX bids but did not follow the bids of AT&V or Matrix.[159] In addition, both parties' documents often mention each other, with

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150 IDF 320.

151 Tr. at 2321-22, 2504-05, 4599.

152 Tr. at 1988-91.

153 Tr. at 878.

154 Tr. at 1352-53.

155 Tr. at 475.

156 Tr. at 462.

157 CX 183; CX 193 at CBI-PL20339; IDF 279-82.

158 CX 183; CX 193 at CBI-PL020339.

159 IDF 277-79.

relatively little attention to other competitors.[160] Taken as a whole, this evidence supports the conclusion that the market was dominated by CB&I and PDM and that they were each other's closest competitor at the time of the acquisition.

4. Pre-Acquisition Competition in the TVC Market

Only CB&I, PDM, and Howard have submitted bids for TVC tank projects since 1990. The record demonstrates, however, that despite Howard's bidding presence, it has not been a significant factor in the TVC market. Howard has never won a project and is not regarded by customers as a credible bidder.[161] In fact, although Howard submitted a lower bid for Raytheon's Long Beach project, Raytheon chose the CB&I/XL pairing[162] because Raytheon believed that CB&I/XL had a superior technical approach.[163] In addition, Howard's total yearly revenues are small, ranging from $2.5 million-$3.0 million, and its bonding capability is correspondingly small.[164]

Customers agree that the main competition for TVCs was between CB&I and PDM and that the acquisition would eliminate this competition to their detriment. For example, TRW testified that when it learned that CB&I had acquired PDM, it estimated that the cost for its planned chamber would increase 50 percent.[165] Another customer, Spectrum Astro, testified that it considers competition between at least two suppliers important to foster innovation and to keep prices down.[166]

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160 *Id.*

161 Tr. at 192-93, 384-87, 1443. In addition, Howard's founder testified that he did not believe that Howard had any real chance of winning a large TVC project. Tr. at 192-93.

162 Typically, one company builds the shroud and another company builds the tank that encloses it. Tr. at 1264. The dominant shroud constructors have been PSI (aka Chart) and XL, which have formed alliances with the dominant tank constructors, PDM and CB&I. Thus, in the bidding on field-erected TVC projects, PSI/PDM has typically been pitted against XL/CB&I.

163 Tr. at 383-87.

164 Tr. at 181, 200.

165 Tr. at 1456-57.

166 Tr. at 2050-51.

As with the other product markets, Respondents' documents show us that the real competition for TVCs rested in CB&I and PDM. A draft business plan for CB&I and XL's strategic alliance to bid for TVC projects described the "only competition for the thermal vacuum systems market" as the PSI/PDM "strategic alliance."[167] Witnesses representing the two makers of shrouds for TVCs testified that the only companies able to construct tanks for field-erected TVCs were PDM and CB&I,[168] one stating that "there were basically two dominant companies that supplied the field-erected chambers and two dominant companies that supplied [thermal vacuum control] systems."[169]

5. Conclusions on Pre-acquisition Competition

The qualitative record evidence thus bolsters the conclusions that can be drawn from the HHIs, which show extremely high levels of concentration in all four markets. The acquisition has resulted in a merger to monopoly or near-monopoly in each relevant market, giving rise to a very strong presumption that the merger is anticompetitive. We next turn to a discussion of entry conditions to determine if there is any evidence to suggest that the acquisition is less anticompetitive than the concentration levels show.

C. Entry Conditions

In addition to their prima facie case based on concentration numbers and a more detailed examination of competitive conditions in each market, Complaint Counsel presented evidence that the LNG, LPG, and LIN/LOX tank markets are difficult to enter.[170] Although Respondents present a very different entry argument as a major part of their defense, we analyze entry conditions in the context of Complaint Counsel's prima facie case. We do this because evidence of high entry barriers necessarily strengthens the conclusions to be drawn from Complaint Counsel's showing of high concentration levels.[171] If entry is difficult, then CB&I would be

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167 CX 212 at CBI-PL031721; Tr. at 1159.

168 Tr. at 1110, 1115, 1118, 1267.

169 Tr. at 1118.

170 The difficulty of entry into the TVC market is not in dispute. Rather than suggesting that new entrants or expanding smaller incumbents will restore competition, Respondents argue that CB&I was not a competitive presence in the TVC market. RAB at 48.

171 In addition, while we acknowledge the conceptual framework of shifting burdens of production, we note that as a practical matter it would be difficult to consider this evidence

sheltered from the threat of new entry and any market power it has would be more secure.[172] In contrast, if entry is easy, any market power gained from a merger can be quickly eroded in the event that incumbent firms, acting alone or in unison, increase prices to a supracompetitive level.[173]

In the absence of actual new entry or expansion by smaller incumbents, predictions about entry require speculation firmly rooted in market realities. Indeed, Areeda & Hovenkamp have commented that "[t]he only truly reliable evidence of low barriers is repeated past entry in circumstances similar to current conditions."[174] Over the years, however, courts and commentators[175] have identified a host of variables that might prohibit or deter a new entrant, including government regulation,[176] high initial investments,[177] incumbent control of an essential

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elsewhere in our analysis, because Complaint Counsel introduced this evidence as part of their prima facie case. At least one court has noted this same difficulty. *See University Health*, 938 F.2d at 1219 n.25 (noting that the government introduced all of its evidence at one time and that defendant responded in kind, and concluding that it would analyze whether the FTC had demonstrated that it had "satisf[ied] its ultimate burden of persuasion," *id.* at 1219, rather than focusing on shifting burdens).

[172] *See Heinz*, 246 F.3d at 717 (high entry barriers eliminate the possibility that the competition lost from the merger will be mitigated by new entry); *United States v. Visa U.S.A., Inc.*, 163 F. Supp. 2d 322, 342 (S.D.N.Y. 2001) ("The higher the barriers to entry, and the longer the lags before new entry, the less likely it is that potential entrants would be able to enter the market in a timely, likely, and sufficient scale to deter or counteract any anticompetitive restraints."), *aff'd*, 344 F.3d 229 (2d Cir. 2003).

[173] *Baker Hughes*, 908 F.2d at 987 ("In the absence of significant barriers a company probably cannot maintain supracompetitive pricing for any length of time."); *United States v. Syufy Enters.*, 903 F.2d 659, 671 n.21 (9th Cir. 1990) (noting that low barriers to entry precluded Syufy from maintaining market share and controlling prices).

[174] 2A Areeda, Hovenkamp & Solow, *supra* note 45, ¶420b, at 60 (2d ed. 2002). *See also Cardinal Health*, 12 F. Supp. 2d at 56("[T]he history of entry into the relevant market is a central factor in assessing the likelihood of entry in the future.").

[175] Areeda, Hovenkamp & Solow identify and discuss economies of scale, high initial investment, capital market imperfections, risk, scarce inputs or customers, product reputation and promotion, and governmental constraints as potential barriers to entry. 2A *id.* ¶ 421, at 65-74.

[176] *See, e.g., Syufy*, 903 F.2d at 673 ("some of the most insuperable barriers in the great race of competition are the result of government regulation"); *United States v. Franklin Elec. Co.*, 130 F. Supp. 2d 1025, 1031 (W.D. Wisc. 2000) (identifying a patent as an entry

or superior resource,[178] access to customers,[179] reputation,[180] and economies of scale.[181] In addition, some courts have embraced the economic concept that for an entry barrier to exist, it must impose long-run costs on the new entrant that the incumbent did not shoulder.[182]

We first turn to Respondents' argument that entry barriers are low in the LNG, LPG, and LIN/LOX tank markets based on the alleged entry in those markets.[183] Respondents point to the facts that three new suppliers in the LNG tank market have contacted customers and that one of these suppliers will be awarded the job to build an LNG tank for Dynegy's Hackberry, Louisiana import terminal.[184] Similarly, Respondents attest that new entrants have bid in both the LPG and LIN/LOX tank markets and that one supplier has won awards to build three LIN/LOX tanks post-merger.[185] They thus conclude that although "[t]he ALJ identified several requirements that new entrants must meet in order to enter the relevant markets[,] . . . these requirements are not

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barrier).

177 *See, e.g., Visa*, 163 F. Supp. 2d at 341 (finding, among other barriers to entry, an up-front investment of over $1 billion).

178 *Rebel Oil Co. v. Atlantic Richfield Co.*, 51 F.3d 1421, 1439 (9th Cir. 1995) (identifying, among other things, control by the incumbent of essential or superior resources as a barrier to entry).

179 *Cardinal Health*, 12 F. Supp. 2d at 58; *see also Visa*, 163 F. Supp. 2d at 342 (identifying the inability of Visa to obtain customers and therefore vendors as a barrier to entry).

180 *See, e.g., Swedish Match*, 131 F. Supp. 2d. at 170-71; *Avery Dennison Corp. v. Acco Brands*, 2000-1 Trade Cas. (CCH) ¶ 72,882, 87557 (also available at 2000 U.S. Dist. LEXIS 3938 (C.D. Cal. Feb. 22, 2000)). *See also Franklin Electric*, 130 F. Supp. 2d at 1031-32 (finding customers' insistence on firms with a track record a barrier to entry); *United States v. United Tote Inc.*, 768 F. Supp. 1064, 1079 (D. Del. 1991) (same).

181 *Cardinal Health*, 12 F. Supp. 2d at 57.

182 *See Western Parcel Express v. UPS of America*, 190 F.3d 974, 975 (9th Cir. 1999); *Rebel Oil*, 51 F.3d at 1439 ("capital market evaluations imposing higher capital costs on new entrants").

183 RAB at 20, 25-26.

184 RAB at 14-17.

185 RAB at 17-19.

the same as entry barriers."[186] If Respondents are correct and if entry barriers are low, the merger is not likely to create or enhance market power and thus is not anticompetitive.

We conclude, however, that Respondents' argument misses a crucial point: in order to deter or counteract the competitive effects of a merger, entry must restore the competition lost from the merger. As the *Merger Guidelines* instruct, entry must be not only likely to occur in a timely manner but also sufficient to constrain post-merger price increases to pre-merger levels.[187] This mode of analysis has enjoyed widespread acceptance in courts, in the economic literature, and among antitrust scholars.[188] Indeed, cases prior to the 1992 revision of the *Merger Guidelines* also examined the sufficiency of entry in their analyses. These cases frequently focused on the ability of the new entrant to take market share from or reduce the prices of the incumbent firms. For example, in finding low entry barriers, *Baker Hughes* relied on, *inter alia*, the fact that a firm had entered the market and expanded from insignificance to become the market leader.[189] The court thus concluded that the market was "volatile and shifting"[190] and predicted that "competitors not only [could], but probably [would], enter or expand if [the] acquisition [led] to higher prices."[191] The court's description of that market made clear its understanding that new entrants or smaller incumbents could effectively constrain the merging entity. Similarly, the *Syufy* court found it dispositive that a post-merger entrant took a significant share of the first-run film market away from the incumbent firm, rendering benign what on its surface had been a merger to monopoly.[192]

The focus on sufficient entry has also led some courts to reject the type of argument that

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186 RAB at 20.

187 *Merger Guidelines* §§ 3.2-3.4.

188 *See Visa*, 163 F. Supp. 2d. at 342 (entry must be "timely, likely, and [of a] sufficient scale to deter or counteract any anticompetitive restraints"); *Cardinal Health*, 12 F. Supp. 2d at 55-58 (same); Robert D. Willig, *Merger Analysis, Industrial Organization Theory, and Merger Guidelines*, Brookings Papers on Economic Activity: Microeconomics, 281, 307 (1991) ("[T]he likelihood, timeliness, and sufficiency of the induced entry are the critical elements of the analysis."); 2A Phillip E. Areeda, Herbert Hovenkamp & John Solow, *supra* note 45, ¶422, at 74-78. *See also FTC v. Staples Inc.*, 970 F. Supp. 1066, 1088 (D.D.C. 1997) (finding that expansion by Wal-Mart would not constrain the merging parties' prices).

189 908 F.2d at 988-89.

190 *Id.* at 986.

191 *Id.* at 989.

192 903 F.2d at 665.

Respondents make in this case – that because new players have entered in some nominal sense, entry barriers are low or non-existent. For example, the court in *Rebel Oil* rejected the argument that the existence of two new entrants constituted evidence of low entry barriers and stated that "[t]he fact that entry has occurred does not necessarily preclude the existence of significant entry barriers."[193] The court noted that because the new entrants would be unable "to take significant business away from the predator, they are unlikely to represent a challenge to the predator's market power."[194] The court in *Oahu Gas Service* also refused to find an absence of entry barriers because the new entrants had remained relatively small.[195] Similarly, the trial court in *Tote* found entry insufficient to rebut the government's prima facie case, because new entrants could not constrain anticompetitive price increases by the incumbents.[196] This focus on the competitive impact of the new entry echoes precisely the question posed by the sufficiency prong of the *Merger Guidelines* and relevant case law, and frames the ultimate question we must answer in this case.

In the LNG, LPG, and LIN/LOX tank markets, the mere fact that new entrants and fringe firms have an intent to compete does not necessarily mean that those firms are significant competitors capable of replacing lost competition. The evidence establishes that the firms that Respondents have identified in these markets are pursuing work and that customers have testified that they will consider bids from suppliers other than CB&I.[197] However, these facts at most show that these firms have the capacity to submit a bid.[198] Although the ability to submit a bid is obviously a necessary first step, we find it insufficient to answer the ultimate question – whether the new entry or smaller incumbent expansion can constrain CB&I at the level it was constrained pre-acquisition. As we discuss below, the evidence shows that to compete effectively with CB&I – and thus sufficiently constrain it – bids from these new entrants must also be taken seriously by the customers in these markets and present the customers with

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193 51 F.3d at 1440 (quotation marks omitted).

194 *Id.*

195 *Oahu Gas Serv. Inc. v. Pacific Res. Inc.*, 838 F.2d 360, 366-67 (9th Cir. 1988).

196 768 F. Supp. at 1082.

197 AT&V has also won three awards to build LIN/LOX tanks. However, as we discuss in Part IV.B.3.a.(1), *infra*, AT&V's performance on these jobs calls into question its ability to compete in the future.

198 In the LNG tank market, Skanska/Whessoe, TKK/AT&V, and Technigaz/Zachry have submitted bids for Dynegy's Hackberry, Louisiana project. In addition, AT&V and Matrix have submitted bids for LPG tank projects, and AT&V, Matrix, and Chattanooga have submitted bids for LIN/LOX tank projects. RAB at 14-19.

credible alternatives.[199]

1. Entry Conditions of the LNG Tank Market

LNG tank customers require potential suppliers to have a good reputation, knowledge of the local labor force, knowledge of federal and local regulatory requirements, and employees who are skilled at designing and constructing tanks. In other words, suppliers must have experience to compete. The evidence suggests that customers view experience in the LNG tank market as evolving over time, with each successfully completed project improving a supplier's ability to provide a quality product and to obtain future work. For example, customers evaluate a potential supplier's strength in each of the aforementioned categories. Moreover, it appears that as an LNG tank supplier builds more tanks, it becomes more efficient both in terms of costs and its ability to build a quality product.[200] This dynamic is particularly important in the United States, where CB&I has decades of experience and has solidified a reputation for quality and reliability. To enter the U.S. market effectively, an LNG tank supplier must not only meet customers' basic requirements but also must be able to match CB&I's long-honed abilities.

The evidence clearly establishes that an LNG tank supplier's reputation plays a key role in its ability to compete. Several customers testified that they prefer to deal with companies with experience in both designing and building tanks and that an LNG tank supplier needs to have constructed more than one tank to be viewed favorably. Yankee Gas, for example, testified that a supplier that has constructed only one tank will not meet the "broad level of experience that [it] will require in [its] evaluation."[201] Similarly, Dynegy testified that it prefers someone with LNG tank construction experience,[202] and Black & Veatch testified that it would be hesitant to use an inexperienced supplier.[203]

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199 We find the Initial Decision's discussion of entry barriers relevant in that it correctly identified a number of credentials any new entrant must have as well as market characteristics that a new entrant must overcome to successfully compete with CB&I. *See generally* IDF 46-54, 166-76, 237-53, 328-33, 415-18; ID at 99-108.

200 *See, e.g.*, Tr. at 1639-40 (a former Zachry employee notes that the more LNG projects it completes, "the more [it] can optimize [its] methods and be more competitive" in terms of costs) (*in camera*).

201 Tr. at 6702.

202 Tr. at 4581-82.

203 Tr. at 564-77.

We find support for this testimony in the behavior of various customers when they select bidders. The first step many companies take in putting together a slate of bidders is to determine which companies have successfully built LNG tanks in the past.[204] Moreover, past performance is an essential aspect of a customer's evaluation of a potential LNG tank supplier. For example, in choosing an LNG tank supplier for its Capleville project, MLGW specifically assessed and rated the various bidders' experience.[205] Although that project occurred several years prior to the acquisition, the evidence suggests that customers continue to take a potential supplier's track record and reputation into account. El Paso testified, for example, that in qualifying bidders it evaluates, among other things, a company's history with previous projects.[206] Similarly, Yankee Gas testified that experience will carry a lot of weight in its evaluation of bids for an upcoming project.[207] CB&I itself recognizes the importance of reputation and markets itself to customers based on the success of its past projects and cites this experience as a reason for choosing it instead of other suppliers.[208]

Antitrust law has long recognized that reputation can be a barrier to entry and expansion.[209] This principle applies especially to markets in which a product failure may result in dire consequences – as the failure of an LNG tank surely would. The court in *Franklin Electric* found that a consumer's reluctance to switch away from firms with long track records in manufacturing submersible turbine pumps would likely prohibit meaningful entry.[210] Similarly, in *Tote*, the fact that a new entrant would need to demonstrate that its system could operate flawlessly for one to two years as a prerequisite to market acceptance was a factor that would impede new entrants from gaining market share and constraining price increases.[211]

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204 Tr. at 4544-45.

205 Tr. at 1788-91.

206 Tr. at 6166-67.

207 Tr. at 6702-03.

208 CX 140, CX 162, CX 173. *Cf.* CX 1719 (investor fact sheet emphasizing "112 years of industry experience").

209 In *Cardinal Health*, for example, the court found that, among other things, the "strength of [the defendants'] reputation" served as a "barrier[] to competitors as they attempt to grow significantly." 12 F. Supp. 2d at 57. Similarly, courts in other cases have found that brand loyalty can make meaningful entry unlikely. *See, e.g.*, *Swedish Match*, 131 F. Supp. 2d at 170-71; *Avery Dennison*, 2000-1 Trade Cas. (CCH) ¶ 72,882 at 87,557 (also available at 2000 U.S. Dist. LEXIS 3938 at *42-44).

210 130 F. Supp. 2d at 1031.

211 768 F. Supp. at 1079-1081.

This precedent notwithstanding, Respondents cite *Baker Hughes* for the proposition that the mere fact that customers place great importance on product quality and reliable future service does not constitute a "high entry barrier."[212] This argument not only misreads *Baker Hughes* but is wholly inapplicable to this case. In the passage cited by Respondents, the court of appeals specifically acknowledged that a customer's focus on product quality and reliable future service "may handicap new entrants."[213] It merely refused to overturn the district court's conclusion that other factors – such as actual entry and expansion – outweighed the evidence regarding customers' concerns.[214] In the instant case, the record presents quite a different picture. The evidence demonstrates that far from being "general statements" – as Respondents suggest[215] – the customers' preference for experience repeatedly manifests itself in the way customers view potential suppliers and award bids in real-world contests. Moreover, unlike in *Baker Hughes*, there is no evidence in this case that new entrants or smaller incumbents can expand their presence in the LNG tank market. Quite to the contrary, the LNG tank market is characterized by long-standing dominance by the two merged firms and a reluctance on the part of customers to take a chance on firms with no experience.

The customers' focus on experience is understandable, because building an LNG tank is not easy.[216] In addition, while some of the skills necessary to build an LNG tank may be of a general nature, others are not. Black & Veatch testified, for example, that the welding, foundation work, and pipeline connections for these cryogenic tanks require specialized skills to be done properly.[217] Similarly, Yankee Gas testified that it will not credit experience in building petroleum tanks as the type of experience necessary to build LNG tanks, because the cryogenic properties of LNG tanks require a special construction skill set.[218] To deal with these technical

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212 RAB at 21.

213 908 F.2d at 989 n.10.

214 908 F.2d at 989. We also note that the Ninth Circuit has concluded that reputation by itself does not necessarily reflect barriers to entry. *Omega Environmental Inc. v. Gilbarco*, 127 F.3d 1157, 1164 (9th Cir. 1997); *Syufy*, 903 F.2d at 669. As in *Baker Hughes*, entry in both of these cases occurred and expanded in the relevant markets. *Omega Environmental*, 127 F.3d at 1164; *Syufy*, 903 F.2d at 665. We thus find these cases inapplicable to the case before us, in which the markets have not seen competitively significant new entry or expansion post-acquisition.

215 RAB at 21.

216 *See* discussion *supra* at Part II.A.

217 Tr. at 565.

218 Tr. at 6701-02.

challenges, both CB&I and PDM developed specialized construction procedures, trained supervisors to manage various parts of the tank construction, and developed working relationships with traveling field crews and local labor. For a new entrant to be taken seriously, it would need to demonstrate that it has access to a group with similar knowledge and expertise. We thus find that it is critical for a tank supplier to have experienced and knowledgeable supervisors as well as access to specialized field crews.

One customer testified that it is necessary for an LNG tank supplier to have supervisors on staff, because they are otherwise difficult to find.[219] This statement is supported in the merging parties' own business practices. Prior to the acquisition, both PDM and CB&I had on salary a staff of supervisors for the construction of the tanks, and CB&I has retained such employees following the acquisition.[220] These supervisors must also be trained to ensure that they are familiar with LNG projects.[221]

Similarly, tank suppliers must employ and train field crews to perform some of the more specialized work on these tanks.[222] The training not only focuses on such obvious skills as the requisite specialized welding techniques, but also teaches the crew familiarity with the firm's procedures and the use of its equipment.[223] These crews, which can range from 40 to 60 people, travel from job to job and are distinct from the local labor pool.[224]

Respondents suggest that because field crews are hourly (rather than salaried) employees and because they can work for multiple companies, knowledge of and connections with these crews do not represent a competitive advantage for the merged firm.[225] We disagree. While it is true in theory that a prospective new entrant could hire members of these field crews, the crew would not be familiar with either the new entrant's procedures or its equipment and would thus need to be trained – a process that would result in additional time and costs to the new entrant.[226]

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219 Tr. at 6231-32.

220 Tr. at 2626-27.

221 Tr. at 2625-26.

222 Tr. at 2633-34.

223 Tr. at 2625-26.

224 Tr. at 1598-99.

225 RAB at 23.

226 Tr. at 1641 (*in camera*), 2626.

As one CB&I employee stated, "[T]here's obviously a learning curve as that person learns a particular company's procedures and equipment."[227] He elaborated that a person working on an initial project "would probably be not as efficient as someone who had worked with the company's procedures and equipment for years."[228] This familiarity reduces CB&I's costs and is likely to factor favorably into a customer's assessment of a bid from CB&I.[229] CB&I can assure a customer not only that it has access to the needed field crews but also that its crews' familiarity with CB&I will save the customer time and money over other options.[230] A new entrant would thus need to cultivate such relationships and be able to demonstrate to customers that it could match CB&I's proficiency in attracting and working with field crews.

Respondents have also argued that access to welders is not a hurdle to entry in this market, because "[w]elding processes for LNG tanks are non-specific."[231] The weight of the evidence suggests otherwise. Regardless of whether the welding is done by field crews, local labor, or the employees of a tank construction company, a tank supplier must first have welding procedures in place. CB&I has developed specialized, proprietary welding procedures that it does not share with the industry, and prior to the acquisition PDM did the same.[232] In fact, in a 2002 discussion with its investors, CB&I's CEO emphasized that building an LNG tank involves very specialized work and that facility owners recognize this fact and do not want to take a chance on "shoddy welding."[233] Similarly, AT&V's Vice President testified that "the [welding] equipment is quite expensive to develop. You can go buy it, but the stuff you buy has to be modified and tailored, and then you have to build procedures around it."[234] He elaborated that because LNG tanks are constructed of sophisticated materials, "you don't just weld them up any

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227 Tr. at 2633-34.

228 Tr. at 2634.

229 Tr. at 2633-34.

230 A Technigaz employee testified that CB&I has experienced field crews that can erect a tank in a shorter time than newly trained field crews. Tr. at 4713 (*in camera*). Similarly, a former Zachry employee stated that there is a learning curve associated with construction of LNG tanks, Tr. at 1637 (*in camera*), and that a company's costs decrease as it builds more tanks. Tr. at 1639-40 (*in camera*). We find this testimony borne out in the Dynegy bid, where Technigaz/Zachry (which has never built an LNG tank) was excluded for price reasons. Tr. at 4760 (*in camera*).

231 RAB at 22.

232 Tr. at 6028-29; CX 109 at PDM-HOU006700; CCFF 331-32.

233 CX 1731 at 44.

234 Tr. at 2379.

old way."[235] Matrix, which supplies LIN/LOX tanks, also testified that if it were to try to supply LNG tanks, it would need to develop specialized welding procedures.[236] As a result, we find that a new entrant would need to develop welding procedures, train its welders in those procedures and the use of its equipment, and demonstrate to customers that it would be able to safely weld and deliver an operable tank in a timely manner.

We also find that knowledge of and connections with local labor are a necessary prerequisite to an LNG tank supplier's ability to compete effectively. Several customers testified that LNG tank suppliers must have knowledge of these markets.[237] One customer even testified that it would not consider a foreign LNG tank designer for a U.S. project unless that designer teamed with an American construction firm.[238] In addition to having general knowledge of local labor markets in the United States, a new entrant would also need to learn how to employ those labor resources most effectively in the construction of LNG tanks and would need to develop relationships with local vendors and suppliers. In its SEC filings, CB&I has repeatedly pointed to the fact that it has cultivated such relationships and has stated that these relationships confer a competitive advantage.[239] In addition, CB&I's CEO testified that a company's local presence can translate into a competitive advantage through knowledge of the local vendors and suppliers and of the local labor markets.[240]

Respondents argue that much of the construction labor is contracted locally and that the construction skills necessary – including welding – can be easily learned. As proof of this position, they point out that Whessoe completed LNG tanks in Dabhol, India, with the use of local labor. We find, however, that Respondents' argument misses an essential point and that the experience in Dabhol actually exemplifies why entry and expansion in the U.S. market are difficult. The ability to hire local welders untrained in welding LNG tanks presupposes that a

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235 *Id.*; *see also* CCFF 327.

236 Tr. at 1601.

237 *See, e.g.*, Tr. at 310, 4521, 7017-18.

238 Tr. at 7017-18.

239 *See, e.g.*, CX 1061 at 10-11 (reporting in an SEC 10-K that CB&I "believes that it is viewed as a local contractor in a number of the regions it services by virtue of its long-term presence and participation in those markets" and that "[t]his perception may translate into a competitive advantage through knowledge of local vendors and suppliers, as well as of local labor markets"); CX 1575 at 7 (same). To avoid any possible confusion, we emphasize that the possession or acquisition of a "competitive advantage" is not illegal, but it can be a relevant factor when a merger is defended on the ground that entry is easy.

240 Tr. at 4230.

tank supplier is ready and able to train and supervise those workers. Although it contracted with a local construction company in India that employed skilled workers, Whessoe needed to bring a large number of supervisors to the work site. We would expect the same to hold true in the United States, given that any foreign firms that enter the U.S. market likely would have U.S. construction partners without experience in building LNG tanks. In fact, the evidence suggests that the international tank design firms recognize this fact and have plans to train U.S. construction employees in the management of these projects – an endeavor that will take a long time and be costly.[241] In addition, even after the U.S. construction employees are trained, it would likely take them a few years to become as efficient as those of CB&I – a fact that AT&V's Vice President acknowledged regarding his firm's employees.[242] Thus, whether the international design firms provide supervisors for a particular job or train employees in the United States, the new entrants face a long and costly learning process before they can become effective competitors to CB&I.

Finally, customers testified that an LNG tank supplier must be able to steer a proposed project through the FERC application process in a timely manner.[243] While it takes expertise to complete the tank drawings and various resource reports required by FERC, many customers testified that it is also of paramount importance to secure approval in a timely manner.[244] Because construction on the LNG tank cannot begin until the FERC application is approved, delay in the approval process translates into delay in the construction and erection of the tank, which in turn delays completion of the entire facility. This delay, of course, can represent real

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[241] *See, e.g.*, Tr. at 2324-26 (TKK plans to train AT&V employees project managers and has thus far trained one), 2626-27(CB&I employee explaining that project managers must be trained).

[242] Tr. at 2379-80; IDF 147.

[243] Because the FERC regulations apply only to interstate commerce, they are usually not applicable to peak-shaving facilities, which serve only local markets. However, in some instances, an owner may specify that its peak-shaving facility be built to comply with the FERC regulations. Tr. at 4930.

[244] Tr. at 310 (stating a reluctance to use an inexperienced LNG tank supplier, because, among other things, the supplier would not be "familiar with all the [regulatory] parties that have requirements and how to satisfy all those parties in a reasonable time"). *Cf.* Tr. at 566 (meeting the schedule is important, and if the tank is delayed, that time is added to the project); Tr. at 627 ("delays in completing the tanks or problems with utilizing the tanks will impact the schedule and the success of the project"); Tr. at 6287 (CMS believed the number one risk on the project was schedule) (*in camera*).

costs for the customer.[245] Thus, customers take FERC experience into account when they evaluate potential bidders.[246] In fact, BP commented that the foreign companies would need to demonstrate the capability to steer a project through the FERC process before it would award them a bid.[247] The evidence also demonstrates that CB&I itself recognizes the importance of experience with the FERC approval process, because it touts its own FERC experience in dealing with prospective customers.[248]

The evidence thus establishes that, at a minimum, a new entrant would need to go through a time-consuming process to develop procedures to meet the unique challenges of building LNG tanks; recruit and hire supervisors with highly specialized experience; gain access to local labor forces; and acquire expertise in dealing with complex regulatory requirements.[249]

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[245] *See, e.g.*, Tr. at 3192 (missing deadlines causes "potential damage to the [LNG tank] client"); Tr. at 6286-87 (the revenue stream does not start until the LNG facility is ready for service) (*in camera*). These costs are usually mitigated by liquidated damages or other penalties. Tr. at 3191-92, 6286-87 (*in camera*).

[246] Prior to the acquisition, Atlanta Gas evaluated bids based partially on the bidders' FERC experience. CX 161. Similarly, CB&I's FERC experience appears to have played a crucial role in CB&I's post-acquisition negotiations with both BP and CMS. As will be discussed more fully in Parts IV.B.1.(a)-(b) of this Opinion, the evidence suggests that CB&I successfully leveraged its completion of the FERC applications into sole-source contracts with BP despite BP's initial reluctance to grant such contracts. When BP hired CB&I, it believed that CB&I's FERC experience gave CB&I a significant advantage. Tr. at 6093 (*in camera*). CMS also chose CB&I based in part on CB&I's FERC experience. Tr. at 6283 (*in camera*). Although some customers hire consultants and EPC contractors to help with the FERC approval process, Tr. at 4991, the evidence suggests that for some customers – especially those in sole-source negotiations – a bidder's FERC experience is crucial.

[247] Tr. at 6092 (*in camera*).

[248] In recent correspondence with a potential customer, the merged firm noted that "CB&I brings unmatched experience in preparing the documents . . . that are necessary for permitting and/or filing for FERC authorization permits." CX 140. In the same correspondence, CB&I further described itself as a firm "whom the permitting agencies, most especially FERC, know and respect." *Id.*

[249] We reject Complaint Counsel's suggestion that access to raw materials and ownership of fabrication facilities are necessary for a new entrant to be competitive. Although the 9 percent nickel steel for LNG tanks used to be sourced in the U.S., it appears that it is now sourced from Japan and Europe. Tr. at 4891 (CB&I purchases its 9 percent nickel steel from Japan and Europe). In addition, while owning a fabrication plant may be helpful in other relevant markets, there is no evidence to suggest that owning such a plant makes a difference for

Without such attributes, an entrant's bid is not likely to be taken seriously, and it will be unable to constrain CB&I effectively. In fact, the new entrants recognize these requirements. AT&V's Vice President, for example, testified that TKK planned to train AT&V's employees in project management skills such as estimating, scheduling, and coordinating as well as in construction techniques, welding, and the operation of welding equipment.[250] While we find such testimony highly probative of AT&V's intent to stay in the market and its plans to become a competitive force, we find that, as of the time of trial – nearly three years after the acquisition – AT&V still has not become a factor in the market. It cannot yet constrain CB&I, and it certainly has not replaced the competition that was lost from the acquisition. Furthermore, we cannot predict when – or even whether – it might do so.

As we will discuss more fully in Part IV.B.1, *infra*, we also find that CB&I's long-standing presence in the U.S. confers on it a virtually insurmountable advantage in many of the attributes we just discussed, at least for the foreseeable future. It has many years of experience in building LNG tanks in the United States. This experience not only gives CB&I an advantage in terms of cost and efficiency but also provides it a reputation for quality and reliability.[251] We believe this dynamic explains why Asian tank manufacturers historically have built the majority of LNG tanks in Asia, European-based tank manufacturers have built the bulk of tanks in Europe, and PDM and CB&I have built the only tanks in the United States.[252] In essence, a new entrant faces a conundrum: its lack of experience and inability to build a reputation place it at a competitive disadvantage in terms of winning a bid, which is the very thing it needs to gain

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building LNG tanks. There is some general testimony that owning a fabrication plant might reduce one's costs on LNG projects, Tr. at 1636 (*in camera*), but we find more persuasive the fact that CB&I had its steel for some recent projects fabricated at the foreign steel mill and delivered directly to the site. Tr. at 4893-94.

[250] Tr. at 2325.

[251] Tr. at 1637-38 (a supplier that builds an LNG tank incurs expenses "that [it] can improve when [it] perform[s] the same work the second or the third time or subsequent times") (*in camera*); Tr. at 2633-34 ("For any type of tank project, there's obviously a learning curve as that person learns a particular company's procedures and equipment, and during the initial project that person was used on he would probably be not as efficient as someone who had worked with the company's procedures and equipment for years."); Tr. at 4713 (CB&I has a cost advantage over Technigaz/Zachry because it has "experienced field crews that can erect an LNG tank in a shorter period of time than a newly trained field crew that has no past experience.") (*in camera*). *See also* CX 392 at 4 (affidavit seeking in camera treatment for documents related to improving CB&I's "processes and methods" that "improve [CB&I's] efficiency and lower [its] costs").

[252] *See* Tr. at 699 (*in camera*), 717-18 (*in camera*); CX 1649 (world map plotted with global tank sales).

experience and build a reputation.

2. Entry Conditions of the LPG Tank Market

The evidence shows that conditions of entry and expansion in the LPG tank market are similar to those in the LNG tank market. It is very difficult to get work without an established record for building high-quality, field-erected LPG tanks.[253] Bidders are selected for inclusion in the bidding process based on past performance, technical capabilities, safety record, quality programs, the size and scope of structures built previously, the volume of work performed, number of employees, qualifications of welders, and financial information.[254] Both Fluor and ITC, for example, pre-qualify bidders using these criteria.[255] It is also important to customers that a contractor show that it has managed a project of similar size,[256] that it is not stretched too thin at the time the project is to be built,[257] and that it has the ability to manage cash flow.[258] Moreover, as with the LNG tank market, an LPG tank supplier's depth of experience matters. AT&V testified, for example, that it would need not only automated equipment and extensive welding training but also years of experience to catch up to CB&I.[259]

Safety is a critical concern for LPG customers. The hazards of a leak are severe, as exemplified by the catastrophic failure of a Whessoe-built LPG tank in Qatar.[260] A builder's reputation and safety record are therefore among the most important considerations for

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253 *See* Tr. at 1609 (LPG tank market characterized as having "learning curves and expenses" similar to the LNG tank market).

254 Tr. at 2290-97, 7083-84; JX 27 at 115-16. Sometimes buyers send bid packages to firms that would not meet qualification standards. Tr. at 7134. The buyer does not expect that such bidders will be accepted but allows them to bid as a matter of courtesy. Tr. at 7134; JX 27 at 57.

255 Tr. at 2289-91, 7084.

256 Tr. at 2291-92, 2295.

257 Tr. at 2295.

258 Tr. at 2297.

259 Tr. at 2379-80.

260 Tr. at 3323; *see also* Tr. at 7141-42.

customers,[261] and buyers are not inclined to contract with builders that have not already built similar tanks.[262] ITC testified that it sends packages to firms that it thinks are reputable and have the capability to build the tank.[263] ITC prefers an experienced builder for any tank that will contain liquid below -3° F, and even a 10 percent price cut would not make it worthwhile to use an inexperienced supplier.[264] ITC testified that at times it allows suppliers to bid even though it does not think they will be competitive, simply to foster its "relationships with them."[265] After the first round of bids comes in, however, it evaluates whether the low bidder is "capable of doing the job that [it] want[s] done."[266] There is no evidence in the record that an inexperienced bidder has made it past this first bidding round.

Technical barriers to entry are not as high in the LPG tank market as in LNG tank market, but they are high nonetheless.[267] LPG tanks are bigger than LIN/LOX tanks but smaller than LNG tanks, and they hold their contents at temperatures that are low (about -50° F) but above those of LNG tanks.[268] An LPG entrant would not need as many field personnel as an LNG entrant, and (unlike an LNG tank entrant) it would have no FERC requirements to master.[269] Generally, LPG tanks use the same kind of construction as LNG tanks but are able to use enhanced carbon steel or a special type of conventional steel (unlike LNG tanks, which require 9 percent nickel steel and more specialized welding techniques).[270] Nonetheless, LPG tank suppliers must develop specialized welding procedures and train welders to build these

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261 JX 27 at 70.

262 Tr. at 7141 ("[P]eople want to see you have built one."); JX 23a at 195 (*in camera*).

263 Tr. at 7084.

264 JX 27 at 115-16.

265 Tr. at 7134; JX 27 at 57.

266 Tr. at 7083.

267 Morse testified that it did not have to extensively train its fabrication personnel to work on an LPG project. Tr. at 6570-71. Although Morse's testimony may be viewed as self-serving because CB&I now owns it, we nonetheless find that owning a fabrication facility is not an entry barrier in the LPG tank market.

268 Tr. at 1609-10, 4073.

269 Tr. at 1609-10.

270 Tr. at 4890.

tanks.[271] Although many companies can make pressure spheres or various flat-bottomed tanks, the record does not indicate that any of these firms have either the requisite special equipment or welding crews that are both experienced with the materials required for LPG tanks and able to travel to the site to work on an extended LPG project.[272]

Arguably, one might expect supply-side substitution to occur if CB&I were to attempt to exert market power in the LPG tank market, because the LPG tank market lies somewhere between the LNG and LIN/LOX markets in the difficulty of its technical requirements and the size of the projects it involves. That is, an LNG tank manufacturer might easily bid on an LPG project, as the latter would be less technically demanding and smaller in scope than an LNG project. If a very large LPG project were available, it might (in theory) attract bids from LNG tank suppliers. There is no record evidence, however, that any LNG tank supplier has shown such interest. In addition, it might appear that a LIN/LOX tank supplier could attempt to make the leap into the LPG market – particularly if a smaller, relatively uncomplicated project were opened for bid. As we discuss in detail in Part IV.B.3 below, however, the existing LIN/LOX tank suppliers (other than CB&I) seem to have difficulty meeting the technical requirements for smaller LIN/LOX tanks, so we find it unlikely that they will be able to compete effectively in the LPG market. Thus, for the foreseeable future, it does not appear that a foreign LNG tank firm will step into the U.S. LPG tank market, or that any LIN/LOX tank supplier identified in the record would be a credible entrant in the LPG market.

3. Entry Conditions of the LIN/LOX Tank Market

We find that entry barriers in the LIN/LOX tank market are also high. A great deal of specialized know-how and critical skills are required in the engineering, fabrication, and construction of LIN/LOX tanks.[273] Design of the tanks requires sophisticated engineering and adherence to stringent regulatory codes.[274] Experienced workers are also critical.[275]

As with the LNG market, ample evidence demonstrates that reputation and experience play a crucial role in a customer's acceptance of LIN/LOX tank manufacturers, making it difficult for new entrants to gain acceptance. LIN/LOX tanks can be very dangerous if they are improperly constructed. Tank failure can cause leaks of the cryogenic liquids and create a

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271 Tr. at 6570-71.

272 Tr. at 7106-07; JX 27 at 43, 59.

273 Tr. at 842, 1343-1346, 2198-99.

274 Tr. at 1566-67.

275 Tr. at 2190.

potentially catastrophic situation. For example, liquid nitrogen can cause severe (and potentially fatal) burns as well as asphyxiation.[276] Similarly, liquid oxygen is highly volatile, and its release can support intense fire that will consume everything in its path.[277] Customers are thus hesitant to contract with an inexperienced manufacturer. Air Liquide testified that safety is the most important factor when it selects a LIN/LOX tank vendor.[278] In addition, LIN/LOX tank customers are liable to their customers for any tank failure.[279] Linde and Air Liquide testified that because of this potential for liability, they have to be very careful in selecting a LIN/LOX vendor.[280]

LIN/LOX tanks are an integral part of the construction and operation of large air separation facilities. Thus, even if a LIN/LOX tank does not fail outright, any problems in the completion or operation of a LIN/LOX tank can have a cascading effect on the much larger air separation plant that the customer is building and on the chemical or manufacturing facility that the plant will serve.[281] Therefore, meeting schedule deadlines is critical to LIN/LOX customers.[282] If a supplier falls behind schedule in the completion of a LIN/LOX tank, it is costly for the tank customer.[283] LIN/LOX customers are liable for liquidated damages to their air separation plant customers if they do not have the plant completed on time.[284] Consequently, LIN/LOX tank manufacturers need to be able to demonstrate a successful track record of completing LIN/LOX tanks on schedule.[285]

Customers are also reluctant to contract with an inexperienced LIN/LOX tank supplier because LIN/LOX tanks sometimes do not fail until several years after they are built. Thus,

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276 Tr. at 848, 1996-97.

277 *Id.*

278 Tr. at 1996-97.

279 Tr. at 849.

280 Tr. at 849, 1996-99.

281 Tr. at 4658-59.

282 Tr. at 849, 2400-01.

283 *Id.*; Tr. at 1997.

284 Tr. at 849.

285 Tr. at 849, 1996-97, 2399-2401.

customers like to see that a vendor's tanks have held up over time,[286] and some customers refuse outright to hire a supplier that has never constructed a LIN/LOX tank.[287] In addition, suppliers that have built multiple tanks over time have an advantage that increases as they build more tanks.[288] Air Products testified, for example, that it would be risky to contract with a supplier that had never built a LIN/LOX tank.[289] Air Liquide testified that it would not buy a LIN/LOX tank from a manufacturer that had never built one before and that it prefers a supplier that has built many LIN/LOX tanks.[290] MG Industries testified that it is very important for a LIN/LOX tank supplier to have prior experience[291] and that it would not contract with Matrix until Matrix gained experience.[292]

This emphasis on experience is reflected in customers' bidding procedures. For example, as part of Air Products' pre-qualification process, it requires the provision of an experience list and calls past customers for references.[293] Air Products requires that the engineers, field crew, and supervisors all have prior LIN/LOX experience.[294] Moreover, customers have a very strict pre-qualification process that a LIN/LOX tank manufacturer must go through before the customer will entertain a bid from the vendor. Much as in the LNG tank market, LIN/LOX tank customers examine the manufacturer's safety record, experience, technical capability, reputation, track record, and financial stability.[295] Given these pre-qualification requirements, it is very

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286 Tr. at 998-99, 2399.

287 Tr. at 467, 1995-99, 2017. *Cf* Tr. at 1388 (discussing the stringent requirements that a LIN/LOX supplier with no experience would need to meet).

288 Tr. at 467, 1995-99, 2017; *see also* Tr. at 2399.

289 Tr. at 1391.

290 Tr. at 1995-99, 2017.

291 Tr. at 467.

292 Tr. at 489.

293 Tr. at 1357-60.

294 Tr. at 1388-91.

295 Tr. at 1357-60 (Air Products uses safety criteria, technical capability, financial viability, and price to select a LIN/LOX tank supplier); Tr. at 1994 (a supplier's technical abilities, safety record, and financial strength are factors that Air Liquide focuses on in selecting a LIN/LOX supplier); Tr. at 849 (Linde is very careful when selecting a LIN/LOX vendor).

difficult for a manufacturer that has never built a LIN/LOX tank to win a bid.[296]

Based on the evidence, we conclude that it is very difficult, if not almost impossible, for new LIN/LOX entrants to overcome these obstacles. Therefore the LIN/LOX tank market displays the same conundrum that characterizes the LNG market – an entrant must have a proven track record and a solid reputation to win a bid, but it can only obtain these qualities after it has already successfully completed prior LIN/LOX projects.

4. Entry Conditions of the TVC Market

As noted earlier (n.170, *supra*), Respondents do not dispute that technical barriers to entry into the TVC market are very high. A significant technological challenge in the building of a successful TVC vessel is the highly specialized welding technique needed to maintain a near-perfect vacuum: "if the welds are improper and there's [sic] overlaps that trap gas . . . there will be a continuous leak."[297] Any such leak will jeopardize the accuracy of testing done in the TVC because the required vacuum levels are so high. One customer testified that "the vacuum levels that we deal with are almost – you can almost count the number of molecules of gas that remain[] in the chamber."[298] If the chamber has a larger defect, it may lose vacuum rapidly

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[296] Tr. at 2398-99. LNG and LPG tank suppliers have expertise similar to that needed to build LIN/LOX tanks, and, as a result, there is the theoretical possibility that a supplier in one or both of the two former markets might also be a credible LIN/LOX tank supplier. However, as of the time of the trial in this matter, none of the new entrants in the LNG tank market had submitted a bid to build a LIN/LOX tank, and no evidence suggests any plans to do so in the future. While there is some overlap among firms in the LPG tank and the LIN/LOX tank markets – Matrix, Chattanooga, and AT&V each participate in both markets – those LPG tank suppliers that have historically focused solely on building LPG tanks have not bid on any post-merger LIN/LOX projects, and there is no evidence that they plan to do so. As we discuss in Parts IV.B.2-3, *infra*, for the most part the firms participating in both markets have not been successful in either. Moreover, we find that experience in building LPG tanks does not necessarily mean that a supplier would be proficient and efficient at building LIN/LOX tanks without some experience in the LIN/LOX market. For example, LIN/LOX and LPG tanks are made of different types of steel. Like LNG tanks, LIN/LOX tanks must be made of 9 percent nickel steel to contain the cryogenic liquid they hold. LPG tanks, which do not require liquid to be contained at such cold temperatures, use enhanced carbon steel.

[297] Tr. at 1142.

[298] Tr. at 1141.

during a satellite test, creating "a serious issue with saving the satellite."[299]

A field-erected TVC tank maker needs to have "a crew that virtually lives in the field for elongated periods of time. . . . You need construction management people, safety people."[300] In the TVC market, buyers place a premium on having the entire project – from engineering to turnkey operability – handled by a tightly integrated team.[301]

Customers also place great importance on the TVC tank maker's ability to stay on schedule.[302] While a satellite is being tested in a TVC, the satellite engineers working on the project are put on hold and are not reassigned to other work.[303] TVC tests take between 2 weeks and 40 days, and each day of testing delays completion of the satellite program by at least a day.[304] Moreover, satellite makers may incur penalties for delaying a spacecraft launch.[305]

We thus find that the absence of any entry into the TVC market, together with the immensely difficult technical challenges any new entrant into that market would face, "largely eliminates the possibility that the reduced competition caused by the merger will be ameliorated by new competition from outsiders and further strengthens" Complaint Counsel's prima facie case.[306]

5. Conclusions on Entry Conditions

We conclude that entry and expansion in each of the four relevant markets are difficult and time-consuming. At a minimum, the entry conditions we have outlined are likely to foreclose new entrants and smaller incumbents from winning bids for some time to come, because they would need to accumulate experience in order to compete with CB&I. Moreover, the new entrants' and smaller incumbents' attempts to gain this experience run up against

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299 Tr. at 1144; *see also* Tr. at 1454.

300 Tr. at 1103.

301 Tr. at 385-87, 1920 (*in camera*).

302 Tr. at 206.

303 Tr. at 1734.

304 Tr. at 1734-37.

305 Tr. at 1737.

306 *Heinz*, 246 F.3d at 717 (citing *University Health*, 938 F.2d at 1219 & n.26).

CB&I's long-standing presence in each of the markets, which gives it a decided advantage over inexperienced suppliers. We do not conclude that these new suppliers will never become a competitive presence in the market. However, they lack experience and are unable in a reasonable time frame to build a reputation for quality and reliability – in markets that, for obvious reasons, highly value such a reputation. We therefore find that entry and expansion in these markets are not likely to replace the competition lost through the acquisition or to sufficiently constrain CB&I in a timely manner.

D. Conclusions on Complaint Counsel's Prima Facie Case

As set forth in more detail above, Complaint Counsel have established extraordinarily high levels of concentration through HHIs, provided additional evidence of pre-merger bids that independently demonstrates the markets to be highly concentrated and enhances the HHIs, and strengthened that showing with evidence of difficult entry conditions. Accordingly, we find that Complaint Counsel have established a strong prima facie case and now turn to Respondents' rebuttal case.

IV. Respondents' Rebuttal Case

Once Complaint Counsel has established a prima facie case, the burden shifts to the respondent to establish that the case inaccurately predicts the probable effects of the merger. As we noted earlier, "[t]he Supreme Court has adopted a totality-of-the-circumstances approach to [Section 7], weighing a variety of factors to determine the effects of particular transactions on competition."[307] Accordingly, a respondent in a Section 7 case may introduce evidence on a wide variety of qualitative or quantitative factors to show that Complaint Counsel's prima facie case gives an inaccurate account of the acquisition's probable effects on competition in the relevant markets.[308]

In the present case, Respondents do not challenge the relevant product and geographic markets identified in the Initial Decision. They also do not dispute that each of the markets was highly concentrated before the acquisition or that the acquisition increased concentration levels substantially.[309] Rather, Respondents proffer a number of other claims (listed in the order in

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[307] *Baker Hughes*, 908 F.2d at 984.

[308] *See University Health*, 938 F.2d at 1218, and cases discussed therein.

[309] Respondents do argue that CB&I was not a competitive force in the TVC market at the time of the acquisition and that it is "questionable whether CB&I would have the necessary expertise to construct TVCs absent the [a]cquisition." RAB at 48. However, the

which we treat them): that the acquisition did not violate Section 7 because the relevant markets are minuscule and do not affect a "substantial" line of commerce; that any possible anticompetitive effects of the acquisition have been cured by post-acquisition entry into the LNG tank market and the expansion of other competitors in the LPG and LIN/LOX tank markets;[310] that potential entry already constrains CB&I or can be expected to occur in the event of an anticompetitive price increase; that economic evidence demonstrates that CB&I cannot profitably raise prices; that customers in each of the markets are sophisticated and can thus restrain CB&I from imposing post-acquisition price increases; and that PDM would have exited the market even absent the acquisition.

We begin our analysis of these defenses by noting that Respondents' burden on rebuttal is linked to the strength of Complaint Counsel's case.[311] Where, as here, Complaint Counsel have established a strong prima facie case, Respondents' burden is high.

A. Small Size of the Relevant Markets

At the outset, we address Respondents' argument that the ALJ erred because "he failed to consider that, in light of the small size of the relevant markets, substantial effects on competition are unlikely."[312] Respondents read Section 7 of the Clayton Act to require substantial effects in a relevant market in terms of some threshold of unit or dollar sales. As support for their position, they cite language in the *Baker Hughes* district court decision to the effect that "[t]he minuscule size of the market creates problems for the government's case, because one element of a Section 7 violation is that 'the market must be substantial.'"[313]

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evidence shows that CB&I continued to exert competitive pressure on PDM in the TVC market up to the time of the acquisition. *See* Part. III.B.4, *supra*.

[310] Respondents argue that the ALJ erred by not considering post-acquisition evidence in his evaluation of Complaint Counsel's prima facie case. However, the post-acquisition evidence proffered by Respondents goes to whether new firms have entered the LNG market or fringe firms have expanded in the LPG and LIN/LOX markets. The proper place to analyze this evidence is in Respondents' rebuttal case, and accordingly we will do so.

[311] *Heinz*, 246 F.3d at 725 ("The more compelling the prima facie case, the more evidence the defendant must present to rebut it successfully.") (citing *Baker Hughes*, 908 F.2d at 991); *FTC v. Arch Coal, Inc.*, No. 04-0534 (D.D.C. Aug. 16, 2004) (slip op. at 30); *see also* 2A Areeda, Hovenkamp & Solow, *supra* note 45, ¶422, at 74 ("The more concentrated the market and the greater the threat posed by the challenged practice, the more convincing must be the evidence of likely, timely, and effective entry.").

[312] RAB at 10.

[313] 731 F. Supp. at 9 (citing *du Pont*, 353 U.S. at 595).

Respondents' reading of both Section 7 and the trial court's language in *Baker Hughes* is erroneous. Complaint Counsel correctly point out that the 1950 Celler-Kefauver Amendments to Section 7 of the Clayton Act[314] added the phrase "in any line of commerce" and that courts have consistently held that the volume or size of commerce affected by an acquisition is not a factor in determining the legality of a horizontal merger.[315] We note in addition that Congress extended Section 7 in 1980 to reach firms engaged "in any activity affecting commerce" and to apply to acquisitions by or from "persons," including natural persons and partnerships as well as corporations.[316] In short, we find nothing in the history of Section 7 or the case law even suggesting that some threshold must be reached before Section 7's prohibitions are triggered. As made clear by the statute itself, the relevant inquiry under Section 7 is whether "the effect" of a given transaction "may be substantially to lessen competition, or to tend to create a monopoly" "in any line of commerce or in any activity affecting commerce in any section of the country."[317]

We also find that, when placed in context, the *Baker Hughes* language quoted by Respondents is more correctly read as questioning whether the government had accurately defined a relevant market in the first instance. The language quoted by Respondents immediately follows a discussion of whether the government had defined both the relevant product and geographic markets too narrowly.[318] The court then added that the narrow line of commerce advocated by the government resulted in insignificant figures in terms of numbers of sales and that the government's statistics were thus vulnerable, given the sporadic nature of sales in the market.[319] Only then did the court conclude, as noted above, that "[t]he minuscule size of the market creates problems for the government's case, because one element of a Section 7

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[314] Monopolies in Restraint of Trade – Supplementing Existing Laws, Pub. L. No. 81-899, 64 Stat. 1125, 1184 (1950).

[315] *See, e.g., FTC v. Food Town Stores*, 539 F.2d 1339, 1345 (4th Cir. 1976) ("The fact that the markets in which the firms compete may be small is irrelevant under the Clayton Act, and does not affect the legality of the merger."); *cf. United States v. Bethlehem Steel Corp.*, 168 F. Supp. 576, 595 (S.D.N.Y. 1958) ("a merger violates section 7 if the proscribed effect occurs in any line of commerce 'whether or not that line of commerce is a large part of the business of any of the corporations involved'").

[316] Antitrust Procedural Improvements Act of 1980, Pub. L. No. 96-349, § 6(a), 94 Stat. 1157.

[317] 15 U.S.C. § 18 (2004).

[318] 731 F. Supp. at 6-8.

[319] *Id.* at 9.

violation is that 'the market must be substantial.'"[320] Moreover, the *Baker Hughes* opinion's quotation from *du Pont* deals with the question of whether the relevant market was properly defined.[321] Thus, although the meaning of the *Baker Hughes* language that Respondents quote may not be perfectly clear, nothing in that opinion mandates our acceptance of the standard that Respondents advocate, particularly in light of the case law cited by Complaint Counsel, the history and scope of Section 7, and the failure of the appellate court in *Baker Hughes* to embrace the lower court's language.

B. Actual Entry

1. Actual Entry in the LNG Tank Market

a. Entrants into the LNG Tank Market

Respondents argue that increasing demand in the LNG tank market has triggered entry by international LNG tank designers that have formed alliances with U.S. construction companies. Respondents also posit that these new entrants have all of the assets necessary to make them competitive with CB&I, such as international reputations for design, connections with local labor forces, and knowledge of various regulatory requirements. They thus claim that three new entrants – Skanska/Whessoe, Technigaz's joint venture with Zachry, and TKK's joint venture with AT&V – now impose competitive constraints on CB&I.[322] At first blush, Respondents' story has some appeal. As we discuss below, however, a closer examination leads us to conclude that these new entrants do not confront CB&I with competition sufficient to constrain it from raising prices.

(1) The New Entrants' Lack of Reputation and Experience

We begin by noting that, as of the time of trial, none of the alleged new entrants had ever built an LNG tank in the United States. By themselves, they each lack a crucial attribute of any successful LNG tank supplier – a reputation with U.S. customers for quality and reliability.[323]

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320 *Id.* (citation omitted).

321 353 U.S. at 595.

322 RAB 14-17.

323 We also question whether Skanska/Whessoe's reputation is wholly favorable. Whessoe was precluded from bidding on an expansion of Atlantic LNG's plant in Trinidad based on its previous performance. Tr. at 596. In addition, although it appears that Enron was ultimately satisfied with Whessoe's work on its Dabhol, India, project, problems at the outset of

Respondents, however, argue that the new entrants have an international reputation that will be recognized and credited by LNG customers in the United States. Indeed, they point to testimony by some customers who stated that they are less hesitant to consider the three foreign tank designers, given their alliances with U.S. construction firms.

Although we think such statements indicate a positive long-term potential for additional competition to develop in the United States, we do not think the statements take Respondents where they want to go. We are even willing to assume that U.S. customers are likely to credit the new entrants' reputations in tank design, but we are unable to make the same assumption about their construction capabilities in the United States. The evidence suggests that customers evaluate not only the experience of a design firm but also the experience of its domestic construction partner. One customer even testified that the ability of the new entrants to compete depends on the capabilities of the U.S. construction companies.[324] We thus find it significant that the U.S. construction companies with which the design firms are partnered have no experience in constructing and erecting LNG tanks, even though they would be expected to lead such efforts.[325] Given CB&I's long history of both designing and building LNG tanks in the U.S., and based on the record as it relates to post-acquisition bids (Part IV.B.1.b, *infra*), we simply cannot conclude that United States customers would rate the new entrants – each a combination of an experienced tank designer and an inexperienced tank constructor – as having a reputation on par with that of CB&I.

Thus, Respondents' reliance on testimony from a number of U.S. customers that plan to consider bids from various combinations of the three new entrants[326] falls far short of proving

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the project required Enron to spend extra money to assist Whessoe. Tr. at 4458-59. Internal PDM documents suggest that Whessoe's poor performance on the Trinidad and Dabhol projects is known by customers and would hinder Whessoe's chances of winning a bid. *See* CX 115, 135 (*in camera*). *See also* CX 693 at BP 01 028 (BP internal document noting that "Whessoe did not perform at all well in Trinidad, and Bechtel had to provide substantial project management support.").

In addition, Technigaz has not itself constructed an LNG tank, so it is questionable whether it has the skills to transmit such knowledge to Zachry. Tr. at 4718 (*in camera*).

[324] Tr. at 4521.

[325] Zachry has never built a field-erected tank of any sort, much less a cryogenic LNG tank. Tr. at 1645 (*in camera*). Likewise, Skanska has never built an LNG tank in the United States. IDF 153. Although AT&V has constructed a number of LIN/LOX tanks, these projects have not been wholly successful, and it has never constructed an LNG tank. *See* Part IV.B.3.a.(1), *infra*.

[326] Tr. at 1326-27, 4487-89, 6993, 6999, 7005.

Respondents' point that entry has been sufficient to replace the competition lost from the acquisition. Unless they were willing to consider these new bidders, LNG tank customers in the United States would have no choice other than CB&I. We thus take their testimony as little more than a refusal to throw themselves on CB&I's mercy. Moreover, these general statements say nothing about the ability of the new entrants to compete effectively with CB&I. We also note that some customers with upcoming projects were unaware of the existence of one or more of the new entrants,[327] which suggests that these new firms' international reputations may not necessarily place them in parity with CB&I.

(2) The New Entrants' Lack of Trained Supervisors and Unfamiliarity with Field Crews and Local Labor Markets

CB&I's supervisors are located in the United States and are experienced at managing the construction of LNG tanks. Because the new entrants' U.S. construction partners do not have any such experience, the tank designers either would need to train the construction company employees to supervise the project or would need to send their own supervisors to the U.S. work sites.[328] In either case, they would bear costs that CB&I does not, and these costs likely would make the new entrants less competitive, at least over the next several years.[329]

In addition, we find that CB&I enjoys a competitive advantage due to its relationships with the field crews that construct these tanks. The evidence is mixed regarding whether the U.S. construction partners of the new entrants would have adequate access to field crews at all. At least in theory, it would seem that field crews, who are (or work for) independent contractors, should be willing to sign on with any tank supplier to work on a project. The real world, however, does not seem to work that way. A former Zachry employee testified that Zachry would have needed to hire plate welders, plate erectors, and insulation installers to be competitive with CB&I on the Dynegy project, but he had no information on Zachry's chances of doing so.[330] AT&V also testified that TKK planned to train some of AT&V's employees to be a field crew, which suggests that TKK is not relying on access to the field crews that have traditionally worked with CB&I (or PDM).[331] Moreover, as noted earlier, a tank supplier needs

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327 Tr. at 1326, 1846-48, 1852-53. *Cf.* Tr. at 6424-25; IDF 142-43 (Calpine had contacted only CB&I to discuss its upcoming LNG import terminal).

328 *See* discussion Part III.C.1, *supra*, at p. 39; Tr. at 2626-27.

329 Tr. at 2379-80; IDF 147 (AT&V's Vice President believes that AT&V's employees will need a few years of experience in the construction of LNG tanks before they work as efficiently as CB&I's employees).

330 Tr. at 1641-42 (*in camera*).

331 Tr. at 2325-26.

to provide substantial training to its field crews in proprietary techniques, company procedures, and the use of company-specific equipment. Thus, even if a new entrant had the needed access to these field crews, it would be at a competitive disadvantage because of the field crews' unfamiliarity with the entrant's procedures and equipment.[332]

We also find that the U.S. construction companies' inexperience in working with the local U.S. labor market in the construction of LNG tanks, combined with their subcontracting various parts of the tanks, has adverse competitive implications. Although the new entrants' U.S.-based construction companies have general familiarity with local labor regulations and knowledge of the local labor markets, CB&I (as the merged firm) has built virtually every LNG tank constructed in the United States. It thus knows in great detail how those labor markets can most effectively be accessed for the construction of LNG tanks. More important, CB&I has long-standing connections with various suppliers in these local markets. The evidence suggests that CB&I believes its knowledge of and connections with the local labor markets give it a competitive advantage. In a post-acquisition 10-K filing, CB&I stated that "it is viewed as a local contractor in a number of regions it services by virtue of its long-term presence and participation in those markets."[333] It further noted that "[t]his perception may translate into a competitive advantage through knowledge of local vendors and suppliers, as well as of local labor markets and supervisory personnel."[334] Thus, we cannot assume – as Respondents suggest – that these new entrants, who have never staffed or managed an LNG tank project, would have a knowledge and experience base comparable to that of CB&I.[335]

(3) The New Entrants' Lack of Regulatory Experience

In addition, it appears that the new entrants have little to no experience with the FERC process, which makes some customers hesitant to use them. For instance, BP testified that Skanska/Whessoe, TKK/AT&V, and Technigaz/Zachry all lacked the level of FERC experience that it would require for its upcoming project and that CB&I's FERC experience gave it a

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332 A CB&I employee testified that CB&I's "field crews are trained in our [CB&I's] procedures and with our equipment, and hiring people off the street would involve training costs. . . . [Y]ou have to train them and ensure that they were experienced in your particular line of work." Tr. at 2626-27.

333 Tr. at 4231; CX 1061 at 10-11.

334 CX 1061.

335 We also question whether the new entrants actually have adequate access to the local labor markets and note that Technigaz/Zachry did not bid for El Paso's Baja, California, LNG import terminal, in part because it did not believe it had access to the local labor it would need. Tr. at 1651-54 (*in camera*).

significant advantage over other tank builders.[336] BP elaborated that although other LNG manufacturers were doing some work, none had demonstrated that it can actually get through the FERC application process in a reasonable amount of time.[337] This general view is supported by BP's own business practices. Although Skanska/Whessoe heavily marketed itself to BP, BP entered into sole-source contracts with CB&I for each of its North American projects.[338] Similarly, when CMS needed to hire a company to help it meet a FERC filing deadline in a short time, it turned to CB&I alone.

Respondents argue that the new entrants have the requisite regulatory experience because "U.S. standards are de facto international standards."[339] We reject this argument, which contradicts both the testimony and the real-world behavior of customers demonstrating that FERC experience is crucial. The only firm to gain any FERC experience as of the record's close is Skanska/Whessoe, which successfully steered Dynegy's LNG project through the FERC application process.[340] Based on the evidence, we do not find that this single experience puts Skanska/Whessoe on par with CB&I. We note, for example, that BP's testimony about the advantage conferred on CB&I because of the latter's FERC experience occurred after the announcement that Dynegy's facility obtained FERC approval. We thus find that, on balance, the evidence establishes that the new entrants do not have the level of FERC experience necessary to compete effectively in this market.

(4) Conclusions on Entry in the LNG Tank Market

We do not suggest that the new entrants would be totally incapable of building an LNG tank in the U.S. It is true that the new entrants have taken a necessary step toward competing in the United States by partnering with U.S. construction firms, which have experience in a wide variety of construction projects and may have some knowledge about various local labor markets

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336 Tr. at 6092-93 (*in camera*). BP testified that MHI, IHI, and Hyundai have virtually no regulatory experience; Daewoo, Technigaz, and Tractebel have a little more experience; and Whessoe might have even a bit more experience Tr. at 6094-95 (*in camera*).

337 Tr. at 6103 (*in camera*).

338 Tr. at 4180, 6069, 6087-88 (*in camera*). One reason for this decision appears to be grounded in CB&I's FERC experience. After CB&I refused to prepare the FERC application unless it was able also to build the entire facility, BP structured a deal to meet CB&I's demands – despite its initial reluctance to do so. Tr. at 4180, 6069-71.

339 RAB at 22.

340 Tr. at 4932-33; RX 926.

that the new entrants can use.[341]

The evidence establishes, however, that being successful at building LNG tanks in the United States requires years of experience in managing the overall project, attracting qualified field crews and local labor, having working relationships with subcontractors, and making regulatory filings.[342] The fact that CB&I has cultivated these skills through decades of experience means that it has some advantages compared to a supplier that has not yet built a tank in the U.S.[343] In addition, CB&I has extensive knowledge of and relationships with various U.S. labor forces and a knowledge of the U.S. regulatory environment, which are attributes customers value. All of these factors work together to help form CB&I's reputation for quality and reliability. While no single competitive advantage we have identified necessarily makes entry difficult, in the aggregate they preclude new entrants from sufficiently constraining CB&I in any reasonable time frame. Thus, we find that even entrants with the technical wherewithal to build LNG tanks have not restored the competition lost from the acquisition and likely cannot do so in the foreseeable future.[344]

Prior to the acquisition, CB&I and PDM were on relatively equal footing. Both firms had experienced tank designers and builders, long experience with the regulatory processes necessary to build LNG facilities, connections to local labor forces, and solid reputations. In other words, each firm had the attributes necessary to satisfy any LNG tank customer. While the new suppliers appear to have gained or are seeking to gain a toehold in the market, they are not on equal footing with CB&I, and their modest progress cannot restore the vibrant competition that once existed.

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[341] Tr. at 656-57 (Zachry has civil engineers and access to labor in the United States); Tr. at 657-59 (Skanska has a presence in the U.S.); Tr. at 4487 (Zachry is a big construction firm in the U.S. that is generally familiar with U.S. construction practices, labor forces, and pricing).

[342] It is curious that Respondents' description of the process for constructing an LNG tank comes from a project manager for an LNG tank to be built in Bonny Island, Nigeria, rather than from any of the numerous projects CB&I has built or is under contract to build in the United States. *See* Tr. at 5868. Unlike in the United States, CB&I has no particular advantage in the Bonny Island market, so this witness's testimony is not probative of the state of competition in the U.S. market.

[343] *See, e.g.*, Tr. at 6224 (El Paso testimony about cost savings resulting from knowledge of and existing relationships with suppliers).

[344] In apparent recognition of the importance of its advantage, internal CB&I correspondence conveyed a concern that should CB&I win the Dynegy project, it would work side-by-side with Skanska and thus expose its "crews, suppliers, and construction methods" to a competitor. CX 1528.

b. Post-Acquisition Bids in the LNG Tank Market

As of the time of trial, no LNG tank bids in the United States had been awarded to any supplier other than CB&I. Nevertheless, Respondents contend that sufficient entry has occurred because Dynegy accepted bids from the three new entrants while precluding CB&I from bidding on its proposed import terminal. The evidence makes clear, however, that far from shunning CB&I, Dynegy negotiated with CB&I on multiple occasions and rejected its offer to bid on the LNG tanks only because CB&I's bid came too late in the process to be considered. The Dynegy project, where CB&I completely ignored its prospective customer's wishes and ultimately removed itself from the competition, comes up short as proof of vibrant competition.

At the outset, we address Respondents' suggestion that Dynegy's award of an EPC contract[345] to Skanska amounts to competition in the relevant market of LNG tanks.[346] This argument fails to distinguish between an EPC contract award and an award for LNG tanks. As we stated earlier, EPC contractors are essentially general managers for an LNG import terminal or a peak-shaving facility. Dynegy made clear to its potential suppliers that it intended to hire an EPC contractor but wanted to bid the LNG tanks separately from the engineering work to save costs.[347] In keeping with this strategy, Dynegy's award of the EPC contract to Skanska did not include an award on the LNG tank.[348] As a result, we discount Respondents' suggestion that this EPC award to Skanska amounts to competition in the relevant market (LNG tanks). We note, however, that even if we were to accept this premise, it appears that CB&I may have taken itself out of the running for the EPC award, which therefore is not evidence of the new entrants' ability to constrain CB&I.[349]

After the EPC contract was awarded to Skanska, CB&I refused to submit a bid for the LNG tanks alone, citing concerns about submitting bid information to a competitor's contractor.[350] As a result of these concerns, Dynegy created a firewall around those employees

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345 *See* discussion, *supra* Part II.E.

346 *See* RAB at 15 (arguing that post-merger "Skanska has *already won* the job of EPC contractor for this project, beating out CB&I and several major international engineering and construction firms") (emphasis in original).

347 Tr. at 4568-71.

348 Tr. at 4568.

349 Some evidence suggests that even if CB&I did not formally withdraw its name from consideration, it did so in effect by continuing to push a turnkey solution despite its customer's desire for an alternative. Tr. at 4571-72; CX 138, 139, 140.

350 Tr. at 4576-77.

evaluating the LNG tank bids,[351] and these safeguards satisfied both TKK/AT&V and Technigaz/Zachry.[352] Nonetheless, for months CB&I continued to refuse to bid on the LNG tanks and also continued to insist that it be allowed to bid for the facility on a turnkey basis.[353] Only at the close of the bidding did CB&I approach Dynegy with an offer to bid on the LNG tanks themselves. At that point, Dynegy declined CB&I's offer, because it had come too late in the bidding process.[354]

Although it appears that CB&I may have overplayed its hand in negotiating with Dynegy, we cannot conclude on these facts that Skanska/Whessoe, TKK/AT&V, and Technigaz/Zachry effectively constrain CB&I. At most, Respondents have established that LNG customers may award a bid to one of the new entrants when CB&I effectively refuses to bid. This observation, of course, says nothing about the state of competition between the new entrants and CB&I. No evidence suggests that, had CB&I chosen to bid, the new entrants would have overcome the competitive disadvantages we identified earlier. In fact, CB&I's reluctance to give Dynegy what it wanted and Dynegy's repeated attempts to bring CB&I into the fold may suggest that Dynegy was concerned about the new entrants' disadvantages. Black & Veatch, which was hired to help evaluate bids for the project, testified that it "had concerns that if [it did] not have a domestic tank price for that project that the prices that the client would receive for those tanks would be higher."[355]

Even if we assume that CB&I lost the Dynegy bid on the merits, we would have to weigh that loss against CB&I's other post-acquisition wins. CB&I is in or has completed sole-source negotiations for six LNG tanks post-acquisition.[356] In addition to the significance of this fact standing alone, we find that the circumstances surrounding most of these projects suggest that the new entrants do not constrain CB&I in any meaningful way. For both the CMS and El Paso projects, the new entrants were not even considered as possible suppliers. CMS testified that it was under time constraints and contacted CB&I because it was already familiar with CMS's

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351 Tr. at 4576; RX 144.

352 Tr. at 4577.

353 CX 139, 140, 1528.

354 Although the record does not definitively establish whether Dynegy's bidding period had actually closed, Dynegy's project manager testified that considering CB&I's bid at such a late stage would have been unfair to the other bidders. Tr. at 4572.

355 Tr. at 622.

356 In addition to the awards of CMS, El Paso, and three BP projects, CB&I has entered into sole-source negotiations with Poten & Partners for an LNG tank. Tr. at 4399. The record, however, does not elaborate on the circumstances surrounding the Poten & Partners bid.

facility and knew the FERC process.[357] As for BP's award of three tanks to CB&I, this appears to be an example of CB&I's ability to foreclose competition. Although BP wanted to offer the LNG tanks for its three facilities through competitive bidding, CB&I refused to undertake any FERC work without a commitment that would allow it to build the entire facility.[358] Rather than turn to another supplier, BP acceded to CB&I's demands and awarded it turnkey contracts for all three facilities.[359] It is notable that BP's internal analysis on these projects questioned Skanska/Whessoe's ability to perform the work, noted that Technigaz was "not active" in the U.S. market, and failed to mention TKK/AT&V at all.[360] Based on the evidence as a whole, we conclude that CB&I's increased market power following the acquisition is not constrained by the new entrants.

It is somewhat surprising that Respondents cite both the CMS and the El Paso (Southern LNG) sole-source negotiations as evidence of vibrant competition post-acquisition. Boiled down, their argument is that the customer can always seek out another supplier even in the course of a sole-source negotiation, and that accordingly CB&I does not have the ability to dictate price.[361] As evidence of this point, Respondents elicited testimony from both CMS and El Paso that they were prepared to solicit other suppliers if they were not satisfied in their negotiations with CB&I.[362] Respondents argue that this pressure from customers caused CB&I to reduce its price on these two projects.

We find these arguments unpersuasive. First, we note that the evidence about the supposed price reductions comes solely from CB&I and that the record does not provide adequate information to determine whether these price reductions occurred in an absolute sense. Both of these contract negotiations had multiple provisions, and any price decrease could easily

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357 Tr. at 6282-83 (*in camera*).

358 Tr. at 6069.

359 Tr. at 6069-71.

360 CX 693 at BP 01 028.

361 *See* RAB at 35-37. For the CMS project, Respondents also argue that CMS received a cost-competitive estimate that was lower than the budget price submitted by Skanska/Whessoe. RAB at 35-36. However, CB&I was unaware that CMS sought a bid from Skanska/Whessoe to check CB&I's competitiveness. Tr. at 6295 (*in camera*). Under these circumstances, the fact that Skanska's bid came in higher than CB&I's does not establish "the pro-competitive force of new entry" claimed by Respondents. RAB at 35. An alternative hypothesis – which is fully consistent with evidence – is that Skanska/Whessoe is unable to sufficiently constrain CB&I.

362 *See* RAB at 35-37.

have been traded for a concession on another point.[363] CB&I's Mr. Scorsone even conceded that CB&I "negotiated some things in exchange for [the] price reduction" on the El Paso project.[364] In addition, Respondents' argument fails to recognize that the customers' ability to exert pressure by threatening to use another supplier is limited by the strength of the alternative suppliers. We find that the evidence amply demonstrates that the new entrants are not a strong alternative to CB&I and thus do not confer much power on the customer. We therefore view the customers' general statements about switching merely as evidence that the customers are not willing to contract with CB&I at any cost. These statements, however, in no way prove that CB&I is constrained to the same degree that it was before the acquisition. Moreover, the price reductions cited by Respondents occurred well after the Complaint in this case issued and are the type of evidence that is wholly manipulable.[365] We find far more compelling the fact that these customers chose CB&I as their supplier in the first instance.

As evidence of entry, Respondents also point to the fact that the new entrants have contacted a number of customers with projects in the very early stages of development.[366] While this fact may be credible evidence that the new entrants have a desire to compete, it does not establish that meaningful entry has occurred. Simply put, evidence that new entrants are soliciting business (or are even providing some services to the market) is not itself evidence that they are now, or will be in the near future, firms that can sufficiently constrain CB&I. At the time of trial, these projects were at too early a stage to be probative of the state of competition in the LNG tank market. For example, Freeport LNG had applied for FERC approval and had hired S&B/Daewoo to do its FERC work; however, it had plans to bid its EPC contract competitively.[367] In addition, it had not yet awarded – or indeed even identified – potential bidders for the construction of the tank.[368] CB&I's CEO even testified that he believes CB&I to be in the running for this project.[369] Similarly, although Yankee Gas had sought budget pricing and had met with CB&I and Skanska/Whessoe, it had not yet pre-qualified any manufacturers and had not sent out requests for proposals for its tank.[370] Finally, MLGW and Calpine testified

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[363] *See* Tr. at 6285 (CMS identified escalation clauses, change orders, and financial security issues as topics of negotiations) (*in camera*).

[364] Tr. at 5080 (*in camera*).

[365] *See supra* note 44.

[366] RAB 15-16.

[367] Tr. at 6974-76, 6978, 7049.

[368] *See* Tr. at 7043 (Freeport LNG will send out requests for proposals once the FERC application is approved).

[369] Tr. at 4142-45.

[370] Tr. at 6447-49, 6451.

that they were considering LNG projects, but they had done nothing more than request preliminary budget pricing.[371] Given the early stages of these projects – and, more important, the customers' consequential lack of information necessary to evaluate the new entrants' proposals – these projects provide inconclusive evidence of whether the new entrants pose a sufficient competitive threat to CB&I.

We also address Respondents' argument that the ALJ erred by disregarding evidence relating to Enron's project in the Bahamas and Atlantic LNG's expansion in Trinidad. Citing their expert's testimony, Respondents assert that "the ability of new entrants to compete effectively in places near the U.S. . . . sheds light on their ability to compete effectively in the U.S."[372] However, there is a crucial difference between competition in the United States market and competition in these other two markets. There are no incumbent firms in either the Bahamas or Trinidad. No one tank supplier enjoys the advantages that come from being the incumbent firm, and all firms can compete on a roughly equal playing field. In contrast, in the United States, the incumbent CB&I has a long-standing presence in the market and consequently enjoys a significant competitive advantage over new entrants.

Respondents argue that CB&I was the "incumbent" in Trinidad, because it had built the last tank there.[373] We cannot say whether building one tank in Trinidad makes an LNG tank supplier an "incumbent" in the sense that we have used that term throughout this Opinion, but it matters little. The record amply demonstrates the power of – and the advantages accruing to – CB&I's true incumbency in the United States and that these advantages are extremely difficult to overcome. We thus conclude that Atlantic LNG's project in Trinidad sheds no significant light on the competitive landscape in the United States. In our view, neither does it demonstrate that LNG tank suppliers can easily enter and effectively compete with CB&I in the United States. Therefore, we find that the ALJ properly excluded evidence related to the Trinidad and Bahamas projects.

Nonetheless, we have examined the evidence surrounding these two projects and conclude that they do not substantiate Respondents' assertion that the projects demonstrate that entry is easy in the U.S. LNG tank market. The testimony on Enron's Bahamas project is scant at best. Only slightly more than four of the nearly 8,400 pages of trial transcript are devoted to this project.[374] Further, the sole testimony about the bids came from Mr. Carling, who was at

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371 Tr. at 1825-28, 6493-94. In addition, Dominion's Cove Point II expansion project is at an early stage. As of the time of trial, CB&I had submitted only a budget price. Tr. at 4148, 4988.

372 RAB at 38.

373 *Id.*

374 *See* Tr. at 4477-4482.

Enron at the time but never actually saw the bids. In addition, his testimony is uncorroborated by other evidence. While Carling remembered the relative positions of the bidders and that they were within 7 to 10 percent of one another, there is no evidence regarding the details of the pricing (*e.g.*, budget or firm prices) or whether the bids were quality-adjusted.[375]

Respondents' Trinidad example is similarly flawed. CB&I's Mr. Scorsone testified that Bechtel informed him that CB&I's initial bid was 5 percent higher than another bidder's and that, despite CB&I's subsequent price reduction, TKK/AT&V was awarded the bid.[376] Respondents argue that this award is an "example of the ability of foreign entrants to discipline CB&I in North America."[377] However, the evidence concerning TKK/AT&V's winning bid comes exclusively from Mr. Scorsone, whose testimony was not corroborated by any other evidence and, indeed, was offered solely to show his state of mind.[378] In addition, the record does not contain any details about the submitted bids and does not reveal why the job was awarded to TKK/AT&V. Accordingly, even if we were inclined to consider evidence from these two projects, it would be impossible to draw conclusions about them from the record before us.

c. Evidence of CB&I's and Customers' Views on the LNG Tank Market

Respondents argue that CB&I views the new entrants as significant competitors and that its assessment of these firms factors into its bidding.[379] The chief evidence on this point again comes from CB&I's own employee, Mr. Scorsone, who testified that upon hearing TKK/AT&V's, Technigaz/Zachry's, and S&B/Daewoo's joint venture announcements, he believed that these joint ventures were serious about winning contracts and that the pairings would make strong competitors.[380] However, because Respondents put forward no contemporaneous evidence to corroborate Scorsone's views, we view his testimony with considerable skepticism. Moreover, in the post-acquisition period, CB&I has not acted as if it took the new entrants into account in its negotiations with potential customers. For several post-

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375 Tr. at 4481.

376 Tr. at 4492.

377 RAB at 39.

378 Tr. at 4951. Mr. Rapp, the project manager for the most recent expansion in Trinidad, was deposed prior to the tank award to TKK/AT&V. When Rapp was deposed, CB&I, TKK, and MHI (among others whose names he could not remember) had not gone past being pre-qualified. Tr. at 1318.

379 RAB at 35; *see generally* Tr. at 4860-72.

380 Tr. at 4853-54, 4856, 4858, 4860-72.

acquisition projects, CB&I has insisted that it do the work on a turnkey basis – even after customers have expressed a strong preference to bid parts of the project competitively. In negotiating with BP, Freeport LNG, and Dynegy, CB&I refused to do any design or FERC work without a commitment from the customer that it would award the entire project to CB&I. Although BP initially was reluctant, it eventually acceded to CB&I's wishes and agreed to allow CB&I to build its three proposed facilities (on the condition that it was satisfied with CB&I's work on the FERC application). CB&I's strategy was less successful with Freeport LNG and Dynegy, both of which selected other companies to do the desired work. However, the fact that CB&I thought it was in a position to make such demands and, in the case of Dynegy, to ignore its customer's wishes on multiple occasions speaks volumes about CB&I's view of the competitive landscape. If CB&I truly believed the new entrants provided meaningful competition, it is unlikely that it would have behaved in such a fashion.

Further, the customer testimony cited by Respondents does not support their arguments about the competition provided by the new entrants.[381] Freeport LNG testified at trial that it would seek bids from the new entrants and that it was comfortable with the options it currently has available to build an LNG tank.[382] However, in our view, the Freeport LNG representative could not credibly have made assumptions about these new entrants and their competitive ability based on past experience. Although he had been involved in various LNG projects worldwide, he had not been involved in selecting the tank constructor but rather had focused on the preliminary design aspects.[383] He also had no prior experience with the construction of an LNG tank in the United States.[384] Moreover, the Freeport LNG project was at an early stage, and the company had not yet requested proposals on the tank.[385] Although Freeport may yet consider CB&I, Technigaz, TKK, Daewoo, and IHI as potential bidders in the future, at present Freeport LNG has not evaluated either the new entrants or their ability to constrain CB&I.[386] Similarly, BP's statement that it had sufficient competition to ensure reasonable prices is unpersuasive because the testimony is inconsistent with BP's internal documents (discussed at p. 60, *supra*) and its actual conduct. Rather than seeking another supplier, BP agreed to give CB&I a turnkey contract for three of its facilities despite what appears to have been an initial reluctance to do so.[387] This evidence suggests that BP did not consider other suppliers as equivalent to CB&I, nor did BP have any experience with evaluating the new entrants' capabilities or pricing.

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381 RAB at 39-41.

382 Tr. at 7018-19.

383 Tr. at 7025-30.

384 Tr. at 7025.

385 Tr. at 7043.

386 Tr. at 7023, 7043.

387 Tr. at 6069-71.

Finally, we are troubled by Respondents' characterization of some of the customer testimony. Respondents suggest that Bechtel stated that it could get a reasonable price by pitting Technigaz/Zachry against CB&I.[388] However, Bechtel actually testified that it would "assume" it could.[389] While this distinction may seem slight, the record is clear that the Bechtel witness knew very little about Technigaz/Zachry, had not yet pre-qualified it as a supplier, and assumed that the alliance between the two companies was organized to offer a suite of services competitive with those of CB&I.[390] We therefore view the testimony cited by Respondents as merely Bechtel's statement that if Technigaz/Zachry stacked up favorably against CB&I, Bechtel intended to engage them in competitive bidding. Similarly, Respondents cite testimony from Calpine to suggest that Calpine is satisfied with the state of competition post-acquisition.[391] Our review of the testimony (including that cited in Respondents' brief) reveals no such conclusion. Rather, Calpine merely testified that it would consider Technigaz/Zachry, Skanska/Whessoe, TKK/AT&V, and CB&I as potential bidders for its LNG tank when the time comes.[392] We note that at the time of trial, Calpine's project was at a preliminary stage. Requests for proposals had not been issued, and Calpine had done no evaluation of the new bidders. Therefore, we find that this testimony does not corroborate Respondents' assertion.

In sum, we do not view the customer testimony cited by Respondents as supportive of their argument that the new entrants have restored competition lost from the acquisition.[393] While we do not ignore the fact that these customers have not complained about the acquisition, all of these customers (except BP) are at early planning stages and have not issued requests for bids or received pricing from the new entrants. In addition, although BP has awarded three bids to CB&I, it did so only after it was confronted by CB&I's demand that it do the entire project alone, and it gave little consideration to the new entrants. Therefore, it is unlikely that the customers relied upon by Respondents were in a position to have evaluated the state of competition post-acquisition. Accordingly, we view the testimony of these customers as little

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388 RAB at 40.

389 Tr. at 1334.

390 Tr. at 1333-36.

391 RAB at 39-40.

392 Tr. at 6495-96.

393 Nor does Respondents' reference to both El Paso's and MLGW's testimony support their position. *See* RAB at 40. Although El Paso testified that the acquisition has not harmed competition in the global market, Tr. at 6140-46, it is the United States market that we must consider. Similarly, MLGW testified that it would have no way of knowing whether a price increase had occurred, and that it would not know until it evaluated bids whether more competition exists now than in 1994. Tr. at 1858-61. This testimony does not establish that "the [a]cquisition has not substantially harmed competition." RAB at 40.

other than speculation that new entrants might constrain CB&I at some level – which, of course, does not demonstrate that they are an adequate replacement for the competition that has been lost.

2. Actual Entry in the LPG Tank Market

a. Entrants into the LPG Tank Market

The LPG tank market has been characterized more by exit than by entry as numerous firms that competed in the 1970s today are out of business.[394] The actual or potential entrants in this market also appear vastly overmatched by CB&I.

(1) AT&V

AT&V successfully won and completed a very small LPG tank project in 2000.[395] Its success with this project, however, says little about AT&V's ability to compete on larger LPG projects so as to act as a constraint against CB&I. The evidence suggests that this project not only was small but also was within the region of the country where AT&V is located.[396] It is therefore questionable whether this win indicates an ability to compete nationwide with CB&I. AT&V's Vice President testified, for example, that his firm's ability to compete with CB&I is limited by AT&V's lack of equipment, lack of trained welding personnel, and CB&I's years of experience.[397] He also stated that CB&I automatically gets bidding opportunities that AT&V does not.[398] In addition, he testified that AT&V has limited capacity to obtain bonding due to its small size and uncertain financial position.[399] To overcome some of its shortcomings, AT&V has partnered with TKK, which supplies the refrigeration expertise that AT&V lacks[400] and

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394 Tr. at 2391.

395 Tr. at 7088-89, 7129-31, 7133-34.

396 CX 107 at PDM-HOU005015 (AT&V characterized as a "Gulf-Coast Regional Competitor").

397 Tr. 2379-80.

398 Tr. at 2421-22.

399 Tr. at 2365-66.

400 JX 23 at 49-50, 57 (*in camera*).

allows AT&V to obtain bonding for larger projects than it could secure on its own.[401] This arrangement, however, is only intermittent and has been ineffective at times. For example, the record indicates that AT&V lost an LPG project in Trinidad to CB&I because TKK was not interested in the project and did not bid aggressively.[402] We also note that AT&V has had quality problems in the LIN/LOX tank market[403] post-acquisition, which raises doubts as to whether it could effectively constrain CB&I going forward in the LPG market.

(2) Matrix, Wyatt, Pasadena Tank, and Chattanooga

Respondents also identify as competitors four would-be LPG tank suppliers, none of which had won any bids as of the time of trial: Matrix, Wyatt, Pasadena Tank, and Chattanooga. The evidence related to Matrix, Wyatt, and Pasadena Tank is limited, but it establishes that all three of these suppliers are marginal at best and do not constrain CB&I effectively. For instance, although Matrix testified that it would pursue bidding on an LPG tank if it were given the opportunity, it also testified that it has never bid on an LPG tank.[404] Similarly, although Wyatt pursued LPG business "many years ago," it faces entry barriers because it has never constructed an LPG tank.[405] Wyatt bid on the ABB Lummus post-acquisition project; however, it lost to CB&I in part because ABB Lummus found Wyatt unresponsive to technical questions about the project.[406] In addition, it is not clear that Wyatt has the capability to compete in the LPG market. Pasadena Tank also appears to be no more than a marginal competitor. One customer is not willing to use Pasadena Tank because it was very late on an earlier project and had problems that it was unable to solve.[407] In addition, a PDM strategic planning document characterized Pasadena as having "one shop and one office" and as specializing in non-refrigerated tanks.[408]

The Chief Operating Officer and part owner of Chattanooga also testified that it believes

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401 Tr. at 2557.

402 Tr. at 2430-32.

403 *See* discussion *infra* at Part IV.B.3.(a).

404 Tr. at 1609.

405 JX 27 at 71-72.

406 Tr. at 3750-51.

407 JX 27 at 132-34.

408 CX 660 at HOU5015.

it has the ability and the necessary equipment to design and build a field-erected LPG tank,[409] that it has employees who are experienced in building such tanks,[410] and that it plans to pursue LPG jobs in the future.[411] These assertions are questionable, however, because the same witness mistakenly characterized methane tanks as LPG tanks,[412] thought gasoline was LPG,[413] and did not know whether propane, butane, propylene, and butadiene would be in a gaseous or liquid state at ambient temperature.[414] In addition, the Chattanooga witness did not recall whether any of Chattanooga's tanks were built for −50° Fahrenheit, though he was confident that Chattanooga would have no trouble building one.[415] In short, Chattanooga's ability to compete in the LPG market is questionable at best.

(3) Morse

Respondents also use Morse as an example of easy "hit-and-run" entry. Morse had never built an LPG tank before it bid on and won a 1994 Texaco job near its home base in the Pacific Northwest. It was able to complete the project quickly and profitably.[416] According to Respondents, Morse was thus poised in 1994 to move from being a regional operation into the nationwide market for LPG tanks. However, after the job for Texaco, Morse did not bid on any other LPG contract in the United States, and internal CB&I and PDM documents do not discuss Morse as a nationwide competitor.[417] Significantly, CB&I acquired Morse in November 2001 – about a month after the Complaint was issued in this case.[418] Moreover, CB&I acquired Morse

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409 Tr. at 6355, 6393.

410 Tr. at 6356.

411 Tr. at 6365.

412 Tr. at 6357-58

413 Tr. at 6388.

414 Tr. at 6402.

415 Tr. at 6388-89.

416 Tr. at 7297.

417 Morse did participate in at least the first round of bidding on an LPG tank in Canada. Tr. at 6589. However, Morse was not asked to bid on an important LPG project, Sea-3/Tampa – reinforcing the characterization of Morse as a regional, not national, competitor. *Id.; see also* CX 107 at PDM-HOU005015 (PDM strategic planning document for 2000 describing Morse as "mostly a Northwest tank company").

418 Tr. at 6545.

for only $3 million, which indicates that it was a very small operation compared to CB&I or PDM.[419] In addition, there is testimony that CB&I's acquisition of PDM did not lead Morse to believe it would be able to take PDM's place in the LPG market.[420]

(4) Foreign Suppliers

Foreign suppliers do not present a credible entry scenario sufficient to support Respondents' argument. TKK has partnered in the past with AT&V to bid on LPG projects, but has not shown consistent interest in this market.[421] Technigaz has built only one LPG tank of the type used in the United States.[422] In short, while Respondents point to firms that theoretically might enter the LPG market, no such firm presents more than a speculative possibility of effective entry in the foreseeable future.

(5) Conclusions on Entry in the LPG Tank Market

Of the two firms that have actually won bids in the LPG market, one (Morse) has now been acquired by CB&I, while the other (AT&V) was involved only in one very small, local project that would have little effect on future success in the LPG market. On the basis of the record before us, the other firms identified by Respondents – Matrix, Wyatt, Pasadena Tank, and Chattanooga – are not convincing potential entrants. We therefore conclude that these firms cannot sufficiently constrain CB&I or restore the competition lost from the acquisition.

b. Post-Acquisition Bids in the LPG Tank Market

Respondents cite the single post-acquisition LPG tank project as evidence that the merged firm does not have market power and that the market has become significantly more competitive since the acquisition. AT&V and Wyatt participated in the bidding on this project but lost to CB&I – apparently not only because CB&I lowered its profit margins in the second round of bidding but also because AT&V and Wyatt were not responsive to the customer's technical questions.[423]

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419 *Id.*

420 Tr. at 6662-63.

421 Tr. at 2431.

422 Tr. at 4708 (*in camera*).

423 Tr. at 3750-51.

The post-acquisition project in question involved an LPG tank to be constructed for BASF/ABB Lummus in Port Arthur, Texas. After the first round of bidding, ABB Lummus told CB&I it was in third place out of three bidders.[424] CB&I then found ways to cut costs by redesigning other parts of the project, lowered its margins from over 4 percent to approximately 2½ percent, and won the job in the second round of bidding.[425] This project would seem to suggest that AT&V and Wyatt were acting as constraints on CB&I's exercise of market power, at least in one instance. However, we have found that the other bidders for this job are not convincing entrants. Moreover, the most probative evidence related to this transaction – CB&I's reduction in price – is the type of post-acquisition evidence on which courts and the Commission have been reluctant to rely, because that evidence was controlled by CB&I itself.[426] CB&I's price reduction may well have been influenced by CB&I's knowledge that its acquisition of the PDM assets had been challenged and its desire to preserve the transaction.[427] As a result, this evidence, standing alone, does not overcome the other evidence related to the difficulty of fully replacing the competition lost by the merger.

In short, the post-acquisition evidence in the LPG tank market demonstrates no more than that two minor competitors submitted bids after the acquisition. We are not, however, persuaded that CB&I's cost-cutting and margin-shaving represent a "sea-change" in the market sufficient to overcome the contrary evidence.

3. Actual Entry in the LIN/LOX Tank Market

a. Entrants into the LIN/LOX Tank Market

Our assessment of entry into the LIN/LOX tank market is aided by the experiences of a few firms that have entered or attempted to enter the market. Respondents argue that the entry of AT&V, Matrix, and Chattanooga rebuts Complaint Counsel's prima facie case in the LIN/LOX

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[424] Tr. at 5040.

[425] Tr. at 5041-42.

[426] *Hospital Corp.*, 807 F.2d at 1384 ("[p]ost-acquisition evidence that is subject to manipulation by the party seeking to use it is entitled to little or no weight"); *B.F. Goodrich Co.*, 110 F.T.C. at 341 (same).

[427] Respondents correctly point out that they did not have the ability to control whether would-be competitors (AT&V and Wyatt) submitted bids for this post-acquisition job. However, CB&I's response to those bids provides more relevant information about the post-merger competitive landscape.

market.[428] However, we find that the experiences of these firms in entering the market, as well as the failed entry effort by a fourth firm not mentioned by Respondents, illustrate instead the high entry barriers in the LIN/LOX market. Furthermore, Respondents' examples do not adequately explain how entry into the LIN/LOX market will overcome the obstacles discussed below and constrain CB&I to the same degree that it was constrained before the acquisition. We thus agree with the Initial Decision's conclusion that Respondents have not demonstrated that entry is sufficient to constrain the exercise of market power by CB&I in the LIN/LOX tank market.

(1) AT&V

AT&V won its first bid to supply two LIN/LOX tanks to BOC in late 2000,[429] and it has since completed that project.[430] By the time of trial, AT&V had won two additional bids – one more for BOC and one for Air Liquide (which was under construction at the time of trial).[431] Far from establishing that entry into this market is easy, however, AT&V's experience demonstrates how difficult it is to gain a presence in supplying LIN/LOX tanks. AT&V testified that entry into the LIN/LOX market took years of effort.[432] For example, although AT&V started visiting customers and marketing itself as a LIN/LOX tank supplier in the early 1990s, it did not win a contract until 2000.[433]

AT&V testified that it took so long to win a contract because customers preferred the reputation and experience of CB&I and PDM.[434] It also testified that prior to the acquisition, customers generally wanted to deal only with CB&I or PDM and that those two companies

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428 Respondents argue that AT&V, Matrix, and Chattanooga are examples of "new" entry that has taken place "in just three years." RAB at 19. This characterization is inaccurate. All three firms have been engaged in long-term efforts to obtain LIN/LOX business that predate the acquisition. Only AT&V and Matrix have been able to gain a foothold in the market by winning a few bids; Chattanooga was an unsuccessful bidder before the acquisition and continues to be unsuccessful.

429 Tr. at 4599.

430 Tr. at 4600.

431 Tr. at 2235 (*in camera*), 2241 (*in camera*), 2504-05, 5291-92.

432 Tr. at 2503-05.

433 Tr. at 2397, 4599.

434 Tr. at 2397-98, 2506-07.

dominated the marketplace.[435] Moreover, AT&V stated that Air Liquide told it that AT&V would have to build one operational LIN/LOX tank that performed well in order for it to win a contract from – or even by considered by – Air Liquide.[436] Thus, AT&V had a difficult time bidding on contracts between 1996 and 2000 because, despite its efforts, it had not yet garnered customer confidence.[437]

AT&V testified that *some* customers are giving it a more serious look because PDM is no longer in the market.[438] However, the evidence surrounding the projects AT&V has won suggests that it will not meaningfully constrain CB&I in the future.

AT&V was required to spend $50,000 on marketing before it won its first contract with BOC in 2000.[439] In addition, BOC testified that because of AT&V's inexperience, BOC planned to spend $50,000 in oversight to ensure that the tank would be delivered on time, on schedule, and on budget. BOC accounted for this expense by adding the $50,000 to AT&V's bid when BOC evaluated the bids, and AT&V's bid was still the lowest.[440] AT&V was thus finally able to convince BOC to take a chance on it, despite its lack of experience.[441] Although BOC was eventually willing to take a chance, the evidence suggests that some customers are more averse to risk. For instance, MG Industries testified that it was surprised that BOC was willing to contract with AT&V.[442]

In 2002, Air Liquide also awarded a LIN/LOX tank to AT&V for its Freeport, Texas, project.[443] AT&V was selected because it had a significant price advantage over the other bidders (approximately $200,000 less) and also because Air Liquide saw its project as an

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435 Tr. at 2389-90.

436 Tr. at 2466-68.

437 Tr. at 2506-08.

438 Tr. at 2572.

439 Tr. at 2383, 2507-08.

440 Tr. at 4620-21, 4655-56. However, a Linde witness testified that he was told by BOC that there were many cost overruns and that in the end AT&V's price was higher than those of the other bidders. Tr. at 931-32.

441 Tr. at 2506-08.

442 Tr. at 460-70.

443 Tr. at 2235 (*in camera*).

opportunity to develop another supplier as an alternative to CB&I.[444] The location of the project also affected Air Liquide's choice of AT&V. Because Freeport is very close to Air Liquide's office, Air Liquide felt that it could easily keep track of AT&V.[445] Air Liquide also testified that had PDM been in existence at the time and submitted a credible and competitive bid, Air Liquide would have been far less likely to have taken the risk of developing a new supplier.[446] Air Liquide elaborated that development of a new LIN/LOX tank supplier entails technical, commercial, and financial risks and requires due diligence.[447]

As of the time of trial, [redacted redacted].[448] AT&V did not execute several of the specifications on the tank that Air Liquide required [redacted].[449] AT&V also was behind schedule by three months and had informed Air Liquide of another month-long delay just before the Air Liquide witness gave his testimony. Air Liquide testified that this delay will have negative repercussions for both Air Liquide and its customer, Dow Chemical. In the worst-case scenario, Dow could have [redacted] as a result of the delay.[450] This result [redacted redacted] exemplifies the importance of quality [redacted] and reputation to customers.

[redacted redacted].[451] Air Liquide further stated that the only manufacturer [redacted] is CB&I because CB&I has the technical capability, a good reputation in the industry, and a good performance record and relationship with Air Liquide.[452] Although Air Liquide contacted CB&I about replacing AT&V on the

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444 Tr. at 2235-37 (*in camera*).

445 *Id.*

446 Tr. at 2236 (*in camera*).

447 Tr. at 2236-37 (*in camera*). Before awarding the bid to AT&V, Air Liquide contacted BOC and obtained a detailed assessment of AT&V's performance from BOC. Tr. at 2239 (*in camera*).

448 Tr. at 2241 (*in camera*).

449 Tr. at 2241-43 (*in camera*).

450 Tr. at 2246-47 (*in camera*).

451 Tr. at 2252 (*in camera*).

452 *Id.*

project, CB&I declined.[453] Air Liquide testified that it would not be willing to contract with Matrix [redacted] because Matrix is [redacted] not pre-qualified by Air Liquide's standards.[454] Air Liquide elaborated that to contract with Matrix, it would have to go through the whole process of qualifying Matrix as a bidder (including due diligence) and that it can no longer afford to take a chance with an inexperienced supplier.[455]

In addition, AT&V's performance on this job has eliminated any savings that Air Liquide may have enjoyed at the outset. Air Liquide anticipated spending between $100,000 to $150,000 to develop AT&V as a supplier – less than the $200,000 price advantage in AT&V's bid. But Air Liquide testified that it has already spent the full $200,000 difference in pricing and, with the further delays, expects to incur another $100,000 to $150,000 in costs by the end of the project.[456] [redacted redacted].[457]

(2) Matrix

Matrix was active in the LIN/LOX tank market in the late 1990s, having successfully completed four tank projects between 1997-2000.[458] As was the case with AT&V, the Matrix witness testified that it took Matrix a long time and hundreds of thousands of dollars to enter.[459] It took between one and one-half and two years from Matrix's initial decision to enter before it won its first contract, and then another year to successfully complete the tank.[460] Matrix's entry was also in part customer-driven.[461] Matrix subsequently completed three tank projects for

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453 Tr. at 5036.

454 Tr. at 2253 (*in camera*).

455 *Id.*

456 Tr. at 2254-55 (*in camera*).

457 Tr. at 2255-56 (*in camera*).

458 IDF 320.

459 Tr. at 1567, 1584-85.

460 Tr. at 1585.

461 Praxair needed a union builder and, as between CB&I and PDM, only CB&I did union work. Tr. at 1617. Matrix had built a cluster tank in Ohio for Praxair, so Praxair was familiar with Matrix and awarded Matrix the job. Tr. at 2174-75.

Praxair and one for Air Products.[462]

However, Matrix sold its Brown Steel fabrication facility in August 2000.[463] Matrix testified that since that sale, it has been at a competitive disadvantage and has elevated costs.[464] Whereas the tanks that Matrix built previously were made when it still owned Brown Steel, today Matrix must subcontract some of the work, which increases its costs.[465] Specifically, the plates for the outer tanks would have to be sent out for blasting and priming.[466] The testimony related to post-acquisition bids reflects that these increased costs have made Matrix non-competitive. For example, Matrix testified that some customers have informed it that its bids were high and questioned its qualifications.[467] Several customers corroborated this view and testified that Matrix has indeed been bidding high.[468] Moreover, Air Liquide was reluctant to contract with Matrix because of its lack of experience[469] and would not consider [redacted] Matrix [redacted].[470]

Matrix testified that it is not planning to exit the LIN/LOX market and that it intends to continue to bid for jobs, though its offering will not be as competitive.[471] Although the acquisition has presented Matrix with some limited opportunities,[472] the evidence suggests that Matrix's viability as a competitor has diminished. Matrix has not won a LIN/LOX job since CB&I acquired the PDM assets. In addition, other LIN/LOX tank suppliers do not view Matrix as a serious competitor. AT&V testified that its only competitors are CB&I and, on a much

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462 IDF 320.

463 Tr. at 1589-90.

464 Tr. at 1590.

465 Tr. at 2159-61.

466 *Id.*

467 Tr. at 2155.

468 Tr. at 489, 1019, 2000-01.

469 Tr. 1588, 2021-22.

470 Tr. at 2253 (*in camera*).

471 Tr. at 1595.

472 Tr. at 2182.

smaller scale, Matrix.[473] Air Products also testified that Matrix has not replaced PDM.[474] We thus find that the preponderance of the evidence supports the Initial Decision's conclusion that Matrix's competitive viability has diminished since the sale of its Brown Steel facility and that it no longer is a competitive constraint on CB&I.

(3) Chattanooga

Although Respondents assert that "Chattanooga has recently entered this market,"[475] it is more accurate to say that Chattanooga has continued its attempts to gain LIN/LOX business that it began prior to the acquisition. Despite the fact that it has bid on projects since prior to the acquisition, Chattanooga still has not won a bid, and it has yet to construct a LIN/LOX tank.[476] Although Chattanooga hired some former Graver employees and bought some equipment from Graver when the latter exited the market,[477] the Chattanooga witness testified that it has never created any strategic plans or pricing strategy for designing, engineering, fabricating, or erecting LIN/LOX tanks, and that it has not been participating in the LIN/LOX market.[478]

In certain instances, potential entrants like Chattanooga can have a competitive influence on incumbents by bidding, even though they have not yet won a bid. However, in the LIN/LOX tank market such influence does not come from submitting a bid alone. Rather, customers must take the bid seriously, and the bid must be competitive if the bid is to have any constraining effect. As discussed above, customers also have extensive qualifications that a manufacturer must satisfy.

LIN/LOX tank customers may acknowledge a bid from a firm, but they will not take it seriously if it is too high, as has been the case with Chattanooga. For example, MG Industries testified that it ignored Chattanooga's March 2002 bid on MG's new Johnsonville, Tennessee, project, which was 30 percent higher than CB&I's bid.[479] The MG Industries witness also

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473 Tr. at 2332-33.

474 Tr. at 1354.

475 RAB at 19.

476 IDF 325.

477 Tr. at 6318.

478 Tr. at 6421-22, 6426. The Chattanooga witness testified that LIN/LOX is a market it will be interested in pursuing when there is sufficient demand. Tr. at 6422.

479 Tr. at 451, 461-62.

questioned whether Chattanooga is a viable LIN/LOX tank supplier in light of its high costs.[480]

A firm like Chattanooga is at a further disadvantage because it lacks the experience and reputational assets of a firm such as CB&I. For example, Air Liquide was not even aware that Chattanooga competed for LIN/LOX tanks.[481] Consequently, Chattanooga has not been able to establish a foothold in this market. Based on the balance of the evidence, we agree with the Initial Decision's conclusion that Chattanooga "does not effectively compete in the LIN/LOX market."[482]

(4) BSL

BSL is a French company that has built LIN/LOX tanks in Europe and Asia.[483] BSL attempted to enter the U.S. LIN/LOX tank market through the use of subcontractors. It formed an alliance with a U.S. firm, Bay Construction, but customers did not consider BSL to be sufficiently qualified due to its lack of experience and proposed use of subcontractors.[484] As with Chattanooga, BSL's bids were too high,[485] and it never won a bid. BSL has since gone out of business.[486]

(5) Conclusions on Entry in the LIN/LOX Tank Market

The competitive capabilities of the firms identified by Respondents as entrants in the LIN/LOX tank market are insufficient to replace the competition that was lost from the acquisition in a meaningful time frame. The LIN/LOX tank market is not "volatile and shifting," as the court found in *Baker Hughes*.[487] Indeed, the structure of the market today is not significantly different from what it was prior to the acquisition, except that PDM is now absent. We see no evidence that AT&V, Matrix, and Chattanooga have, in the aggregate, expanded their

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480 Tr. at 466.

481 Tr. at 2027.

482 IDF 325; *see also Merger Guidelines* § 3.4.

483 Tr. at 1342-43.

484 Tr. at 954, 2002-03; *see also* Tr. at 1577-78.

485 Tr. at 955, 1378-80; CX 608 at CBI-PL023631.

486 Tr. at 955, 1351, 1380, 2001.

487 908 F.2d at 986 (citing 731 F. Supp. at 11).

competitive presence post-acquisition or that they now constrain CB&I in the manner it was constrained prior to its acquisition of PDM.[488] While AT&V may have made some limited progress as a competitor in the few years before and after the acquisition – although even this progress may be questionable in light of AT&V's negative performance with Air Liquide – Matrix has lost ground. Prior to the acquisition, Matrix was gaining a foothold with a few completed tanks. Since the acquisition, however, Matrix has not won any bids and, by its own admission, is not as competitive as it used to be because of the sale of its Brown Steel fabrication facility. Chattanooga was an insufficient entrant prior to the acquisition and continues to be insufficient. Consequently, Respondents have not presented any evidence of "dramatic changes in the market"[489] that would lead us to believe that future attempts at new entry or expansion will be any different from the past experiences recounted above. Respondents also have not demonstrated that entry into the LIN/LOX market would be sufficient to replicate the competition lost from the acquisition, nor is there evidence that firms other than AT&V, Matrix, or Chattanooga plan to enter.

We should note that it is not surprising that customers have attempted to develop suppliers to replace PDM in the LIN/LOX tank market; customers testified that they prefer to have multiple suppliers.[490] Even before the acquisition, the exit of Graver – the only firm that approached CB&I's and PDM's level of experience and reputation – led to a highly concentrated market. The acquisition further concentrated it.

However, the mere fact that a customer may try to develop an additional supplier in an attempt to enhance competition does not mean that the competition lost from an acquisition has

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[488] MG Industries' experience with a LIN/LOX tank project bid after the acquisition is a good example of the dearth of competition provided by some of these firms. In April 2002, MG Industries received bids on a LIN/LOX tank project in New Johnsonville, Tennessee, from CB&I, Chattanooga, and Matrix. Tr. at 456-57. Matrix's and Chattanooga's bids were, respectively, 20 percent and 30 percent higher than CB&I's bid. MG Industries did not negotiate with either Matrix or Chattanooga, because those bidders would have had to drop their prices by 20 percent and 30 percent, and MG testified that it would have been concerned that such a price drop would be detrimental to the project. Tr. at 461. MG Industries attempted to bluff CB&I into giving it a lower price, but CB&I held firm on its price and was awarded the project. Tr. at 460-61; *see* IDF 306-10. MG Industries testified that the pre-acquisition PDM had bid lowest in its last three or four LIN/LOX projects and that it was able to use PDM in negotiations to get better prices from other suppliers. However, MG Industries testified that its negotiations concerning the New Johnsonville project were limited to making the best deal it could get from CB&I. Tr. at 462. AT&V was not invited to bid on this project because MG Industries was not aware of AT&V. Tr. at 482.

[489] OA at 4.

[490] Tr. at 347-49, 1531-32, 2030, 4618-19, 4673-75.

been replaced. Section 7 of the Clayton Act would be meaningless if a weak showing of entry sufficed to rebut a prima facie case. Consider Air Liquide's experience with AT&V. Air Liquide testified that it contracted with AT&V because it believed that it needed to develop a new supplier in the wake of PDM's removal from the market.[491] Air Liquide also testified that it would have been far less likely to take the risk of contracting with AT&V had PDM still been in the market and submitted a competitive bid.[492] [redacted redacted] Air Liquide expects that it will have cost Air Liquide $100,000 to $150,000 above and beyond the $200,000 price advantage in AT&V's bid.[493] [redacted redacted].[494] For obvious reasons, this project is hardly an example of *sufficient* entry or of a restoration of the competition lost from the acquisition.

We also note that the decline in demand for LIN/LOX tanks may make entry/expansion of existing or bidding firms even less likely. Chattanooga testified that the demand for LIN/LOX tanks has decreased, making it less desirable for Chattanooga to enter the LIN/LOX market.[495] While both Matrix and Chattanooga testified that the acquisition has created an opportunity for them because customers will be looking to replace PDM,[496] the fact remains that neither has been able to win a bid post-acquisition.

b. Post-Acquisition Bids in the LIN/LOX Tank Market

Respondents point out that AT&V has won three of four competitively bid LIN/LOX tank projects in support of their argument that entry into this market rebuts a prima facie case.[497] It is true that AT&V has gained a foothold in the LIN/LOX tank market by continuing the efforts to compete that it began prior to the acquisition. However, AT&V does not have nearly the reputation or capacity of CB&I.[498] AT&V testified that it can construct only four tanks at a

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491 Tr. at 2235-36 (*in camera*).

492 Tr. at 2236 (*in camera*).

493 Tr. at 2254-55 (*in camera*).

494 *See* Tr. at 2252 (*in camera*), 5036.

495 Tr. at 6380-82.

496 Tr. at 2182-83, 6367-68.

497 RAB at 18.

498 IDF 315-19.

time[499] and has turned down the opportunity to bid for LIN/LOX tanks due to capacity constraints.[500] In addition, as we discussed in the previous section, AT&V's competitive viability is now marred by its recent negative performance on Air Liquide's Freeport project. AT&V will not receive a favorable reference from Air Liquide, and this will have some impact on its ability to get future work.[501] Thus, we find that AT&V's post-merger wins do not establish that it can restore the competition lost from CB&I's acquisition of the PDM assets.

4. Actual Entry in the TVC Market

The record evidence shows no attempted entry into the TVC market by any suppliers. There is record testimony that new entry is unlikely because the market is small and because field-erected TVC tank fabrication has more exacting "design engineering," "leak testing and cleanliness" requirements than tank fabricators encounter in other markets.[502] In addition, entry by a foreign supplier is unlikely, since many of these projects require security clearances and may have "Buy America" requirements as well.[503]

5. Conclusions on Actual Entry

Given the evidentiary record, we believe Respondents' reliance on *Baker Hughes* is misplaced. It is certainly true that the district court in *Baker Hughes* relied on the fact that two companies had each won a contract for hydraulic rig orders in the U.S. to support its conclusion that the acquisition was unlikely to harm competition over the long term.[504] However, those findings were corollaries of the court's determination that barriers to entry and expansion were low – as evidenced by one firm's entry and expansion to become the market leader. Indeed, the court of appeals in that case highlighted this growth as the rationale for its conclusion that competitors not only could, but probably would, enter the market in response to

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499 Tr. at 2376.

500 Tr. at 2375.

501 *See* Tr. at 2400. Customers are very careful to check a firm's references before awarding a LIN/LOX tank. Before Air Liquide hired AT&V, it visited BOC and inspected the tank that AT&V built for BOC. Tr. at 2239 (*in camera*).

502 Tr. at 1272.

503 Tr. at 1147-49.

504 731 F. Supp. at 10.

supracompetitive pricing.[505]

In contrast, and as explained at length above, the relevant markets in the instant case are not prone to such activity. The LNG tank market, for instance, has been dominated by CB&I and PDM for nearly three decades. These two companies not only won the vast majority of projects but in many instances were the only bidders. Moreover, while it appears that some new suppliers have decided to compete in the LNG tank market following the acquisition, we find them unable to constrain CB&I sufficiently. Similarly, in both the LIN/LOX and LPG tank markets, the firms to which Respondents point were present prior to the acquisition, and there is no evidence to suggest that these firms have increased their aggregate market presence. Thus, while other firms may enter and exit each of these markets, the evidence shows that their presence has not diminished the market dominance of the merged firm, nor have they undermined the conclusion that CB&I and PDM would have remained the only two major players in these markets absent the acquisition.

We therefore concur with the ALJ and find the markets in this case analogous to that at issue in *Tote*, where the court found, among other things, that the technical requirements associated with creating a totalisator system coupled with the customers' need for reliability would "hinder both new entrants and incumbents in their efforts to gain market share or affect prices."[506] In reaching this conclusion, the court rejected defendants' argument that a new entrant's submission of a number of bids and contacts with customers constituted evidence of entry.[507] The court did not agree that the mere submission of a bid made the new entrant a genuine competitor. Rather, the court examined the likely strength of those bids and their ability to constrain anticompetitive price increases by the incumbents.[508] We have employed that same approach in this case and conclude that the entry pointed to by Respondents is insufficient to constrain CB&I post-acquisition.

C. Potential Entry

Respondents assert that evidence of potential entry in both the LNG tank and LPG tank markets rebuts Complaint Counsel's prima facie case. They contend that the actual entrants they have pointed to "empirically demonstrat[e] that entry barriers are low."[509] In light of these

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505 908 F.2d at 989.

506 768 F. Supp. at 1081.

507 *Id.* at 1080-81.

508 *Id.* at 1081-82.

509 RAB at 20.

assertedly low entry barriers, Respondents then argue that potential entrants either already constrain CB&I or can be expected to enter the market in the event of anticompetitive price increases by CB&I.[510] Of course, for a potential entrant or the threat of a potential entrant to act as a competitive constraint on incumbent firms, entry – at least for that firm – must be easy.[511] As discussed above, entry into both the LNG tank and LPG tank markets is extremely difficult and time-consuming.[512] We thus reject Respondents' arguments.

D. Critical Loss Analysis

Respondents also argue that the ALJ erred in disregarding their expert's conclusion (based on his critical loss analysis) that CB&I could not raise prices, and they assert that this evidence shows that the acquisition has not harmed competition.[513] Critical loss analysis provides a quantitative framework for testing whether a hypothesized price increase of a certain magnitude will be profitable. The first step in a critical loss analysis is to calculate the critical loss threshold, *i.e.*, the fraction of current sales that would need to be lost to render a hypothesized percentage price increase unprofitable.[514] To accomplish this, one must weigh the profits forgone on the sales that would be lost as a result of the price increase against the increased profits on the retained sales. The critical loss is the fraction of sales that would need to be lost to balance exactly those countervailing effects. The second step is to estimate the likely loss in sales that would result from the hypothetical price increase. If the hypothetical price increase results in a loss of sales that exceeds the critical loss, then the price increase would not be profitable and would be unlikely to occur.

Critical loss analysis is a still-evolving analytical approach that some courts have applied

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510 *Id.* at 19.

511 *United States v. Marine Bancorporation Inc.*, 418 U.S. 602, 628 (1974) ("[E]ase of entry . . . is a central premise of the potential-competition doctrine."); *FTC v. Procter & Gamble Co.*, 386 U.S. 568, 581 (1967) (Procter exerted influence on the market because, *inter alia*, "barriers to entry by a firm of Procter's size and with its advantages were not significant").

512 *See* discussion, *supra* at Parts III.C.1-2.

513 RAB at 47-48.

514 Tr. at 7259.

for delineation of markets[515] and for competitive effects analysis.[516] Although we do not doubt the soundness of the logic underlying critical loss analysis (*i.e.*, that businesses are unlikely to impose price increases that will, on balance, be unprofitable), we are mindful that recent economic literature has cautioned that the analysis has certain vulnerabilities. The literature informs us that, if misapplied, critical loss analysis (like any other tool of economic analysis) can suggest results that are contrary to real-world experiences and inconsistent with established economic principles.[517] To take a simple example, critical loss principles hold that a firm may not have the power to increase prices profitably for products with high profit margins. This is so because price increases typically cause a loss of some sales and the profits earned from them. When the profit per unit is high, even a small loss of sales will produce a large loss in profits – so much so, that the higher profits on retained sales may not make up for the lost profits from the lost sales. In that situation, a critical loss analysis might conclude that a merged firm does not have the market power to profitably increase prices, because it will lose too many sales to its competitors (or due to consumers foregoing purchase of the product altogether). However, basic economic principles also tell us that high profit margins may be a sign of products with relatively inelastic demand (*i.e.*, products for which the quantity demanded is relatively insensitive to price, as could be the case if, for example, there are few or no substitutes). A merger between two firms that enjoy high profit margins and relatively inelastic demand may very well result in a price increase, because the merged firm may not anticipate losing any sales if it increases its price. Information on pre-merger and post-merger elasticities of demand is thus important to determine whether this condition is present. Accordingly, both critics of and adherents to critical loss analysis agree that critical loss analysis is only as good as the factual premises and the data that underlie it.[518] In particular, a solid evidentiary basis must support any assumptions used in the analysis and the actual loss of sales posited for a given price increase.

Here, Respondents proffered a critical loss analysis by their expert, Dr. Barry Harris. Dr. Harris testified that CB&I cannot profitably impose a price increase as a result of its acquisition of PDM, because post-acquisition CB&I has already lost actual sales far in excess of the level

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[515] *FTC v. Tenet Health Care Corp.*, 186 F.3d 1045 (8th Cir. 1999); *FTC v. Occidental Petroleum Corp.*, 1986-1 Trade Cas. (CCH) ¶ 67,071 (D.D.C. Apr. 29, 1986).

[516] *FTC v. Swedish Match*, 131 F. Supp. 2d at 169.

[517] *See generally* Michael L. Katz & Carl Shapiro, *Critical Loss: Let's Tell the Whole Story*, 17 Antitrust 49 (Spring 2003); Daniel P. O'Brien & Abraham L. Wickelgren, *A Critical Analysis of Critical Loss Analysis*, 71 Antitrust L.J. 161 (2003). *But see* David T. Scheffman & Joseph J. Simons, *The State of Critical Loss Analysis: Let's Make Sure We Understand the Whole Story*, The Antitrust Source (Nov. 2003).

[518] *See* Katz & Shapiro, *supra*, note 517 at 52; Scheffman & Simons, *supra* note 517, at 4 n.11.

that would have been consistent with a profitable price increase.[519] He further stated that new entrants and fringe suppliers have simply been able to defeat CB&I post-acquisition.[520] We have carefully considered Dr. Harris's analysis, but in the end, we are not convinced that he has reached the correct conclusion for this case – especially because that conclusion is at odds with the competitive effects that established economic principles conclude likely follow from the extraordinarily high concentration levels that we discussed in Part III.A, *supra*, the state of pre-acquisition competition that we discussed in Part III.B, *supra*, and the nearly insurmountable entry barriers that we found to predominate in Part III.C, *supra*.

Besides finding that his analysis is outweighed by the contrary evidence in this case, we conclude for several other reasons that we must reject Dr. Harris's analysis. First, it appears from the record that Dr. Harris did not perform a critical loss analysis for each distinct relevant market.[521] Instead, he combined the post-merger sales for all four relevant markets and concluded generally CB&I has lost "in excess of half" of the bids[522] and roughly 82 to 83 percent of the dollars available from the post-merger projects.[523] Even if one assumes, *arguendo*, the validity of Dr. Harris's underlying factual assumptions – several of which we discuss below – this approach is not informative of CB&I's ability to raise prices in any particular relevant market and thus does not convince us that CB&I cannot raise prices in the relevant markets. Although the four relevant markets share some characteristics, each is distinct. For example, none of the markets has the same mix of new entrants or fringe competitors, and the strength of these new entrants or expanded fringe firms in *each* of the relevant markets is a crucial consideration in the assessment of CB&I's ability to raise price. In addition, grouping the sales of multiple relevant product markets together can skew results. For example, AT&V's three post-merger wins in the LIN/LOX tank market in large part form the basis for Dr. Harris's conclusion that CB&I has lost in excess of half the bids in all four relevant markets.[524] Dr. Harris did not explain why it was appropriate to group all four relevant product markets together in his critical loss analysis, and his testimony did not shed light on how (or whether) he might

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519 Tr. at 7263, 7265-66.

520 Tr. at 7345-46 (Dr. Harris noting that, in contrast to Dr. Simpson, he believes that the entrants have been successful competitors).

521 In addition to this general analysis, Dr. Harris performed a separate critical loss analysis for the LNG tank market, which we discuss below.

522 Tr. at 7356.

523 Tr. at 7357. Dr. Harris did not have the aid of a calculator in testifying and thus qualified these figures as being approximate.

524 RX 951. (RX 951 was admitted into evidence for demonstrative purposes only. However, we reviewed it because it forms the basis for Dr. Harris's general discussion about CB&I's post-acquisition losses.)

have accounted for market differences. Nor can we, on our own, discern any compelling reason to treat the four separate markets as a single market. Accordingly, we do not find his critical loss analysis helpful in assessing CB&I's ability to sustain price increases in any relevant market.

We have other concerns about Dr. Harris's analysis. For example, he included CB&I's sole-source contract with CMS, but excluded CB&I's sole-source contract with El Paso and CB&I's three sole-source contracts with BP.[525] The omission of the El Paso and BP contracts significantly changes CB&I's post-merger win-to-loss ratio,[526] and, as discussed below, Dr. Harris included three projects that we believe should not have been counted. We also question Dr. Harris's assumption that both the Dynegy and Trinidad projects represented instances of CB&I's losing a bid to new entrants in the LNG tank market. These concerns lead us to reject his analysis in this case.

Indeed, we find that the record does not support Dr. Harris's inclusion of at least three of the projects included in his analysis, because they either did not involve a relevant product or occurred before the acquisition. For example, Dr. Harris included a TVC award to XL/Votaw. Although he noted that this project was small – approximately the size of a shop-built tank – he testified that he included it because it was field-erected.[527] However, no evidence suggests – and indeed, Respondents do not even assert – that Votaw is a competitor in the large, field-erected TVC market. We thus conclude that this award should not have been included in Dr. Harris's calculations. Similarly, without sufficient explanation for doing so, Dr. Harris included BOC's Midland, North Carolina, project, which was solicited in late 2000[528] and awarded prior to the acquisition.[529] Given the timing of this project, we think it was inappropriate to consider it without some explanation of its relevance. Finally, we question Dr. Harris's decision to include CB&I's Praxair win. Scorsone, the President of CB&I's Industrial Division, testified that this project was not bid competitively, because CB&I – as a result of its acquisition of the PDM assets – "inherited the responsibilities" from PDM to construct Praxair's LIN/LOX/LAR tanks at a 4 percent margin.[530]

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525 *Id.*

526 Dr. Harris concluded that CB&I won 4 out of 10 projects post-merger. Even if we assume that Dr. Harris is correct and that CB&I has won only 40 percent of the post-merger bids, inclusion of these other 4 bids would have increased CB&I's win-to-loss ratio to 8 out of 14, or roughly 60 percent.

527 Tr. at 7355-56.

528 Tr. at 4599.

529 *See* RX 951 (project awarded Feb. 1, 2001); *see also* RX 208.

530 Tr. at 5019-20. Although the history of the CB&I/Praxair agreement is not corroborated by other evidence, we mention it out of an abundance of caution – the exclusion of

We now turn to Dr. Harris's examination of the LNG tank market. As with his more general analysis, he found that CB&I lost more sales post-acquisition than would have been profitable from a price increase.[531] This conclusion is premised on an assumption that CB&I's not winning the Dynegy and Trinidad bids shows that it cannot profitably impose a 5 percent price increase in the LNG tank market. We find this assumption unsupported by the evidence.

We conclude that the Dynegy project is not illustrative of the alleged new entrants' ability to constrain CB&I effectively. As we discussed earlier, time and again, CB&I refused to bid for the tanks on this project and repeatedly insisted that Dynegy contract with it on a turnkey basis. Only after the bidding process was nearly complete did CB&I approach Dynegy to submit a bid. We find that Dynegy's refusal to accept CB&I's bid at such a late stage does not represent the result of a competition on the merits, and this outcome therefore tells us little about whether an attempted exercise of market power by CB&I would lead to a loss of sales that exceeded a critical loss threshold.[532]

Dr. Harris similarly included the Trinidad project in his analysis because he found "a lot of similarities between Trinidad and the United States."[533] In addition to Trinidad's close geographic proximity to the United States, Dr. Harris emphasized that LNG tanks in Trinidad are built to standards similar to those in effect in the U.S. and that CB&I, which had built the previous tank at the site, had "some local advantages."[534] However, as we have already stated, the Trinidad project provides little or no relevant information with which to assess LNG sales in the United States. Trinidad has no domestic incumbent LNG tank providers, and therefore all LNG tank suppliers stand on more equal footing. Despite Dr. Harris's assertion that CB&I has

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this project would benefit Dr. Harris's calculation, because it would reduce the number of CB&I's post-merger wins.

[531] Tr. at 7263.

[532] Moreover, even if we accepted Dr. Harris's assumption that CB&I lost the Dynegy project, we could not conclude (based on the evidence) that CB&I could not raise prices post-merger. Like any other supplier, CB&I's pricing is constrained at some level. However, the mere fact that buyers switch awards to new entrants at some point tells us nothing about the effectiveness of the new entrants' ability to constrain CB&I's prices to pre-acquisition levels. This concept, commonly referred to as the "Cellophane Fallacy," derives from criticism of the approach taken by the Supreme Court in *United States v. E.I. du Pont de Nemours & Co.*, 351 U.S. 377 (1956). *See, e.g.,* Steven C. Salop, *The First Principles Approach to Antitrust, Kodak, and Antitrust at the Millennium*, 68 Antitrust L.J. 187, 197 (2000).

[533] Tr. at 7268.

[534] *Id.*

local advantages, the evidence shows that CB&I is not an incumbent firm in the same sense that it is in United States market, where it has participated for decades. Thus, we are not convinced by his rationale for including this project, and we conclude that this outcome does not shed light on whether a price increase in the United States market would lead to a loss of sales that exceeds a critical loss threshold.

Because Respondents sponsored Dr. Harris's testimony, it was, of course, up to Respondents and Dr. Harris to show that his conclusions were sound and well supported.[535] Based on the problems that we have identified, we find that Respondents have not carried this burden and that the ALJ correctly disregarded the analysis.

E. Customer Sophistication

There is some support for Respondents' point that sophisticated customers with bargaining power can ameliorate the anticompetitive effects of a merger.[536] However, many of the cases in which courts have accepted buyer power or customer sophistication arguments have also found easy entry and expansion and have relied on both facts to determine that the prima facie case has been rebutted.[537] At a basic level, customers must have alternative suppliers in order to have any real bargaining power. Despite the instant case's similarities to *Baker Hughes* – *e.g.*, customers in all four relevant markets have elaborate bidding procedures and engage in competitive bidding – there is one determinative difference: the buyers in this case have no real alternatives to the monopolist. As we have discussed at length, the alternatives to CB&I are weak at best in the LNG, LPG, and LIN/LOX tank markets and non-existent in the TVC market. For example, the new entrants in the LNG tank market do not have a long-term presence or experience in the market and thus cannot effectively compete with CB&I – a fact that CB&I itself recognizes in its dealings with customers. The new entrants' inexperience also appears to have played a central role in CB&I's success in securing some of its post-acquisition sole-source contracts. Similarly, although there are more alternative suppliers in the LPG and LIN/LOX tank markets, they still face a variety of obstacles, including capacity constraints, lack of

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535 Rules of Practice for Adjudicative Hearings, 16 C.F.R. § 3.43(a).

536 *See* RAB at 30 ("[T]he sophistication and bargaining power of buyers play a significant role in assessing the effects of [an acquisition].") (brackets in original) (citations omitted). *See Baker Hughes*, 908 F.2d at 986-87.

537 *See, e.g., Advo Inc. v. Philadelphia Newspapers*, 854 F. Supp. 367, 375 (E.D. Pa. 1999) (noting the ability of customers to bring in other suppliers); *R.R. Donnelley & Sons Co.*, 120 F.T.C. 36, 191-92 (1995) (finding that buyers in the relevant market "use procurement designed to ensure negotiating leverage" and have the ability to "solicit and obtain *multiple* bids") (emphasis added).

experience, and poor performance records.[538] Indeed, many of the alternative suppliers in these two markets competed at least to some degree with CB&I prior to the acquisition, and there is no indication that they have collectively increased their presence after the acquisition. We conclude from this evidence that the competition to which Respondents refer does not provide a viable alternative to CB&I in the relevant markets and does not provide customers with any real ability to thwart price increases post-merger.

In addition, some evidence suggests that customers in the LNG, LPG, and LIN/LOX tank markets may suffer from inadequate information on pricing and thus may be unable to constrain CB&I from increasing prices post-acquisition.[539] Any particular customer in each of these markets purchases a tank infrequently[540] and therefore is unlikely to have the necessary information on hand to know whether it has been subjected to a price increase. For example, CMS testified that in order to evaluate CB&I's price for its Lake Charles expansion, it looked at the FERC filing for Cove Point's expansion, because that was the only place CMS could find costs.[541] CMS further testified that because the projects are not identical, the comparison was difficult to make.[542] Similarly, El Paso testified that it is "operating a little bit in the dark in terms of knowing . . . the costs . . . for LNG tank suppliers."[543] There is also no evidence that customers in these various markets share information about the cost of their purchases with other potential customers.

On the other hand, other evidence indicates that at least some tank customers may have

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538 *See, e.g.*, Tr. at 1588, 1609, 2021-22, 2155, 2252 (*in camera*), 2365-66, 2379-80; JX 27 at 72-73. Respondents point to AT&V, Matrix, Wyatt, Chattanooga, and Pasadena Tank as alternatives to CB&I for the construction of LPG tanks. As we discussed above, however, these suppliers face a variety of difficulties.

539 The Supreme Court has recognized that a lack of information can impede a buyer's ability to exert its bargaining power by switching (or threatening to switch) to an alternative supplier. *See, e.g., Eastman Kodak Co. v. Image Technical Servs., Inc.*, 504 U.S. 451 (1992). In *Kodak*, the Court found that a lack of information regarding the cost of service and parts of Kodak's equipment explained why an increase in those costs did not affect Kodak's market share in the original sale of equipment. *Id.* at 473. While the facts of this case, of course, are not analogous to those of *Kodak*, we believe the broader point – that lack of the necessary information may impede a buyer's ability or incentive to switch to alternative suppliers – is relevant to our inquiry.

540 IDF 204, 210-11, 233-34, 269, 292-93.

541 Tr. at 6290 (*in camera*).

542 *Id.*

543 Tr. at 6238; IDF 207.

access to information they would need to adequately assess whether CB&I has raised prices. For example, in the LNG tank market CMS employed a consultant to help it evaluate CB&I's price, and the consultant provided a rough benchmark for what level of pricing to expect.[544] In addition, there may be better price information in the LIN/LOX and LPG tank markets because customers have traditionally purchased these types of tanks more frequently. ITC, an LPG tank customer, testified that it regularly evaluates confidential bids from multiple tank suppliers.[545] Similarly, MG Industries, a LIN/LOX tank customer, testified that it purchased 14 tanks in the 1990s[546] and decreased its costs prior to the merger by informing vendors that their prices were too high.[547]

However, even if customers had access to the pricing information for multiple projects, such information would not necessarily assist them in detecting a price increase. In seeking to rebut Complaint Counsel's proof of anticompetitive effects, Respondents elicited a large volume of testimony to demonstrate that it is difficult, if not impossible, to compare prices of various tanks because the specifications vary so widely from project to project. This conclusion appears sound, yet it leads to the related conclusion – not helpful to Respondents' argument – that it would be difficult, if not impossible, for customers to look at these projects and determine whether the prices they pay after the acquisition exceed what they would have paid but for the acquisition.

Therefore, we conclude that Respondents have not carried their burden to produce evidence of customer sophistication sufficient to rebut Complaint Counsel's prima facie case.

V. Competitive Effects of the Acquisition and Conclusions

Based on the totality of the evidence, we find that Complaint Counsel established that CB&I's acquisition of PDM is likely to lessen competition substantially throughout the United States in each of the four relevant product markets. Complaint Counsel presented a strong prima facie case through both extraordinarily high levels of concentration and other evidence of Respondents' dominance in sales over the last decade. The evidence shows that CB&I purchased its closest competitor in the LNG tank, LPG tank, LIN/LOX tank, and TVC markets. Complaint Counsel's case was enhanced by proof that entry in each of the relevant markets is

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[544] Tr. at 6290-91 (*in camera*); *see also* Tr. at 6239 (consultants "can provide a rough benchmark" and inform customers, "based on their experience, [that] a tank should cost [a certain amount] per cubic meter of storage").

[545] Tr. at 7082-83.

[546] Tr. at 478.

[547] Tr. at 350; IDF 354.

difficult and that new entry or expansion by existing firms cannot replicate the competition lost as a result of the acquisition.

Respondents' evidence of entry into the LNG tank market and expansion of smaller incumbents in the LPG and LIN/LOX tank markets establishes neither that entry or expansion into these markets is easy nor that it has actually occurred at a level that will meaningfully constrain CB&I post-acquisition. Although some companies have shown interest in these markets, we find that this mere interest and intention to compete does not make them competitors sufficient to replace the competition lost from CB&I's acquisition of PDM. In addition, we are not persuaded by Respondents' critical loss argument or by their argument that sophisticated customers will be able to thwart a price increase by CB&I. This is especially true here because there are no alternative suppliers to which customers can turn in the face of supracompetitive pricing by CB&I. In accord with Complaint Counsel's economic expert, we find that customers in these markets will likely be harmed post-acquisition, because CB&I can significantly increase price or reduce quality before other suppliers can begin to constrain it.[548] For these reasons, we conclude that Respondents have not rebutted Complaint Counsel's prima facie case.

VI. Anticompetitive Price Increases

Based on our analysis in Parts III-V, *supra*, we have concluded that the acquisition violates Section 7 of the Clayton Act and Section 5 of the Federal Trade Commission Act.[549] We need not consider Complaint Counsel's cross-appeal to the extent that they argue that the ALJ erred in declining to find that the acquisition resulted in actual anticompetitive effects. Because Respondents have not rebutted Complaint Counsel's prima facie case, Complaint Counsel are not required to come forward with additional evidence to show actual anticompetitive effects. As several courts have observed, "Congress used the words 'may be substantially to lessen competition' . . . to indicate that its concern was with probabilities, not certainties."[550]

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[548] *See* Tr. at 3072-73. For example, Matrix testified that it is at a competitive disadvantage in the LIN/LOX market due to the sale of its Brown Steel subsidiary and that its costs are now higher. Tr. at 1590. The same Matrix witness testified later that the acquisition created some potential opportunities for the company in some limited circumstances. Tr. at 2182. One way to interpret this later statement is that it is consistent with an anticompetitive effect: if a higher-cost firm begins to see more market opportunities, the acquisition may have raised price levels in the market.

[549] *See United States v. Penn-Olin Chem. Co.*, 378 U.S. 158, 171 (1964) (a Section 7 violation is established when a reasonable likelihood of a substantial lessening of competition is shown); *United States v. SunGard Data Sys.*, 172 F. Supp. 2d 172, 180 (D.D.C. 2001) (same).

[550] *SunGard*, 172 F. Supp. 2d at 180 (citations omitted); *see also Heinz*, 246 F.3d at 708 (quoting *Brown Shoe Co. v. United States*, 370 U.S. 294, 323 (1962)).

Nonetheless, Complaint Counsel argue that CB&I has engaged in several instances of actual anticompetitive conduct since the acquisition and that these instances provide the Commission another reason for finding liability under the antitrust laws.[551] In light of our holdings above, we decline to address these arguments.

VII. Exiting Assets

Respondents' final argument is that absent the acquisition, PDM's Erected Construction Division would have ceased operating in the relevant markets and that CB&I's acquisition of these assets therefore had no impact on competition.[552] First, we want to be clear that Respondents are not arguing that PDM's EC Division met the requirements of the failing firm defense recognized under the *Merger Guidelines*.[553] Rather, they rely on the so-called "exiting assets" defense outlined in a 1986 law review article, which suggests that where a company has made exhaustive efforts to sell assets that would actually have exited the relevant market absent the acquisition, such facts might justify an otherwise anticompetitive acquisition.[554] The Commission, however, has not yet sustained this defense in any of the cases that have raised this issue,[555] and this case is no different. We agree with the ALJ that Respondents did not present persuasive evidence that PDM had made the decision to close the business in the near future,[556] nor did Respondents show that PDM conducted an exhaustive search for alternative buyers.[557] Instead, PDM chose to sell its assets to its closest competitor, thereby creating a firm with unmatched market dominance. Even were we to accept the exiting assets defense in theory, we agree with the ALJ that Respondents have not established the defense on these facts.

VIII. Remedy

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551 *See* CCACAB at 51-60 (alleging actual post-merger price increases for several LNG, LIN/LOX and TVC projects).

552 RAB at 58-61.

553 OA at 30.

554 John E. Kwoka, Jr. & Frederick R. Warren-Boulton, *Efficiencies, Failing Firms, and Alternatives to Merger: A Policy Synthesis*, 31 Antitrust Bull. 431 (1986).

555 *See Olin Corp*, 113 F.T.C. at 618 (finding that management of the acquired company had not conducted an exhaustive search).

556 ID at 116-17; IDF 504-14.

557 Tr. at 2931; ID at 116-18; IDF 517-20, 524.

After concluding that Complaint Counsel had presented sufficient evidence to prove that the acquisition violated Section 5 of the FTC Act and Section 7 of the Clayton Act, the ALJ fashioned a remedy to address the law violation he found. In relevant part, his Order directed CB&I to divest: (1) all the assets (including PDM's Water Division) that it acquired from PDM along with any additional assets that it has acquired to replace or maintain the acquired PDM assets; (2) all intellectual property and rights to such property, including the PDM name, that it acquired from PDM; (3) all contracts that it acquired from PDM, to the extent they have not been fully performed; and (4) "if possible," a sufficient revenue base to assure the divested assets can actively compete in the LNG market.

In their appeal, Respondents object that the ALJ's Order may actually harm competition by reducing the number of competitors who are able to bid on large projects.[558] They also argue that the divestiture will result in two "higher cost companies" instead of one low cost company and accordingly that Complaint Counsel failed to show the efficacy of divestiture as a remedy in this case.[559] Respondents also object to the divestiture of PDM's Water Division assets, arguing that there is no evidence to show that another firm could not "compete in the relevant markets without the Water Division assets."[560]

Complaint Counsel in a cross-appeal argue that aspects of the ALJ's Order are vague and ambiguous and that it does not go far enough. Specifically, Complaint Counsel assert that, in addition to divesting all the assets identified by the ALJ, Respondents must also assign to the prospective buyer a percentage share of all work in progress so that the firm can be assured of becoming a viable competitor in the relevant markets. In addition, Complaint Counsel argue that Respondents must be compelled to take affirmative steps to ensure that a sufficient number of experienced employees are transferred to the buyer and to provide the buyer with necessary technical and administrative assistance for a period of time. Finally, Complaint Counsel argue in favor of the appointment of a monitor trustee who will oversee the divestiture process. In response, Respondents assert that they have had insufficient notice of all the relief demanded by Complaint Counsel and that they have not had a fair opportunity to respond to the final order proposed by Complaint Counsel.

This Part of our opinion is divided into two sections. In the first section, we discuss the remedy that we have fashioned to address the law violation and ensure that meaningful and effective competition is restored to the market. In the process of expounding on our Order

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558 RAB at 52.

559 RAB at 55-56.

560 RAB at 57. Respondents' appeal brief actually states: "Nor is there evidence that a party purchasing the EC Division could compete in the relevant product markets without Water Division assets." We assume, however, that Respondents meant to say that there is no evidence that a purchaser could *not* compete without the Water Division assets.

provisions and our rationale for adopting them, we address all the arguments raised by Complaint Counsel and most of the arguments raised by Respondents. In the second section, we examine any remaining arguments, to the extent they are not addressed in the first section.

A. Standard and Explanation of Remedy

CB&I's acquisition of PDM's Erected Construction and Water Divisions resulted in a monopoly or a near-monopoly in all four relevant markets, and violated both Section 7 of the Clayton Act and Section 5 of the FTC Act. We thus must determine how most effectively to "pry open to competition [the] market[s] that [have] been closed by defendants' illegal restraints."[561] Based on our review of the record, we agree with the Initial Decision's determination that divestiture is the most appropriate remedy to effectuate this outcome. The Clayton Act itself contemplates that, upon our finding that Section 7 of the Act has been violated, we order Respondents to divest themselves of "the stock, or other share capital, or assets held" in violation of that section.[562] Much of the case law has echoed this sentiment and found divestiture the most appropriate means for restoring competition lost as a consequence of a merger or acquisition. In the *du Pont* case, the Supreme Court stated that "[t]he very words of §7 suggest that an undoing of the acquisition is a natural remedy"[563] and that divestiture "should always be in the forefront of a court's mind when a violation of § 7 has been found."[564] Similarly, the Court stated in *Ford Motor* that "[c]omplete divestiture is particularly appropriate where asset or stock acquisitions violate the antitrust laws."[565] In this case, the evidence shows that in four separate markets, CB&I acquired its closest competitor and thus obtained monopoly or near- monopoly power, entry is extremely difficult, and no new entry or fringe expansion has been able to challenge CB&I effectively. Given these facts, we find it highly unlikely that the relevant markets will return to their pre-acquisition state absent divestiture. In addition, as we will discuss in this portion of our Opinion, we find that a number of ancillary provisions are crucial to establishing a viable entrant to replace the competition lost from CB&I's acquisition of PDM.[566]

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561 *Du Pont*, 366 U.S. at 323.

562 15 U.S.C. § 12(b).

563 *Du Pont*, 366 U.S. at 329.

564 *Id.* at 331.

565 *Ford Motor Co. v. United States*, 405 U.S. 562, 573 (1972).

566 Section 11(b) of the Clayton Act and pertinent case law afford the Commission broad remedial powers. 15 U.S.C. § 21(b) (granting the Commission the power to order divestiture "in the manner and within the time fixed by said order").

We order CB&I to reorganize its Industrial Division (and, to the extent necessary, its water tank unit) into two separate, stand-alone divisions (New PDM and New CB&I) and to divest New PDM within six months after our Order becomes final. We have taken this approach to give CB&I, which is best positioned to know how to create two viable entities from its current business, the opportunity to do so. We also believe this approach will remedy the anticompetitive effects of the merger more quickly than would immediately appointing a divestiture trustee, who would have to learn the business before recommending a divestiture package. While we recognize that this approach places the burden of unscrambling the merger on CB&I's shoulders, we find this burden justified. CB&I proceeded with its acquisition of PDM with the knowledge that the Commission was still investigating the transaction. Because Respondents have created – at least to an extent – any problems associated with unwinding the transaction (and restoring competition), equity necessitates that they help solve them.

In addition, because common sense tells us that Respondents' self-interests will be best served by creating less rather than more competition from the divested assets, we have also included two provisions to ensure that CB&I creates a viable business and divests it to an appropriate buyer within a reasonable time frame. First, if CB&I has not divested New PDM under the requirements of our Order within 180 days of the Order's becoming final, we reserve the right to appoint a divestiture trustee[567] to divest either New PDM or New CB&I. This provision should ensure that CB&I has an incentive to assemble a package of assets that will be sufficient to create a viable competitor and readily attract an acceptable buyer. It also provides CB&I with the incentive to maintain the strength and viability of the to-be-divested assets. Second, we have appointed a monitor trustee. Experience has shown not only that a seller has the incentive to create a weak competitor with its divestiture package, but also that buyers may lack the necessary information to assess properly the asset package. A monitor trustee will ensure that a good mix of assets is made available to the acquirer and that the acquirer receives what it needs to maintain a viable business. A monitor trustee also will make certain that the divestiture proceeds smoothly by providing a conduit between the acquirer and Respondents and promptly notifying the Commission of any problems.

In addition to the general requirement that CB&I create two viable, stand-alone businesses, the Order contains a number of specific provisions that warrant discussion. We begin this discussion by noting that the Supreme Court has recognized that "[t]he relief which can be afforded" from an illegal acquisition "is not limited to the restoration of the status quo ante."[568] "There is no power to turn back the clock. Rather, the relief must be directed to that which is 'necessary and appropriate in the public interest to *eliminate the effects* of the

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[567] Our Final Order specifies that the monitor trustee, who will oversee the divestiture requirements of our that Order, may be the same person as the divestiture trustee (whom we may appoint if Respondents fail to divest the required assets in accordance with the Order). Final Order ¶ V.C.

[568] *Ford Motor Co.*, 405 U.S. at 573 n.8.

acquisition offensive to the statute.'"[569] With this standard in mind, we explain the ancillary relief we have ordered in this matter.

We have included in the assets to be divested not only those assets necessary to build the four relevant products but also those necessary to build water tank products, similar to those tanks historically built by PDM's Water Division. Respondents argue that such additional relief is inappropriate, because it does nothing to restore the competition in the relevant markets.[570] They also argue that there is no evidence that a purchaser needs other tank assets to compete in the relevant markets.[571] Complaint Counsel, on the other hand, point to the irregular timing of sales in the relevant markets and the facts that PDM's EC and Water Divisions were inter-related before the acquisition and were sold together as a going concern. They assert that given these facts, PDM's Water Division assets are necessary to ensure the viability of a newly-created entrant.[572]

We think that Complaint Counsel have the stronger argument but acknowledge that it is impossible to know whether a new entrant must have the assets similar to those of PDM's Water Division in order to compete in the relevant markets. However, there is no evidence to suggest that a smaller set of assets than those illegally acquired by CB&I will suffice to restore competition, and what we know with certainty is that this combination of assets has made a saleable package in the past. Thus, we follow the Supreme Court's guidance in *du Pont* and resolve this dispute in favor of including broader rather than narrower relief. The Court in *du Pont* stated that "it is well settled that once the Government has successfully borne the considerable burden of establishing a violation of law, all doubts as to the remedy are to be resolved in its favor."[573] We find this rule especially compelling where – as here – Complaint Counsel have established such a strong prima facie showing, including the fact that entry is extremely difficult in each of the relevant markets. Moreover, to ensure that narrower relief is available if it is warranted by market conditions, we have included a provision that allows the exclusion of the water tank assets if the acquirer and monitor trustee both find them unnecessary and agree to exclude them.

The Order also requires CB&I to divide its customer contracts between its newly-created subsidiaries (New CB&I and New PDM) as successors to CB&I. While this may seem a drastic step at first blush, we find it a necessary one under the circumstances of this case. As we

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569 *Id.* (emphasis in original) (citations omitted).

570 RAB at 56-57.

571 *Id. See supra* note 560.

572 CCACAB at 78.

573 *Du Pont*, 366 U.S. at 330.

discussed in Part III.C, *supra*, a supplier must gain experience and a good reputation from past jobs to compete effectively in each of the relevant markets. This task is difficult not only because of technical requirements, customer preferences, and the need to match the long-honed experience and reputation of the incumbent firm, CB&I, but also because the irregular timing of the sales in these markets. Without a division of customer contracts, a purchaser would have virtually no on-going business on which to build a reputation and would have no way of knowing when – or if – it might make a sale.

The Supreme Court has recognized the importance of a customer base. In response to a vertical merger by which Ford Motor Company acquired a spark-plug manufacturer with a 15 percent market share, the Court upheld ancillary relief designed to provide the divested entity "an assured customer while it struggles to be re-established as an effective, independent competitor."[574] We find that approach equally valid where CB&I, through its illegal acquisition of PDM, has gained monopoly or near-monopoly power in markets characterized by extremely difficult and time-consuming entry. We thus conclude that a division of contracts is necessary to ensure that the purchaser will be able to gain the requisite experience in these markets and restore the vibrant competition lost from the acquisition. Moreover, to the extent that CB&I is unable to transfer or assign customer contracts, the Order requires CB&I – the party best-situated to deal with these issues – to "enter into such agreements, contracts, or licenses as are necessary to realize the same effect as such assignment or transfer."[575]

We have also required CB&I to facilitate the transfer of employees so that New PDM and New CB&I each have the technical expertise to complete the customer contracts assigned to them and to bid on and complete new customer contracts. The evidence overwhelmingly demonstrates that experience is the lynchpin to success in any of the relevant markets, which logically means that the transfer of employees is crucial to this divestiture's success. To effectuate this transfer and to ensure the employees are fairly allocated, our Order further requires CB&I to: (1) provide the acquirer with information about its employees, (2) remove contractual impediments that could prevent employees from accepting employment with the acquirer,[576] (3) provide certain financial incentives to employees who accept offers of

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574 *Ford Motor Co.*, 405 U.S. at 576-577.

575 Final Order ¶ III.B.

576 Such impediments can include, but are not limited to, "any non-compete or confidentiality provisions of employment or other contracts with CB&I that would affect the ability of the Relevant Business Employee to be employed by the Acquirer." Final Order ¶ IV.D.2.(ii). Respondents argue that this provision "encourages the exchange of confidential business information between competitors and denies CB&I confidentiality regarding issues unrelated to the relevant products." RRCARB at 56. Respondents' first argument in fact supports the need for a monitor trustee, who can ensure that any problems related to an information exchange are resolved without violating the law. With regard to Respondents'

employment from the acquirer, and (4) refrain from inducing employees hired by the acquirer to terminate their employment with the acquirer.

Finally, we turn to issues concerning the provision of technical assistance and administrative services. Complaint Counsel object to the ALJ's failure to order technical assistance and administrative services. Like the ALJ, we recognize that such requirements raise the possibility of coordination in markets with few major participants. As we have noted throughout this Opinion, the relevant products all require a great deal of technical competence and knowledge to produce – some of which is proprietary information known only to CB&I. We anticipate, however, that the transfer of employees will likely provide the technical competence and knowledge needed for the acquirer to produce the relevant products without the technical assistance of CB&I. Because technical knowledge typically resides with the people who implement it, we believe that the acquiring firm's need for technical assistance and administrative services may be inversely proportional to the quantity and quality of experienced personnel who transfer from CB&I to the acquiring firm.

Of course, apart from directing CB&I to provide incentives and remove obstacles to facilitate employee transfers, we cannot control the degree to which the transfers occur. We are also unable to predict at this point in the divestiture process whether a critical mass of employees will make the transfer to adequately provide the necessary knowledge and technical competence to the acquirer (and obviate any need for the acquiring entity to seek either assistance or services from CB&I).[577] Given these uncertainties, we conclude, as we did with respect to the divestiture of PDM's Water Division assets, that the monitor trustee must determine whether, and if so to what extent, these services may be necessary to restore the competition lost through the acquisition. We believe this issue needs to be finally resolved in the context of our review of a specific divestiture package for prior approval.

Accordingly, we direct the monitor trustee to include in the final report to the

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second point, we note that the purpose of the provision is to ensure that current CB&I employees are not prevented from working for the acquirer by a breach of contract suit (or the threat of it). The provision is thus qualified as requiring a waiver only as to contractual provisions that "would affect the ability" of the transferred employee "to be employed by the [a]cquirer." Final Order ¶ IV.D.2.(ii). This qualifier should protect CB&I's interest with respect to those products not involved in the divestiture.

[577] We also note that even with transfer of experienced personnel, there remains the possibility that technical assistance may be required. As we have stated, constructing the relevant products is extremely difficult and draws on the knowledge and experience of a variety of CB&I employees. Therefore, it is possible that transferred employees, while experienced and able to construct these products in a general sense, may have gaps in their knowledge that would necessitate assistance (at least in the short term).

Commission concerning the sale of the divested assets, a recommendation regarding the need for such services and, if he or she believes there is such a need, a recommendation with respect to the provision, manner, and duration of these services.[578] We will consider this recommendation along with the acquiring firm's need for such assistance when we exercise our right of prior approval of the final divestiture package. If we determine that the provision of such services is a necessary part of the divestiture package, we will allow CB&I to recover its costs from any assistance it provides, which should ensure that the acquirer seeks CB&I's help only to the extent necessary. While we prefer a complete disentanglement between CB&I and the acquiring firm, we recognize that some level of assistance may be necessary to enable the acquiring firm to compete successfully.

Even though we did not accept Complaint Counsel's Proposed Order in its entirety, a number of our Order's provisions raise issues similar to those that Respondents raised in opposition to Complaint Counsel's proposals. Specifically, Respondents objected to the requirements that: (1) CB&I transfer employees to the divested entity,[579] (2) CB&I assign customer contracts other than those formerly held by PDM,[580] (3) CB&I waive contractual impediments to its employees' working for the acquirer,[581] and (4) CB&I provide transitional assistance.[582] Respondents argue that the evidence does not establish that any of these requirements are necessary for an effective divestiture and that these requirements may, in fact, harm competition.[583] However, as we have just discussed, we find that the evidence provides clear support for these requirements.

In sum, we find that the additional water tank assets, allocation of customer contracts, and transfer of employees are necessary to ensure that the divested entity can compete effectively in the relevant markets. Depending on the details of the divestiture package, we also find it possible that the provision of technical assistance and administrative services may be needed for the divestiture to be effective. The record is replete with evidence that these markets are very difficult to enter and that a new entrant must have experience and a solid reputation.

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578 We require the monitor trustee's assessment because we recognize that an information imbalance may exist between CB&I and the acquiring firm, which may not be in the best position to assess fully all of its needs before acquiring the divested assets. Given the monitor trustee's neutral role in the process, we anticipate that he or she will have access to information that the acquiring firm may not be able to get.

579 RRCARB at 50-52.

580 *Id.* at 52-56.

581 *Id.* at 56.

582 *Id.* at 57.

583 *See generally* RRCARB at 49-58.

With these provisions, both New PDM and New CB&I will have on-going projects upon which to build a reputation as well as knowledgeable and skilled employees to do the work. Therefore, the Order should thus insert a competitive acquirer into the market and help replicate the competition lost from the acquisition.

B. Respondents' Other Arguments

Respondents make three additional arguments in opposition to divestiture and ancillary relief. First, they assert that a divestiture would harm competition by reducing "the number of competitors that can bid on large LNG projects."[584] Second, Respondents argue that they did not receive proper notice of the provisions of Complaint Counsel's Proposed Order and that Complaint Counsel's attempt to "raise new arguments" in the form of their cross-appeal to supplement the ALJ's order should be "rejected on fundamental grounds of fairness."[585] Third, Respondents argue that before we consider implementing any of Complaint Counsel's Proposed Order, we should remand this case for additional evidence on remedy issues. We find that Respondents' arguments are not supported in the record or the law.

With respect to Respondents' first argument, we note at the outset that prior to its acquisition of PDM, CB&I had no trouble convincing LNG customers to consider its bids, and Respondents presented no evidence to show why returning CB&I to its pre-acquisition state will preclude it from being a viable supplier. Instead, they point to testimony from three customers in support of their argument. We find that this testimony – when read in context – does not support Respondents' position.

Calpine and CMS both testified that the financial and bonding capability of the two new companies would be of concern to them. However, we view their general testimony *in its totality* as stating the obvious – that LNG tank customers consider financial stability and bonding capacity in selecting a tank supplier. For example, in addition to testifying that he would be concerned about the new companies' ability to guarantee a job,[586] the Calpine representative testified that he "would have to take a fresh view of whether they would be put on the bid list."[587]

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584 RAB at 52.

585 RRCARB at 48.

586 Tr. at 6510-11.

587 Tr. at 6511. Respondents also cite testimony by a witness from Calpine that he did not believe that PDM would make Calpine's bid list and that CB&I's inclusion on the list would depend on what was left of the company. RAB at 53. However, he also testified that he had no knowledge of how either company would look post-divestiture and that he was merely speculating about the post-divestiture world. Tr. at 6538.

Similarly, CMS did not testify "that a break-up would create two companies that CMS would not want to deal with" as Respondents suggest,[588] but rather testified that it "would have to look at" the impact a break-up would have on either company's ability to guarantee a job.[589]

We also find Respondents' reliance on testimony from El Paso misplaced. El Paso testified that the acquisition gave it some comfort in CB&I's ability to guarantee a job (because El Paso can now seek more assets in the event CB&I fails to construct the tank). However, this testimony says nothing about El Paso's comfort level with CB&I pre-merger or the impact of a Commission-required divestiture on El Paso's assessment of either CB&I or a new company going forward. It is thus not probative of the impact a divestiture will have in the LNG tank market. In fact, in its speculation about a post-divestiture world, El Paso did not testify that a break-up might cause it not to consider buying from either CB&I or a new company, but rather that "it would be less inclined to do any more than maybe one or two jobs with them total."[590] For obvious reasons, this testimony does not suggest that either New CB&I or New PDM will be unable to compete post-divestiture.

We have also considered Respondents' argument that they did not receive proper notice of Complaint Counsel's Proposed Order. We reject this assertion as lacking factual support. Far from providing the "barest" sketch, the Notice of Contemplated Relief that accompanied the Complaint in this matter stated that if CB&I's acquisition of PDM was found to violate either Section 5 of the FTC Act or Section 7 of the Clayton Act, the Commission could order, among other things, "[r]eestablishment by CB&I of two distinct and separate, viable, and competing businesses, one of which shall be divested by CB&I." Later in the same paragraph, the Notice elaborated that a divestiture could include "such other businesses as necessary to ensure each [new business's] viability and competitiveness" in the relevant markets, and "all intellectual property, knowhow, trademarks, trade names, research and development, customer contracts, and personnel, including but not limited to management, sales, design, engineering, estimation, fabrication, and construction personnel . . ." We thus reject Respondents' claim that they were not on notice that the relief in this case might include the assignment of contracts, the transfer of employees, and the divestiture of water tank assets similar to those acquired by CB&I from

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588 RAB at 54.

589 Tr. at 6265. Furthermore, the quote from a CMS employee that CMS "wouldn't have wanted anyone smaller than CB&I," which Respondents cite as evidence of the potential harm that will flow from a divestiture, is taken out of context. *See* RAB at 54. Rather than discussing the potential impact of a divestiture, this testimony discusses the ability of the new entrants to guarantee their work. Tr. at 6288-89 (*in camera*). Given the context, it is inappropriate to interpret this customer's testimony as a commentary on divestiture.

590 Tr. at 6155-56.

PDM's Water Division.[591]

Furthermore, it should hardly come as a surprise that the type of general language contained in the Notice of Contemplated Relief often triggers the types of specific provisions set forth in our Order. For example, a number of consent orders that the Commission has entered into over the last several years included provisions that required the respondents to effectuate employee transfers by both removing contractual impediments[592] and providing financial

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[591] We note that the technical assistance and administrative services requirements are not specifically enumerated in the Notice but rather are covered under the language "and such other arrangements as necessary or useful in restoring viable competition in the lines of commerce alleged in the complaint." Plainly, "such other arrangements" encompass terms that were not specifically enumerated but are related to the enumerated relief and geared to make such relief effective. As discussed above, that is precisely the nature of the additional terms at issue. Moreover, Respondents have not proffered any new evidence – in their appeal or cross-appeal response, or at oral argument – to counter the evidence that suggests such a provision will be necessary to ensure effective competition. In any event, as we have discussed, the requirement to provide such assistance or services may be rendered unnecessary, depending on the contours of the final agreement negotiated by CB&I and the Acquirer and approved by the Commission. In addition, we note that the provisions allow Respondents to recover their costs for providing these services, so the provisions should result in no economic harm to CB&I. Thus, having weighed these factors, we conclude that the inclusion of these provisions is equitable.

[592] *See Baxter Int'l Inc. and Wyeth,* Dkt. No. C-4068 (Feb. 3, 2003) (Decision and Order), *available at* http://www.ftc.gov/opa/2003/02/baxter_wyethdo.pdf (requiring respondent to "remove any impediments within the control of Respondents that may deter these employees from accepting employment with the . . . [a]cquirer, including, but not limited to, any non-compete provisions of employment or other contracts with Respondents that would affect the ability or incentive of those individuals to be employed by the . . . [a]cquirer" (¶ II.H)); *MSC.Software Corp.*, Dkt No. 9299 (Oct. 29, 2002) (Decision and Order), *available at* http://www.ftc.gov/os/2002/11/mscdo.pdf (requiring that respondent shall "eliminate any non-compete restrictions that would otherwise prevent employment of such employees by the Acquirer; and shall eliminate any confidentiality restrictions that would prevent employees who accept employment with the Acquirer from using or transferring to the Acquirer any information or Intellectual Property that is in the employee's memory or that is part of the Licensed Rights" (¶ V.C.3.)); *Amgen, Inc. and Immunex Corp.*, Dkt. No. C-4056 (Sept. 3, 2002) (Decision and Order), *available at* http://www.ftc.gov/os/2002/09/amgendo.pdf (requiring respondents to "remove any impediments within the control of Respondents that may deter these employees from accepting employment with the Commission-approved Acquirer, including, but not limited to, any non-compete provisions of employment or other contracts with Respondents that would affect the ability or incentive of those individuals to be employed by the Commission-approved Acquirer" (¶ II.I)).

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NEWS

An interview with Timothy Muris

21 December 2004

Tim Muris recently stepped down as chair of the US's Federal Trade Commission. GCR asked him what he felt his key achievements were, and if he had any advice for his successors.

GCR: Will you miss the FTC? What in particular did you find fulfilling?
Muris: Sure, I'll miss it. What I enjoy the most is working with smart, and nice, people on problem-solving. Fortunately for me, both of my new jobs [Muris has become co-chair of the antitrust practice at O'Melveny & Myers and a professor at George Mason University] will bring me into contact with a lot of smart, nice people, and I'll be working on interesting issues.
GCR: Is the FTC a special place - do you have any anecdotes
Muris: It is a very special place. The FTC had its 90th anniversary celebration just after I left. Looking around the audience and realising that the FTC had followed a hard road to high prominence was very satisfying. The FTC is one of the most respected institutions in the world now. A lot of people worked hard to make it happen, and I regard myself as one of those people.
GCR: Do you have a greatest achievement - and, if so, is there a greatest disappointment?
Muris: I don't tend to think about individual issues. I tend to look at the big picture. I think if you look at Bob Pitofsky's tenure and mine together you see a sensible bi-partisan agenda to protect consumers. The FTC is now an institution that has enormous respect, does enormous good, and is largely above partisanship in a town where that is rare.
GCR: I thought you would just say: 'the do-not-call register'
Muris: I could have. I'm very proud of it. Somebody wrote - tongue in cheek - that that's what's going to be on my tombstone. But I don't tend to focus so much on the individual issues. In the big picture, I really do think that the FTC has a well-deserved reputation for being an excellent institution and I'm proud to have contributed to that.
GCR: Your tours of duty at the FTC spanned three decades. What has been the most significant change at the Commission or in enforcement generally in that span?
Muris: Now there is a clear agenda, one that is widely shared. The FTC got off track in the 70s. The FTC's statutes are so vague that - theoretically - it could get involved in almost anything. The FTC has finally settled in both its antitrust and consumer protection missions so that it has core activities are where everybody agrees, "that's what we should do". In the 70s, that was up for grabs. In the 80s, we began shifting to today's agenda, but it was controversial, believe it or not.
GCR: The FTC seemed to 'respond' to you - did you feel that?
Muris: I appreciate the compliment. I think I was lucky to inherit an agency that had performed so well under Bob Pitofsky and that had so many talented and experienced people. I had commissioners who were very supportive. It obviously helped that I had a

Exhibit 3

background with the FTC and had an agenda. It wasn't like I was a newcomer. It was a fortunate convergence of forces, if it was anything.

GCR: So you aren't going to claim any personal credit at all?

Muris: It is important to be a strong leader and I think I was a strong leader. If I had not been at the agency, it might not have performed as well, but it was a team effort, no doubt about it.

GCR: Is there an art to leading an organisation such as the FTC?

Muris: In an agency, unless it has a clear statutory mandate, there has to be a shared sense of the basic functions of the agency - a core of activities that takes up 70 to 80 per cent of your time. I did emphasise some different things than Bob, and in some ways our tenures aren't totally comparable on the antitrust side because he had the merger wave and I didn't. But I think it is a necessary but not sufficient condition for success that there is an agenda that makes sense to all sides - to people in the agency, on the Hill, and in the world at large. And the FTC's basic agenda is pretty simple. On the antitrust side, go after horizontal restraints, including horizontal mergers. On the consumer protection side, go after fraud, basic deception, deceptive advertising, plus protecting consumers' privacy, which is fairly new. (For example, we took a settlement from Microsoft under this heading.)

GCR: Did you think of yourself then as a manager or a 'leader'?

Muris: As both, frankly. This was the sixth government job I'd had. If you are going to set an agenda, it is important to be an effective manager and I worked hard at the management part of the job.

GCR: What's your management 'philosophy'?

Muris: Fit the tasks that you give people to their skills. It seems obvious, but it took me a while to learn that. I've seen people be spectacular at some tasks and bad at others. When I put together a team I do so with that in mind. It is also very important - again as a manager - to have your agenda. You also should respect the people who work for you and with you. I really value people's opinions. I know that leaders and managers are expected to be decisive, but I particularly value the experience of having people disagree with me. There are too many people who don't tell you what they really think. It helps being from an academic background - in the academic world, disagreement is not regarded as a bad thing.

GCR: If you could grant Deborah Majoras [his successor] one wish, what would it be?

Muris: For the commissioners to be as supportive of her as they were of me. Orson Swindle and Thomas Leary were tremendous: extremely helpful, willing to discuss and debate ideas. They are Republicans - but all of the commissioners, with limited exceptions on a few issues, were extremely helpful and very supportive. Debbie is very, very talented and I think that she will do a superb job.

GCR: A modernisation commission is about to enter full activity in the US - if it fixes just one thing about US antitrust enforcement, what should that be?

Muris: The problems in our system are more procedural than substantive. The class action system has gotten out of control and needs reform. In antitrust, you also have the problem of potential multiple recoveries. So procedural issues present the most pressing problems.

GCR: They sound like the hardest thing to fix - as in the most vested interests.

Muris: They probably will be hard to fix. If you look at tort reform, the Democrats in our Senate have been able to bottle up tort reform . . . the antitrust reforms are a little more specific, however.

GCR: You didn't seem to travel as much as some of your colleagues or counterparts at the DoJ. Was that deliberate or just the

confluence of events?
Muris: I thought I travelled a lot. I was at the first ICN meeting; I enjoyed Naples. I was on my way to the second one when we had a crisis . . . perhaps I had the advantage of having Bill Kovacic who is extremely well-known internationally and loves to get on aeroplanes. But I did travel. It is an important part of the job.
GCR: Do consumer protection and competition policies naturally dovetail - how? I see parallels, yes, but do the two actually converge and meet?
Muris: They don't dovetail for everybody, because there are some people in the consumer protection world who are anti-markets. But at the FTC we regarded them as opposite sides of the same coin. The goal is to protect consumers and the best way to do that is to have a market orientation. You also need rules that say you can't get together with your competitors and not compete, you can't defraud consumers, you can't steal money from consumers.
GCR: I see that at the basic level they are compatible. It is more that the skill sets required at the practical level seem unrelated?
Muris: As done in some countries, they are not compatible. In the US, as done at the FTC, they have the same market orientation. We ask, "What makes a market work best?" At the FTC, the consumer protection people for 25 years have been very supportive of advertising, whereas in other countries they've been suspicious of advertising. The FTC has come to realise that truthful advertising benefits consumers. In a world where it is hard to find information, truthful advertising can be very beneficial.
GCR: What do you think about exchanges between agencies? Do you think it is good for officials from one regime to spend time working within another, or visiting as an observer?
Muris: Sure. The second biggest change that has happened to FTC enforcement of antitrust in the last 30 years is the internationalisation of the work. In 1984, before I left the Bureau of Competition (in 1985), I did three foreign trips. We were just beginning to hold annual consultations with the Europeans. But it was not a particularly important part of the job. Now, it is crucial. Anything that we can do to increase relationships at a practical level in cases that we share is of value. The consumer protection area needs to catch up to antitrust in this regard. Cross border fraud should provide the impetus.
GCR: Don't certain US statutes rather thwart efforts to exchange staff?
Muris: There are some difficulties. In the cross-border fraud area, there is a proposed statute that has now passed the Senate and passed two committees of the House that would provide, for example, better sharing of information with people outside the US because right now there are some obstacles. On a broad basis - not just the antitrust level - more cooperation is necessary.
GCR: I was angling this question at the personal level. I know officials who would jump at the opportunity to do a secondment to the US.
Muris: That is good. But even working on cases together - when two agencies go after the same defendant - we're hampered from doing that right now by some of our legislation.
GCR: By showing how it is possible to challenge a consummated merger do you worry you may have opened up a new business line for the 'naughty' US plaintiff's bar? As I understand it, all one has to do now is find a merger where there is some evidence of price rises, and you can file a lawsuit ...
Muris: I personally think that the FTC has to face a very high hurdle to bring a consummated merger case. If the merged entity has been operating for a while, it's not enough to assert that the transaction was anti-competitive - you have to prove it. In essence, if the evidence exists, you better have looked at it. That hurdle is

if the evidence exists, you better have looked at it. That hurdle is very high.

GCR: So people won't be able to develop evidence to a high enough standard regularly enough or cheaply enough to be a nuisance, you think.

Muris: It's very hard, and appropriately so, to bring a private case against a consummated merger. I don't believe that we are opening up a new area.

GCR: Thank you.

Exhibit # 4

[REDACTED]

Westlaw.

Not Reported in F.Supp.2d
2000 WL 1780288 (E.D.Cal.), 2001-1 Trade Cases P 73,135
(Cite as: 2000 WL 1780288 (E.D.Cal.))

United States District Court, E.D. California.

WESTERN DUPLICATING, INC., Plaintiff,
v.
RISO KAGAKU CORPORATION et al.,
Defendant.

No. Civ. S98-208 FCD GGH.

Nov. 21, 2000.

MEMORANDUM AND ORDER

DAMRELL, J.

*1 This antitrust action is before the court on defendant Riso, Inc.'s ("Riso") motion to dismiss, or alternatively, for summary judgment, [FN1] and plaintiff Western Duplicating, Inc.'s ("Western") cross-motion for partial summary judgment.

FN1. Defendant RPSI Enterprises dba Riso Products of Sacramento ("RPSI") joins in Riso's motion.

TIMING OF RISO'S MOTION FOR SUMMARY JUDGMENT

As a preliminary matter, Western contends that Riso's motion for summary judgment is premature since Riso has "stonewalled" discovery. According to Western, (1) Riso supports its motion for summary judgment with documents Western requested, and Riso refused to produce, and (2) on the date Western filed its opposition, Riso had produced very few documents. As a result, Western contends that its ability to respond to Riso's motion is greatly impaired.

Generally, summary judgment is not appropriate when the nonmoving party has not had an adequate opportunity to conduct any discovery. "Rule 56(f) motions should be granted 'almost as a matter of course' unless 'the nonmoving party has not diligently pursued discovery of evidence." ' *Wichita Falls Office Assocs. v. Banc One Corp.*, 978 F.2d 915, 919 n. 4 (5th Cir.1992) (quoting *International Shortstop, Inc. v. Rally's, Inc.*, 939 F.2d 1257, 1267 (5th Cir.1991)). "Summary judgment is especially inappropriate where the material sought is also the subject of outstanding discovery requests." *Visa Int'l Serv. Ass'n v. Bankcard Holders of Am.*, 784 F.2d 1472, 1475 (9th Cir.1986).

The court has reviewed the file and notes that Western has been diligent in its pursuit of discovery. Only limited discovery was permitted prior to November 2, 1999. Riso filed the instant motion just two months later on January 14, 2000. Since that time, Western and Riso have continued to do battle over the production of documents. In October 2000, however, Riso produced 85 boxes of documents in response to Western's numerous requests. According to the magistrate judge's October 31, 2000 order on Western's motion regarding production of records and other topics, that production was just the beginning. [FN2]

FN2. The court does not accept Western's accusation that Riso "stonewalled" discovery. According to the magistrate judge's order, Western propounded some 400 separate requests for production. Order, filed Oct. 31, 2000, at 4.

Given the present state of discovery, and the need to proceed with caution in summarily adjudicating a complex antitrust action such as this, the court finds Riso's motion for summary judgment premature, and denies the same without prejudice. The court likewise denies Western's motion for partial summary judgment without prejudice. [FN3] The parties' may re-file their respective motions after the close of discovery.

FN3. The parties' respective objections to evidence are also denied without prejudice.

BACKGROUND

The facts set forth herein are drawn from Western's Second Amended Complaint ("SAC"). Riso

Exhibit 5

Kagaku Corporation ("RKC") is one of three manufactures of digital duplicators in the world. SAC ¶ 15. [FN4] Its digital duplicators are known as "Risographs." RKC also manufacturers parts and supplies, including ink and masters, for use in Risographs, and markets these products in the United States through its wholly-owned subsidiary Riso. *Id.* ¶ 1. Riso, in turn, markets the machines, parts, and supplies to end-users primarily through a network of 240 authorized Riso dealers, including defendant RPSI. *Id.* ¶¶ 7, 8. Riso also sells a relatively small amount of product directly to end-users through 18 branch offices. In addition to marketing Riso products, Riso dealers also provide service, warranty and repair services to Risograph owners. Riso and its dealers enjoy a 65-75% share of the digital duplicator market in the United States, and a 90% share of the aftermarket for Risograph supplies. *Id.* ¶¶ 24, 30, 122.

> FN4. RKC was dismissed as a defendant in this action for lack of personal jurisdiction on July 23, 1999.

*2 Western sells ink and masters for use in digital duplicators, including Risographs. *Id.* ¶ 11. Western sells ink and masters directly to owners of digital duplicators, as well as indirectly through distributors and dealers throughout the United States. *Id.* Western began competing with Riso and its dealers for sales of inks and masters sometime after January 30, 1994. *Id.*

According to Western, Riso and its dealers unlawfully conspired to exclude it from the aftermarket for ink and masters. *Id.* ¶¶ 13, 14. As detailed below, Western contends that Riso uses its market power in the digital duplicator market to prohibit its dealers from selling non-Riso supplies. *Id.* ¶ 40. Western further contends that Riso and its dealers leverage their market power in the maintenance, service and repair aftermarket to eliminate competition in the supplies aftermarket. *Id.* ¶¶ 14, 28, 30.

Following the entry of high quality competitive inks and masters in late 1993 and 1994, Riso amended its dealer agreement in April 1994 to prohibit its dealers from offering competitive (non-Riso) inks and masters for use in Risographs, thereby conditioning its dealers' ability to purchase Risographs upon those dealers not offering competitive supplies. *Id.* ¶ 34. The amended dealer agreement ("dealer agreement") likewise prohibits terminated dealers from selling non-Riso products, thereby conditioning terminated dealers' ability to purchase spare parts necessary for service upon terminated dealers not offering competitive supplies. The dealer agreement further prohibits Riso dealers from selling Riso products to anyone but end-users, and provides that the warranty given to dealers does not cover the cost of repairs or adjustments caused by parts, supplies, repairs or maintenance services not authorized by Riso. *Id.* Western contends that these restrictions threatened Riso dealers' revenue streams because competitors could offer ink and masters at prices significantly below Riso prices. According to Western, these restrictions provided Riso dealers with an incentive to restrain trade and restrict competition in the sale of ink and masters.

Western argues that once Riso provided its dealers with the incentive, beginning in October 1994 and lasting to the present, Riso and its dealers combined and conspired to eliminate competition from "supply pirates" such as Western. *Id.* ¶¶ 35, 52. Specifically, Western alleges that Riso dealers agreed to use "service threats" to coerce customers to use Riso ink and masters and to spread fear, uncertainty and doubt (known as "FUD marketing") in the minds of consumers in order to discourage them from purchasing competitive ink and masters. *Id.* ¶ 53. Among other things, Western contends that Riso produced "warnings" concerning the use of non-Riso supplies and distributed them to its dealers to pass-on to end-users. *Id.* 86-89. These warnings state that use of non-Riso supplies may, among other things, harm the Risograph, and damage caused by the use of non-Riso supplies is not covered under the warranty. *Id.* Western further alleges that some Riso dealers, including RPSI, tell Risograph owners that use of non-Riso supplies will void their warranties. *Id.* ¶¶ 72-74.

*3 Western contends that these efforts have been, and continue to be, successful because Riso and its dealers have monopoly power over the service, maintenance and repair of Risographs. *Id.* ¶ 55. According to Western, this monopoly power exists because Riso only sells spare parts to its dealers and terminated dealers and prohibits them from selling

the parts to anyone but an end-users. Thus, because of these restrictions, there are no independent service organizations for Risographs, and because there are no service options for most customers, "service threats" and FUD marketing succeed in eliminating competition for sales of ink and masters for use in Risographs. *Id.* ¶ 55.

As a result of this conduct, Western alleges that it has been excluded from selling competitive ink and masters for Risographs.

ALLEGED VIOLATIONS

Based on the above policies and practices, Western alleges the following antitrust violations against Riso and RPSI: (1) monopolization, attempting monopolization, and conspiracy to monopolize the aftermarket for sales of ink and masters in violation of § 2 of the Sherman Act; (2) illegal tying of Risographs to dealer's agreement not to sell competitive ink and masters in violation of §§ 1 and 3 of the Sherman Act; (3) illegal tying of spare parts and service manuals to terminated dealer's agreement not to sell competitive ink and masters in violation of §§ 1 and 3; and (4) illegal group boycott in violation of § 1.

In addition to violating antitrust laws, Western contends that Riso and RPSI made misleading and false representations concerning non-Riso products in violation of the Lanham Act, the California Cartwright Act, Cal. Bus. & Prof.Code § 16600, and the California Unfair Business Practices Act, Cal. Bus. & Prof.Code § 17200, and intentionally interfered with Western's contractual relations and prospective economic advantage. Finally, Western contends that Riso violated Massachusetts Protection Act, Mass. Gen. Laws ch. 93A.

STANDARD

A complaint will not be dismissed under Fed.R.Civ.P. 12(b)(6) "unless it appears beyond doubt that plaintiff can prove no set of facts in support of his [or her] claim that would entitle him [or her] to relief." *Yamaguchi v. Department of the Air Force,* 109 F.3d 1475, 1480 (9th Cir.1997) (quoting *Lewis v. Tel. Employees Credit Union,* 87 F.3d 1537, 1545 (9th Cir.1996)). "All allegations of material fact are taken as true and construed in the light most favorable to the nonmoving party." *Cahill v. Liberty Mut. Ins. Co.,* 80 F.3d 336, 337-38 (9th Cir.1996).

ANALYSIS

1. Market Power In Western's Proposed Product Markets

In order to prevail on its conspiracy, monopolization, attempted monopolization claims, and tying claims, Western must show, among other things, that Riso possesses market power in the relevant product markets. *Rebel Oil Co., Inc. v. Atlantic Richfield Co.,* 51 F.3d 1421, 1444 (9th Cir.1995) (market power required for conspiracy to restrain trade); *Eastman Kodak Co. v. Image Technical Servs., Inc.,* 504 U.S. 451, 481 (1992) (hereinafter *"Kodak I"*) (quoting *United States v. Grinnell Corp.,* 384 U .S. 563, 570-71 (1966) (market power required for monopolization); *Image Technical Servs., Inc. v. Eastman Kodak Co.,* 125 F.3d 1195, 1202 (9th Cir.1997) (hereinafter *"Kodak II"* (market power required for attempted monopolization); *Datagate, Inv. v. Hewlett-Packard Co.,* 60 F.3d 1421, 1423-24 (9th Cir.1995) (market power in tying product required for tying claim [FN5]).

> FN5. "A tying arrangement is a device used by a competitor with market power in one market (for the 'tying' product) to extend its market power into an entirely distinct market (for the 'tied' product)." *Id.* at 1423.

***4** Monopoly power, commonly referred to as market power, is "the power to control prices or exclude competition." *Grinnell Corp.,* 384 U.S. at 571 (quoting *United States v. E.I. du Pont de Nemours & Co.,* 351 U.S. 377, 391 (1956)). A plaintiff may demonstrate market power either directly or circumstantially. Direct evidence is "evidence of restricted output and supracompetitive prices." *Rebel Oil,* 51 F.3d at 1434. "To demonstrate monopoly power by circumstantial evidence, 'a plaintiff must: (1) define the relevant market, (2) show that the defendant owns a dominant share of that market, and (3) show that there are significant barriers to entry and show that existing competitors lack the capacity to increase their output in the short run." ' *Kodak II,* 125 F.3d at

1202 (quoting *Rebel Oil,* 51 F.3d at 1434).

Western claims that the relevant geographic market is the United States, and the relevant product markets are: (1) the market for high speed digital duplicators ("original equipment market"); (2) the market for warranty and maintenance service for Risographs ("warranty and service aftermarket"); and (3) the market for ink and masters ("supplies aftermarket"). SAC ¶ 14. Riso assumes, for purposes of its motion to dismiss only, that Western's definitions of the relevant product markets and Riso's share of the same, are correct.

A. Market Power In The Digital Duplicator Market

Riso contends that dismissal is proper because Western admits in its SAC that at least nine competitors have entered the "digital duplicator market." While Western does allege that competitors entered the digital duplicator market after Riso, it also alleges that, despite the increasing demand, the number of competitors is decreasing, and there have been no new manufacturers of digital duplicators *since 1990. Id.* ¶ 25. In other words, no competitor has entered the market in the past decade. Western's allegations do not preclude a finding of market power in the digital duplicator market as a matter of law.

Riso further contends that dismissal is proper because Western alleges that competitors have expanded. Riso bases its contention on Western's allegations that (1) Ricoh and Duplo entered the market after Riso, and (2) "[a]t present, only Ricoh and its dealer networks exist as a substantial competitor to RISO and its dealers in the original equipment market." *Id.* ¶ 26. According to Riso, the only inference to be drawn from these allegations is that Ricoh and Duplo have increased their market share by expanding their output and sales.

As set forth above, Western alleges that Ricoh and Duplo entered the market prior to 1990. Assuming, as Riso apparently does, that their respective market shares were zero upon entry, their output has expanded. However, the expansion of output at some unknown point during the past decade does not defeat Western's current claim of market power. Indeed, expansion may have contracted over the past several years. Accordingly, Western's allegations do not preclude a finding of market power in the digital duplicator market as a matter of law.

B. Market Power In The Aftermarket For Supplies

*5 Riso contends that dismissal is proper because Western admits in its SAC that (1) competitors have entered the supplies aftermarket, and (2) existing competitors do not lack capacity to expand. The latest date on which a competitor is alleged to have entered the supplies aftermarket is "early 1994." *Id.* ¶¶ 32-33. Competitors entering the market before the alleged predatory conduct is said to have begun, does not establish the absence of entry barriers. *See Rebel Oil,* 51 F.3d at 1434.

Moreover, Riso's motion is directed solely at Western's circumstantial proof of market power in the aftermarket for supplies. However, Western has alleged direct proof of market power in this market. *See id.* Western alleges that Riso restricts output via its dealer agreement and that it charges supracompetitive prices for its ink and masters. SAC ¶¶ 34, 111. Thus, Western has adequately alleged market power in the supplies aftermarket. [FN6]

> FN6. Although it is not altogether clear, Riso also appears to contend that Western's claim that Riso monopolizes or attempts to monopolize the aftermarket for warranty and maintenance service is defeated by Western's allegations concerning entry barriers in the supplies aftermarket. As set forth above, Western's allegations do not defeat its claim that Riso has market power in the supplies aftermarket.

2. Contract, Combination or Conspiracy To Restrain Trade

Section 1 of the Sherman Act reads in relevant part:

> Every contract, combination in the form of trust or otherwise, or conspiracy, in restraint of trade or commerce among the several States, or with foreign nations, is hereby declared to be illegal. Every person who shall make any contract or

> engage in any combination or conspiracy hereby declared to be illegal shall be deemed guilty of a felony....

15 U.S.C. § 1. To establish a claim under Section 1 , Western must: (1) demonstrate the existence of a conspiracy; (2) that the conspiracy unreasonably restrained trade under either a per se rule of illegality or under a rule of reason analysis; and (3) that the restraint on trade affected interstate commerce. *See Bhan v. NME Hosps., Inc.,* 929 F.2d 1404, 1410 (9th Cir.1991).

The conspiracy element of Section 1 limits the "application of the Sherman Act to concerted conduct by more than one person or single entity." *Oltz v. St. Peter's Cmty. Hosp.,* 861 F.2d 1440, 1449 (9th Cir.1988). To survive a motion to dismiss, a plaintiff must "allege the essential element of conspiracy" between two or more parties. *See Smilecare Dental Group v. Delta Dental Plan of Cal., Inc.,* 88 F.3d 780, 786 (9th Cir.1996). Section 1 does not proscribe purely unilateral activity by a single entity. *United States v. Colgate,* 250 U.S. 300, 307 (1919).

Riso moves to dismiss Western's claims brought pursuant to Section 1 on the ground that Western cannot rely on the restrictions contained in the Riso dealer agreement to support its conspiracy allegations because the dealer agreement was unilaterally amended by Riso to contain those claims.

"[A] contract between a buyer and a seller satisfies the concerted action element of section 1 of the Sherman Act where the seller coerces a buyer's acquiescence in a tying arrangement imposed by the seller." *Systemcare, Inc. v. Wang Laboratories Corp.,* 117 F.3d 1137, 1142 (10th Cir.1997). As the court reasoned in *Systemcare,* "[t]he essence of section 1's contract, combination, or conspiracy requirement in the tying context is the agreement, however reluctant, of a buyer to purchase from a seller a tied product or service along with a tying product or service. To hold otherwise would be to read the words 'contract' and 'combination' out of section 1." *Id.* at 1142-43. [FN7] As the Supreme Court noted in *Perma Life Mufflers, Inc. v. International Parts Corp.:*

> FN7. Tying arrangements also include agreements in which the seller agrees to sell one product only on the condition that the buyer agrees not to purchase that product from any other supplier. *Image Technical Servs. v. Eastman Kodak Co.,* 903 F.2d 612, 615 (9th Cir.1990).

> *6 A plaintiff can clearly charge a combination between Midas and himself as of the day he unwillingly complied with the restrictive franchise agreements, or between Midas and other franchise dealers, whose acquiescence in Midas' firmly enforced restraints was induced by the communicated danger of termination.

392 U.S. 134, 142 (1968) (citations and quotation marks omitted), *overruled on other grounds, Copperweld Corp. v. Independence Tube Corp.,* 467 U.S. 752 (1984); *see also Will v. Comprehensive Accounting Corp.,* 776 F.2d 665, 669-70 (7th Cir.1985).

Western alleges, among other things, that Riso violated Section 1 of the Sherman Act by illegally tying (1) the sale of Risographs to its dealer's agreement not to sell competitive ink and masters, and (2) the sale of spare parts and service manuals to its terminated dealer's agreement not to sell competitive ink and masters. SUF ¶¶ 40, 45. According to Western, Riso coerces its dealers to acquiesce in the agreement under threat of losing their dealerships and its terminated dealers under threat of losing their access to spare parts, and thus, the substantial revenues they derive from servicing their installed equipment base. *Id.* ¶¶ 40, 45, 51. Western's allegations are sufficient to allege a conspiracy under Section 1.

Moreover, Western does not limit its conspiracy allegations to the restrictions contained in the dealer agreement. Western also alleges that Riso and its dealers conspired at the October 1994 Dealer Advisory Council Meeting to eliminate competition from "supply pirates" such as Western. Pursuant to that conspiracy, Riso dealers allegedly agreed to use service threats to coerce customers to use Riso inks and masters and to spread fear, uncertainty and doubt in the minds of consumers to prevent them from purchasing non-Riso inks and masters. *Id.* ¶¶ 31-36. Western's allegations concerning the agreements entered into at the Dealer Advisory Council Meeting are sufficient to allege the

existence of a conspiracy to restrain trade. Accordingly, Riso's motion to dismiss Western's Section 1 claim is denied.

3. Restrictions In The Dealer Agreement

A. Exclusive Dealing Arrangements

Riso alternatively moves to dismiss Counts 1 and 3 on the ground that the challenged restraints are not anticompetitive. According to Riso, the challenged restraints are essentially exclusive dealer arrangements. While it is true that exclusive distribution agreements, standing alone, do not violate the antitrust laws, *see A.H. Cox & Co. v. Star Machinery Co.,* 653 F.2d 1302, 1306-07 (9th Cir.1981), Western contends that the challenged provisions are not merely exclusive dealing agreements, but illegal ties. [FN8] Western also contends that the restrictions are part of a scheme to restrain trade in the aftermarket for supplies, and thus, constitute illegal exclusive dealing arrangements.

> FN8. Tying and exclusive dealing are two distinct claims. *See Ron Tonkin Gran Turismo, Inc. v. Fiat Distribs., Inc.,* 637 F.2d 1376, 1388 (9th Cir.1981).

An exclusive dealing contract involves a commitment by a buyer to deal only with a particular seller, and is unlawful only if it violates the rule of reason. *Morgan, Strand, Wheeler & Biggs v. Radiology, Ltd.,* 924 F.2d 1484, 1488-90 (9th Cir.1991). "Only those arrangements whose 'probable' effect is to 'foreclose competition in a substantial share of the line of commerce affected' violate Section 3." *Omega Envtl., Inc. v. Gilbarco, Inc.,* 127 F .3d 1157, 1162 (9th Cir.1997) (quoting *Tampa Elec. Co. v. Nashville Coal Co.,* 365 U.S. 320, 327 (1961)). In assessing market foreclosure, the court must consider whether competitors can reach the ultimate consumers of the product by employing existing or potential alternative channels of distribution. *Id.* at 1163. If so, the arrangements may not actually foreclose competition. Moreover, exclusive dealing arrangements imposed on dealers rather than end users "are generally less cause for anticompetitive concern." *Id.* at 1162-63. Relying on *Omega,* Riso argues that dismissal of Counts 1 and 3 is proper because alternative channels of distribution exist and the challenged restrictions apply only to distributors, not end-users.

*7 Riso's argument fails to consider the additional alleged restraints not present in *Omega* and their impact on Western's ability to sell to ultimate consumers. Even assuming Western can reach ultimate consumers (Risograph owners), Western alleges that the vast majority refuse to purchase its supplies for fear of damaging their Risographs or invalidating their warranties. Western contends that their refusal is the result of Riso's and its dealers conspiracy to restrain trade in the supplies aftermarket through the use of service threats and FUD marketing. Riso's argument also fails to consider Western's allegation that "[b]ecause RISO dealers control the servicing of Risographs, selling through Riso dealers is a competitive necessity." These factors were present in in *Omega.* [FN9] Accordingly, Riso's motion to dismiss Counts 1 and 3 is denied.

> FN9. Western's allegation that it sells an undisclosed amount of ink and masters does not defeat its claims.

B. Non-Price Vertical Restraints

Riso contends that the types of restraints contained in its dealer agreement are routinely upheld because they have no negative impact on competition. Riso asks the court to review the challenged restrictions in a vacuum, and to ignore the remaining allegations contained in the Western's second amended complaint. As set forth above, Western contends that the challenged restrictions motivate Riso dealers and terminated dealers to engage in additional conduct aimed at eliminating competition in the supplies aftermarket, including the use of service threats and FUD marketing. According to Western, it is this entire scheme that damages competition. Accordingly, Riso's motion to dismiss Western's claims on the ground that Western cannot establish that it has been harmed by any of Riso's dealer restraints is denied.

C. Warranties

To the extent that Western contends that Riso unlawfully ties its warranty to the use of Riso parts, supplies and Riso-authorized service, Riso moves to

dismiss on the ground that there is no tie.

Tying arrangements exist where the buyer is coerced into buying the tied product, or at least agrees that he will not purchase that product from any other supplier. *Northern Pacific Ry. Co. v. United States,* 356 U.S. 1, 5-6 (1958).

> [T]he essential characteristic of an invalid tying arrangement lies in the seller's exploitation of its control over the tying product to force the buyer into the purchase of a tied product that the buyer either did not want at all, or might have preferred to purchase elsewhere on different terms. When such "forcing" is present, competition on the merits in the market for the tied item is restrained and the Sherman Act is violated.

Jefferson Parish Hosp. Dist. No. 2 v. Hyde, 466 U.S. 2, 12 (1984).

Western alleges, among other things, that the maintenance agreements used by Riso's branch offices provide that customer's will incur additional charges for "service made necessary by the use of materials other than those approved by Riso, Inc. for use in the Equipment." SAC ¶ 82. Western also alleges that employees of Riso's branch offices have "falsely represented that use of [Western] supplies caused damage to Risographs and necessitated repairs and threatened to bill customers for any repairs if they continued to use [Western] supplies." *Id.* ¶ 83. According to Western, such representations cause the Riso maintenance agreements to operate as *de facto* tying arrangements. *Id.* A reasonable jury could conclude that the maintenance agreement coupled with the alleged disparagement and threats "forced" customers to purchase only Riso supplies. Accordingly, Riso's motion to dismiss plaintiff's tying claims insofar as they involve Riso's warranty is denied.

3. Lanham Act

*8 Western claims that Riso violated the Lanhan Act by making "false or misleading representations of the nature, characteristics, or qualities of plaintiffs' [sic] services and products." *Id.* ¶ 137. Western identifies three allegedly false or misleading statements in its second amended complaint. First, Western contends that Riso distributes a "WARNING" to its dealers for distribution to Risograph owners which states that use of generic supplies may (1) damage the "Riso Drum," (2) contaminate the "Ink Drum Unit" or adjacent areas which house electronic circuitry, (3) cause premature failure of the "Thermal Head" and related components, (4) cause premature failure of the "Inking System," (5) create a toxic environment, (6) result in fire, (7) result in termination of the 7 year/10 million copy warranty, (8) increase service contract pricing, (9) result in termination of any full coverage maintenance agreement, (10) result in "High User Hourly Service Rates," and (11) result in a "Complete Ink Drum Cleanout Charge." *Id.* ¶ 87. Second, Western contends that Riso distributes warning stickers to its dealers for placement inside Risographs that warn that use of non-Riso ink may result fire. *Id.* ¶ 88. Finally, Western alleges that Riso recently distributed a warning sticker which reads:

> WARNING
>
> Be sure your masters and ink cartridges carry the original RISO logo. Use of non-RISO manufactured inks or masters may result in lower print quality, higher cost per copy, significant increase in set off and may cause serious damage to the ink cylinder and the Risograph.
>
> Use of non-RISO manufactured inks or masters may cause repair or service problems not covered by your warranty or service agreement. Please consult your authorized RISO representative for further information.

Id. ¶ 89. Western alleges that the above claims are false and/or misleading, *id.* ¶¶ 86-87, 137 and that it has lost sales as a result, *id.* ¶¶ 90, 138.

In order to state a claim under § 43(a) of the Lanham Act, 15 U.S .C. § 1125(a), a plaintiff must allege: "(1) a false statement of fact by the defendant in a commercial advertisement about its own or another's product; (2) the statement actually deceived or has the tendency to deceive a substantial segment of its audience; (3) the deception is material, in that it is likely to influence the purchasing decision; (4) the defendant caused its false statement to enter interstate commerce; and (5) the plaintiff has been or is likely to be injured as a result of the false statement, either by direct diversion of sales from itself to defendant or by a lessening of the goodwill associated with its products." *Southland Sod Farms v. Sover Seed Co.,*

108 F.3d 1134, 1139 (9th Cir.1997).

Riso moves to dismiss Western's Lanham Act claim on the grounds that the statements relied on by Western are not specific enough and are true. Riso contends that the alleged misrepresentations lack specificity because (1) they do not claim that use of non-Riso products will *always* lead to poor results or cause damage, and (2) do not refer to any supplier, including Western, by name. Rather, according to Riso, they merely "state that certain unnamed non-Riso supplies may present difficulties for the Risograph user and/or damage the machine."

***9** The Lanham Act does not reach claims of general superiority. *See Cook, Perkiss and Liehe, Inc. v. Northern Cal. Collection Serv. Inc.,* 911 F.2d 242, 246 (9th Cir.1990). Where an advertisement quantifies the superiority, however, a claim may lie. *Id.* The issue in *Cook* was whether an advertisement which implied that a collection agency offers the same collection services as lawyers at lower or more competitive prices was mere puffery, and thus, not actionable under the Lanham Act. *Id.* at 245. Although the court held that the advertisement was "merely general in nature," and therefore nonactionable puffery, the court noted that "misdescriptions of specific or absolute characteristics of a product are actionable." *Id.* (quoting *Stiffel Co. v. Westwood Lighting Group,* 658 F.Supp. 1103, 1115 (D.N.J.1987)). "[A]dvertising statements placed in an ad knowing or intending that they are of the type that will affect the consumer's judgment, are not puffery, but rather constitute actionable representations within the meaning of the Lanham Act." *U-Haul Int'l, Inc. v. Jartran,* 522 F.Supp. 1238, 1253 (D.Ariz.1981), *aff'd,* 681 F.2d 1159 (1982).

The alleged misrepresentations at issue here far exceed general statements of superiority. To the contrary, the various warnings allegedly produced by Riso warn of specific consequences which may result from using non-Riso products, including fire, severe equipment damage, exposure to toxic substances, and termination of the 7 year/10 million copy warranty.

The court rejects Riso's assertion that its use of the term "may" alone shields it from liability as a matter of law. In *Gillette Co. v. Norelco Consumer Prods. Co.,* 946 F.Supp. 115, 137 (D.Mass.1996), relied on by Riso, the court held that the defendant's representation that any product that provided a shave closer than its own "Could be Too Close For Comfort," was not actionable because it was not objectively capable of proof or disproof. *Id.* at 137. The court observed that the plaintiff's failure to offer any standards by which to measure the truth of the statement was understandable, "because the conditional 'could' is denotative of only a possibility; and things that are possible can occur, but they may not." *Id.* Riso argues that, like the plaintiff in *Gillette,* Western complains of statements that suggest a possibility. Riso is correct, none of the warnings state that use of non-Riso products *will* cause an untoward result. However, unlike the vague possibility suggested in *Gillette* that a shave could be "too close," Riso warns of no less than 11 specific occurrences of damages which may result from use of non-Riso products, including fire, severe equipment damage, exposure to toxic substances, and termination of the 7 year/10 million copy warranty. This is not the type of vague puffery at issue in *Gillette* and the other cases relied on by Riso.

Likewise, a plaintiff need not be specifically named in the allegedly disparaging statement where the group named is small enough that the statement can reasonably be understood to apply to each class member or the circumstances of the publication reasonably suggest that a particular member of the group named was targeted. *See Auvil v. CBS "60 Minutes",* 800 F.Supp. 928, 936 (E.D.Wash.1992); *Alvord-Polk, Inc. v. F. Schumacher & Co.,* 37 F.3d 996, 1015 (3d Cir.1993). Western alleges that Riso dealers have made disparaging remarks to customers knowing that the customers use Western supplies. SAC ¶ 153. Under these circumstances, the statements could reasonably be understood to apply to Western's products. Although these particular statements were allegedly made by Riso dealers, Western alleges that Riso conspired with its dealers to restrain competition in the supplies aftermarket and discussed with its dealers the use of threats and FUD marketing, including the use of the subject warnings. *Id.* ¶¶ 53-54. Moreover, Western alleges that Riso produced the aforementioned warnings and provided them to their dealers for distribution to end-users, and that the dealers distributed the warnings to end-users. *Id.*

¶ 87, 89.

***10** Finally, although Western alleges that the statements were false, *id.* ¶¶ 86-87, 137, such an allegation not necessarily required. "The Lanham Act encompasses more than blatant falsehoods. It embraces innuendo, indirect intimations, and ambiguous suggestions evidenced by the consuming public's misapprehension of the hard facts underlying an advertisement." *William Morris Co. v.. Group W, Inc.*, 66 F.3d 255, 257-58 (9th Cir, 1995) (per curium) (quoting *Vidal Sassoon, Inc. v. Bristol-Myers Co.*, 661 F.2d 272, 277 (2d Cir.1981) (internal quotations omitted)). Western has stated a claim for relief under the Lanham Act, and Riso's motion to dismiss the same is denied.

4. Intentional Interference With Contractual Relations And A Prospective Economic Advantage

In order to state a claim for intentional interference with contractual relations or prospective economic advantage, Western must allege, among other things, a valid contract or economic relationship between itself and a third party, and Riso's knowledge of the same. *See Pacific Gas & Electric Co. v. Bear Stearns & Co.*, 50 Cal.3d 1118, 1126 (1990); *Westside Ctr. Assocs. v. Safeway Stores 23, Inc.*, 42 Cal.App. 4th 507, 521-522 (1996). Riso moves to dismiss Western's intentional interference claims on the ground that Western failed to allege that Riso was aware of any relationship or contract between Western and a third party.

In its second amended complaint, Western alleges that: (1) it has been successful in obtaining some orders for ink and masters from school districts in the Bay Area; (2) upon learning of Western's success, two Riso dealers, including defendant RPSI, "engaged in threats and product disparagement toward those school districts;" (3) at the time the dealers did so, they knew that Western was the source of those districts' ink and masters and intended their threats and false statements be understood to refer to Western's products; and (4) the threats and disparagement undertaken the dealers were carried out in conspiracy with and with the assistance of Riso, specifically in connection with the contracts between Western and Stockton Unified School District and the Modesto City Schools. SAC ¶¶ 152-55. Western's allegation that Riso "specifically aid[ed] and assist[ed] [RPSI] in its interference with the contract between plaintiff and the Stockton Unified School District and the Modesto City Schools," is fairly construed as alleging that Riso was aware of those contractual relationships at the time of its alleged acts. Accordingly, Riso's motion to dismiss plaintiff's intentional interference claims is denied.

5. Massachusetts Protection Act

Riso moves to dismiss Western's Massachusett's Protection Act claim on the ground Western failed to alleged that the complained of conduct occurred primarily and substantially in Massachusetts. Riso's motion is denied because Western did so allege. *Id.* ¶ 159.

6. Injunctive Relief

***11** Since the filing of the instant action, Western has ceased operations. In a letter to the court dated November 2, 2000, Western's counsel states:

> In light of Western Duplicating Inc. having sold its digital duplicator supplies business ..., absent some completely unforeseen turn of events, [Western] will not be seeking an injunction to halt what it contends are RISO's ongoing restraints of trade.

Based on this representation, Western's claims for injunctive relief are dismissed without prejudice.

CONCLUSION

1. Riso's motion to dismiss is GRANTED WITHOUT PREJUDICE as to Western's claims for injunctive relief and is DENIED in all other respects.

2. Riso's motion for summary judgment is DENIED WITHOUT PREJUDICE.

3. Western's motion for partial summary judgment is DENIED WITHOUT PREJUDICE.

4. The parties' respective evidentiary motions are DENIED WITHOUT PREJUDICE.

5. No points and authorities submitted in this action shall exceed 40 pages. No accompanying pleadings,

including declarations, statements of fact and responses thereto, shall exceed 20 pages.

IT IS SO ORDERED.

2000 WL 1780288 (E.D.Cal.), 2001-1 Trade Cases P 73,135

END OF DOCUMENT

INITIAL DECISION FILED:
June 27, 2002

UNITED STATES OF AMERICA
FEDERAL TRADE COMMISSION

In the Matter of	
SCHERING-PLOUGH CORPORATION, a corporation,	
UPSHER-SMITH LABORATORIES, a corporation,	PUBLIC RECORD VERSION Docket No. 9297
and	
AMERICAN HOME PRODUCTS CORPORATION, a corporation.	

INITIAL DECISION

By: D. Michael Chappell, Administrative Law Judge

Karen Bokat, Esq., Philip M. Eisenstat, Esq., Michael B. Kades, Esq., Judith Moreland, Esq., Seth C. Silber, Esq., Bradley S. Albert, Esq. Markus H. Meier, Esq., and Elizabeth R. Hilder, Esq.
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Counsel for Upsher-Smith Laboratories, Inc.

Exhibit 6

I. INTRODUCTION

A. Federal Trade Commission Complaint

The Federal Trade Commission issued its Complaint in this matter on March 30, 2001. The Complaint charges that Respondents Schering-Plough Corporation (Schering), Upsher-Smith Laboratories, Inc. (Upsher-Smith), and American Home Products Corporation (AHP) engaged in conduct that violates Section 5 of the Federal Trade Commission Act, 15 U.S.C. § 45. The Complaint alleges that Respondents entered into unlawful agreements to delay entry of low-cost generic competition to Schering's prescription drug K-Dur 20. Before detailing the findings of fact and conclusions of law, the following overview is provided.

Schering manufactures and markets two extended-release microencapsulated potassium chloride products: K-Dur 20 and K-Dur 10, both of which are covered by a formulation patent owned by Schering, patent number 4,863,743 (the "'743 patent"), which expires on September 5, 2006. On August 6, 1995, Upsher-Smith filed an Abbreviated New Drug Application ("ANDA") with the U.S. Food and Drug Administration ("FDA") to market Klor Con M20, a generic version of Schering's K-Dur 20. Upsher-Smith submitted a certification to the FDA, known as a Paragraph IV Certification, with this ANDA certifying that its product, Klor Con M20, did not infringe Schering's K-Dur 20 and, on November 3, 1995, Upsher-Smith notified Schering of its Paragraph IV Certification and ANDA.

Schering sued Upsher-Smith for patent infringement in the United States District Court for the District of New Jersey on December 15, 1995, alleging that Upsher-Smith's Klor Con M20 infringed Schering's '743 patent. On June 17, 1997, Schering and Upsher-Smith agreed to settle their patent litigation. The Complaint alleges that through this settlement agreement, Schering agreed to make unconditional payments of $60 million to Upsher-Smith; Upsher-Smith agreed not to enter the market, either with the allegedly infringing generic version of K-Dur 20 or with any other generic version of K-Dur 20, until September 2001; both parties agreed to stipulate to the dismissal of the litigation without prejudice; and Schering received licenses to market five Upsher-Smith products. Complaint at ¶ 44.

On December 29, 1995, ESI Lederle, Incorporated ("ESI"), a division of AHP, submitted an ANDA to the FDA to market a generic version of Schering's K-Dur 20. ESI submitted a Paragraph IV Certification with this filing and notified Schering of its Paragraph IV Certification and ANDA. Schering sued ESI for patent infringement in the United States District Court for the Eastern District of Pennsylvania on February 16, 1996, alleging that ESI's generic version of Schering's K-Dur 20 infringed Schering's '743 patent. The Complaint alleges that Schering and AHP reached an agreement in principle settling their litigation in January 1998, and they executed a final settlement agreement on June 19, 1998. Complaint at ¶ 54. AHP agreed that its ESI division would not market any generic version of Schering's K-Dur 20 until January 2004, would not market more than one generic version of Schering's K-Dur 20 between January 2004 and September 2006, and would not support any study of the

bioequivalence or therapeutic equivalence of a product to K-Dur 20 until September 5, 2006. Complaint at ¶ 55. AHP received a payment from Schering of $5 million, and an additional payment of $10 million when its generic product received FDA approval in 1999. Complaint at ¶ 55.

The Complaint alleges that the agreements between Schering and Upsher-Smith, and between Schering and AHP, were agreements not to compete that unreasonably restrained commerce in violation of Section 5 of the FTC Act. Complaint at ¶¶ 68, 69.

The Complaint further alleges that Schering had monopoly power in the manufacture and sale of potassium chloride supplements approved by the FDA and narrower markets contained therein, and engaged in conduct intended to unlawfully preserve that monopoly power, in violation of Section 5 of the FTC Act. Complaint at ¶ 70. And, the Complaint alleges that Schering conspired separately with Upsher-Smith and with AHP to monopolize the manufacture and sale of potassium chloride supplements approved by the FDA and narrower markets contained therein, in violation of Section 5 of the FTC Act. Complaint at ¶ 71.

B. Respondents' Answers

In answers filed April 23, 2001, Schering, Upsher-Smith and AHP denied that the agreements were unlawful, and offered a number of affirmative defenses. Upsher-Smith's answer asserted that its patent settlement agreement with Schering was lawful, reasonable, procompetitive and in the public interest.

In its answer, Schering asserted that its settlement agreement with Upsher-Smith allowed Upsher-Smith to bring its product to market in September 2001, five years before patent expiration. Schering asserted its settlement agreement with ESI was forged under active judicial supervision and allowed ESI to bring its potassium chloride product to market over two years before Schering's patent expired. Schering further asserted that the Complaint fails to acknowledge that Schering has a valid patent giving it a right to exclude infringing products, the Complaint fails to allege that the procompetitive efficiencies of the settlement do not outweigh any actual or potential anticompetitive effects, and that the relief sought by the Complaint is contrary to public policy because it interferes with settlement of patent infringement litigation.

C. Procedural History

On October 12, 2001, the Complaint against AHP was withdrawn from adjudication for the Commission to consider a proposed consent agreement. The Commission approved the final consent order on April 2, 2002. Although AHP is no longer a party to the case, the legality of the Schering/AHP agreement remains at issue with respect to Schering.

Trial commenced on January 23, 2002 and ended on March 28, 2002, covering 8629 pages of transcript, with 41 witnesses testifying, and thousands of exhibits admitted into evidence. Closing arguments were heard on May 1, 2002.

On February 12, 2002, Upsher-Smith moved to dismiss the Complaint due to Complaint Counsel's failure to establish a prima facie case. Pursuant to Commission Rule 3.22(e), the ruling on the motion to dismiss was deferred until all evidence was received. In a ruling from the bench on March 22, 2002, Upsher-Smith's motion was denied on the grounds that the evidence presented created factual issues of dispute sufficient to defeat the motion to dismiss.

On March 6, 2002, the parties filed a joint motion to extend the deadline for filing the initial decision. By Order dated March 14, 2002, extraordinary circumstances were found to exist sufficient to extend the deadline for filing the Initial Decision by 60 days until May 31, 2002. The record was closed on March 28, 2002. By Order dated May 29, 2002, continuing extraordinary circumstances were found to exist and the deadline was extended an additional 60 days. This initial decision is filed within 90 days of the close of the record.

D. Evidence

The Initial Decision is based on the transcript of the testimony, the exhibits properly admitted in evidence, and proposed findings of fact and conclusions of law and replies thereto filed by the parties. Numerous exhibits were conditionally admitted. Evidence, including transcripts from investigational hearings, which was conditionally admitted, was considered even though Complaint Counsel failed to properly connect up the evidence against all parties, and was found not to be dispositive to the determination of any material issue in the case.

The parties submitted extensive post-trial briefs and reply briefs. The Initial Decision contains only the material issues of fact and law. Proposed findings of facts not included in the Initial Decision were rejected either because they were not supported by the evidence or because they were not dispositive to the determination of the allegations of the Complaint.

Many of the documents and testimony were received into the record *in camera*. Where an entire document was given *in camera* treatment, but the portion of the document relied upon in this Initial Decision does not rise to the level necessary for *in camera* treatment, such information is disclosed in the public version of this Initial Decision, pursuant to 16 C.F.R. § 3.45(a) (the ALJ may disclose such *in camera* material to the extent necessary for the proper disposition of the proceeding).

E. Summary

Based upon the theories advanced by Complaint Counsel, for Complaint Counsel to prove that the agreements to settle the patent litigation between Schering and Upsher-Smith and between Schering and ESI were anticompetitive requires a presumption that the '743 patent was not valid or that Upsher-Smith's and ESI's products did not infringe the '743 patent. There is no basis in law or fact to make that presumption. In addition, Complaint Counsel has failed to meet its burden of proving the relevant product market or that Schering maintained an illegal monopoly within that market. Despite the emotional appeal which may exist for Complaint Counsel's position, an initial decision must be based on substantial, reliable evidence and well reasoned legal analysis. For the reasons set forth below, the violations alleged in the Complaint have not been proven and the Complaint will be dismissed.

II. FINDINGS OF FACT

A. Respondents

1. Schering-Plough Corporation

1. Schering-Plough Corporation ("Schering") is a New Jersey corporation with its principal place of business at 2000 Galloping Hill Road, Kenilworth, New Jersey. Schering is engaged in the discovery, development, and marketing of brand-name and generic drugs, as well as over-the-counter healthcare and animal care products. (Schering Answer at ¶ 3; CX 174 at FTC 0022249-50 (Schering 12/31/99 Form 10K)).

2. Key Pharmaceuticals, Inc. ("Key"), a Florida corporation, is a subsidiary of Schering. (CX 174 at FTC 0022315). It produces K- Dur 20, a 20 milliequivalent potassium chloride supplement, and holds the patent on that product. Schering Answer at ¶ 34. Warrick Pharmaceuticals Corporation ("Warrick"), a Delaware corporation, is a subsidiary of Schering. CX 174 at FTC 0022318. It produces generic pharmaceutical products, and in some situations, produces generic versions of Schering's patented products once another generic has entered the market. (Russo, Tr. 3429-30).

3. Schering is a corporation, as "corporation" is defined in Section 4 of the Federal Trade Commission Act, 15 U.S.C. § 44. (Schering Answer at ¶ 7).

4. Schering's acts and practices, including the acts and practices alleged in the Complaint, are in or affect commerce as "commerce" is defined in Section 4 of the Federal Trade Commission Act, 15 U.S. C. § 44. (Schering Answer at ¶ 8).

2. Upsher-Smith Laboratories, Inc.

5. Upsher-Smith Laboratories, Inc. ("Upsher-Smith") is a business corporation organized under the laws of the state of Minnesota that has issued shares of common stock. (CX 1 (Upsher-Smith Articles of Incorporation); Upsher-Smith First Admissions, Nos. 1, 2. Its principal place of business is Plymouth, Minnesota. (Troup, Tr. 5397). Upsher-Smith is a privately-held company. (Troup, Tr.5398).

6. Upsher-Smith is incorporated, has shares of capital or capital stock, and is authorized to carry on business for its own profit, and is, therefore, a corporation, as "corporation" is defined in Section 4 of the Federal Trade Commission Act, 15 U.S.C. § 44.

7. Upsher-Smith manufactures pharmaceutical products at its facilities in Minnesota and ships products to the other 49 states of the United States. It purchases pharmaceutical ingredients for its pharmaceutical products from suppliers located outside Minnesota, and transfers funds across state lines in exchange for those ingredients. Upsher-Smith First Admissions, Nos. 12, 13, 14, 15, 16, 17, 18, 19, 20 and 21.

8. Upsher-Smith markets its products to retail, chain, and hospital pharmacies, and to key physician groups, primarily by means of wholesale and drug chain distribution channels throughout the United States. (CX 317 at USL 01643 (Upsher-Smith Financial Statements, 1/3/99 and 1/4/98)).

9. Upsher-Smith's business activities are in or affect commerce as "commerce" is defined in Section 4 of the Federal Trade Commission Act, 15 U.S.C. § 44.

3. American Home Products Corporation

10. American Home Products Corporation ("AHP") is a corporation organized and existing under the laws of Delaware, with its principal place of business at Five Giralda Farms, Madison, New Jersey. It engages in the discovery, development and marketing of brand name and generic drugs, as well as "over the counter" medications. AHP Answer at ¶ 5; CX 484 at 05 00052.

11. Wyeth-Ayerst Pharmaceuticals, Inc. ("Wyeth"), is a subsidiary of AHP. ESI Lederle, Inc. ("ESI"), is a business unit of Wyeth. ESI engages in research, manufacture and sale primarily of generic drugs. AHP Answer at ¶ 6.

12. On October 10, 2001, Complaint Counsel and counsel for AHP filed a Joint Motion to Withdraw Respondent American Home Products from Adjudication in order for the Commission to consider an executed proposed consent agreement. On October 12, 2001, the Commission issued an Order Withdrawing Matter from Adjudication as to Respondent

American Home Products Corporation. The Commission approved the final consent order April 2, 2002.

B. The Pharmaceutical Industry

13. Newly developed prescription drugs are sometimes referred to as "pioneer" or "innovator" or "branded" drugs. (Hoffman, Tr. 2206-07; Dritsas, Tr. 4621). Approval for an innovator drug is sought by filing a New Drug Application ("NDA") with the U.S. Food and Drug Administration ("FDA"). (Hoffman, Tr. 2207).

14. Newly developed prescription drugs are often protected by patents. (Hoffman, Tr. 2215). A patent is granted by the federal government to the patent holder giving the holder exclusive rights to make, use, vend and to import the subject matter covered by the patent claims. (Miller, Tr. 3310-11:2; O'Shaughnessy, Tr. 7064-65).

15. A generic drug contains the same active ingredient as the branded or innovator drug, but not necessarily the same inactive ingredients. (Hoffman, Tr. 2207; Levy, Tr. 2186). Approval for a generic drug may be sought by filing an Abbreviated New Drug Application ("ANDA") with the FDA. (Hoffman, Tr. 2209; Troup, Tr. 5403). The ANDA applicant must demonstrate, among other things, that the generic drug is bioequivalent to the brand-name drug that it references. (Hoffman, Tr. 2208; Troup, Tr. 5403).

16. When a brand-name prescription drug is protected by one or more patents, an ANDA applicant that intends to market its generic prescription product prior to the expiration of any patents may proceed to seek FDA approval, but must certify in the ANDA either that (1) the generic version does not infringe the patents on the brand-name drug or (2) the patents are invalid. (Hoffman, Tr. 2215-16; Troup, Tr. 5404). This is known as a "Paragraph IV Certification." (Hoffman, Tr. 2216; Troup, Tr. 5404).

17. A bioequivalent drug contains the same active ingredient as the reference drug and is absorbed into the bloodstream at the same rate and extent, and remains at certain levels for the same period of time as the reference drug. (Hoffman, Tr. 2208).

18. Generic drugs that are AB-rated to a reference drug are considered by the FDA to be therapeutically equivalent to, and substitutable for, the reference drug. (Hoffman, Tr. 2278).

19. Generic drugs can offer price competition to the branded drug. The generic enters the market at a lower price than that of the branded drug. (Teagarden, Tr. 210-11; Goldberg, Tr. 137-38; Dritsas, Tr. 4743, 4904-05).

20. The price of generic drugs falls even further as additional generic versions of the same branded drug enter the market. (Schering Answer at ¶ 17; Goldberg, Tr. 120-21; Rosenthal, Tr. 1543).

21. Sales of the branded product decrease after generic entry because generics are substituted for the branded product. (Rosenthal, Tr.1538; Bresnahan, Tr. 462-63).

22. In most states, a pharmacist is permitted to substitute an AB-rated generic product for a brand name drug, unless the physician directs otherwise. (Hoffman, Tr. 2278; Teagarden, Tr. 197-98; CX 1493 at 81 (Dolan Dep.); Schering Answer at ¶ 18). A pharmacist cannot substitute a generic that is not AB-rated for a branded drug without the physician's approval. (Bresnahan, Tr. 491; Russo, Tr. 3468).

23. In some states, pharmacists are required to substitute an AB-rated generic unless the physician directs otherwise. (Bresnahan, Tr. 1178; Addanki, Tr. 5998).

24. In addition to state mandatory substitution laws, Medicaid policies and managed care plans also tend to encourage generic substitution. (CX 18 at SP 23 00044 (1997 K-Dur Marketing Plan); Bresnahan, Tr. 491-93).

C. Geographic Market

25. The geographic market is the United States. (F. 26-28).

26. Purchasers of potassium chloride supplements in the United States can purchase these products only from manufacturers who market in the United States, and whose products have been approved for sale in the United States by the FDA. (Hoffman, Tr. at 2206).

27. Schering has FDA approval to sell its K-Dur extended release potassium chloride tablets. (Kerr, Tr. 6561). Schering sells K-Dur throughout the United States. (CX 18 at SP 23 00044). Of the $290 million in K-Dur 20 sales in 2000, Schering made $287 million of those sales in the U.S., and $3 million worth internationally in 2000. (Audibert, Tr. 4212-13).

28. Upsher-Smith has FDA approval to sell its Klor-Con M extended release potassium chloride tablets. (CX 59; Hoffman, Tr. 2273-74). Since Upsher-Smith began Klor Con M20 in September 2001, Upsher-Smith has been shipping it to all the major wholesalers and chain distribution centers throughout the United States. (Kralovec, Tr. 5076-77). Upsher-Smith does not sell Klor-Con M20 outside of the United States. (Dritsas, Tr. 4620).

D. Relevant Product Market

29. The relevant product market is all oral potassium supplements that can be prescribed by a physician for a patient in need of a potassium supplement. (F. 31-118).

30. Professor Bresnahan incorrectly defined the relevant product market as K-Dur 20 mEq. (F. 31-118).

1. K-Dur 20 is one of many potassium chloride products on the market

31. K-Dur is a potassium chloride product marketed by Schering. (Russo, Tr. 3410-11). K-Dur is primarily used to treat potassium depletion in coronary artery disease patients. (Russo, Tr. 3410-11). To treat a patient's coronary artery disease, physicians often prescribe products that are also diuretics, causing a depletion in potassium, referred to as hypokalemia. (Russo, Tr. 3410-11; Goldberg, Tr. 125-26).

32. K-Dur is marketed in 10 mEq and 20 mEq dosage strengths. (Russo, Tr. 3411). The 10 mEq and 20 mEq labels denote the amount of potassium within the tablet. (Russo, Tr. 3415).

33. There are at least 23 potassium supplements on the market. (Russo, Tr. 3414; SPX 2209-31; CX 17).

34. Reports from the IMS database reflect that the potassium chloride supplement category includes a number of products, including K-Dur 10 and 20, Micro K, Micro K 10, Slow K, K-Tab, Klor Con 8, Klor Con 10, Klor Con M10, Klor Con M20, as well as other general tablet/capsules and generic forms of potassium chloride. (USX 1010; Bresnahan, Tr. 889-90).

35. Managed health care offers many choices of oral potassium chloride supplements. There were at least 24 different combinations of brand and generic potassium chloride products listed on the 2001 United Healthcare Preferred Drug List. (Goldberg, Tr. 154; USX 277).

36. As of 2001, there were numerous branded and generic potassium chloride products on Merck-Medco's formulary. (Teagarden, Tr. 207, 216-17; CX 56; CX 57). A formulary is a list of drugs that the physicians keep on hand to determine what products and what portion of the cost the managed care organization will reimburse to the patient. Dritsas, Tr. 4648.

37. Medco, a pharmacy benefit manager and Merck-Medco's predecessor, regards 10 mEq and 20 mEq potassium chloride products to be "competing." (Teagarden, Tr. 226; USX 131 at Merck-Medco 000206).

2. Potassium chloride products are therapeutically equivalent

38. The demand for a potassium supplement "begins when a patient goes in to a physician and they're treated for hypokalemia, so the doctor would write a prescription for KCl." (Dritsas, Tr. 4644; Bresnahan, Tr. 696).

39. If a physician prescribes a specific amount of potassium, any potassium chloride product would be effective. (Freese, Tr. 4951-52). A prescription for 20 mEq of potassium could be satisfied with a potassium chloride powder, effervescent, or liquid. (Freese, Tr. 4953-54; USX 410 at 190301). Because potassium products are all therapeutically interchangeable, a pharmacist could dispense 20 mEq of potassium chloride in whatever product form is appropriate for the patient. (Freese, Tr. 4956).

40. At maintenance, a physician will typically prescribe approximately 40 mEqs of potassium per day. (Russo, Tr. 3423). If a doctor writes a prescription for K-Dur 20, a patient will take two tablets (one tablet two times a day, with meals). (Russo, Tr. 3423-24). If a patient's prescription is written for a 10 mEq product, the patient will have to take four 10 mEq tablets, likely two in the morning and two in the evening. (Russo, Tr. 3424).

41. Just because a potassium chloride product is not AB-rated to K-Dur 20 does not mean that it is not therapeutically interchangeable for K-Dur 20. (Dritsas, Tr. 4689-90; CX 740).

42. The FDA's designation of a generic pharmaceutical as "AB-rated," rated or bioequivalent, to a pioneer drug does not necessarily define the product market for antitrust purposes. (Addanki, Tr. 5684). Professor Bresnahan incorrectly defined the relevant market as consisting of 20 mEq tablets and capsules; and a 20 mEq tablet is not bioequivalent to a 20 mEq capsule. (Addanki, Tr. 5684; Bresnahan, Tr. 675; CX 1586). An AB-rated generic is substitutable for the branded product, but that does not mean that the AB-rated generic is the only potential substitute for the branded product. (Addanki, Tr. 5684).

43. K-Dur 20's 20 mEq dosage does not give it a therapeutic advantage over other potassium chloride products. (Russo, Tr. 3421).

44. K-Dur 20 is therapeutically interchangeable with two Klor Con 10s. (Dritsas, Tr. 4655-56). There is no category of patients who can only take K-Dur 20 and not two Klor Con 10s. (Dritsas, Tr. 4661).

45. Two 10 mEq tablets would effectively release in a patient's stomach at approximately the same rate as one 20 mEq tablet. (Goldberg, Tr. 174-75). If a pharmacist were to give a patient two Klor Con 10 tablets, rather than a K-Dur 20, the patient would simply take the two Klor Con tablets at the time that he was supposed to take the one K-Dur 20 tablet. (Dritsas, Tr. 4660-61).

46. Upsher-Smith's 1996 marketing plan for its Klor-Con potassium products shows that the various release mechanisms for different potassium chloride products all delivered potassium, and therefore were therapeutically equivalent and comparable. (Dritsas, Tr. 4693-94; USX 1549; USL 13859).

47. Dr. Addanki looked at whether there were side effect differences between different potassium chloride products that affected their substitutability for each other. (Addanki, Tr. 5693). The primary side effect associated with potassium chloride products is the possibility of gastrointestinal (GI) irritation. (Addanki, Tr. 5693-95). Gastrointestinal irritation is not a substantial problem, however, as its incidence is low for all oral potassium chloride supplements. (Addanki, Tr. 6163). K-Dur 20 does not eliminate this potential GI side effect. (Addanki, Tr. 5693-95). Thus, potential side effect issues do not affect the substitutability of other potassium chloride products for K-Dur 20. (Addanki, Tr. 5695).

48. Although Schering's marketing strategy for its K-Dur 20 product was to emphasize that it could increase patient compliance, there is no significant difference in patient compliance between K-Dur 20 and Klor Con 10. (Dritsas, Tr. 4662).

3. Customers viewed K-Dur 20 and other potassium chloride products as interchangeable

49. According to Complaint Counsel's witnesses, oral potassium chloride products are therapeutically equivalent.

50. Dean Goldberg of United HealthCare ("UHC") testified that there is a substantial "degree of choice" in the potassium chloride market. Goldberg, Tr. 126-27. Goldberg testified that most, if not all, potassium chloride products are therapeutically equivalent. Goldberg, Tr. 144 (discussing USX 277, United HealthCare's Preferred Drug List). Goldberg also confirmed that reasonable substitutes exist to the 20 mEq sustained release potassium chloride product and, that physicians consistently prescribe those products. Goldberg, Tr. 144.

51. Russell Teagarden, a licensed pharmacist, of Merck-Medco, the nation's largest Physician Benefits Manager ("PBM") testified that there is no separate listing for 20 mEq potassium chloride products on its formulary. Teagarden, Tr. 234 (discussing USX 125); Tr.

240 (discussing USX 127). He also testified that at many times, for example in 1993, 1994, and 1995-96, Merck-Medco did not even list K-Dur 20 as a prescription drug on its formulary. Teagarden Tr. 239-44. Instead, Merck-Medco's formularies at those times simply listed other potassium supplements sold by other pharmaceutical companies. USX 127 at 176; USX 128 at 186.

52. Merck-Medco has consistently regarded potassium chloride products with different delivery systems as clinically equivalent and therefore interchangeable. (Teagarden, Tr. 249-50; (USX 123; USX 124; USX 125).

53. Merck-Medco equates microencapsulated tablets and capsules with wax matrix potassium chloride products. (Teagarden, Tr. 232, 247-48, 250; USX 123-25). Merck-Medco views branded and generic liquids, sustained release tablets and capsules, effervescent tablets, and powder potassium chloride supplements as alternative products substitutable for one another. (Teagarden, Tr. 233-34, 237-38, 240, 243, 255-56; USX 125; USX 127; USX 128; USX 126; USX 690). In addition, 8 mEq and 10 mEq products consistently are listed as substitutable alternatives on Merck-Medco's formularies. (Teagarden, Tr. 234, 240, 243-44, 256; USX 125; USX 127; USX 128; USX 690).

54. All the potassium chloride products on Merck-Medco's 2001 formulary are listed in the same therapeutical class. (Teagarden, Tr. 223-24; USX 131).

55. All the oral potassium chloride products on United Healthcare's Preferred Drug List are therapeutically equivalent. (Goldberg, Tr. 144-45).

56. Decision-makers at HMOs do not place a premium on K-Dur's delivery system or dosage form. (CX 13 at SP 003045; Addanki, Tr. 5691).

57. Physicians viewed K-Dur 20 as a product for which there were numerous other alternatives. (Dritsas, Tr. 4834). In 1995, 71 percent of the prescriptions for potassium chloride supplementation were being written for products other than K-Dur 20. (Addanki, Tr. 6174; CX 13). As of August 1997, 6 out of 10 potassium chloride prescriptions were for something other than K-Dur 20. (Bresnahan, Tr. 1279).

58. A company could compete with K-Dur 20 simply by convincing a physician to change his prescribing habits. (Dritsas, Tr. 4690).

59. There was significant substitution back and forth between Klor Con 10 and K-Dur 20. (Dritsas, Tr. 4752; Addanki, Tr. 5702). Pharmacists were substituting two Klor Con 10s for one K-Dur 20. (Dritsas, Tr. 4834).

4. Schering viewed K-Dur 20 as competing in the same market as other potassium chloride products

60. Schering measures the sales performance of K-Dur 20 against the entire potassium chloride supplement market, including other products such as 10 mEq potassium chloride products as competitors to K-Dur 20. (Russo, Tr. 3420; CX 18 at 23 000041; CX 17 at 003951, 003954; CX 20 at 00434). Schering's marketing plans indicate that there are over 20 different potassium chloride supplements, all competing in the same market. (Russo Tr. 3414-15; SPX 2209-2231; CX 17). Professor Bresnahan relied on Schering business documents that combined K-Dur 10 and K-Dur 20 in the same charts and business plans. (Bresnahan, Tr. 816). Bresnahan did not consider key portions of Schering's documents that show Schering considered K-Dur to be a part of a larger potassium chloride market. (Bresnahan 709-13, 721, 814-17, 824-25).

61. A 1996 Schering marketing backgrounder states that "K-Dur competes in a crowded $264 million potassium market which continues to grow. . . ." (Russo, Tr. 3412; CX 17, CX 746; Bresnahan, Tr. 720-21).

62. Schering's 1997 K-Dur Marketing Plan lists competing potassium chloride tablets and capsules. (SPX 977 at SP003849).

63. Schering perceived that K-Dur's major competitors were Klor Con and generic potassium chloride. (CX 20; Bresnahan, Tr. 827). A number of Schering documents characterize generic 10 mEq forms of potassium chloride as Schering's "major competitors." (Bresnahan, Tr. 1170).

5. Upsher-Smith viewed its potassium chloride products as competing in the same market as the other potassium chloride products

64. Upsher-Smith believed it was competing against everyone selling potassium chloride, including K-Tab, Micro-K, Ethex, K-Dur, and Slow K. (Addanki, Tr. 5711; SPX 1050). Upsher-Smith focused on the entire potassium chloride market and did not differentiate between dosage strengths. (Dritsas, Tr. 4692).

65. Upsher-Smith's documents indicate that it was looking at the entire potassium chloride market in positioning its Klor Con 10 potassium chloride product. (Dritsas, Tr. 4692; Addanki, Tr. 5711).

66. In its 1996 market share projections, Upsher-Smith assumed that the potassium market, which included K-Dur 10, K-Dur 20 and all other potassium products, was a $218

million market. (Dritsas, Tr. 4700; USX 1549 at USL 13858).

67. A 1996 marketing plan for Klor Con tablets indicates that the major competitors to Klor Con 8 and 10 were K-Tab, Micro-K 10, Ethex and K-Dur 20. (Dritsas, Tr. 4691-92, 4696; USX 1549 at USL 13858).

68. An Upsher-Smith training manual, dated June 3, 1997, listed a variety of 10 mEq products competing in the potassium market, including Klor Con 10, K-Tab 10, Klotrix 10, Kaon-Cl, Apothecon's product Micro-K 10, ESI, Medeva, Ethex, K-Dur 10, K-Dur 20 and K-Plus 10. (Dritsas, Tr. 4738-39; USX 630 at USL 15331). The manual listed a number of 8 mEq potassium products in the market, including Klor Con 8, Slow K, Copley 8, Warner Chilcott 8, Kaon-Cl 8, Abbott 8, Micro-K 8, and K-Plus 8. (Dritsas, Tr. 4739; USX 630 at USL 15332). Potassium powders in the market were Klor Con 20, Klor Con 25, K-Lor powder, Kay Ciel powder and Klor-vess powder 20. (Dritsas, Tr. 4739; USX 630 at USL 15333). K-Lor powder is marketed by Abbott Laboratories, a major, multi-billion dollar pharmaceutical company. (Dritsas, Tr. 4739-40). Finally, at least two effervescent tablet products were in the potassium market, Klor Con/EF and K-Lyte. (Dritsas, Tr. 4740; USX 630 at USL 15333).

69. Upsher-Smith's marketing documents reflect the fact that K-Dur 20 "competes directly against the 8 and 10 mEq strengths" of Upsher-Smith's Klor Con. (Bresnahan, Tr. 845; Dritsas, Tr. 4689, 4696; CX 740).

6. The substantial substitutability among potassium chloride products was reflected in actual competition between them

(a) Upsher-Smith directly targeted K-Dur 20 by emphasizing the substitutability of Upsher-Smith's Klor Con 10 mEq product

70. Upsher-Smith built demand for its Klor Con potassium chloride products based on therapeutic substitution. (Dritsas, Tr. 4653).

71. In order to compete against Schering's K-Dur 20, Upsher-Smith's sales representatives informed physicians and managed care organizations that they could more cheaply substitute two Klor Con 10 tablets for one K-Dur 20 tablet. (Dritsas, Tr. 4622-23).

72. In August 1999, Upsher-Smith employed a tactic to encourage high prescribers of K-Dur 20 to prescribe two 10 mEq tablets instead of one K-Dur 20. (Dritsas, Tr. 4765-66; USX 484 at USL 03330).

73. K-Dur 20 tablets are scored, making them easier to break in half. (Freese, Tr. 4955). Because many patients had to break the large K-Dur 20 tablet in half to swallow it anyway, patients could save money by taking two Klor Con 10s instead of one K-Dur 20. (Dritsas, Tr. 4622-23). Upsher-Smith's Klor Con 10 wax matrix tablet was about the same size as half a K-Dur 20 tablet. (Dritsas, Tr. 4624; Freese, Tr. 4955). Klor Con 10 was easier to swallow, though, because a halved K-Dur 20 tablet was bulky with rough edges. (Dritsas, Tr. 4624). Klor Con 10 was round and aqueous coated, a good alternative for patients complaining about swallowing a big tablet. (Dritsas, Tr. 4624).

74. Upsher-Smith implemented therapeutic switch incentive programs through its telephone sales force by targeting high volume K-Dur pharmacies, through visits to the headquarters of chains, wholesalers and managed care organizations, and by targeting long term care and select chains. (Dritsas, Tr. 4754-56; USX 1551 at USL 13795). Upsher-Smith also sent direct mail to high K-Dur prescribers about the cost savings of using two Klor Con 10s instead of one K-Dur 20. (Dritsas, Tr. 4756-58; USX 1551 at USL 13795).

75. Direct mailings emphasized the quality of Klor Con and the 56 percent savings. (Dritsas, Tr. 4766; USX 484 at USL 03328). These mailings continued through November 1999. (Dritsas, Tr. 4766-67; USX 484 at USL 03331).

(b) Schering competed against other potassium chloride products

76. During the 1996 -1997 period, Klor Con 10 sales increased 33 percent, moving from 12 percent of total prescriptions to 16 percent. (Bresnahan, Tr. 831). Generic potassium chloride sales increased during the same period, moving from 29 percent to 30 percent of total prescriptions by 1997. (Bresnahan, Tr. 832).

77. This growth was coming at K-Dur 20's expense. (CX 746 at SP 23 00039; Bresnahan, Tr. 743-45, 477; CX 18; SPX 901). Generic competition was growing at K-Dur 20's expense, in part because of the generics' price advantage, in part because of efforts to substitute two 10 mEq tablets for one K-Dur 20, and also because of managed care's role in requiring the use of generics. (Addanki, Tr. 5708, 5732-33; SPX 993 at SP 290039; CX 20 at SP 004040).

78. Schering expected that losses to 10 mEq generics would worsen over time. "As physicians change their prescribing habits and as the senior population moves into the managed care setting, the branded portion of the market will decrease and the potential for K-Dur volume growth will be limited." (CX 13 at SP 003046). Documents from the March 1995 time frame reflect concerns that staff HMO "decision makers do not place a premium on K-Dur's unique delivery system and dosage form." (CX 13 at SP 003047; Bresnahan, Tr. 717).

79. In 1995, Schering developed a marketing strategy to address competition from generic 10 mEq products. (CX 13 at SP 003046; Bresnahan, Tr. 715-16). Schering sought to develop brand awareness of, and brand allegiance to, the K-Dur brand to prevent an anticipated loss of market share to generic competition. (Bresnahan, Tr. 714-715; CX 13 at SP 003044- 48).

80. As of July 1996, Schering was aggressively marketing K-Dur to gain sales from generic potassium chloride products. (CX 718 at SP 23 00039; Bresnahan, Tr. 742). Schering began a targeted mail series to promote K-Dur 20 in an effort to "blunt the continued growth of generic potassium usage." (CX 718 at SP 23 00054); Bresnahan, Tr. 758; CX 18 at SP 23 00039). Schering ran a significant number of promotional programs over a ten-year period that heavily promoted and marketed both its K-Dur products. (Russo, Tr. 3418-19).

7. *Brown Shoe* factors not addressed in the preceding sections

a. No industry or public recognition of distinct markets

81. Complaint Counsel's expert, Dr. Bresnahan, admitted that he could not cite any pharmaceutical trade periodicals that treat K-Dur 20 as a product that has unique features. (Bresnahan, Tr. 711-12; 1271-72).

82. No studies exist comparing patient compliance for K-Dur 20 and the Klor Con 8 mEq and 10 mEq wax matrix products. (Dritsas, Tr. 4662; Kerr, Tr. 6907-08).

83. IMS, the authoritative industry data source, lists a number of products and manufacturers under its single potassium supplement category numbered 60110. (Dritsas, Tr. 4709-12; 4800-01; USX 619 at 14884-996; USX 822 at 1-12). Schering's K-Dur 20 product is included in the IMS listing with all of the other potassium products. (Dritsas, Tr. 4709; USX 822 at 1). Professor Bresnahan concedes that "all economic researchers . . . working in this industry use" IMS data. (Bresnahan, Tr. 471). In fact, Bresnahan himself relied on IMS data for the graph in CX 1596. (Bresnahan, Tr. 735).

b. No peculiar characteristics and uses

84. There are no peculiar characteristics or uses for K-Dur 20. (F. 38-59).

c. No unique production facilities

85. The K-Dur 10 and K-Dur 20 mEq products are produced in the same Schering facility. (Bresnahan, Tr. 1272).

86. Upsher-Smith purchases from Reheis, the same company that supplies the active ingredient for both the wax matrix Klor Con 8 and 10 and sustained release Klor Con M10 and M20. (CX 263 at 170356.).

d. No distinct customers

87. There is no distinctive class of customers based on "demographics or other classification criteria" that prefer K-Dur 20. (Bresnahan, Tr. 707). K-Dur 20, Klor Con 8 and 10, Micro-K, K-Tab, Slow K, K-Lyte, Klotrix, Apothecon KCL and Ethex potassium chloride products are all prescribed for the same purpose of treating potassium deficiency. (Bresnahan, Tr.1271; Dritsas, Tr. 4662).

88. There is no special group of patients that can only take K-Dur 20 and can not take other potassium products such as Klor Con. (Dritsas, Tr. 4661).

e. No distinct prices

89. In 1997, K-Dur had the same relative price as other potassium chloride supplements. (Teagarden, Tr. 224, 215, 218). During this time period, branded potassium products had "comparable" prices to K-Dur 20. (Bresnahan, Tr. 730). K-Dur and other potassium chloride supplements have "approximately the same" price. (Russo, Tr. 3426).

90. Dr. Bresnahan presented no statistical pricing study (Bresnahan, Tr. 1274), and did not even have pricing data for K-Dur 20, K-Dur 10, Klor Con 10 or for any other competitors (Bresnahan, Tr. 834-35. 867). During 1997, some potassium chloride products were more expensive than K-Dur 20. (Addanki, Tr. 5741-42; SPX 2069 at 1).

91. Dr. Bresnahan conceded that a pricing difference alone does not suffice to prove a separate product market. (Bresnahan, Tr. 1002). Prices of products that compete in a relevant market need not be close to one another because competition can occur in other dimensions. (Addanki, Tr. 6198).

92. Professor Bresnahan did not conduct the analysis necessary to determine the degree of price sensitivity between 20 mEq sustained-release products and other potassium products. (Bresnahan, Tr. 689-90, 810).

93. Professor Bresnahan did not study the price trend of K-Dur 20 since September 1, 2001, when new entry occurred in the market. (Bresnahan, Tr. 1003).

94. Upsher-Smith launched Klor Con M10 on September 1, 2001. (Dritsas, Tr. 4827).

95. Upsher-Smith launched Klor Con M10 aggressively against K-Dur 10 simultaneously with the launch of Klor Con M20 against K-Dur 20. (Troup, Tr. 5486-88).

96. Just prior to the launch of Klor Con M10, K-Dur 10 sales began to fall dramatically beginning in the summer of 2001 and continuing through November 2001. (Dritsas, Tr. 4827; USX 1557). K-Dur 20 sales followed the same trend in the summer of 2001 and continued though November 2001. (Dritsas, Tr. 4823; USX 1586).

97. Upsher-Smith launched Klor Con M10 in the midst of K-Dur supply problems that began earlier in the summer of 2001, just prior to the launch of Klor Con M10. (Troup, Tr. 5488-89). Due to the lack of availability of K-Dur, Upsher's potassium chloride sales were already on the rise, when Klor Con M10 and M20 were launched into the market. (Troup, Tr. 5488-89).

98. Upon its entry into the market with Klor Con M10, Upsher-Smith had a significant sales increase in its potassium chloride products. (Troup, Tr. 5489-90). Upsher-Smith had record sales of wax-matrix potassium chloride products in the year 2001 as well. (Troup, Tr. 5490).

99. While Upsher-Smith enjoyed strong sales for its Klor Con M10 product, this was due partially to the supply shortages Schering faced for both K-Dur 20 and K-Dur 10, due to FDA compliance issues that arose during the summer of 2001. (Dritsas, Tr. 4682, 4825).

100. Upon the launch of Klor Con M10 as a generic substitute to K-Dur 10, mandated state substitution for low cost generic alternatives took effect in several states. (Dritsas, Tr. 4824-25). These laws frequently block the prescribed branded product from being dispensed when a generic alternative is available, and thus prevent competition from the branded product completely. (Addanki, Tr. 5748-49; Dritsas, Tr. 4824-25). Similarly, in the K-Dur 20 market, state substitution laws that mandated substitution by a generic alternative negatively affected Schering's sales. (Dritsas, Tr. 4682, 4825).

101. K-Dur 10 in June 1997 amounted to 5% of the total prescriptions for potassium chloride in the United States. (CX 62 at SP 089326-27). K-Dur 10 sales performed just as Schering's K-Dur 20 performed. Despite the price increases for K-Dur 10, K-Dur 10's sales rose and in fact rose faster than K-Dur 20's sales. (CX 62-65).

102. Professor Bresnahan incorrectly asserts that K-Dur 20 is a monopoly (Bresnahan, Tr. 8147), but he concedes that K-Dur 10 was not a monopoly. (Bresnahan, Tr. 8146-47; Addanki, Tr. 5740).

103. While K-Dur 10 was not a monopoly product, K-Dur 10 sales fell just as dramatically as K-Dur 20, when Klor Con M10 became available on September 1, 2001. (Addanki, Tr. 5739-40; Dritsas, Tr. 4823-28; USX 1586; USX 1557).

f. Price sensitivity

104. Price is a major competitive factor in the potassium supplement market. (Dritsas, Tr. 4715-16; USX 626 at 15228).

105. Generic potassium products competed vigorously on price with branded potassium products, taking away sales and market share. (Dritsas, Tr. 4715-18, 4724-25, 4752-53, 4770-72; USX 626 at 15228; USX 1551 at 13791; USX 425 at 1002952).

106. K-Dur 20 lost some market share to other potassium chloride products. (CX 18 at 23 00045, CX 20 at 004040; Dritsas, Tr. 4717-18, 4752-53). K-Dur 20 also took market share and sales from other potassium products. (Dritsas, Tr. 4719-20, 4724-25, 4742, 4752, 4841; CX 19 at 15228).

107. Generic manufacturers, such as Apothecon, increased their sales of potassium supplements with lower prices, suggesting price sensitivity and an ability to gain share at the expense of other products in the market with lower prices. (Dritsas, Tr. 4763-64, 4770-72, 4909-10; Addanki, Tr. 6176-79; CX 50 at 13474; USX 380 at 142328; USX 425 at 1002952.).

108. Upsher-Smith's Dolan wrote that a firm may have a gain in sales after cutting prices. Slow-K, for example, showed a unit increase of 41% from 1994 to 1995 while their dollar share continued to decline. (Addanki, Tr. 6181).

(i). Schering K-Dur prices were sensitive to other potassium supplement prices

109. According to Schering, the pricing of K-Dur 20 was depressed due to generic potassium competition. (Russo, Tr. 3416).

110. The 30% price difference between K-Dur 20 and the unbranded generic

potassium products caused the sales of the generic products to rise, as noted in the 1998 K-DUR Marketing Plan. (CX 20 at 4040).

111. Schering's price for K-Dur 20 was not the highest for potassium chloride supplements during this time – other products were both lower and higher than K-Dur 20 for a 20 mEq dose. (Addanki, Tr. 5741; SPX 2069). IMS data shows that in 1997, K-Tab 10 was the highest priced potassium chloride product. (Addanki, Tr. 5742; SPX 2069). Between 1996 and 2000, K-Dur 20 was never the highest priced potassium chloride supplement. (Addanki, Tr. 5743; SPX 2068). Schering's K-Dur 20 competed on price with other potassium chloride products by using discounts and rebate programs. (Addanki, Tr. 6172-73).

112. Professor Bresnahan testified that he did not compare Schering's prices against other potassium products' pricing in forming his opinion as to the relevant market in this litigation. (Bresnahan, Tr. 725, 867).

113. Professor Bresnahan also did not measure the cross-elasticity of demand between competing potassium products in conducting his analysis of the potassium market and K-Dur 20. (Bresnahan, Tr. 810).

(ii.) Schering paid large rebates

114. The annual rebates Schering-Plough paid to its customers for K-Dur for 1995 were $21.005 million. (CX 695 at SP 020696). The annual rebates Schering-Plough paid to its customers for K-Dur for 1996 were $28.659 million. (CX 695 at SP 020696). The annual rebates Schering-Plough paid to its customers for K-Dur for 1997 were $17.593 million. The annual rebates Schering-Plough paid to its customers for K-Dur for 1998 were $34.565 million. (CX 695 at SP 020699). The annual rebates Schering-Plough paid to its customers for K-Dur for 1999 were $37.602 million. (CX 695 at SP 020700-701). The annual rebates Schering-Plough paid to its customers for K-Dur for 2000 were $35.214 million. (CX 695 at SP 020701). These rebates were "significant" and were "more than 10 percent of the gross sales of K-Dur" in 2000. (Addanki, Tr. 6173-74). In the first six calendar months of 2001, Schering-Plough paid its K-Dur customers $23.530 million in rebates for K-Dur. (CX 695 at SP 020702).

115. From October 1, 1997 to June 30, 2001, Schering-Plough paid its K-Dur customers a total of $136.566 million in rebates related to its K-Dur product. (CX 695 at SP 020698-0702).

116. The rebates that Schering-Plough paid its K-Dur customers after the June 1997 Agreement with Upsher-Smith demonstrate that Schering-Plough "[was] competing on price through rebates" (Addanki, Tr. 6173). The tens of millions of dollars paid to K-Dur customers

in rebates is inconsistent with the theory that Schering-Plough was a monopolist in the sale of its potassium products during this time period. (Addanki, Tr. 6173).

117. Professor Bresnahan did not study Schering's rebates at all in connection with his work in this case. (Bresnahan, Tr. 702). Nor did Professor Bresnahan study Upsher-Smith's rebate programs. (Bresnahan, Tr. 702). Further, Professor Bresnahan did not compare the two firms' relative level of rebate spending on potassium chloride (Bresnahan, Tr. 702).

g. No specialized vendors for various potassium products

118. No specialized vendors serve only K-Dur 20 — both Klor Con and K-Dur 20 are dispensed by pharmacies in response to prescriptions written by doctors. (Bresnahan, Tr. 695-96). Both drugs are prescription medications for potassium. (Bresnahan, Tr. 696-97). Patients who are hypokalemic receive prescriptions for a potassium supplement when they visit the doctor. (Bresnahan, Tr. 696). Demand for both products begins when a patient presents himself to a doctor. (Bresnahan, Tr. 696). Prescriptions are dispensed for both products at pharmacies. (Bresnahan, Tr. 697-99).

E. The '743 Patent and Schering's K-Dur Products

119. Potassium chloride supplements are prescription drugs used to treat potassium deficiency (known as "hypokalemia"), a condition that often arises among individuals who take diuretic medications used to treat high blood pressure or congestive heart disease. (Goldberg, Tr. 125-26; CX 3 at FTC 190286-89; CX 19 at USL 15229). Potassium deficiency can cause muscle weakness and life-threatening cardiac conditions. (CX 3 at FTC 190286-88; CX 26 at USL 07336; Goldberg, Tr. 125-26; Schering's Answer at ¶ 22; Banker, Tr. 2950).

120. Potassium chloride, the active ingredient in potassium chloride supplements, including K-Dur 20, is not patented. (Schering Answer at ¶ 33; Banker, Tr. 3251).

121. Patent number 4,863,743 ('743 patent) claims a "pharmaceutical dosage unit in tablet form for oral administration of potassium chloride" containing potassium chloride crystals coated with a material comprising ethylcellulose, having a viscosity greater than 40 cp, and hydroxypropoylcellulose or polyethylene glycol. (CX 12 at FTC 0021322). The novel feature claimed in the '743 patent is the particular coating applied to the potassium chloride crystals. The active ingredient, potassium chloride, was a known compound. The coating allows for sustained-release delivery of the potassium chloride. (CX 12 at FTC 0021319-20). Thus, the '743 patent relates primarily to the sustained-release formulation and does not cover the active ingredient itself. (Banker, Tr. 2947; Horvitz, Tr. 3625-27).

122. Key Pharmaceuticals, a division of Schering, owns the '743 patent. The '743

patent, issued on September 5, 1989, covers K-Dur 20 (as well as K-Dur 10, a 10 mEq version of the product) and expires on September 5, 2006. (Schering Answer at ¶ 34; CX 12 at FTC 0021318).

123. K-Dur 20 is a controlled release, microencapsulated, potassium chloride product developed by Key Pharmaceuticals in the 1980s and approved by the FDA in 1986. (Kerr, Tr. 7561). The "20" in K-Dur 20 refers to 20 mEq (milliequivalent), the amount of potassium contained in the 20 mEq dosage form. (Bresnahan, Tr. 489).

124. Complaint Counsel's expert witnesses did not reach an opinion as to whether the '743 patent is invalid or infringed by Upsher-Smith's or AHP's products. (Bresnahan, Tr. 670; Bazerman, Tr. 8568; Hoffman, Tr. 2351).

F. Upsher-Smith's Potassium Products and Patent Litigation

1. Upsher-Smith's ANDA and the initiation of patent litigation

125. On August 8, 1995, Upsher-Smith filed an ANDA with the FDA to market Klor-Con M in two dosage forms, 10 mEq and 20 mEq, as bioequivalent versions of Schering's K-Dur products. (USX 695). Upsher-Smith subsequently amended its ANDA submission to remove the 10 mEq dosage form from consideration, due to the FDA's initial rejection of a biowaiver for the 10 mEq dosage form. (CX 255). The FDA determined that no ANDA filer was eligible to have exclusivity for any 10 mEq dosage form of any generic version of K-Dur. (USX 345).

126. At the time of its ANDA submission, Upsher-Smith was not aware that it was the first ANDA filing referencing K-Dur 20. (Troup, Tr. 5491; Dritsas, Tr. 4666). After amending its ANDA to remove the 10 mEq dosage form, Upsher-Smith submitted a Paragraph IV Certification. (CX 224). On November 3, 1995, Upsher-Smith notified Schering of its ANDA filing and Paragraph IV Certification with respect to the 20 mEq dosage form. (CX 224; Troup, Tr. 5404).

127. On December 15, 1995, pursuant to the time period set forth in the Hatch-Waxman Act, Schering sued Upsher-Smith for patent infringement in the U.S. District Court for the District of New Jersey, alleging that Upsher-Smith's Klor Con M infringed Schering's '743 patent. (USX 677; Kralovec, Tr. 5032; Troup, Tr. 5404). Trial of the patent case was scheduled to begin on June 18 or 19, 1997. (Hoffman, Tr. 3549).

128. No testimony or evidence was offered to show that Schering's filing of the patent litigation against Upsher-Smith was not initiated for the legitimate purpose of defending its patent.

2. Settlement discussions between Schering and Upsher-Smith

129. In the patent litigation, Schering alleged that Upsher-Smith's Klor Con M20 product infringed the '743 patent because [**redacted**] [**redacted**] [**redacted**] *(Banker, Tr. 5254-55; SPX 2258; SPX 2259).* Schering also asserted that [**redacted**] [**redacted**] [**redacted**] [*(Banker, Tr. 5257-59:16; SPX 2258; SPX 2260).*

130. In its answer to Schering's complaint, dated January 29, 1996, Upsher-Smith denied that its product infringed "any claim of the '743 patent," and asserted, as affirmative defenses, that the claims of the '743 patent were invalid and that the '743 patent was unenforceable. (CX 226 at SP 08 00039-41). Upsher-Smith also filed a counterclaim for declaratory judgment that its product did not infringe the '743 patent and that the '743 patent was invalid and unenforceable. Upsher-Smith asserted that Schering brought its case with the intention of "trying to delay Upsher-Smith's FDA approval and thereby put off for as long as possible the time when it must face competition from Upsher-Smith's product." (CX 226 at SP 08 00041-42).

131. The patent infringement litigation between Upsher-Smith and Schering was vigorously contested from the outset. (Cannella, Tr. 3815; Kralovec, Tr. 5033; Troup, Tr. 5405-06). As the patent litigation continued through the spring of 1997, Mr. Ian Troup, Upsher-Smith's President and Chief Operating Officer, became increasingly concerned about the toll it was taking on Upsher-Smith. (Troup, Tr. 5405-06). The litigation was taking longer than Upsher-Smith had anticipated and was particularly rancorous. (Troup, Tr. 5405-07).

132. In April or May 1997, Troup first approached Schering about a possible settlement of the litigation. (Troup, Tr. 5397, 5408-09). The parties held a series of meetings over the course of the month before trial in an attempt to reach a settlement of the patent litigation. (F. 129-62).

133. The initial settlement meeting took place between Mr. Martin Driscoll, Vice President of Sales and Marketing for Key, and Troup at Schering's office in Kenilworth, NJ on May 21, 1997. (Troup, Tr. 5409). Troup stated that he wanted to obtain through settlement the earliest possible date to launch Klor-Con M20 without incurring the damages that could arise from patent infringement. (Troup, Tr. 5411-12). Troup suggested to Driscoll that they settle the litigation by setting a date certain for Upsher-Smith to enter the market with its Klor Con M products sometime before September 2006, the expiration date of Schering's K-Dur patent. (Troup, Tr. 5410-11).

134. At this settlement meeting or the next, Driscoll and Troup discussed the possibility that Schering might permit Upsher-Smith's generic version of K-Dur to come to market in late 2005 or early 2006, before the expiration of Schering's patent. (Troup, Tr. 5412). Troup stated that Upsher-Smith wanted to be on the market at an earlier date and that it would have problems with money and cash flow if its entry was delayed until 2005. (Troup, Tr. 5413).

135. The parties met again at Upsher-Smith's offices in Plymouth, Minnesota, on May 28 and June 3, 1997. Mr. Driscoll and Mr. Raman Kapur, President of Schering's Warrick subsidiary, attended these meetings on behalf of Schering. Mr. Troup and consultant Andrew Hirschberg attended on behalf of Upsher-Smith. (Troup, Tr. 5417; CX 1511 at 8-10 (Kapur Dep.); Schering First Admissions Nos. 7-9, 11-12; Upsher-Smith Second Admissions Nos. 9-10, 13-14, 22). At the May 28, 1997 meeting, Kapur indicated he was interested in the possibility of licensing some of Upsher-Smith's products. (Troup, Tr. 5420).

136. During the course of the May 28 and June 3, 1997 meetings, Troup again suggested that Schering make a payment in connection with a settlement of the patent suit. (CX 1511 at 18-19 (Kapur Dep.)). Troup stressed Upsher-Smith's need to replace its lost revenue from not having a generic K-Dur 20 product on the market. (Hoffman, Tr. 3568; CX 1511 at 18-19 (Kapur Dep.)).

137. During the course of the May 28 and June 3, 1997 meetings, the parties discussed various dates for Upsher-Smith's entry into the K-Dur 20 market. (CX 1511 at 22-23 (Kapur Dep)). The parties decided to approach settlement by splitting the remaining life on Schering's K-Dur patent. (Troup, Tr. 5424-26). Mr. Troup preferred an earlier date. (CX 1511 at 23-24 (Kapur Dep.)). Mr. Driscoll told Upsher-Smith that the earliest date he could offer for Upsher-Smith's entry was September 2001. (CX 1511 at 23 (Kapur Dep.)). Schering never suggested that it would consider an entry date earlier than September 1, 2001. (Troup, Tr. 5500).

138. At the May 28 and June 3, 1997 meetings, the parties discussed several possibilities for business opportunities, such as a co-marketing arrangement with respect to Schering's K-Dur or a joint venture for Upsher-Smith research and development. (CX 1511 at 14-15 (Kapur Dep.); Troup, Tr. 5433-34). They also discussed the possibility that Schering might license one or more Upsher-Smith products, including cholestyramine, pentoxifyilline and Upsher-Smith's sustained release niacin product, Niacor-SR. (CX 1511 at 14, CX 1495 at 62 (Kapur Dep.); SPX 1242 at 16 (Kapur Dep.); Troup, Tr. 5420, 5430-34). Upsher-Smith described the expected clinical benefits of Niacor-SR, and Schering was aware of the market opportunity for Niacor-SR because it had been involved in evaluating the market for other, nearly identical projects. (CX 1495 at 70-71; SPX 1265 at 73 (Driscoll Dep.)). Troup was

willing to consider the possibility of licensing Niacor-SR to Schering outside the United States, as Upsher-Smith had no presence in Europe or elsewhere internationally. (Troup, Tr. 5432).

139. Prior to the parties' next face-to-face negotiation session, Mr. John Hoffman, Schering's General Counsel, spoke to, Mr. Nick Cannella, Upsher-Smith's outside counsel, on or about June 10, 1997, to discuss logistics and ground rules for the upcoming meeting. (Cannella, Tr. 3824-25). Hoffman told Cannella that Schering viewed the upcoming meeting as an opportunity to discuss potential business opportunities between Schering and Upsher-Smith, not as an occasion to debate the merits of the underlying patent case. (Cannella, Tr. 3826; Hoffman, Tr. 3541). Hoffman stated that Schering "was not going to be paying Upsher-Smith to stay off the market." (Hoffman, Tr. 3541).

140. Prior to the parties' next face-to-face negotiation session, Troup and Hirschberg discussed what Upsher-Smith should ask for in exchange for a license to Niacor-SR. (Troup, Tr. 5448). Hirschberg recommended that Mr. Troup ask for $100 million for a Niacor-SR license. (Troup, Tr. 5448).

141. Upsher-Smith representatives, Troup, Cannella and Hirschberg, and Schering representatives, Hoffman, Kapur, and Jeffrey Wasserstein, Vice President of Business Development, met in Kenilworth, N.J. on June 12, 1997. (Troup, Tr. 5436-38; Hoffman, Tr. 3539, 3541-42). Troup again raised his desire to gain an entry date earlier than September 1, 2001, for Upsher-Smith's generic version of K-Dur. (Troup, Tr. 5439). Mr. Troup stated at the June 12 meeting that Upsher-Smith still had "cash needs" because all of the company's cash was tied up in two products in development, Upsher-Smith's generic version of K-Dur and its sustained release niacin product, Niacor-SR. (Hoffman, Tr. 3543).

142. Hoffman stated to Troup that the September 1, 2001 entry had already been negotiated, and that Schering wanted to discuss licensing opportunities. (CX 1509 at 49 (Hoffman Dep.); Troup, Tr. 5439-40). Mr. Hoffman told Mr. Troup that Schering would be "willing to do arm's length business deals that stand on their own two feet, and that's what we're here to discuss." (Hoffman, Tr. 3544).

143. Before the June 12, 1997 meeting Upsher-Smith required Schering to sign a confidentiality agreement regarding Upsher-Smith Niacor-SR product information. (CX 1041). Troup brought to the meeting a confidential printed presentation about Upsher-Smith's Niacor-SR product. (Troup, Tr. 5436-37; CX 1041). This presentation was similar to the presentations Upsher-Smith provided to Searle and the European companies interested in licensing Niacor-SR. (USX 538; CX 1023). Troup also provided Schering with two draft protocols for conducting post-market studies for Niacor-SR. (CX 714; CX 1043).

144. Troup confirmed that Upsher-Smith's offer of a Niacor-SR license extended

only to non-NAFTA territories. (Hoffman, Tr. 3545; Troup, Tr. 5440-41). Schering was disappointed that Upsher-Smith would not consider a partnership for Niacor-SR in the United States (CX 1511 at 26-27 (Kapur Dep.)), but remained interested in the opportunity to market the product internationally. (Troup, Tr. 5443-44). Kapur also expressed his continued interest in Upsher-Smith's cholestyramine and pentoxifyilline products. (Hoffman, Tr. 3545).

145. The parties discussed the market potential for Niacor-SR. (Hoffman, Tr. 3547-48; Troup, Tr. 5441-43; Cannella, Tr. 3868). Upsher-Smith told Schering that late-stage clinical work on Niacor-SR was finished and that Schering would be able to get on the European market with Niacor-SR soon. (Troup, Tr. 5441-43). Schering and Upsher-Smith discussed niacin combination therapy, the advantages of Niacor-SR versus immediate release niacin, the flushing side effects and Niacor-SR's effects on Lp(a). (Troup, Tr. 5583-87). Troup referred to Kos Pharmaceutical's niaspan product, and Kos's market capitalization, to show that Upsher-Smith's Niacor-SR niacin product had tremendous potential. (Troup, Tr. 5583-87; Cannella, Tr. 3829-30).

146. The June 12, 1997 meeting included a preliminary discussion concerning the price of the Niacor-SR product. Troup asked for $70-80 million in his first offer to Schering. (Troup, Tr. 5449; Hoffman, Tr. 3545; SPX 1242 at 44-45 (Kapur Dep.); Cannella, Tr. 3830). Schering told Upsher-Smith it would continue to analyze the issues and the clinical data for Niacor-SR and would get back to Upsher-Smith about its interest in pursuing a deal for Niacor-SR. (Hoffman, Tr. 3545-46; Cannella, Tr. 3832). The parties also discussed the potential licensing of other Upsher-Smith products, including Prevalite and Pentoxifylline. (Troup, Tr. 5445-46; Hoffman, Tr. 3544-45).

147. Shortly before or after the June 12, 1997 meeting with Upsher-Smith in Kenilworth, Kapur and Driscoll briefed Mr. Raul Cesan, Schering's president of pharmaceuticals worldwide, on the Upsher-Smith negotiations. (CX 1510 at 66-67; SPX 1242 at 29-30 (Kapur Dep.)). Driscoll and Kapur told Cesan that they had discussed with Troup whether there were any potential business opportunities that would be valuable to both Schering and Upsher-Smith, and that Troup had suggested a possible deal for Niacor-SR in markets outside of the United States. (SPX 1242 at 30 (Kapur Dep.)). Cesan asked Kapur to contact Mr. Tom Lauda, Schering's Vice President of Global Marketing, to see if Lauda would be interested in marketing Niacor-SR internationally. (SPX 1242 at 30-31 (Kapur Dep.); CX 1489 at 14 (Cesan Dep.)).

148. Following Cesan's instructions, Kapur telephoned Lauda and told him that Schering was considering a licensing opportunity for Upsher-Smith's sustained-release niacin product, that the opportunity would cost Schering approximately $60 million, and asked if Global Marketing would perform an assessment of the product to see if it would be worth $60 million to Schering. (Lauda, Tr. 4342-43). Kapur did not tell Lauda that this licensing

opportunity was connected to patent litigation. (Lauda, Tr. 4344).

149. Lauda asked Mr. Jim Audibert, head of Schering's Global Marketing's cardiovascular unit, to perform an assessment of Upsher-Smith's Niacor-SR product. (Lauda, Tr. 4344). Lauda told Audibert that a packet of information about the product would be delivered and Kapur was available to answer any questions that Audibert may have had. (Lauda, Tr. 4404). Lauda did not tell Audibert any amount that Schering expected to pay for the license, and Audibert was unaware that the Niacor opportunity had any connection to a patent suit. (Audibert, Tr. 4113).

150. Kapur sent Upsher-Smith's Niacor-SR data package to Audibert after receiving it from Troup. (CX 1511 at 40 (Kapur Dep.)). Audibert did not recall Lauda specifying a deadline for his review of Niacor-SR, but he knew from past experiences with similar requests that Lauda usually wanted the assessment to be completed quickly. (Audibert, Tr. 4112-13).

151. Audibert provided a formal written assessment of the commercial value of Niacor-SR, dated June 17, 1997. (SPX 2). Although Audibert did not complete his written assessment until June 17, 1997, Audibert and Lauda discussed Audibert's assessment before Audibert completed it. (Lauda, Tr. 4345; CX 1483 at 30 (Audibert I.H.)). In summary, Audibert concluded that Niacor-SR offers a $100+ million sales opportunity for Schering. (SPX 2, at SP 1600045.) Annual dollar sales projections, in millions, were $45 (1999), $70 (2000), $114 (2001), $126 (2002). (SPX2, at SP 1600046-47). Detailed findings on Audibert's analysis and conclusions are set forth at F. 243-57.

152. The next meeting between Schering and Upsher-Smith took place on June 16, 1997, in Upsher-Smith's office in Plymouth, Minnesota. (Troup, Tr. 5452; Hoffman, Tr. 3550). Kapur, Hoffman, Wasserstein and Schering's in-house attorney Paul Thompson attended for Schering; Troup, Hirschberg, and Cannella (via telephone) participated on behalf of Upsher-Smith. (Hoffman, Tr. 3546; Troup, Tr. 5452; Cannella, Tr. 3834). Discussion at the June 16 meeting focused on the valuation of the package of Upsher-Smith products, including Niacor-SR and pentoxifylline for the ex-NAFTA countries and cholestyramine worldwide. (Troup, Tr. 5453). Over the course of the meeting, Upsher-Smith offered to license to Schering for the ex-NAFTA countries its wax matrix 8 and 10 mEq products and Klor Con M20. (Troup, Tr. 5453). Troup still wanted $80 million and talked again about the fact that Kos' market capitalization was $400 million based on the strength of Kos' similar niacin product, for which Kos had projected annual sales of $250 million by the third year. (Troup, Tr. 5455; Hoffman, Tr. 3547; Cannella, Tr. 3835). Schering made a counter-offer of $60 million, which was accepted by Upsher-Smith. (Cannela, Tr. 3835; Troup, Tr. 5458).

153. The parties discussed, either at the June 16 meeting or shortly thereafter, that the $60 million would be paid in installments. (Troup, Tr. 5459-60; Hoffman, Tr. 3547; CX 1511

at 74-75 (Kapur Dep.)). To bridge the gap between Upsher-Smith's asking price and Schering's counter-offer, the parties negotiated milestone payments for launch of Niacor-SR in nine different countries throughout the world, including $2 million for Japan and $1 million each for eight other countries, totaling $10 million in milestones. (CX 1511 at 72-73 (Kapur Dep.); Cannella, Tr 3836; Hoffman, Tr. 3547; Troup, Tr. 5458-59). Troup also asked for two different levels of royalties on Niacor-SR: a 10% royalty on annual net sales up to $50 million and a 15% royalty on annual net sales in excess of $50 million. (Troup, Tr. 5459; CX 347 at SP 12 00195).

3. Final negotiations and the June 17, 1997 Agreement

154. Following the June 16, 1997 meeting, the parties' first efforts to create a written agreement produced competing drafts. (Cannella, Tr. 3842-44). The final details of the agreement, including the amounts of the installment payments that would make up the $60 million in up-front royalties, were worked out in a series of telephone calls between the parties over the next 24 hours. (CX 1511 at 74-76 (Kapur Dep.); Hoffman, Tr. 3548-50; Troup, Tr. 5459-60, 5464; Cannella, Tr. 3843-44).

155. After the conference calls to fine-tune the agreement, the agreement was memorialized in writing in an initial fax copy in the early hours of June 18, 1997. (Troup, Tr. 5464; Hoffman, Tr. 3549-50). The settlement agreement, CX 347, bears the date of June 17, 1997. (CX 347; Hoffman, Tr. 3550). However, it was actually signed at 2:00 or 3:00 a.m. on June 18, 1997. (Hoffman, Tr. 3550; Troup, Tr. 5467). Troup signed a fax copy on June 18 (Troup, Tr. 5467), and a hard copy of the final version on June 19, after returning to the office from a business trip. (Troup, Tr. 5465, 5467-68; CX 348).

156. The critical terms of the June 17, 1997 Agreement (CX 348) are set forth below:

> IX. This Agreement constitutes a binding agreement between the Parties with respect to the subject matter set forth herein, conditioned solely upon the approval of the Board of Directors of Schering-Plough Corporation (the "Board"). This Agreement will be presented to the Board at its regularly scheduled meeting to occur on June 24, 1997.
>
> X. Failure of any party to perform its obligations under the Agreement (except the obligation to make payments when properly due) shall not subject such party to any liability or place them in breach of any term or condition of the Agreement to the other party if such failure is due to any cause beyond the reasonable control of such non-performing party ("force majeure"), unless conclusive evidence to the contrary is

provided. Causes of non-performance constituting force majeure shall include, without limitation, acts of God, fire, explosion, flood, drought, war, riot, sabotage, embargo, strikes or other labor trouble, failure in whole or in part of suppliers to deliver on schedule material, equipment or machinery, interruption of or delay in transportation, a national health emergency or compliance with any order or regulation of any government entity acting with color of right. . . .

¶ 3 Upsher-Smith agrees that it will not market in the United States its KLOR CON M 20 potassium chloride product, or any other sustained release microencapsulated potassium chloride tablet, prior to September 1, 2001. Effective as of September 2001, Upsher-Smith shall have a non-royalty bearing non-exclusive license under the '743 patent to make, have made, import, export, use, offer for sale and sell its, KLOR CON M 20 and KLOR CON M 10 potassium chloride tablets in the United States. . . .

¶ 4 Each of Upsher-Smith and Schering shall stipulate to the dismissal without prejudice of the action known as Key Pharmaceuticals, Inc. v. Upsher-Smith Laboratories, Inc., U.S.D.C., D.N.J. (Civil Action No. 956281 (WHW)).

Paragraphs 7, 8, 9, and 10 grant Schering or its designated affiliates, the "SP Licensee," exclusive licenses for NIACOR-SR, KLOR CON 8, KLOR CON 10, KLOR CON M20, PREVALITE, and Pentoxifylline. For each of the drugs except PREVALITE, the territories of the exclusive licenses are all countries other than Canada, the United States, and Mexico. For PREVALITE, the territories are all countries other than Canada and Mexico (and in different packaging in the U.S.)

¶ 11 In consideration for the licenses, rights and obligations described in paragraphs 1 though 10 above, the SP Licensee shall make the following payments to Upsher-Smith:

(i) An up-front royalty payment of twenty-eight million dollars ($28,000,000) within forty-eight (48) hours of the date on which the Agreement is approved by the Schering-Plough Corporation's Board of Directors (the "Approval Date").

(ii) An up-front royalty payment of twenty million dollars ($20,000,000) on the first anniversary of the Approval Date.

(iii) An up-front royalty payment of twelve million dollars ($12,000,000) on the second anniversary of the Approval Date.

(iv) Milestone payments due within ten (10) days of the first commercial sale of NIACOR-SR by the SP Licensee or its sublicensee in each of the following countries. . . .

¶ 12 In the event that any court or governmental authority or agency rules that the licenses granted to the SP Licensee are void or invalid, then all such rights which are ruled to be invalid shall terminate and Upsher-Smith shall have the right, at its sole discretion, to purchase back, for nominal consideration, all such terminated rights. Any of Schering's payment obligations under the Detailed Agreement relating to such invalidated rights which have not become due and payable prior to the date of such ruling shall thereupon terminate.

157. The June 17, 1997 agreement achieved two purposes: (1) a settlement agreement of the patent infringement litigation whereby Schering agreed to grant Upsher-Smith a royalty-free license to enter the market with Klor Con M20 and Klor Con M10 on September 1, 2001 (five years before the expiration of Schering's patent on its K-Dur products) (Troup, Tr. 5461–63; Hoffman, Tr. 3548; CX 348); and (2) a license agreement for six separate products, and a related supply agreement for each of the six licensed products. (Troup, Tr. 5509, 5461-63; CX 348).

158. Paragraph 3 states that "Upsher-Smith agrees that it will not market in the United States its Klor Con M 20 potassium chloride product, or any other sustained release microencapsulated potassium chloride tablet, prior to September 1, 2001." (CX 348; Troup, Tr. 5469). The language "or any other sustained release microencapsulated potassium chloride tablet" was added so that Upsher-Smith could continue to market its Klor Con 8 and Klor Con 10 wax matrix tablets without any restrictions. (Troup, Tr. 5469-70). Schering wanted to prevent Upsher-Smith from simply renaming its Klor Con M 20 product to get around the language and intent of the settlement agreement. (Troup, Tr. 5470). No other restrictions on any of Upsher-Smith's other products were intended by the settlement agreement. (Troup, Tr. 5470; Cannella, Tr. 3849-50).

159. The license from Schering to Upsher-Smith for the '743 patent covers the marketing and sale of both Klor Con M20 and Klor Con M10 in the United States, even though Klor Con M10 was not a subject of the patent infringement lawsuit or a part of Upsher-Smith's ANDA filing. (Troup, Tr. 5470-72; Kerr, Tr. 6253-54; CX 348).

160. Paragraph 11 of the settlement agreement discusses royalty payments, which

refers to the licenses for the six products: Niacor-SR, cholestyramine, Pentoxifylline, and the three potassium products. (Troup, Tr. 5473-74, 5631-33).

161. Paragraph 11 contains a reference that payment was in consideration of licenses, rights, and obligations described in paragraphs 1-10 of the entire agreement. (Troup, Tr. 5473-74; CX 348). The term "SP Licensee," by whom consideration was paid, only appears in Paragraphs 7 through 10 of the settlement agreement dealing with licenses, and not in Paragraphs 1 through 6, which involve only the settlement of the patent infringement litigation. (Troup, Tr. 5472-73, 5631-33).

162. No fact witness testified that the payments provided for in the June 17, 1997 agreement were not for Niacor-SR and the other products Schering licensed from Upsher-Smith.

4. Schering's Board of Directors approves the June 17, 1997 Agreement

163. The June 17, 1997 agreement was contingent on approval by the Schering Board of Directors. (Cannella, Tr. 3855-56; CX 347 at SP 12 00190). The presentation to Schering's Board sought authorization to enter into the license agreement with Upsher-Smith. (CX 338). It states that, during the course of Schering's discussions with Upsher-Smith, Upsher-Smith "indicated that a prerequisite of any deal would be to provide them with a guaranteed income stream for the next twenty four months to make up for the income that they had projected to earn from sales of Klor-Con had they been successful in their suit." (CX 338 at SP 12 00270). The Board was informed that Schering had made it clear to Upsher-Smith that any such deal would have "to stand on its own merit, independent of the settlement." (CX 338 at SP 12 00268). One Schering Board member testified that "it was made very clear to the directors that we were looking at this license agreement which had to stand on the merits of the license agreement." (SPX 1225 at 30 (Becherer Dep.)). Another Board member explained that "the licensing agreement that was being proposed would have to stand on its own merits," so that it "would be an agreement that would make sense in and of itself independent of anything else." (CX 1526 at 24-25 (Russo Dep.)).

164. The Board presentation provided sales projections for Niacor-SR of $100 million plus in annual sales. (CX 338 at SP 12 00268). The presentation showed a net present value of $225-265 million for the Niacor license. (CX 338 at SP 12 00275).

165. The Board presentation provided sales forecasts for sales of prevalite, pentoxifylline, and Klor-Con 8, 10 and M 20 "to be $8 million a year in the first full year of launch, growing to $12 million a year in the second full year, and then gradually declining in year four and thereafter. Net margins on the products are expected to be between 35% and 50%."

(CX 338 at SP 12 00271).

166. A Board member testified that "[t]he focus of this proposal was a licensing agreement for four products in a space that Schering was interested in for a $60 million investment and a $225 million plus economic value return. So, from the Board's standpoint, there was nothing about this that would cause any questions." (CX 1526 at 51 (Russo Dep.)). Based on the information presented to them and their understanding that the payments were for the licensed products, the Board approved the license deal. (CX 340 at SP 07 00003).

5. The "any other sustained release microencapsulated potassium chloride tablet" clause was necessary and narrowly constructed to fully settle the litigation

167. Paragraph 3 of the settlement agreement states that "Upsher-Smith agrees that it will not market in the United States its Klor Con M 20 potassium chloride product, or any other sustained release microencapsulated potassium chloride tablet, prior to September 1, 2001." (CX 348; Troup, Tr. 5469). The language "or any other sustained release microencapsulated potassium chloride tablet" was added after some discussion between the parties so that Upsher-Smith could continue to market its Klor Con 8 and Klor Con 10 wax matrix tablets without any restrictions. (Troup,Tr. 5469-70). Schering wanted to prevent Upsher-Smith from simply renaming its Klor Con M 20 product to get around the language and intent of the settlement agreement. (Troup, Tr. 5470).

168. A narrowly-constructed restriction like the one in the first sentence of paragraph 3 of the agreement is necessary in a patent settlement, as "it's essential to describe what it is that the parties can and can't do." (Kerr, Tr. 6334, 6336, 6338-39). In the pharmaceutical industry, settlement agreements necessitate narrowly-constructed clauses limiting the production of specific compounds, as generics need to be as similar as possible to the branded products and hence defy limitation by general language. (Kerr, Tr. 6338-39).

169. Professor Bresnahan has not identified any other product that was blocked by the language in the June 17, 1997 agreement that allegedly barred Upsher-Smith from marketing "any other sustained release microencapsulated potassium chloride tablet." (Bresnahan, Tr. 984). Nor is Professor Bresnahan aware that either Upsher-Smith or Schering had any product in mind other than the Klor Con M20 product when they drafted their agreement. (Bresnahan, Tr. 984).

170. Upsher-Smith's witnesses verified that no other products in Upsher-Smith's pipeline were bottlenecked by the limiting clause in paragraph 3. (Dritsas Tr., 4836).

171. Professor Bresnahan conceded that "if the contract were otherwise pro-competitive," it would be reasonable to read the language of the agreement as ruling out a "me-too product that is simply introduced under another name other than Klor Con M20 but is, in fact, Klor Con M20." (Bresnahan, Tr. 985). Such a provision would not be anticompetitive. (Bresnahan, Tr. 987-88, 990-91).

G. Whether the $60 Million Dollars Was a Payment For Fair Value of Niacor-SR

172. Complaint Counsel's expert witness economist, Professor Timothy F. Bresnahan testified that a side deal at fair value did not raise competitive concerns. (Bresnahan, Tr. 932-33.) Professor Bresnahan confirmed that the determination of fair value was a subjective standard measured at the time of the transaction: "if Schering-Plough had made a stand-alone determination that it was getting as much in return from those products as it was paying, then I would infer that they were not paying for delay." (Bresnahan, Tr. 964-65. *See also* Tr. 660-61; 989-90.)

1. The market for cholesterol reducing drugs

173. In the mid-1990s, pharmaceutical companies were interested in the market for reducing cholesterol-reducing drugs. (Horovitz, Tr. 3623-60). The worldwide market for cholesterol lowering drugs had grown to become the seventh best selling drug class in the world. (SPX 235 at SP 16 00001). In 1997, the global market for cholesterol-reducing drugs was estimated at $6-7 billion. (Kerr, Tr. 6871-72; SPX 225 at 3; Levy, Tr. 1763-64; Kerr, Tr. 6876). Forecasts in 1997 for the cholesterol-reducing drug market indicated that by the year 2000, the world market could total $11 billion. (Kerr, Tr. 6875-76; SPX 225 at 3).

174. Documents available to Schering in June 1997 showed that the market for cholesterol lowering drugs outside the U.S., Canada, and Mexico ("worldwide Ex-NAFTA") was larger than the U.S. market for cholesterol lowering drugs. (SPX 5 at SP 16 00447; CX 1042 at SP 16 00112). Complaint Counsel's pharmaceutical licensing expert, Dr. Nelson Levy estimated that in 1997, U.S. sales represented "roughly" half of worldwide sales of cholesterol lowering drugs. (Levy, Tr. 1914-15).

175. Although relatively inexpensive hyperlipidemic agents, including niacin, had been available for decades, annoying side effects interfered with patient compliance. (SPX 608 at SP 16 00344-345). In the late 1980's, however, the market for cholesterol lowering drugs began to take off with the widespread use of the newly developed and more expensive HMG-CoA reductase inhibitors, known as the statins. (SPX 608 at SP 16 00345). In the mid-1990's, there were five classes of cholesterol lowering drugs, including the statins that dominated the market, the fibrates, the bile acid sequestrants, niacin and probucol. (SPX 235 at SP 16

00001).

176. Niacin, or nicotinic acid, is a B vitamin that was first discovered to have hypolipidemic qualities in 1955. (SPX 608 at SP 16 00390). Niacin decreases LDL (known as "the bad cholesterol"), raises HDL (known as "the good cholesterol"), decreases triglycerides (TGs), and decreases lipoprotenin(a) (Lp(a)). (SPX 608 at SP 16 00390-391; Horovitz, Tr. 3620; Audibert, Tr. 4099). Niacin has a unique profile in that it is the only drug shown to alter each of these lipids in the desired direction, and is one of the most effective compounds in increasing HDL. (Halvorsen, Tr. 3903; Horovitz, Tr. 3620; Levy, Tr. 1761; CX 1042 at SP 16 00072). Niacin's effectiveness in reducing total cholesterol, LDL cholesterol and triglycerides, as well as raising HDL cholesterol, has been demonstrated in numerous independent studies over the past 30 years. (USX 21 at 0077; USX 308 at 110462-64).

177. Niacin is also one of the only compounds known to decrease Lp(a). (SPX 608 at SP 16 00390-391; Halvorsen, Tr. 3903; SPX 235 at SP 16 00002). Prior to 1997, several studies had associated Lp(a) with atherosclerosis and CAD, and treatment of Lp(a) was considered by European and U.S. experts to be one of the major unmet needs. (SPX 608 at SP 16 000362; SPX 235 at SP 16 00003; SPX 924 at SP 002780; CX 1042 at SP 16 00068-69).

178. In addition to its known efficacy profile when used as monotherapy, niacin had also been shown prior to 1997 to be an effective agent when used in combination with other cholesterol lowering drugs, such as statins. (SPX 608 at SP 16 00382, 391; Freese, Tr. 4962-64, 4989; SPX 52 at FTC 110463-110464; USX 141 at Moreton 00082; CX 1042 at SP 16 00074). As a result, physicians also prescribe niacin in combination with statins. (Horovitz, Tr. Tr. 3670; Brown, Tr. 3146-47; Freese, Tr. 4989).

179. Despite niacin's known profile as an effective cholesterol reducing agent, the immediate release formulations of the drug were not widely used prior to 1997 due to a side effect known as flushing. (Horovitz, Tr. 3620-21, 3625-26; USX 141 at Moreton 00082; SPX 924 at SP 002781; Audibert, Tr. 4100). Flushing is a result of increased blood flow near the skin, which causes redness, tingling and itching in almost all patients who use niacin. (Horovitz, Tr. 3625-26; Halvorsen, Tr. 3906; Brown, Tr. 3150). Although flushing does not present a safety risk, it is a nuisance side effect that significantly reduces patient compliance. (Halvorsen, Tr. 3906; Horovitz, Tr. 3620-21, 3625-26; Audibert, Tr. 4105). This flushing side effect prevented widespread use of what was recognized in the pharmaceutical industry as an otherwise effective cholesterol lowering agent. (Horovitz, Tr. 3620-21; Audibert, Tr. 4099-100).

2. Upsher-Smith's Niacor-SR and other products relevant to the settlement agreement

a. Development and testing of Niacor-SR

180. Upsher-Smith began the Niacor-SR (Sustained Release) development program in 1991. (Kralovec, Tr. 5010). Niacor-SR is a sustained-release formulation of niacin, meaning that it releases niacin gradually over a period of time. (Halvorsen, Tr. 3901; Horovitz, Tr. 3624). The purpose of sustained-release niacin is to eliminate flushing. (Halvorsen, Tr, 3905-06).

181. In 1997, both Upsher-Smith and another pharmaceutical company, Kos Pharmaceuticals, were each involved in the advanced stages of development for obtaining FDA approval of their own sustained-release niacin products. (Troup, Tr. 5474-75; USX 21 at 76-77). Upsher-Smith's Niacor-SR product presented an opportunity for Upsher-Smith to expand its sales in an extremely large market of cholesterol-reducing drugs. (Halvorsen, Tr. 3902-03).

182. By spring 1997, Upsher-Smith believed that it had completed all of the clinical development work on Niacor-SR, and was preparing to file its NDA for Niacor-SR. (Troup, Tr. 5474-75). As early as 1995, Upsher-Smith had conducted and completed the patient phase of two Phase III pivotal studies -- the last phase of clinical development for gaining approval of a drug product by the FDA with over 900 patients. (Halvorsen, Tr. 3907). By July of 1996, the last of 300 patients had completed testing in two additional longer-term Phase III follow-on studies. (Halvorsen, Tr. 3911; CX 1019 at 175679). By June 1997, Upsher-Smith was in the process of developing and performing a short, 17-day, 38-healthy-volunteer pharmacokinetic study on Niacor-SR and was finalizing an individual and integrated study report so that Upsher-Smith could file its NDA. (Halvorsen, Tr. 3907).

183. As part of its Phase III testing for Niacor-SR, Upsher-Smith conducted two pivotal studies, as required by the FDA, the 920115 and 900221 studies. (Halvorsen, Tr. 3907-08). Upsher-Smith also conducted two longer term follow-on studies – the 920944 and 900837 studies. (Halvorsen, Tr. 3907-08). The last patient in the last of the four studies, the 920944 study, completed treatment in July 1996. (Halvorsen, Tr. 3909). The results of the Phase III studies available in June 1997 confirmed the safety and efficacy of Niacor-SR as a cholesterol-reducing drug. (Horovitz, Tr. 3641-42, 3658).

184. In addition to clinical safety and efficacy tests, the FDA requires a pharmacokinetic test ("PK test") for approval of an NDA submission. (Halvorsen, Tr. 3937). This test measures how a drug is absorbed and eliminated in the human body. (Halvorsen, Tr, 3936-37, 3939). The subject is dosed and then serial blood draws or urine samples are taken over time, for example hourly, with the purpose of plotting the concentration of the drug in the plasma or urine over time. (Halvorsen, Tr. 3936-37). In March 1997, the FDA ultimately agreed with Upsher-Smith that a multi-dose PK test was unnecessary for approval of the Niacor-SR NDA, and indicated that Upsher-Smith could seek approval based on a single-dose

urine PK test. (Halvorsen, Tr. 3938-41; CX 917 at 107426-27; USX 281).

185. As of June 1997, Niacor-SR was Upsher-Smith's primary research project and was a highly valued asset. (Troup, Tr. 5474-75). By the second quarter of 1997, Upsher-Smith had spent $13 million developing Niacor-SR – more than double all of Upsher-Smith's other projects combined. (Halvorsen, Tr. 3902; Dritsas, Tr. 4833).

186. In 1994, Upsher-Smith's market research showed a potential market for Niacor-SR of $100 to $400 million in 2000. (Kralovec, Tr. 5011-12). As of spring 1997, Upsher-Smith believed Niacor-SR had the potential to be a very successful product, with revenues of at least $50 to $100 million, and possibly as much as $250 million. (Freese, Tr. 4978, 4990; Kralovec, Tr. 5011; Dritsas, Tr. 4829, 4831-32).

b. Upsher-Smith's comparison of Niacor-SR to Kos' Niaspan and cross-license agreement with Kos

187. In the mid-1990s, Kos Pharmaceuticals ("Kos") developed Niaspan, a sustained-release niacin product, which released niacin in a controlled dosage form for cholesterol therapy. (Patel, Tr. 7497; Halvorsen, Tr. 3945; Horovitz, Tr. 3640). Based on information available to Upsher-Smith in 1997, Niacor-SR and Niaspan were virtually the same in terms of efficacy and safety. (Halvorsen, Tr. 3947-48, 3960; Troup, Tr. 5524-25; Kerr, Tr. 6292; Horovitz, Tr. 3626, 3660; Lauda, Tr. 4351; Levy, Tr. 1315). During 1996 and 1997, Upsher-Smith's Director of Clinical and Regulatory Affairs, Dr. Mark Halvorsen continually kept track of the information on Niaspan that was publicly available. (Halvorsen, Tr. 3945-47; USX 535).

188. Comparing Kos's statements regarding Niaspan's performance on all of the lipid parameters -- Lp(a), LDL, HDL, triglycerides – and Kos' statements regarding the safety profile of Niaspan to Niacor-SR's clinical and safety results, Dr. Halvorsen was confident in June 1997 that Niaspan and Niacor-SR were virtually identical. (Halvorsen, Tr. 3945-47; USX 535). Upsher-Smith executives believed Kos's Niaspan to be a direct and major competitor to Niacor-SR. (Kralovec, Tr. 5025; Halvorsen, Tr. 3946-47; Kerr, Tr. 6297).

189. By February 7, 1997, Kos and Upsher-Smith had negotiated and agreed on a cross-license under which **[redacted] [redacted] [redacted]** *(Kralovec, Tr. 5022-23; Halvorsen, Tr. 3948; CX 568 at 145288-9).* **[redacted]** *(Kralovec, Tr. 5022-23; Halvorsen, Tr. 3948; CX 568 at 145288-9).*

190. This agreement did not affect Upsher-Smith's ability to license its Niacor-SR

product for sales outside of the United States. (Kralovec, Tr. 5027-28; Troup, Tr. 5479-80). In fact, the agreement explicitly allowed Upsher-Smith to license its extra-U.S. rights under the patent to third parties. (Troup, Tr. 5655-56; Kerr, Tr. 6462; CX 568 at 145288).

191. The financial market expected Kos' Niaspan product to be very successful. (Kerr, Tr. 6292-93; USX 1606). On April 21, 1997, investment firm Dillon Reed forecast that Niaspan sales would reach $250 million by 2001 --roughly the same amount that Upsher-Smith had estimated for its sales of Niacor-SR. (Kralovec, Tr. 5025-26; USX 535 at USL 11515; SPX 225 at 2). In May 1997, analysts at Dillon Reed estimated product revenues for Niaspan of $17.3 million for 1998, growing to $242.8 million in 2001. (Kerr, Tr. 6827-28; 6832-33; USX 239). Other investment reports at that time forecast Niaspan sales of $20 million in 1997, growing to $250 million in 2000. (Kerr, Tr. 6876-77; SPX 225).

192. The investment community's valuation of Kos Pharmaceuticals in the first half of 1997 bolstered Upsher-Smith's expectations for Niacor-SR. (Kralovec, Tr. 5025-26; Troup, Tr. 5441-43; USX 535).

c. Upsher-Smith's efforts to license Niacor-SR

193. In order to reach the maximum level of sales for Niacor-SR, Upsher-Smith believed that it would have to spend $15-20 million to develop an effective sales force. (Kralovec, Tr. 5012-13).

194. Upsher-Smith saw great potential for Niacor-SR outside the U.S. market, but lacked a sales or marketing representative outside of North America. (USX 154-55; Freese, Tr. 4978; Kralovec, Tr. 5016; Troup, Tr. 5476; Halvorsen, Tr. 3970-71). By mid-1996, Upsher-Smith began actively looking for a Niacor-SR licensing partner for the European market. (Kralovec, Tr. 5028-29; Troup, Tr. 5476; Halvorsen, Tr. 3965). Upsher-Smith planned to market Niacor-SR in North America on its own and so did not discuss U.S. licensing of Niacor-SR with potential licensees. (Freese, Tr. 4977-78; Kralovec, Tr. 5016; Troup, Tr. 5431-33, 5440-41).

195. By the end of May 1997, Upsher-Smith's efforts to find a European partner for Niacor-SR had progressed to the point where Upsher-Smith representatives were holding face-to-face meetings with potential licensees to discuss licensing opportunities. (Freese, Tr. 4976-77; Halvorsen, Tr. 3965; Troup, Tr. 5475-76; Kralovec, Tr. 5020-21; USX 596-98; CX 880). These Upsher-Smith representatives reported to senior management that they were enthusiastic about finding a licensing partner. (Kralovec, Tr. 5020-21).

196. In the first week of June 1997, Upsher-Smith executives were in Europe meeting with four potential licensing partners for Niacor-SR: Servier, Pierre Fabre, Esteve, and Lacer.

(Halvorsen, Tr. 3871, 3967, 4026; Kralovec, Tr. 5028-29; Troup, Tr. 5476; Horovitz 3767; USX 596-98; CX 880). Upsher-Smith executives believed that potential European licensing partners were showing "strong interest" in Niacor-SR and that a substantial up-front payment was warranted. (Kralovec, Tr. 5017-18; 5020-21). As of June 1997, none of the four potential licensing partners for Niacor-SR had turned down Niacor-SR. (USX 596; USX 1523 at 58-59 (O'Neill Dep.); Kerr, Tr. 6321, 6818, 6815-16).

d. Other Upsher-Smith products relevant to the June 17, 1997 Agreement

197. In 1997, in addition to its niacin and potassium supplement families of products, Upsher-Smith had several other drugs on the market, or near market stage, including Pentoxifylline, Prevalite and Pacerone. (Dritsas, Tr. 4618-19, 4832-33; Troup, Tr. 5420-21, 5445). Although Upsher-Smith had plans for marketing these products in the United States, it lacked the presence and resources to market the drugs outside of North America. (Dritsas, Tr. 4636, 4833; Troup, Tr. 5431-32).

198. Prevalite, a bile acid sequestrant called cholestyramine, was another cholesterol fighting drug sold by Upsher-Smith. (Dritsas, Tr. 4618-19). Prevalite was a branded generic similar to Bristol-Myers Squibb's branded product Questran/Questran Light. (Dritsas, Tr. 4813-18; USX 591; USX 660). In 1996, Upsher-Smith had sales for Prevalite of $7 million, with 1997 projected sales at $8.8 million. (Dritsas, Tr. 4804-05, 4812-13; USX 591; USX 440; USX 627 at 15277).

199. Pentoxil, Upsher-Smith's trade name for Pentoxifylline, was another generic drug that was under development at Upsher-Smith in 1997. (Halvorsen, Tr. 3981). Pentoxifylline is used to treat peripheral intermittent claudication. Pentoxifylline allows red blood cells to be more flexible so that they may pass into blood vessels that have decreased in size and deliver oxygen. (Halvorsen, Tr. 3981). By June of 1997, Upsher-Smith had completed and submitted to the FDA all the clinical studies required for approval of its ANDA for Pentoxifylline as a generic form of the Trental brand of Pentoxifylline. (Halvorsen, Tr. 3981082). In 1997 alone, Trental sales were $153 million. (Rosenthal, Tr. 1740). Trental's Pentoxifylline patent was set to expire in July 1997, and in June 1997, Upsher-Smith expected to be among the first generics approved to enter the market after the expiration of the patent. (Halvorsen, Tr. 3983). At that time, Upsher-Smith's internal market projections estimated that Upsher-Smith's Pentoxifylline would realize $4.4 million sales in 1998. (USX 668 at 20666).

200. Pacerone, Upsher-Smith's trade name for an amiodarone product, was under development at Upsher-Smith in 1997. Pacerone is used to treat ventricular tachycardia, or rhythm management for the heart. (Dritsas, Tr. 4637-38, 4833). In June of 1997, Upsher-Smith believed that Pacerone was an important product and estimated first year sales of

Pacerone would be $10 million. (Troup, Tr. 5446).

3. Schering's interest in and valuation of Niacor-SR

a. Schering's interest in Kos' sustained release niacin product, Niaspan

i. Schering's negotiations with Kos

201. Kos filed an NDA for Niaspan with the FDA in May 1996. (SPX 18). Schering was interested in Niaspan in early 1997. Schering believed that a sustained release niacin product that solved flushing caused by immediate release niacins and did not elevate liver enzymes to the degree that some over-the-counter sustained release niacins had done could be commercially successful. (CX 1494 at 85; CX 1495 at 73 (Driscoll Dep.); SPX 1265 at 73 (Driscoll Dep.); Audibert, Tr. 4116-17).

202. Schering was interested in Niaspan not only as a late stage product that could generate revenues in the near term, but also because it presented an opportunity for Schering to enter the cholesterol lowering market in advance of its launch of ezetimibe, a drug that Schering was developing for the cholesterol market. (Audibert, Tr. 4108-11; Russo, Tr. 3437-38; SPX 21 at 002771).

203. In 1997, Mr. Raymond Russo was Key's marketing director for cardiovascular products in the United States. (Audibert, Tr. 4110; Russo, Tr. 3433-34). Russo participated in the negotiations with Kos regarding its Niaspan product. (Russo, Tr. 3449). James Audibert was Ray Russo's counterpart responsible for territories outside the United States and was for a time involved in the negotiations with Kos regarding Niaspan. (SPX 1224 at 77 (Audibert Dep.); CX 1484 at 132 (Audibert Dep.); Audibert, Tr. 2450, 2452, 4109; Russo, Tr. 3439).

204. By the time of Schering's discussions with Kos, the FDA had completed its medical review of Niaspan, and was discussing labeling with Kos. (Russo, Tr. 3445; CX 543; Audibert, 4102, 4105). The fact that the medical review had been completed meant that the FDA had judged the product to be safe and efficacious, and that it was just a matter of finalizing the actual labeling on the product before approval by the FDA. (Audibert, Tr. 4105-06).

205. During the first half of 1997, Kos was seeking a co-promotion arrangement for Niaspan, meaning that both parties to the deal would be involved in the sales and marketing of the Niaspan product. (Russo, Tr. 3449). Under a co-promotion arrangement, the parties would split efforts in the field force and divide the cost of the marketing. (Russo, Tr. 3449). A co-promotion arrangement differs from a license, in which the company licensing the product would retain all control and all sales proceeds after royalties are paid. (Russo, Tr. 3449-50).

Also, in a license arrangement, the licensee alone would be responsible for all the expenditures, investment and strategic direction associated with the product. (Russo, Tr. 3449).

206. Martin Driscoll, Schering's Vice President of Sales and Marketing for Schering's Key division, thought Kos' product labeling looked interesting. (CX 1495 at 96 (Driscoll Dep.); Driscoll, Tr. 1420, 2702). Schering asked Kos for more information, including Niaspan's clinical results supporting the labeling. (CX 1495 at 96 (Driscoll Dep.)). Kos was not forthcoming with additional information. (CX 1495 at 97-98 (Driscoll Dep.); SPX 1265 at 97-99 (Driscoll Dep)).

207. Kos wanted to maintain control over Niaspan's marketing and strategic positioning, while its partner gave Niaspan primary promotional positioning. (SPX 18). Kos wanted to have Niaspan promoted by Schering's sales representatives in the "primary position," meaning that it would be the first product a sales representative would discuss in a doctor's office. (Audibert, Tr. 4106). Schering explained that it could not guarantee that Niaspan would always be in the primary position because Schering had its own products, such as Claritin, that would be detailed first during particular seasons. (Audibert, Tr. 4107). Kos also wanted guarantees with respect to the level of call activity, asking for specific numbers of specific types of calls through the launch period. (Russo, Tr. 3451). Schering did not feel that it could accommodate the level of call activity that Kos wanted. (Russo, Tr. 3451). Schering would be more comfortable with secondary detailing. (Patel, Tr. 7555). Kos wanted "absolute maximum commitment from Schering in the form of first line details." (Patel, Tr. 7555). And, Kos also was demanding strategic control over the marketing and promotion of Niaspan. (Driscoll, Tr. 1423; Patel, Tr. 7557). Schering and Kos also discussed the issue of who would "book" sales. (Patel, Tr. 7556). Booking sales refers to which company records the sales that have been made. (Patel, Tr. 7556). Kos wanted to record, or "book," Niaspan's sales to show significant sales as a company. (Patel, Tr. 7556).

208. Audibert viewed Kos' demands as "unrealistic in terms of what their expectations were from us" regarding co-promotion activity. (Audibert, Tr. 2448). Audibert viewed Kos' demands for support from Schering's sales force as irrational, and very difficult for Schering to agree to. (Audibert, Tr. 4106).

ii. Schering's evaluation, market research, and forecasts for Niaspan

209. On February 11, 1997, the information about Niaspan that Schering had been able to obtain from Kos was sent to Schering's cardiovascular licensing group, which includes Audibert. (Audibert, Tr. 4102; SPX 924). Audibert was asked to evaluate a Niaspan co-promotion deal, in which Schering would be promoting the product along with Kos, from the perspective of Global Marketing. (Audibert, Tr. 4100-01).

210. In his discussions with Kos and evaluation of Kos' materials, Audibert learned that it was possible to develop a sustained-release niacin product that was both safe and effective. (CX 1484 at 132 (Audibert Dep.); Audibert, Tr. 2452-53; SPX 18; SPX 21). For Audibert, Niaspan proved that the concept of a sustained release niacin that reduced flushing and solved liver toxicity issues could work. (CX 1484 at 132 (Audibert Dep.); Audibert, Tr. 2454, Tr. 4115-16). Kos told Schering that Niaspan had a very low incidence of elevated liver enzymes. (Audibert, Tr. 4105). Kos referenced a study by Dr. McKinney using a particular sustained release niacin on the market at that time. (SPX 18; Audibert, Tr. 4104).

211. Schering performed market research in the United States to determine doctors' interest in sustained release niacin. (Audibert, Tr. 2393-94; Russo, Tr. 3447-48, 3501-02; CX 576). The market research included telephone interviews with ten prominent lipidologists who had attended Schering's recent meetings in New York concerning ezetimibe, another drug of Schering. (Audibert, Tr. 2393-94; Russo, Tr. 3447-48, 3501-02; CX 576). Schering found that doctors would welcome a sustained release niacin product that reduced flushing and avoided liver toxicity issues, but would want more evidence that the product met those needs. (Russo, Tr. 3532; CX 576).

212. Schering was hopeful that Niaspan's delivery system would overcome the experts' reservations regarding sustained release niacin and flushing, liver toxicity and diminished efficacy. (Russo, Tr. 3503, 3509). Accordingly, Schering wanted to see the rest of the NDA filing for Niaspan for additional data that would support Kos' representations. (Russo, Tr. 3511). Schering also wanted to see the final labeling submitted to the FDA for Niaspan because Schering believed that if it showed no contraindications and a better side effect profile than other niacin products, Niaspan would be a very good product for Schering. (Russo, Tr. 3511-12).

213. Following the April 9, 1997 meeting with Kos, Schering worked to put together broad deal terms that it ultimately would present to Kos. (Russo, Tr. 3455). Part of that process involved an assessment of the product's value to Schering and the preparation of sales forecasts. (Russo, Tr. 3455). Russo forecasted as his "base case scenario II" what he thought was the most realistic projection of Niaspan sales in the United States. (Russo, Tr. 3459, 3461-63, 3472); CX 550 at SP 002743; CX 551, at SP 002731). Under this scenario, Russo projected that Schering could achieve $134 million in sales in 2002, rising thereafter to $193 million. (Russo, Tr. 3461, 3529; CX 550 at SP 002743).

iii. Schering's offer to Kos for Niaspan

214. On May 15, 1997, Schering provided a written proposal to Kos for a co-promotion of Niaspan. (Russo, Tr. 3463-64; CX 554; SPX 619). Schering is the only company that gave Kos a written proposal before Niaspan was launched. (Patel, Tr. 7543).

215. [**redacted**] [**redacted**] *(Russo, Tr. 3589; CX 554).* [**redacted**] [**redacted**] [**redacted**] [**redacted**] *(Russo, Tr. 3590; CX 554; Patel, Tr. 7666).* [**redacted**] [**redacted**] [**redacted**] *(Russo, Tr. 3590).* [**redacted**] *(Russo, Tr. 3589, 3590; CX 554; Patel, Tr. 7665; SPX 6190).* [**redacted** **redacted**] *(Russo, Tr. 3589-90; CX 554).* [**redacted**] *(Russo, Tr. 3589, 3590;* CX 554; *Patel, Tr. 7665; SPX 619).* [**redacted** **redacted** **redacted**] *(Russo, Tr. 3589; CX 554; Patel, Tr. 7665; SPX 619).* [**redacted** **redacted** **redacted**] *Patel, Tr. 7666).*

216. Schering's proposal did not contain up-front payments to Kos or equity investments. *(Patel, Tr. 7605; CX 554).*

217. On May 21, 1997, one week after submitting its proposal, Schering had a conference call with Kos to discuss the written proposal. (SPX 230; SPX 35; *Patel, Tr. 7667).* Kos did not react favorably to Schering's proposal. (Russo, Tr. 3465). Mr. Dan Bell, Chief Operating Officer of Kos, told Schering that its offer was practically "insulting," and that he was "offended" by it. (SPX 230; *[Patel, Tr. 7669].*

218. [**redacted**] *(Patel, Tr. 7571].* [**redacted** **redacted**] *(Patel, Tr. 7531-32, 7608; CX 556; CX 769).* [**redacted** **redacted**] *(Russo, Tr. 3465-66).* [**redacted** **redacted**] *(Russo, Tr. 3465).* [**redacted** **redacted**] *(Russo, Tr. 3450).* [**redacted** **redacted**] *(Bell, Tr. 7567; Patel, Tr. 7608-09; CX 556).* [**redacted** **redacted** **redacted**] *(Patel, Tr. 7567, 7607-08; CX 556)).*

219. After receiving Kos' reaction to Schering's first proposal, Schering did not submit another proposal to Kos. (Russo, Tr. 3466, 3488; CX 558). Schering felt that Kos would be a difficult partner to deal with. (Audibert, Tr. 2450).

iv. Kos' discussions with other potential partners and subsequent sales of Niaspan

220. Kos' Niaspan entered the market in August 1997. (7 Tr. 1404 (Driscoll I.H.)). At the time of Niaspan's launch, Kos was still looking for a co-promotion partner for Niaspan in the U.S. (Patel, Tr. 7577).

221. In the fall of 1997, Kos had conversations with Searle Pharmaceuticals. (Patel, Tr. 7576; Egan, Tr. 7895-96; 7898). In early November, Searle met with Kos and the parties discussed Kos' demands for a U.S. co-promotion agreement. (CX 524). Kos demanded from Searle a large number of details for Niaspan. (Egan, Tr. 7986-88). Searle found Kos' demands unreasonable. (Egan, Tr. 7982). Kos wanted an up-front payment from Searle in the $10-20 million range. (Egan, Tr. 7982). Kos also wanted a "ridiculous" and unreasonable percentage of the profits from any co-promote arrangement. (Egan, Tr. 7984-85). Searle declined the Kos opportunity. (Egan, Tr. 7980).

222. During the summer and fall of 1997, Kos was also pursuing discussions with SmithKline Beecham concerning a co-promotion arrangement for Niaspan. In August 1997, Kos discussed with SmithKline the broad terms of a potential co-promotion partnership for Niaspan. *(Patel, Tr. 7678*; CX 508). As with Schering, Kos stated that it needed guaranteed detailing for Niaspan, that Kos wanted to book sales, and that Kos wanted the opportunity to co-promote a SmithKline product. *(Patel, Tr. 7678-79;* CX 508). SmithKline and Kos also discussed SmithKline's interest in non-U.S. rights to Niaspan. (CX 508). In November 1997, Kos announced disappointing sales results and its stock price dropped. *(Patel, Tr. 7685, Tr. 7688)*; Levy, Tr. 2076-77). Subsequently, SmithKline and Kos did not to enter into an arrangement regarding Niaspan. (Patel, Tr. 7540).

223. Kos had other discussions with potential partners about a European license for Niaspan after November 1997. (Patel, Tr. 7589). **[redacted redacted redacted]** *(Patel, Tr. 7615,* 7587). Kos did not find a European partner for its Niaspan product. (Patel, Tr. 7540).

224. Overall, Kos' Niaspan has had a spotty history in the marketplace. (Kerr, Tr. 6329). Initially, Niaspan did not achieve nearly the expected sales levels predicted and Kos' stock price plummeted. (Kerr, Tr. 6329, 6331; USX 1607).

225. In 1998, Niaspan sales were poor. Sales for the first 6 months of 1998 totaled $3.8 million and in August 1998, after being in the market one year, Niaspan's share of new prescriptions for the month was only 1.1%. (Audibert, Tr. 4159; SPX 15). Total sales for 1998 were only $15 million. (Driscoll, Tr. 1405). Two years after introduction, in 1999, Niaspan's sales were only $37 million. (Kerr, Tr. 6331; USX 1613).

226. After four years, Niaspan is now moderately successful, with last year's sales equal to about $100 million. (Kerr, Tr. 6331).

b. Schering's Evaluation of Upsher-Smith's sustained release Niacin product, Niacor-SR

227. In June 1997, Kapur telephoned Lauda and told him that Schering was considering a licensing opportunity for Upsher-Smith's sustained-release niacin product, that the opportunity would cost Schering approximately $60 million, and asked if Global Marketing would perform an assessment of the product. (Lauda, Tr. 4342-43). Lauda contacted Audibert and instructed Audibert to conduct a commercial assessment of Niacor-SR for worldwide territories, excluding the United States, Canada, and Mexico ("Worldwide EX-NAFTA"). (Lauda, Tr. 4344).

228. Audibert began his review when he received the data package regarding Niacor-SR on June 12, 1997. (Audibert, Tr. 4113; Lauda, Tr. 4344). The package included results from the two phase III pivotal clinical trials conducted by Upsher-Smith to obtain registration of Niacor-SR, referred to by their protocol numbers 920115 and 900221. (Audibert, Tr. 4113-15, 4171; CX 1042; Halvorsen, Tr. 3907-08). The package also included information regarding two draft protocols for phase III-B studies Upsher-Smith was planning to conduct once the NDA was filed. (Audibert, 4113-15; SPX 71-72; Halvorsen, Tr. 4025). Phase III-B studies are studies conducted not as part of the initial registration of a product, but to support subsequent labeling revisions. (Audibert, Tr. 4114). One protocol would evaluate the use of Niacor-SR in combination with a statin, and the other would evaluate Niacor-SR when administered as a single evening dose. (Audibert, Tr. 4115; SPX 71-72).

i. Mr. Audibert's qualifications in June 1997

A. Expertise in Sustained Release Products and Cholesterol Lowering Pharmaceutical products

229. James Audibert, who is currently employed within the Schering Plough Research Institute, was serving in June of 1997 as the Senior Director of Global Marketing for Cardiovascular Products. (Audibert, Tr. 4085, 4092). Audibert received his Bachelor of

Science in Pharmacy from Northeastern University College of Pharmacy in 1974, and received his Master of Science in Pharmacology from Northeastern University College of Pharmacy in 1982. (Audibert, Tr. 4081). From 1976 to 1987, Mr. Audibert worked for two companies, both of which specialized in the use of sustained release technology to transform old compounds into new products. (Audibert, Tr. 4082-84).

230. In mid-1986, Schering acquired Key and, in March 1987, Audibert moved to New Jersey to work for Schering's marketing department. In April 1995, Audibert went to work in Schering's Global Marketing Department. (Audibert, Tr. 4085). In this position, Audibert was in charge of cardiovascular products, including cholesterol lowering products. (Audibert, Tr. 4092-93).

231. Audibert's responsibilities included working on a cholesterol-lowering agent Schering had in development called ezetimibe. (Audibert, Tr. 4093). By early-1997, Mr. Audibert began working with the research organization to identify the patient populations in which, and products against which, ezetimibe would be tested in clinical studies. (Audibert, Tr. 4094). As part of this process, Audibert was also conducting a detailed evaluation of the market for cholesterol lowering drugs. (Audibert, Tr. 4094-95).

232. Audibert's detailed evaluation of the cholesterol lowering market included: (1) a review of secondary information and published literature regarding the market and products within the market; (2) conducting primary market research around the world, including interviewing physicians on what they perceived to be unmet needs and future trends in cholesterol management; (3) convening advisory panels to get input from experts in the cholesterol lowering area; (4) attending major cardiology meetings around the world dealing with current and future trends in cholesterol management, and the development of future cholesterol lowering products; and (5) traveling to subsidiaries around the world to meet with national experts and local opinion leaders in cholesterol management. (Audibert, Tr. 4095-96).

233. As part of this process of evaluating the cholesterol lowering market, Audibert studied the profiles of the products that were already available for the treatment of cholesterol, as well as the anticipated profiles of future products, and evaluated what unmet needs existed within the market. (Audibert, Tr. 4097-98). This included studying the major cholesterol lowering products on the market in 1997, including the statins, the fibrates, the resins, and niacin. (Audibert, Tr. 4098). Audibert also conducted a detailed evaluation of the size of the cholesterol lowering market, which included: (1) examining the current size of the worldwide market by product and geographic territory; (2) predicting the future size of the cholesterol lowering market through conversations with opinions leaders, examination of cholesterol management treatment guidelines, estimation of the impact of future products on the market, and consideration of analyst reports published by the investment community. (Audibert, Tr. 4096-97).

234. [**redacted** **redacted** **redacted**] *[(SPX 625 at SP 002914; SPX 25 at SP 002899)]*. [**redacted**] *[(SPX 625 at SP 002914; SPX 25 at SP 002899)]*.

235. **[redacted** **redacted** **redacted**] *(Audibert, Tr. 4301-02; SPX 221 at SP 002895-2898).*[**redacted** **redacted**] *(Audibert, Tr. 4302-04; SPX 231 at SP 002941-2942).* [**redacted** **redacted** **redacted**] *(Audibert, Tr. 4303; SPX 231 at SP 002944).* **[redacted** **redacted** **redacted**] *(Audibert, Tr. 4304; SPX 231 at SP 002944)*].

236. [**redacted** **redacted** **redacted** **redacted**] *(Audibert, Tr. 4304).*

237. Audibert also learned about niacin through his work on ezetimibe. (Audibert, Tr. 4098-99). Audibert was fully aware of the available scientific knowledge regarding niacin, including: the fact that niacin had been known for many years to have a positive effect on various lipid parameters that are important in cholesterol management, including lowering LDL, raising HDL, lowering triglycerides, and lowering Lp(a); the fact that niacin has been shown to be effective in long term morbidity studies; and the fact that niacin was incorporated into the NCEP treatment guidelines which recommend niacin as one of the agents for use in managing cholesterol. (Audibert, Tr. 4098-99). However, Audibert was also acutely aware of the fact that immediate release forms of niacin were limited by the side effect of flushing, and that sustained release niacin dietary supplements had been associated with substantial elevations in liver enzyme levels. (Audibert, Tr. 4100).

B. Involvement in the evaluation of Kos' Sustained Release Niacin Product in Spring 1997

238. On February 11, 1997, the information about Niaspan that Schering had

obtained from Kos was sent to Schering's cardiovascular licensing group. (Audibert, Tr. 4102; SPX 924).

239. On March 13, 1997, Audibert and Russo initiated a conference call with Kos to discuss Niaspan. (Audibert, Tr. 4103-05; SPX 18 at SP 002776). During this conversation, Audibert initiated a discussion of Niaspan's side effect profile, including in particular, the success of its sustained release formulation in: overcoming the flushing side effect of immediate release niacin, without causing the significant elevations in liver enzymes reported with over-the-counter sustained release niacin formulations. (Audibert, Tr. 4103-05; SPX 18 at SP 002776; Russo, Tr. 3443-44).

240. Kos advised Audibert that the rate of discontinuation due to flushing had been reduced to about 5% of patients. (Audibert, Tr. 4103-05; SPX 18 at SP 002776). When Audibert raised the issue of liver enzyme elevations, Kos advised Audibert that, in contrast to the McKinney study in which 50% of patients experienced liver enzyme elevations above five times the upper limit of normal, only about 1% of patients in clinical trials with Niaspan experienced elevations of three times the upper limit of normal. (Audibert, Tr. 4103-05; SPX 18 at SP 002776).

241. Kos advised Audibert that it had filed an application for regulatory approval with the United States FDA, and that the FDA had completed its medical review of Niaspan and was discussing labeling with Kos. (Audibert, Tr. 4105; SPX 18 at SP 002776). Because the FDA does not proceed to a discussion of labeling until it has determined a product is safe and effective, the fact that the FDA had completed its medical review and was discussing labeling for Niaspan indicated to Audibert that the FDA had concluded that Niaspan's sustained release formulation was indeed safe and effective. (Audibert, Tr. 4101-02, 4105-06).

242. In late-March or early-April 1997, Audibert stopped participating as the international contact in the negotiations with Kos. (Audibert, Tr. 4111-12). Kos had indicated that it was focused on co-promotion of the product in the United States and that promoting Niaspan outside the United States was not a priority. (Audibert, Tr. 4106). Audibert terminated his involvement, in part, because he believed Kos' demands were "totally irrational" and he felt that it was unlikely that the parties would reach an agreement. (Audibert, Tr. 4111-12).

ii. Mr. Audibert's evaluation of the Niacor-SR opportunity in June 1997

A. Evaluation of market opportunity and product profile

243. Audibert conducted an evaluation of Niacor-SR to determine whether its product profile satisfied the market opportunity. (Audibert, Tr. 4112). The 52-page data package provided by Upsher-Smith to Schering contained detailed summaries of the results of Niacor-SR's phase III pivotal trials, including all the information that Audibert required to conduct his evaluation of Niacor-SR's clinical profile. (Audibert, Tr. 4113-14).

244. The clinical data from Upsher-Smith's pivotal trials confirmed to Audibert that Niacor-SR was effective, and that it exceeded the regulatory hurdle of an average 15% reduction in LDL cholesterol. (Audibert, Tr. 4123; CX 1042; CX 1484 at 119-21 (Audibert Dep.)).

245. The clinical data from Upsher-Smith's pivotal trials illustrated to Audibert that Niacor-SR had significantly reduced the incidence of flushing as compared to immediate release niacin. (Audibert, Tr. 4117-19; CX 1042 at SP 16 00088-00089). As compared to immediate release niacin, Niacor-SR reduced the number of flushing occurrences more than four-fold. (Audibert, Tr. 4118-19; CX 1042 at SP 16 00089; Horovitz, Tr. 3645-46).

246. The clinical data from Upsher-Smith's pivotal trials illustrated to Audibert that Niacor-SR caused a very low incidence of liver enzyme elevations. (Audibert, Tr. 4119-20). Audibert concluded that the incidence of liver enzyme elevations in the Niacor-SR pivotal trials was consistent with that seen with cholesterol lowering drugs generally, and was substantially lower than the 66% incidence associated with prior sustained release niacin products. (Audibert, Tr. 4104-05, 4121, 4124; Horovitz, Tr. 3650-51). In his written commercial assessment, Audibert reported that the fact that some patients experienced liver enzyme elevations with Niacor-SR was consistent with the known side effect profile of the statins. (SPX 2 at SP 16 00044). Audibert's evaluation of the results of the Niacor-SR pivotal trials also revealed that the liver enzyme elevations experienced in that small percentage of patients returned to normal when the drug was discontinued. (Audibert, Tr. 4121-22; CX 1042 at SP 16 00093; Horovitz, Tr. 3649-50).

247. Based on his evaluation of the results of the pivotal trials, Audibert concluded that Niacor-SR was a safe and effective drug that satisfied the unmet need in the cholesterol lowering market that he identified in June 1997. (11 Tr. 4123-24 (Audibert Dep.)). Audibert had seen Kos' Niaspan as the "proof of concept," and he concluded based on the results of Upsher-Smith's clinical trials that Upsher-Smith had also used sustained release technology to develop a safe and effective niacin product. (11 Tr. 2453-54 (Audibert Dep.); [*Lauda, Tr. 4512-13).*].

B. Mr. Audibert's Commercial Assessment of the Niacor-SR Opportunity

248. Having determined that Niacor-SR's product profile satisfied an unmet need in the marketplace, Audibert constructed a forecast of sales based on that product profile in that market. (Audibert, Tr. 4124). The process for constructing this sales forecast included: (1) an evaluation of the current and future size of the cholesterol lowering market; (2) an evaluation of how Niacor-SR would be positioned within that market; (3) an evaluation of the price at which the product would be sold; and (4) a determination of the market share that the product would obtain given that price and product position in a market that size. (Audibert, Tr. 4124-27).

249. First, Audibert evaluated the current size of the market and made a projection of the future growth of that market for a period of ten years. (Audibert, Tr. 4124-25). Mr. Audibert used IMS data representing the current size of the cholesterol lowering market worldwide, excluding the U.S., Canada and Mexico ("worldwide Ex-NAFTA"), the territories in which the license to Niacor-SR was available. (SPX 5). The IMS data indicated that the size of the cholesterol lowering market in those territories in 1996 was $4 billion. (SPX 5). Mr. Audibert's handwritten notations on the IMS data reflect his calculation of prior growth in this market at a rate of 10%, 22% and 6% in the previous three years. (SPX 5). Audibert estimated an average annual growth 15% in 1997, 1998 and 1999, and a lower growth rate of 10% thereafter. (SPX 2 at SP 16 000046). Second, Audibert evaluated how Niacor-SR would be positioned within the cholesterol lowering market, first, as monotherapy and second, in combination with statins. (Audibert, Tr. 4125-26; [*SPX 231 at SP 002944)*]. Third, Audibert conducted an evaluation of the price at which Niacor-SR could be marketed. (Audibert, Tr. 4125-27). In making this determination, Audibert knew that Niacor-SR's position against the statins required that he be realistic in terms of pricing for Niacor-SR. (Audibert, Tr. 4126). As a result, he concluded that Niacor-SR would best be positioned as an inexpensive alternative to the statins and he selected a price of just half of atorvastatin, the generic name for Lipitor. (Audibert, Tr. 4126). Finally, Audibert projected what share of the market Niacor-SR could obtain at that price and positioning. (Audibert, Tr. 4126-27). Audibert concluded that Niacor-SR would compete as a low-priced, moderately effective product for the treatment of high cholesterol. (Audibert, Tr. 4126-27). From his experience in talking with cardiologists and health payers internationally, Audibert had learned that many countries with government funded health systems recognized the need to treat high cholesterol, but simply could not afford to treat significant portions of the population with the expensive statins. (Audibert, Tr. 4126-27).

250. Having identified the opportunity to position Niacor-SR as an inexpensive alternative to statins, Audibert still believed that Niacor-SR would only obtain an initial market share of .75%, rising for just two years to 1.5%, and then decreasing thereafter to a 1% share. (Audibert, Tr. 4127-29; SPX 2 at SP 16 00047).

251. Having estimated the overall size of the market and a market share for this product over a ten year period, Audibert used multiplication to determine projected sales. (Audibert, Tr. 4127). Audibert's formal written assessment for Niacor-SR, dated June 17,

1997, includes tables illustrating Audibert's annual projections of market size and market share, from which he calculated annual dollar sales. (Audibert, Tr. 4127-29); SPX 2 at SP 16 00046-47). The sales projected for each of these years, in millions, were:

Sales	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Millions	45	70	114	126	116	127	140	125	136	149

(SPX 2 at SP 16 00046-47).

252. On the basis of his sales projections, Audibert then prepared a written profit and loss analysis. (Audibert, Tr. 4138-39; SPX 6). The annual profit and loss calculations were created by deducting from his sales forecasts, an estimated 10% cost of goods, as well as the cost of selling and promoting Niacor-SR, which Audibert estimated to peak at $22.8 million in the third year of sales. (SPX 6). Because Audibert did not know what royalty rate would be negotiated, his calculations represented the annual net profit before deducting the royalties to be paid to Upsher-Smith. (Audibert, Tr. 4139).

253. Following his evaluation of the Niacor-SR opportunity, Audibert prepared a written commercial assessment, as well as a written profit and loss projection on the basis of the sales he had projected in his commercial assessment. (SPX 2; SPX 6). Audibert provided a copy of each of these documents to Lauda. (Audibert, Tr. 4138-40; Lauda, Tr. 4345-46).

254. In his assessment, Audibert provided background information regarding the cholesterol lowering market, including the competitor products in that market. (SPX 2 at SP 16 00040-45). Audibert explained the current state of knowledge regarding niacin as an effective cholesterol lowering agent, as well as the difficulties that had hampered prior immediate release niacins (flushing) and sustained release niacins (association with hepatotoxicity). (SPX 2 at SP 16 00040-45). Audibert detailed the current size of the cholesterol lowering market, recent growth experienced in that market, and provided an assessment of why the growth of that market was expected to continue. (SPX 2 at SP 16 00040-45). Audibert identified his conclusion that a product opportunity existed for Niacor-SR, and on the basis of his conclusions, he provided a summary of his sales projections for Niacor-SR. (SPX 2 at SP 16 00040-45). Audibert attached to his assessment two tables which contained his detailed financial projections of both the future growth of the cholesterol lowering market and his sales projections for Niacor-SR in that market. (SPX 2 at SP 16 00046-47). Audibert concluded that Niacor-SR offers a $100 + million sales opportunity for Schering. (SPX 2, at SP 1600045).

255. Niacor-SR also offered strategic value to Schering in June 1997. Schering was developing ezetemibe for the cholesterol market, the projected launch of which was still several years away. (Audibert, Tr. 4094, 4108-09). Because Schering was planning to launch the

largest product in company history in a market in which it had no presence, it was important for Schering to first establish a presence in that market in order to build a knowledgeable sales force capable of maximizing the launch of ezetimibe. (Audibert, Tr. 4108-11; Horovitz, Tr. 3622-23, 3659-66; Lauda, Tr. 4348-49; Russo, Tr. 3437-38).

iii. Audibert's sales projections for Niacor-SR were consistent with projections for Niaspan

256. In March 1997, Kos proceeded with an Initial Public Offering ("IPO") on the basis of projected sales of its primary product, Niaspan. (Patel, Tr. 7544; Egan, Tr. 7982; Kerr, Tr. 6982). Around the time of the IPO in the spring of 1997, several market analysts published projected U.S. sales for Niaspan reaching between $220 million and $250 million in the third year of sales. (Levy, Tr. 2072; SPX 226; Kerr, Tr. 6872-73; USX 535 at USL 11514; [*Patel, Tr. 7674-75).*]

257. In April 1997, Russo, Schering's senior director of marketing in charge of the negotiations with Kos prepared a range of forecasts of potential U.S. Niaspan sales. Russo forecasted as his "base case scenario II" what he thought was the most realistic projection of Niaspan sales in the United States. (Russo, Tr. 3459, 3461-63, 3472; CX 550 at SP 002743; CX 551 at SP 002731). Under this scenario, Russo projected that Schering could achieve $134 million in sales in 2002, rising thereafter to $193 million. (Russo, Tr. 3461, 3529; CX 550 at SP 002743).

iv. Schering determined that the value of Niacor-SR to Schering in June 1997 exceeded $60 million

258. Following Audibert's evaluation, Lauda and Audibert met to discuss the written assessment and profit and loss statement, including the projected sales that Schering could expect from Niacor-SR, its projected market share, and assumptions underlying those projections. (Lauda, Tr. 4345-46; SPX 2; SPX 6). Lauda concluded that Schering could promote Niacor-SR and "easily garner" the market share that Audibert projected. (Lauda, Tr. 4347-49).

259. Using the financial projections contained in Audibert's commercial assessment and the terms of the license agreement, including the royalty payments to Upsher-Smith called for under the agreement, Schering performed its standard calculation of the economic value for this transaction which confirmed that Niacor-SR presented an economic value to Schering of between $225 to $265 million, and an internal rate of return of 43%. (SPX 26 at SP 16 00275). None of Complaint Counsel's witnesses challenged the validity of Schering's calculation that Audibert's financial projections for Niacor-SR represented an economic value to Schering of between $225 to $265 million, and a return on its investment of 43%. (SPX 26 at

SP 16 00275).

260. Schering's expert on pharmaceuticals, Dr. Zola Horovitz, performed his own "conservative" calculations and concluded that Schering could have paid as much as $100 million and still obtained a 35% internal rate of return and an economic value of $205 million. (Horovitz, Tr. 3617-18). Upon review of the information he relied upon, Dr. Horovitz testified that, based on Schering's projections at knowledge in June 1997, the deal for Niacor-SR would be a good deal for Schering and would stand on its own two feet. (Horovitz, Tr. 3787).

261. Having concluded that the Niacor-SR opportunity presented a value to Schering in excess of $60 million, Lauda advised Kapur of his conclusion and later provided him a copy of Audibert's written assessment and profit and loss projections. (Lauda, Tr. 4349; SPX 2; SPX 6).

4. Schering's And Upsher-Smith's post-deal conduct

a. Schering's internal preparations and communications with Upsher-Smith regarding availability of Niacor-SR data

262. Shortly after Schering's Board of Directors approved the Niacor-SR license, June 24, 1997, (CX 340), Schering began to get the Niacor-SR project organized. On July 2, 1997, Kapur informed Cesan that global marketing would take responsibility for Niacor-SR, while Warrick, Schering's subsidiary, would oversee development of the generic products licensed from Upsher-Smith. (SPX 8). At the same time, Kapur notified Lauda that the Niacor-SR deal had been approved and that global marketing was to take the lead in supervising Schering's international registration and marketing of Niacor-SR. (SPX 7; Lauda, Tr. 4350).

263. Schering also contacted Upsher-Smith regarding Niacor-SR and other matters soon after the Schering Board approved the Upsher-Smith license agreement. (SPX 255; SPX 9). On June 30, 1997, Schering's in-house counsel for licensing, Paul Thompson, sent Upsher-Smith a draft of a more detailed Amendment Agreement that expanded on such issues as the supply and delivery of Niacor-SR and other licensed products. (SPX 255; Kralovec, Tr. 5050-51). On July 16, 1997, Kapur wrote to Troup regarding Schering's intention to schedule a visit to inspect Upsher-Smith's facility that manufactured cholestyramine, one of the generic products Schering had licensed from Upsher-Smith. (SPX 9).

264. Audibert attempted to arrange, through Mark Halvorsen, Upsher-Smith's Director of Clinical and Regulatory Affairs, a visit by someone from Schering's clinical research group to Upsher-Smith in order to review Upsher-Smith's data and discuss regulatory filing strategies. (SPX 241; Audibert, Tr. 4142, 4149-50). On August 21, 1997, Audibert updated

Kapur on the Niacor-SR project, explaining that his efforts to arrange this trip to Upsher-Smith had been unsuccessful because of Upsher-Smith's delays in compiling the relevant clinical data and regulatory documents. (SPX 11; Audibert, Tr. 4154-55).

265. Schering continued to communicate with Upsher-Smith regarding its desire to obtain the Niacor-SR data. (SPX 10; SPX 12). On October 21, 1997, Kapur wrote to Troup, asking whether the Niacor-SR clinical data that Schering had expected by mid-October was available and attempting once again to set up a meeting for Schering to review the information at Upsher-Smith's offices. (SPX 12 at SP 05 00014; Audibert, Tr. 4156). A November 7, 1997 memo from Mr. Kapur to Audibert indicates that Troup had agreed that Upsher-Smith would send Schering the Niacor-SR registration information in segments so that Schering would not have to wait until the full ISS/ISE (Integrated Summary of Safety and Integrated Summary of Efficacy) were completed. (SPX 12 at SP 05 00013; Audibert, Tr. 4156).

b. Upsher-Smith's internal development efforts on Niacor-SR and communications with Schering

266. After the June 17, 1997 agreements, Troup alerted the various managers of departments at Upsher-Smith about the specific products being licensed by Schering and the steps to be taken for each product under the license agreement with Schering. (Troup, Tr. 5481-83). By the end of June, Upsher-Smith and Schering had begun to negotiate and exchange drafts of a fuller Amended Agreement and a Manufacturing Agreement for the products from Upsher-Smith. (USX 732).

267. As of the summer of 1997, Upsher-Smith was going forward with its NDA and Upsher-Smith's primary activity was to complete the final study reports and the ISS/ISE. (Halvorsen, Tr. 3975). The patient phase of all four clinical studies had concluded well before June 1997 and Upsher-Smith was in the process of compiling the data. (Halvorsen, Tr. 3912).

268. In early June 1997, consistent with the FDA's agreement in March 1997 that Upsher-Smith only needed to conduct a single-dose PK test (Halvorsen, Tr. 3940-41; USX 0281). Upsher-Smith prepared a protocol for such a test and started on it immediately. (Halvorsen, Tr. 3941; SPX 331). To conduct the PK test, Upsher-Smith first had to be sure that it had validated a proper bioanalytical method for measuring the drug passed in urine. (Halvorsen, Tr. 3942-45). Upsher-Smith hired two contract research organizations ("CROs") to work separately in competition to develop a final methods validation. (Halvorsen, Tr. 3942-45; USX 562). Simultaneously, Upsher-Smith had them test the protocol with a pilot study using Slo-Niacin so that Upsher-Smith would have samples to use in developing the method for testing Niacor-SR. (Halvorsen, Tr. 3942-45).

269. Upsher-Smith continued throughout the second-half of 1997 to hold its teleconferences

with the CROs regarding the study reports, medical narratives and the accompanying medical narratives. (Halvorsen, Tr. 3975; USX 1146). Between June 20 and December 19, 1997, there were 19 more such conference calls. (USX 1146). As of July 22, 1997, the goal was to file the Niacor-SR NDA before the end of the year. (Halvorsen, Tr. 3985; USX 1188 at 093578).

270. During June and July 1997, Upsher-Smith was working on its Niacor-SR package insert to include with its NDA submission. (Freese, Tr. 4990; USX 308). By July 21, 1997, Upsher-Smith had developed a revised draft of its package insert. (Freese, Tr. 4990; USX 308). Upsher-Smith's draft package insert included annotations to over 20 different niacin studies regarding the efficacy and benefits of niacin in the treatment of hypercholesterolemia. (Freese, Tr. 4990; USX 308 at 110477-9).

271. Prior to August 14, 1997, Audibert called Halvorsen regarding Niacor-SR clinical data in the first of several communications between the two representatives. (Halvorsen, Tr. 3976-77; USX 189). During that first call, Halvorsen and Audibert discussed the four clinical studies Upsher-Smith had conducted with Niacor-SR for FDA approval — the two pivotal studies and the two follow-on studies. (Halvorsen, Tr. 3976-77; USX 189). On August 14, 1997, Audibert sent Halvorsen a fax to arrange a meeting at Upsher-Smith for the week of September 15. (USX 189).

272. In August 1997, Upsher-Smith was still planning to file its NDA for approval of Niacor-SR at the end of 1997. (Halvorsen, Tr. 3977-78). By telephone call, Halvorsen informed Audibert that he did not believe that there would be clinical data available until late October, and that what Upsher-Smith would have at that time were the final reports from the individual studies, and not the ISS/ISE. (CX 780 at 00236).

273. On August, 15, 1997, Upsher-Smith mailed copies of the four protocols --the 115, 221, 837 and 955 clinical studies --to Audibert. (Halvorsen, Tr. 3979; USX 727). Mr. Audibert then forwarded this information to Schering's research institute. (CX 780 at 00236).

274. On October 27, 1997, a Schering licensing attorney faxed to Upsher-Smith's CFO, Mr. Paul Kralovec, a copy of the Amendment Agreement with Schering's proposed revisions. (SPX 217 at 0013). On November 12, 1997, Kapur's secretary, responded to Upsher-Smith's October 31 letter regarding the need for Schering to execute a broader confidentiality agreement covering the licensed products, including Pentoxifylline. (USX 218 at 135402).

c. Kos' stock plunge preceded Upsher-Smith's and Schering's decisions not to pursue Niacor-SR projects

275. In November 1997, Kos announced its first quarterly results for Niaspan sales in the United States, which were considerably below what everyone had expected. (Audibert, Tr. 4156; Lauda, Tr. 4433; Halvorsen, Tr. 3956; Troup, Tr. 5480). The first published figures regarding Niaspan sales in November 1997 were a major disappointment to investors, and Kos' stock price, which had

peaked around $44 per share, plummeted to $5 per share. (Troup, Tr. 5480).

276. Within a few weeks after Kos released the sales information for Niaspan, Upsher-Smith had pulled back on its ANDA project because in order to successfully go forward with a generic product, the branded product must attain a certain level of sales. (Halvorsen, Tr. 3956, 3964). An NDA was equally unpromising, as Niacor-SR was a very similar product to Niaspan, which failed to achieve a large following. (Halvorsen, Tr. 3964). In December 1997, Upsher-Smith put its Niacor-SR development project "on hold status, pending evaluation of Kos marketing success." (SPX 302 at USL 16165).

277. Although Upsher-Smith decided not to go forward with its NDA for Niacor-SR in the United States, a December 16, 1997 fax reports that Halvorsen informed the Niacor-SR team that there was a possibility that the project would proceed in Europe through Schering. (USX 1226; Halvorsen, Tr. 3987-88). January 15, 1998 meeting minutes indicate that the Niacor-SR project was on hold with "only minimal activity" to continue in most departments. (CX 962 at USL 13253; Halvorsen, Tr. 4051). Halvorsen testified that Upsher-Smith's clinical department proceeded "full forward" at that point with efforts to complete the study reports. (Halvorsen, Tr. 4051). The January 15, 1998 meeting minutes indicate that this continuing work represented "a significant amount of resource hours" for Upsher-Smith. (CX 962 at USL 13252, USL 13253; Halvorsen, Tr. 4051). Upsher-Smith continued to communicate with its CROs in efforts to compile the integrated summary of safety and the draft clinical tables in January 1998. (Halvorsen, Tr. 3988-89; USX 1235).

278. Niaspan's performance in the marketplace was relevant to the Niacor-SR project because it provided a real world opportunity for Schering to test the market. (Audibert, Tr. 4144). By September 1998, Schering no longer believed that Niacor-SR would do as well as it had originally predicted. (Lauda, Tr. 4433-34; Audibert, Tr. 4143-44).

279. A subsequent discussion between Audibert, Kapur and Troup regarding Niacor-SR is summarized in a September 25, 1998 memo from Audibert to Mr. Lauda. (SPX 15). During this discussion, Troup stated that Upsher-Smith was not going forward with its NDA. (SPX 15; Audibert, Tr. 4159). Audibert's memo indicates that this raised some real issues in his mind about the potential commercial viability of Niacor-SR from his perspective. (SPX 15; Audibert, Tr. 4159). He noted that "in August 1998, after being in the market one year, Niaspan's new Rx share for the month is only 1.1 percent" and that, "judging by the response of the investment community, the prognosis of Niaspan is poor." (SPX 15). He also stated that Upsher-Smith's decision not to pursue its NDA would result in delay and a greater demand on Schering's resources if it proceeded with its European filings. (SPX 15).

280. On October 6, 1998, Kralovec confirmed in a letter to Kapur that Upsher-Smith had suspended all research on Niacor-SR. (CX 1111; Kralovec, Tr. 5058-59; Lauda, Tr. 4428-29). Upsher-Smith cited the poor performance of Kos' Niaspan as one factor in its decision (Kralovec, Tr. 5061-62), as well as the fact that the FDA had requested that Upsher-Smith conduct an additional PK

study, which would have delayed Upsher-Smith's NDA and resulted in the product coming to market two or three years behind the launch of Niaspan. (Lauda, Tr. 4429; CX 1111).

281. Schering abandoned its efforts to bring Niacor-SR to market for several reasons. (Audibert, Tr. 4144; Lauda, Tr. 4352-53). The Kos product continued to do poorly in the marketplace, telling Schering that marketing a sustained release niacin product was going to be more difficult than anticipated. (Audibert, Tr. 4144-45). Niaspan's poor performance in the United States had implications for Niacor-SR sales in Europe. (Audibert, Tr. 4145). The fact that Upsher-Smith had abandoned its pursuit of the NDA before it was ready to be filed meant that Schering would have to devote more of its own resources to putting together its international dossier than had originally been anticipated. (Audibert, Tr. 4145). Finally, even if Schering had gone forward with the work to prepare the dossier, the entry of Niacor-SR in Europe would have been much later than originally anticipated. (Audibert, Tr. 4145). As a result, Schering decided not to pursue Niacor-SR further. (Lauda, Tr. 4407).

d. Upsher-Smith continued clinical work and medical writing wrap up and continued to communicate with Schering in 1998

282. Although Upsher-Smith decided in December 1997 to put on hold its plans to obtain FDA approval for Niacor-SR, this did not affect its clinical work on behalf of Schering. (Halvorsen, Tr. 3989). Upsher-Smith continued in 1998 to finalize the clinical study reports and put them in a usable form for Schering. (Halvorsen, Tr. 3989). During 1998, Upsher-Smith remained in contact with Schering-Plough regarding the licensed products. (USX 665, SPX 251; CX 1088; CX 1111).

283. Throughout the first part of 1998, at Upsher-Smith's instruction, its CRO continued to work on the methods validation for the single-dose PK protocol. (Halvorsen, Tr. 3943-44; SPX 331). The CROs working on the reports and medical writing continued their work through March of 1998, and Upsher-Smith's research and development team continued to have their regular telephone conferences to supervise and assist that work. (Halvorsen, Tr. 3924-25:4; 3944-45; USX 1230). Between January 1, 1998 and May 1998, members of Upsher-Smith's research and development team participated in a dozen such calls. (USX 1230; USX 1232 at 903845; Halvorsen, Tr. 3988-95).

284. In a meeting in March of 1998 in the office of Upsher-Smith's president Mr. Troup, Dr. Halvorsen was informed that Schering was not going to seek European approval. (Halvorsen, Tr. 3924-25).

285. On May 13, 1998, a CRO provided to Upsher-Smith the final draft of the Niacor-SR 92044 follow-on study and the related medical narratives. (USX 1265 at 093775; CX 1019). On November 4, 1998, Upsher-Smith received from a CRO its 508-page report containing the final methods validation for the PK test required by the FDA. (Halvorsen, Tr. 3943-44; SPX 333 at 165879). The total cost to Upsher-Smith of performing this final methods validation was $400,000.

(Halvorsen, Tr. 3944). Upsher-Smith was also spending money on its multiple CROs for their clinical work in completing the final study reports, the ISS and the ISE. (Halvorsen, Tr. 3944-45).

286. All totaled, from 1991 through 1998, Upsher-Smith spent $15-16 million on developing Niacor-SR -- four times as much alone than all other product development projects, and more than 80 percent of Upsher-Smith's total research budget during that period. (Kralovec, Tr. 5010-11; Halvorsen, Tr. 3902, 3995; Troup, Tr. 5475).

287. In September 1998, Upsher-Smith's President and Warrick's President, Mr. Kapur, had a discussion regarding the status of Niacor-SR. (Troup, Tr. 5608; Audibert, Tr. 4158-59; CX 1088 at 006-7). Troup reported that Upsher-Smith was not planning to file its NDA for FDA approval. (CX 1088; CX 1111 at SP 05 006-7; Troup, Tr. 5610). Mr. Troup explained that Upsher-Smith was concerned that Kos's Niaspan product had not been successful, even though Kos had invested considerably more sales and promotion effort in the United States than Upsher-Smith planned. (CX 1088 at SP 05 006-7; Troup, Tr. 5480-81; Audibert, Tr. 4159-60).

288. Based on what he knew at the time, Troup also explained that Niaspan appeared to be marginally better than Niacor-SR. (CX 1111). Upsher-Smith believed that because Niaspan had received the results indications for arteriosclerosis and myocardial infarction and because Niacor-SR would not get those indications without further expensive and time-consuming clinical tests, Niaspan had a market advantage over Niacor-SR. (Kralovec, Tr. 5058-59; Halvorsen, Tr. 3957-60).

289. As Kapur had requested, on October 6, 1998 Paul Kralovec, Upsher-Smith's Chief Financial Officer, provided Kapur written confirmation of Upsher-Smith's decision to suspend its efforts on Niacor-SR. (CX 1111). In the letter, which was also copied to Troup, Kralovec again confirmed the reasons for Upsher-Smith's decision not to proceed with U.S. approval. (CX 1111). He again explained that based on Kos's approval, Upsher-Smith would have been two to three years behind the launch of Niaspan. (CX 1111).

5. Complaint Counsel has not demonstrated that the value of Niacor-SR and the other pharmaceutical products was not $60 million

a. Dr. Levy's criticism of the terms of the license fees

290. Dr. Levy did not prove that the terms of the deal were "grossly excessive" because he performed no quantitative analysis of the value of Niacor-SR. (*See* Levy, Tr. 2055-64). Dr. Levy rejected the standard practice of using discounted cash flows to determine the value of a drug such as Niacor-SR. (Levy, Tr. 2059). As a result, Dr. Levy could not provide testimony as to the value of Niacor-SR — he admitted he could not testify whether a license for Niacor-SR was worth zero, $10 million or $100 million. (Levy, Tr. 2063).

291. Dr. Levy conceded that he had done no quantitative analysis of Niacor-SR. (Levy, Tr. 2057-59). Dr. Levy rejected using net present value ("NPV") analysis to value license opportunities for late stage pharmaceutical products. (Levy, Tr. 2155). He described conducting NPV analysis to determine the value of a pharmaceutical drug as "guesswork" because he believed that one "does not have a clue" as to what the risk factor is and testified that "nobody is going to rely" on such NPV calculations. (Levy, Tr. 2155-57). He testified that an NPV analysis of a late-stage pharmaceutical product that was not on the market was "GIGO," which he explained meant "Garbage in, garbage out." (Levy, Tr. 2157).

292. Other witnesses who testified in relation to NPV analysis confirmed its utility in valuing licenses, including Complaint Counsel's own witnesses. Dr. Max Bazerman, Complaint Counsel's expert witness, testified that in his 15 years of meetings with pharmaceutical executives, none have ever expressed the view that "discounted cash flows are junk or garbage or worthless or words to that effect." (Bazerman, Tr. 8555). Complaint Counsel's expert Professor Bresnahan confirmed that NPV determinations are used to value a stream of payments and that NPV analysis is a common concept in economics and finance. (Bresnahan, Tr. 662). Upsher-Smith's expert Dr. William Kerr testified that NPV analysis is "the most common method for valuing intellectual property." (Kerr, Tr. 6277-78). Schering's expert Dr. Zola Horovitz explained that the purpose of a net present value analysis calculation is to determine what a project will return as far as profits and cash flow to a company. (Horovitz, Tr. 3615). Horovitz testified that he conducted an NPV analysis based on the information Upsher-Smith provided to Schering and concluded that Schering could have paid up to $100 million for the Niacor-SR license. (Horovitz, Tr. 3612-13).

293. Not only did Dr. Levy not perform a financial evaluation of Niacor-SR, he did not do a financial evaluation of any of the five other products licensed to Schering. (Levy, Tr. 2059). Dr. Levy admitted that he did not know as to each of the five other products licensed under the June 17 Agreement whether each product was worth zero, $10 million or $100 million. (Levy, Tr. 2062-63). Dr. Bresnahan concedes that each of these 5 other products had value for Schering. (Bresnahan, Tr. 951, 953, 956).

294. Dr. Levy admitted that he also did not do any valuation analysis on the production or supply rights for the six licensed products that Upsher-Smith granted to Schering in Paragraphs 7-10 of the license agreement. (Levy, Tr. 2059-63). In fact, Dr. Levy was unaware that Schering had received any production rights from Upsher-Smith under the agreement. (Levy, Tr. 2059-60).

295. Dr. Kerr, Upsher-Smith's valuation expert, performed a valuation of the drugs licensed in the June 17 Agreement other than Niacor-SR and determined that they were worth $10.1 million as of June 1997. (Kerr, Tr. 6300-02).

296. Instead of offering an opinion on the value of the license fees, Dr. Levy testified only that the fees were "grossly excessive." This conclusion was based in part on his belief that the $60 million

up-front payment was larger than any previous license fee in the history of the pharmaceutical industry. (Levy, Tr. 1329-30). A comparison of the payment terms of various deals requires more than an isolated consideration of the up-front license fees. In performing his up-front-payments-only analysis, Dr. Levy ignored provisions relating to how the parties agreed to split future revenues generated from the product and ignored Schering's consideration of its costs to bring the product to market. (Levy, Tr. 1337, [*Tr. 1464-66*]; CX 1604).

297. [**redacted** **redacted**] *(Levy, Tr. 1329; SPX 92 at SP 00195).* [**redacted** **redacted** **redacted**] *(Levy, Tr. 1329).* [**redacted** **redacted** **redacted**] *[(Lauda, Tr. 4595; CX 1402 at SP 074847)]*, [**redacted** **redacted**] *[(CX 1468 at SP 074431-32)]*, [**redacted** **redacted**] *[(CX 1468 at SP 074433)]*. [**redacted** **redacted**] *[(Lauda, Tr. 4450-51)]*, [**redacted** **redacted**] *[(CX 1397 at SP 06958)]*. [**redacted**]

298. As noted by Mr. James Egan, Complaint Counsel's rebuttal witness from Searle Pharmaceuticals, there is risk involved in making a large up-front payment (Egan, Tr. 7983). [**redacted** **redacted** **redacted** **redacted**] *[(CX 1338 at SPCID2 ID 12723)]*. [**redacted** **redacted**] *[(Lauda, Tr. 4512-13)]*, [**redacted** **redacted** **redacted**]. *[(Lauda, Tr. 4599-4601)]*.

299. In evaluating a licensing opportunity, Schering analyzes the total investment required to bring a product "to a state of registration," which includes (1) research and development expenditures required to bring a product to the approvable stage; and (2) payments that are contingent upon pre-approval events, such as successful completion of phase II studies. (Lauda, Tr. 4365-66). With the results of the Phase III clinical trials already in Schering's hands, Niacor-SR was much further along in development than most of the other Schering deals analyzed by Dr. Levy. *[(Levy, Tr. 1464-65)]*; CX 1604; [*(Lauda, Tr. 4405, 4468)*]; SPX 2267; Horovitz, Tr. 3766). [**redacted** **redacted** **redacted**

redacted] [*(Lauda, Tr. 4465-68)*];(SPX 2264).

300. Schering also regularly considers economic value when considering an in-licensing opportunity. (Lauda, Tr. 4361-63). The economic value is the estimated economic return Schering expects to realize on a project. (Lauda, Tr. 4362). [**redacted** **redacted** **redacted**] [*(Lauda, Tr. 4450-51)*], [**redacted** **redacted** **redacted**] [*(Lauda, Tr. 4479, 4481, 4483); CX 1397)*], [**redacted** **redacted**] [*(Lauda, Tr. 4478-79)*]. [**redacted** **redacted** **redacted** **redacted**]. [*(CX 1397 at SP 06958)*] *(SPX 92 at SP 00195)*. [*(Lauda, Tr. 4481-83)*]; *(19 Tr. 4479-83; CX 1397 at SP 069948)*.

ii. Dr. Levy's criticism of Schering's due diligence

301. Dr. Levy testified that, in his opinion, the level of due diligence performed by Schering for Niacor-SR was "strikingly superficial." (Levy, Tr. 1341-42; CX 1597). In explaining how he reached this conclusion, Dr. Levy testified that he had put himself in Schering's position in June 1997 to "try to ascertain what I might have done had I seen what they saw." (Levy, Tr. 1342).

302. In support of his testimony that the due diligence performed for Niacor-SR was "strikingly superficial," Dr. Levy compared the volume of due diligence for Niacor-SR to the volume of due diligence from two other Schering evaluations. [*(Levy, Tr.* 1376-78, *1492, 1516, 1886-87)*]. In selecting his two yardsticks, Dr. Levy concedes that he simply selected these comparators from a "list," and that he did not review "in toto" all 33 license evaluations for which Schering produced documents to Complaint Counsel. [*(Levy, Tr. 1377, 1524)*].

303. Aside from his general criticism of the volume of due diligence performed for Niacor-SR, Dr. Levy identified two specific aspects of due diligence that he believes should have raised concerns for Schering: (1) dietary supplement forms of sustained release niacin had been associated with liver toxicity; and (2) the FDA had requested that Upsher-Smith perform an additional 17-day, single-dose pharmacokinetic ("PK") study in 30 patients. (Levy, Tr. 1317, 1388; Halvorsen, Tr. 4001-03; SPX 0331). However, the liver toxicity issue had already been specifically evaluated by Schering. (Audibert, Tr. 4119-22). Also, Dr. Levy described the requirement of a PK study as follows: "Doing a pharmacokinetic study in Schering-Plough is like falling off a log. I mean they do them routinely." (Levy, Tr. 1388). Lauda testified that the PK study was, at best, a very minor issue that would not even have "caused a blip on the radar." (Lauda, Tr. 4516-17, 4421). Moreover, at the time of the license

agreement for Niacor-SR, Upsher-Smith had already built the PK study into the December 1997 NDA filing timetable upon which Schering relied. (Horovitz, Tr. 3728, 3793-94).

304. The amount of due diligence that Schering performs in evaluating a licensing opportunity depends on the nature of the opportunity. (Russo, Tr. 3432-33; [*Lauda, Tr. 4574*]). Schering does not use any standard approach in evaluating a licensing opportunity. (Russo, Tr. 3432-33). Generally, the higher the risk involved with a particular product, the more involved Schering's review process will be. (Russo, Tr. 3432-33).

305. Unlike other products Schering has evaluated, Niacor-SR was a very straightforward product in a market with which Schering was intimately familiar. [*(Lauda, Tr. 4599-4601)*]; Audibert, Tr. 4093-98, [*4299-4304*], 4137). Niacor-SR was a late stage Phase III product, and Schering was able to conduct its evaluation on the basis of the results of the Phase III pivotal trials. (Audibert, Tr. 4113-14; [*Lauda, Tr. 4599-4600*]; Horovitz, Tr. 3682, 3717; CX 1042). Niacor-SR's active ingredient, niacin, is an old and well-known compound with an established product profile. (Audibert, Tr. 4137-38; [*Lauda, Tr. 4599-4600*]; Horovitz, Tr. 3681). Niacor-SR had "proof of principle" in that niacin has long been known to be effective in the treatment of high cholesterol, the exact indication targeted for Niacor-SR. (Audibert, Tr. 4116-17; [*Lauda, Tr. 4599-4600*]. In fact, as a result of niacin's known efficacy profile, the FDA had advised Upsher-Smith during the development of Niacor-SR that "there is no question that niacin is effective," and that "efficacy was considered almost a non-issue." (CX 1376 at Upsher-Smith FTC 127098; CX 1371). On the basis of these considerations, Dr. Horovitz testified that in evaluating a drug like Niacor-SR, he would expect that a knowledgeable person could perform the requisite due diligence more quickly than would be the case with other licensing evaluations. (Horovitz, Tr. 3682).

306. Audibert was already familiar with cholesterol lowering drugs – including niacin – as a result of his detailed evaluation of the cholesterol lowering market as part of his work on Schering's blockbuster pipeline drug, ezetimibe. (Audibert, Tr. 4095-4100). Niacor-SR was a known drug reformulated using sustained release technology to overcome a known side effect, a method of development with which Audibert had gained substantial expertise throughout his career. (Audibert, Tr. 4082-89; Horovitz, Tr. 3679-80). Audibert knew from his evaluation of Kos' Niaspan just months earlier that the FDA was on the verge of approving another sustained release niacin, and the results of the pivotal trials for Niacor-SR confirmed that Upsher-Smith had similarly succeeded in developing a safe and effective sustained release niacin. (Audibert, Tr. 2453-54 (Audibert Dep.); [*Lauda, Tr. 4512-13*]; Horovitz, Tr. 3679-80).

307. Based on Audibert's evaluation of Niacor-SR, Schering did not believe that additional due diligence was required. [*(Lauda, Tr. 4516*]; Audibert, Tr. 4137).

308. Dr. Levy was unfamiliar with the National Cholesterol Education Program ("NCEP"), which sets the nationally accepted guidelines for cholesterol lowering in the United States and which

were relied on throughout the Kos and Upsher-Smith niacin research documents and studies. (Levy, Tr. 8404-05). Dr. Levy also demonstrated his unfamiliarity with the leading studies relating to niacin. (Levy, Tr. 8401-03, 8406).

309. Dr. Levy was mistaken in both his expert report and his trial testimony as to the type of PK study Upsher-Smith needed to complete to get its NDA for Niacor-SR approved — he was under the misimpression that a multiple dose PK study was required. In fact, by March 1997 the FDA had confirmed that Upsher-Smith only had to perform a single-dose PK study. (Levy, Tr. 2182-83; CX 917 at 107426; USX 281).

310. Dr. Levy admitted that he had not seen (and therefore had not considered) the 200-plus page final methods validation report for the Niacor-SR PK test that the CRO had been developing between summer 1997 and fall of 1998. (Levy, Tr. 2131; SPX 333 (methods validation report); Halvorsen, Tr. 3943-45 (describing MDS Harris work on report); USX 556 (December product update cited by Levy stating "MDS Harris will complete work through method validation")).

311. At the time he testified, Dr. Levy believed Upsher-Smith had only conducted the two Phase III pivotal clinical studies and was unaware that Upsher-Smith had also conducted the two longer term follow-on Phase III studies, the 900837 and the 920944 studies. (Levy, Tr. 2079-80).

312. When asked whether he took into account any follow-on studies, Dr. Levy indicated he had focused on the materials provided to Schering and believed he knew what Schering knew at the time about the status of Upsher-Smith's clinical studies. (Levy, Tr. 2079-80). However, all four clinical studies are referenced in the confidential presentation Upsher-Smith provided to Schering – including the two follow-on studies -- and the presentation indicated that Upsher-Smith had completed or was completing the final study reports for all four. (CX 1042 at 0079). Dr. Levy conceded on cross-examination that all four reports were referenced in the materials Schering received. (Levy, Tr. 1830-31).

313. In his expert report, Dr. Levy stated that the elevated liver enzyme levels indicated in the package Schering received from Upsher-Smith "would have mandated a detailed examination of the effects of Niacor-SR on the liver prior to any consideration of in-licensing the drug. Such detailed examination, in my opinion, would have included at least: Examination of liver biopsies in patients treated with Niacor-SR . . ." (Levy, Tr. 1785-99). A liver biopsy is performed by inserting through the skin of the subject a seven-inch hollow needle, approximately 18-gauge, with a bore on the point that fills the bore of the needle. (Levy, Tr. 1785-99). The needle is pushed through into the liver, a chunk of the liver is removed using suction, and then the needle is removed. (Levy, Tr. 1795-96).

314. To perform such liver biopsies, Upsher-Smith would have been required to track down patients who had completed the study years earlier and re-dose those patients in an attempt to replicate those elevations, and then perform a surgical procedure to remove a piece of the patients' livers to

determine whether that re-dosing had caused liver damage. (Levy, Tr. 1786-87, 1796-97). Dr. Levy testified at his deposition that it would have been "quite reasonable" for Schering to ask Upsher-Smith to do this. (Levy, Tr. 1786-87). During cross-examination, however, Dr. Levy admitted that he "probably overstated" the opinion expressed in his expert report and deposition testimony regarding the requirement of liver biopsies. (Levy, Tr. 1790, 1793, 1798-99). Dr. Horovitz explained his experience with the clinical trials for one of the statins where a Japanese company had inquired about the possibility of taking liver biopsies of patients during the clinical trials, and the FDA considered that request "ridiculous." (Horovitz, Tr. 3708).

iii. Dr. Levy's criticism of the post deal conduct

315. Dr. Levy testified that his opinion that the "$60 million was not for Niacor-SR" rests in part on the fact that after the June 17, 1997 licensing transaction neither party showed any serious interest in marketing Niacor-SR. (Levy, Tr. 1822-23). In his report, Dr. Levy wrote that there were almost no communications between Schering and Upsher-Smith after the execution of the agreement. (Levy, Tr. 2079-80).

316. Levy's conclusion in his report and testimony that there were almost no communications between Schering and Upsher-Smith following the June 17, 1997 Agreement is contrary to the record evidence. (Levy, Tr. 2079-80). There were no fewer than 2 meetings and 21 other documented communications between Schering and Upsher-Smith in 1997 after Upsher-Smith and Schering's licensing agreement and the record indicates it is likely there were other undocumented telephone calls. The communications continued into 1998. (F. 262-65).

317. Dr. Levy admitted that in reaching his opinion regarding Upsher-Smith's post-June 1997 efforts on Niacor-SR, he had not reviewed any of the more-than 80 minutes and agendas documenting the more-than 40 teleconferences Upsher-Smith had held with the CROs between June of 1997 and May of 1998 contained in USX 1178 through USX 1266. (Levy, Tr. 2099-2102, 2127). Those minutes detail the ongoing work being done by Upsher-Smith and the CROs to finalize the individual study reports, to compile the ISS/ISE and to wrap up the project. (Levy, Tr. 2099-2102, 2127). Those ClinTrials teleconference minutes and agenda memorialize that in December of 1997, Upsher-Smith had informed ClinTrials that Upsher-Smith was not going forward with filing the NDA, but that its European partner (Schering) might be proceeding. (USX 1259 at 093868; USX 1260 at 093790).

318. Based on the mistaken belief that Upsher-Smith had stopped its clinical work on Niacor-SR, Dr. Levy testified it was his belief that the Upsher-Smith went almost a year without telling Schering that Upsher-Smith had decided not to pursue its U.S. submission -- a decision Dr. Levy found "inconceivable." (Levy, Tr. 1394). Dr. Levy admitted, however, that he had been unaware of the ClinTrials documents indicating not only that Upsher-Smith had continued the clinical work into May of 1998, but that Upsher-Smith understood in March of 1998 that Schering was not going forward with its European submission. (Levy, Tr. 2099-2102, 2127; USX 1259 at 093868; USX 1260 at 093790).

b. Professor Bresnahan

319. Complaint Counsel offered the testimony of Professor Timothy Bresnahan, Professor of Economics. Bresnahan did not perform an economic valuation of any of the drugs licensed from Upsher-Smith to Schering. (Bresnahan, Tr. 950-57). He did not do a valuation analysis of Niacor-SR, pentoxifylline, Prevalite, the Klor Con products, or the supply agreement. (Bresnahan, Tr. 950-57). Professor Bresnahan also did not challenge the Niacor-SR sales projections, estimated cost of goods sold, net profit, or the economic value of $225 - 265 million presented to Schering's Board of Directors. (Bresnahan, Tr. 975-78). Instead, Bresnahan utilized a "revealed preference" test and a market test to opine on the value of Niacor-SR. (F. 320-22).

i. The "revealed preference" test

320. Professor Bresnahan applied the "revealed preference" test to opine that the $60 million payment was not for the Niacor license. Professor Bresnahan's opinion was that Schering's decision not to pay Kos for the right to co-market Niaspan revealed that Schering would not pay $60 million for a license for any sustained-release niacin product. (Bresnahan, Tr. 582, 596-98; CX 1578).

321. Schering's decision to discontinue discussions with Kos with respect to a potential co-marketing arrangement was made for reasons that did not apply to its license transaction with Upsher-Smith. First, Schering was to receive at most half the profits from sales of Niaspan. As Professor Bresnahan conceded, this meant that the projected NPV of Schering's interest in Niaspan profits was $127 million. (Bresnahan, Tr. 1115-16; CX 558; Russo, Tr. 3529-30). On the other hand, Schering was to receive all of the Niacor-SR sales after deducting a small royalty. (Levy, Tr. 1329; SPX 92 at SP 00195). As Professor Bresnahan conceded, the projected NPV of Schering's interest in the Niacor-SR sales was $225-$265 million. (Bresnahan, Tr. 1117; [*Lauda, Tr. 4478-79*]; SPX 26 at SP 16 00275). Second, Kos' demands from a co-promotion arrangement were high. Kos insisted that under any arrangement Schering would have to guarantee a significant number of primary details for Niaspan. (Patel, Tr. 7531, 7554; CX 769). Kos also wanted guarantees with respect to the level of sales call activity. (Russo, Tr. 3451). Third, Kos wanted to retain most of the control over how the product was marketed. (Bresnahan, Tr. 1112). Fourth, Kos insisted on booking sales or making Schering pay money in order to book sales. (Patel, Tr. 7556). And fifth, the Kos people were proving to be very difficult to work with. (Bresnahan, Tr. 1122).

322. The substantial, reliable evidence presented by Schering demonstrates legitimate, credible reasons for Schering's preference of a licensing deal with Upsher-Smith over a co-marketing arrangement with Kos. (F. 217-19). This evidence refutes the conclusion Professor Bresnahan reached using his "revealed preference" test. (F. 320-21).

ii. The market test

323. Professor Bresnahan testified that he applied a "market test" to prove that the $60 million was a payment for delay, and not for Niacor-SR. Professor Bresnahan's theory was that because no other company had made Upsher-Smith an offer that included a substantial non-contingent payment for the licenses, the "market test of the $60 million payment is failed." (Bresnahan, Tr. 601-02). Bresnahan's conclusion that the Niacor-SR license was not worth $60 million was based on his application of this "market test."

324. Professor Bresnahan had never before applied this market test in the context of pharmaceutical licensing, and he did not understand, when he applied it, how Schering normally goes about deciding what to pay for a license. (Bresnahan, Tr. 1125). When applying his market test, Professor Bresnahan did not know whether Schering customarily knew or cared what other companies were bidding for a product. Lauda explained, there is never a "market price" for a licensing opportunity. Schering generally does not know what other companies are bidding, and Schering's determination of how large a bid to make is driven by the company's own internal assessments. (Lauda, Tr. 4374-75). Complaint Counsel's rebuttal witness, Egan, (Searle) testified that one company may value a licensing opportunity differently from another. (Egan, Tr. 7964). These differences in valuation are attributable to varying subjective criteria. (Egan, Tr. 7964).

325. During the 30 days preceding Schering's license of Niacor-SR, Upsher-Smith had received expressions of interest from a number of European companies. (Halvorsen, Tr. 3970-73). At the conclusions of the June meetings in Europe, those companies indicated that they would review Niacor-SR and contact Upsher-Smith, but not within the following month. (Halvorsen, Tr. 3974).

326. The substantial, reliable evidence presented by Schering demonstrates the factors Schering considered in valuing the Niacor-SR licence. (F. 243-57). The evidence presented by Schering that Niacor-SR was worth $60 million to Schering in June 1997 refutes the conclusion Professor Bresnahan reached using his market test.

H. ESI's Micro-K20 and Patent Litigation

1. ESI's ANDA and the initiation of patent litigation

327. In 1995, ESI Lederle, Incorporated ("ESI"), a division of American Home Products ("AHP") sought approval from the FDA to market Micro-K20, a generic version of Schering's sustained release potassium chloride tablet, K-Dur 20. (SPX 678; Miller, Tr. 3320). On December 22, 1995, ESI submitted an ANDA to the FDA that referenced K-Dur 20 and contained a Paragraph IV certification to Schering's '743 patent. (Schering Answer ¶ 51; AHP Answer ¶ 51).

328. On December 29, 1995, ESI notified Schering of its Paragraph IV certification containing data from a bioequivalent study demonstrating Micro-K 20's bioequivalency to Schering's

K-Dur 20 tablets. (CX 419 at SP 06 00052; Schering Answer ¶ 51). The notification letter stated that the '743 patent would not be infringed by the AHP generic product since it "[did] not contain potassium chloride crystals coated with a mixture of ethylcellulose and hydropropylcellulose or with a mixture of ethylcellulose and polyethylene glycol, as disclosed and claimed in U.S. Patent 4,863,743." (CX 419 at SP 06 00052; SPX 678 at 1).

329. On February 16, 1996, within 45 days of receiving this letter, Schering's Key Pharmaceuticals division sued ESI for "willful and deliberate" infringement of the '743 patent, as contemplated under 21 U.S.C. § 355(j)(5)(B)(iii). (Miller, Tr. 3319-20). Schering sought an injunction in the U.S. District Court for the Eastern District of Pennsylvania that would have prevented ESI from marketing its generic version of K-Dur 20 for the remaining life of the '743 patent. (Miller, Tr. 3319-21; SPX 679).

330. ESI filed an answer and counterclaim for a declaratory judgment, alleging non-infringement and invalidity of the '743 patent. (SPX 680).

331. No evidence or testimony was offered to show that Schering's filing of the patent litigation against ESI was not initiated for the legitimate purpose of defending its patent.

2. Settlement Negotiations

332. The parties first began discussing a possible settlement of the case in October 1996. (Herman, Tr. 2487). At a status conference, the presiding judge, Judge DuBois, suggested that the parties participate in a mediation session with a U.S. magistrate judge. (Herman, Tr. 2487). On October 16, 1996, both Key and ESI agreed to participate in mediation. (Herman, Tr. 2495; SPX 73). The magistrate judge appointed to participate in the mediation was Judge Rueter. (Herman, Tr. 2486). The mediation process with Judge Rueter ultimately lasted approximately 15 months. (Herman, Tr. 2486).

333. Throughout the course of the litigation between Schering and ESI, Judge DuBois made it clear that he wanted the parties to settle the case. (SPX 1222 at 53:13-25 (Alaburda I.H.)). Judge DuBois brought up settlement every time he talked to the parties, usually as the first order of business. (SPX 1222 at 73:3-16 (Alaburda I.H.)).

334. The parties participated in a settlement conference on November 19, 1996 in Judge Rueter's chambers. (Herman, Tr. 2497; SPX 77).

335. On December 10, 1996, Schering proposed to ESI that they enter into a co-promotion venture in which Schering and ESI would jointly fund and manage a third-party workforce in marketing K-Dur 20. (Herman, Tr. 2503-04; CX 1482 at 67 (Alaburda I.H.); CX 1494 at 101 (Driscoll I.H.); SPX 76).

336. ESI rejected the proposal on February 20, 1997, stating that, as a generic manufacturer, ESI did not have a sales and detail force capable of selling and marketing K-Dur 20. (Herman, Tr. 2504; CX 1482 at 70 (Alaburda I.H.); CX 1492 at 56 (Dey I.H.); CX 457).

337. Eight days later, on February 28, 1997, another mediation session took place in Judge Rueter's chambers. (Herman, Tr. 2504; SPX 1202).

338. Following the February 1997 mediation session, the parties continued to discuss settlement proposals. On March 12, 1997, Judge DuBois sent a letter to counsel stating that he understood from Judge Rueter that settlement negotiations were continuing, and expressing his hope that the parties would settle. (Herman, Tr. 2513; SPX 1198).

339. On March 19, 1997, Mr. Paul Heller, ESI's outside counsel, wrote Mr. Anthony Herman, Schering's outside counsel, a letter stating that he had been advised that Schering's copromote proposal "raises considerable antitrust risks." (Herman, Tr. 2513; CX 458). The letter noted, again, that ESI was amenable to an arrangement whereby Schering would pay ESI and ESI would receive a license to enter the market in the future. (Hoffman, Tr. 2659-60; CX 458). Schering explained to ESI that this proposal was unacceptable. (Hoffman, Tr. 2631-32).

340. On April 18, 1997, Herman sent a letter to Judge Rueter on behalf of both Schering and ESI reporting on the state of the settlement efforts as being at "a standstill." (Herman, Tr. 2514; CX 459; CX 1492 at 129 (Dey I.H.)).

341. On August 20, 1997, Judge Rueter held a third mediation session in his chambers. (Herman, Tr. 2515; SPX 552).

342. Following the August 20, 1997 mediation session, on September 24, 1997, Heller sent a letter to Herman. (Herman, Tr. 2519; SPX 94). That letter projected the amount of profits that ESI believed it would earn if it were to win the case. (Herman, Tr. 2519; SPX 94, at SP 13 00004). ESI projected that, with the simultaneous launch of three generic versions of K-Dur 20, ESI's generic would earn over $15 million in sales in the first year on the market. (SPX 94, at SP 13 00004). ESI projected that its generic version of K-Dur 20 would earn over $25 million in sales in its second year on the market, over $28 million in its third year on the market, over $24 million in its fourth year on the market, and over $23 million in its fifth year on the market. (SPX 94, at SP 13 00004).

343. Schering was willing to discuss other opportunities that were mutually beneficial to the parties apart from an outright payment to ESI. (Kapur, Tr. 1431; SPX 1242 at 125-27 (Kapur Dep.)). Mr. Martin Driscoll, then Vice President of Marketing and Sales for Key, discussed several such opportunities with ESI, including co-marketing Schering's products. (CX 1510 at 140 (Kapur I.H.); Kapur, Tr. 1431).

344. On October 14, 1997, Dr. Michael Dey, CEO of ESI, wrote a letter to Kapur, the head of Schering's generic division, to discuss a proposal for ESI to license several products to Warrick for overseas sale. (Herman, Tr. 2519; CX 465; CX 1482 at 121-24 (Alaburda (I.H.)). Those two products were enalapril and buspirone. (Herman, Tr. 2519-20; CX 1482 at 122-23 (Alaburda I.H.); SPX 1242 at 125-27 (Kapur Dep.)).

345. The next mediation session occurred on October 27, 1997 in Judge Rueter's chambers. (Herman, Tr. 2520). No settlement between the parties was reached that session. (Hoffman, Tr. 2618; Herman, Tr. 2520).

346. Another settlement conference was scheduled for November 17, 1997. (CX 468). On November 12, 1997, Herman sent Judge Rueter a letter expressing Schering's position that it would be a waste of the Court's and the parties' time to proceed with the scheduled settlement conference. (Herman, Tr. 2521; CX 468). At that point, ESI had told Schering that it was no longer interested in a co-promotion arrangement. (Herman, Tr. 2522; CX 468). This was the last time the copromote concept was raised. (Herman, Tr. 2522). The letter informed Judge Rueter that ESI had stated it was unwilling to agree to Schering's copromote proposal because of antitrust concerns. (Herman, Tr. 2522; CX 468). ESI responded that although ESI was not interested in a co-promote, the parties were considering separate licensing opportunities. (SPX 1195).

347. Herman's letter also addressed Schering's concerns that ESI lacked a potentially marketable product, informing Judge Rueter that Schering was unwilling to make another settlement offer until ESI demonstrated that it has a bona fide 20 milliequivalent potassium chloride product that, but for the lawsuit, would receive FDA approval. (Herman, Tr. 2522; CX 468).

348. The proposed November 17, 1997 settlement conference was postponed. (Herman, Tr. 2521).

349. ESI then provided Schering with information related to the current FDA approval status of ESI's proposed generic version of K-Dur. (Herman, Tr. 2523; SPX 82). On December 15, 1997, Mr. Herman summarized this information in a letter to ESI's counsel. Mr. Herman's December 15, 1997 summary noted the difficulties ESI had up to that point in trying to obtain FDA approval for its proposed generic version of K-Dur 20. The main problem ESI had involved a study included in the ANDA designed to demonstrate ESI's proposed generic was bioequivalent to K-Dur 20. (CX 469; Herman, Tr. 2523). The bioequivalence study had been performed in 1989. (CX 469; Herman, Tr. 2523-24). The FDA found five different deficiencies with regard to the study. (CX 469; Herman, Tr. 2523-24). ESI did not respond to the FDA regarding the deficiencies until May 14, 1997. (CX 469; Herman, Tr. 2524). On August 6, 1997, FDA rejected ESI's response to the five deficiencies in ESI's bioequivalence study. (CX 469; Herman, Tr. 2524). ESI began a new bioequivalence study on December 8, 1997, a week before the December 15, 1997 summary. (CX 469; Herman, Tr. 2524).

350. Two days later, in a December 17, 1997 letter from Schering to ESI, Schering proposed to settle the lawsuit by providing ESI with a license to market ESI's proposed generic version of K-Dur, effective December 31, 2003. (Hoffman, Tr. 2638-39; Herman, Tr. 2525; CX 470).

351. The December 17, 1997 letter stated:

> We propose to settle the case based on the following:
>
> (1) Schering shall grant ESI a royalty-free license under the '743 patent to make, use, offer for sale and sell its Micro-K 20 potassium chloride product in the United States effective December 31, 2003. Until that date, ESI shall not make, use, offer for sale or sell its micro-K product.
>
> (2) ESI will acknowledge infringement and validity of the '743 patent in a consent judgment.

(CX 470; Herman, Tr. 2525-26).

352. In the same December 17, 1997 letter, Schering also proposed that:

> As an additional matter, ESI shall grant Schering, including its designee, exclusive licenses for buspirone, enalapril, and three other products under development by ESI to be mutually agreed upon by the parties. . . . In exchange for the licenses described in the unnumbered paragraph above, Schering shall pay ESI an up-front payment of $5 million and a 5 percent royalty on annual sales for ten years post-approval.

(CX 470; Herman, Tr. 2526).

353. ESI responded to Schering's offer on December 22, 1997, accepting the December 31, 2003 entry date:

> The general structure of your December 17 proposal is acceptable with the following modifications. The effective date of the license under the '743 patent should be December 31, 2003, or whenever a generic is placed on the market, whichever occurs earlier. . . . ESI will be able to market in the United States if the '743 Patent is invalidated or rendered unenforceable by another party.

(CX 473; Herman, Tr. 2527; Hoffman, Tr. 2639). ESI also agreed to acknowledge validity and enforceability of the '743 patent, but would not acknowledge that its product infringed. (Herman, Tr. 2528; CX 473).

354. The date of December 31, 2003 referred to in the letters differs from the date for ESI's product entry in the final agreement by one day. (Herman, Tr. 2525; CX 470; CX 473; CX 479). In the final agreement, the date agreed upon for ESI's product entry was January 1, 2004. (Herman, Tr. 2525; CX 479).

355. ESI also agreed, in its December 22, 1997 letter, to grant licenses to Schering for buspirone, enalapril, and three other products to be agreed upon. (Herman, Tr. 2528; CX 473; CX 1509 at 70 (Hoffman Dep.)). ESI countered with an initial $5 million payment, to be followed by further payments upon the FDA's issuance of an approval letter for ESI's ANDA and thereafter for a total of $55 million on an agreed-upon time schedule. (Hoffman, Tr. 2528; CX 473). This represents a $50 million difference from Schering's offer. (Herman, Tr. 2528; CX 470; CX 473). ESI also proposed a royalty rate of 50 percent of gross profit for the licenses to Schering, as opposed to Schering's proposal of 5 percent of annual sales. (Herman, Tr. 2528-29; CX 473; CX 470).

3. Settlement agreement in principle

356. Between the time of the December 22, 1997 correspondence and January 23, 1998, the date Schering and ESI reached an agreement in principle, Schering and ESI had agreed on a January 1, 2004 date of entry for ESI. (Hoffman, Tr. 2640, 2619-20, 2638; CX 1509 at 70 (Hoffman Dep.); Herman, Tr. 2532-33). Schering told ESI that January 1, 2004 was as far as Schering would go. (CX 1482 at 99-100 (Alaburda I.H.); SPX 1222 at 101 (Alaburda I.H.); CX 1492 at 136-37 (Dey I.H.)). Schering made it very clear to ESI that "that was it. That was as far as they would go, and there wouldn't be any further negotiating on that point." (CX 1482 at 99-100 (Alaburda I.H.); SPX 1222 at 101 (Alaburda I.H.)).

357. The final mediation sessions occurred on January 22 and 23, 1998, in conjunction with a Markman hearing held on January 21 and 22, 1998. (Herman, Tr. 2529). A Markman hearing is a hearing at which evidence is taken and argument is heard so that the Court can interpret the claims of the patent at issue in the lawsuit. (Herman, Tr. 2529).

358. On January 22, 1998, the second day of the Markman hearing, the Court finished hearing evidence at around 1 p.m. (SPX 687, at ESI HRG 000126-27). The parties had another settlement conference with Judge Rueter scheduled for 2 p.m. (SPX 687, at ESI HRG 000126-27). The parties spent about three and a half hours in the January 22, 1998 settlement conference with Judge Rueter. (SPX 687, at ESI HRG 000128).

359. On January 23, 1998, the parties had another settlement conference with Judge Rueter.

(Herman, Tr. 2529). The session concluded about 11:30 p.m., when an agreement in principle was reached. (Herman, Tr. 2529, 2531-32).

360. At the January 23, 1998 meeting, for Schering, were Mr. Herman and Ms. Susan Lee, Director of Patent Litigation. For ESI, were Mr. Heller and Dr. Dey. (Herman, Tr. 2532). During the evening, there were also calls between Judge Rueter and John Hoffman of Schering, who was at home, and between Judge Rueter and Mr. Driscoll, who was on his cellular phone at a New Jersey Nets basketball game with his sons. (Hoffman, Tr. 2603, 2618-19; 2629; Herman, Tr. 2532; Driscoll, Tr. 2706).

361. Before the January 23, 1998 mediation conference, the date of market entry for ESI's generic product had been agreed to in principle as January 1, 2004. (Hoffman, Tr. 2640, 2619-20, 2638; Herman, Tr. 2532-33). The parties had also agreed in principle that Schering would license generic enalapril and buspirone from ESI for $15 million. (Herman, Tr. 2532; Hoffman, Tr. 2620).

362. During the meeting, ESI insisted on additional payments. (Herman, Tr. 2533). Mr. Herman took the position that Schering was not going to pay any more money, and that it wanted to try the case. (Herman, Tr. 2533). Schering eventually agreed to pay ESI $5 million to settle the case. (Hoffman, Tr. 2620; Herman, Tr. 2534). ESI continued to insist on another $10 million. (Herman, Tr. 2535).

363. Driscoll, testified that he came up with a concept under which Schering would not have to pay ESI any money if ESI could not obtain approval of its ANDA product. If ESI received approval for its ANDA by a date certain, Schering would make a certain payment. (Driscoll, Tr. 2712; CX 1494 at 110 (Driscoll I.H.); Hoffman, Tr. 2620-21; CX 1492 at 156-57 (Dey I.H.)). If the date was later, it would be a lesser payment. (Driscoll, Tr. 2712; CX 1494 at 110 (Driscoll I.H.); Hoffman, Tr. 2620-21). Driscoll ultimately agreed that Schering could make certain payments, consisting of $10 million if ESI's ANDA were approved by July, $5 million if it were approved 6 months later, with further decreasing payments. (Driscoll, Tr. 2712).

364. When Driscoll made this commitment, he believed that Schering would not have to pay it. (Driscoll, Tr. 2713, 2722; CX 1509 at 104 (Hoffman Dep.); CX 1482 at 109 (Alaburda I.H.)).

365. Judge Rueter asked the parties to write up the terms and initial or sign them that night. (Hoffman, Tr. 2621). In the secretarial area of Judge Rueter's chambers, Heller, counsel for ESI, hand wrote out the settlement principles with Schering's representatives. (Herman, Tr. 2537, 2488; CX 472).

366. The two-page handwritten agreement in principle, dated January 23, 1998, was signed by Mr. Heller, for ESI, and for Key by Ms. Susan Lee, who was the director of patent litigation for Schering. (Herman, Tr. 2488-89; CX 472).

367. The January 23, 1998 handwritten agreement in principle states that Schering would grant ESI a license under its K-Dur patent beginning on January 1, 2004. (CX 472).

368. The January 23, 1998 handwritten agreement, states that ESI grants to Schering the right to market ESI's generic versions of enalapril and buspirone in Europe. (CX 472). The handwritten agreement also states that Schering would provide $10 million to ESI upon the signing of the settlement agreement, and $10 million split into equal monthly installments to be paid over seven and a half years. (CX 472). In addition, the handwritten agreement states that Schering would pay ESI an amount between $625,000 and $10 million, depending on the date of FDA approval of ESI's generic version of K-Dur 20. (CX 472).

369. Immediately after the agreement in principle was reached on January 23, 1998, the district judge conditionally dismissed the case. (Hoffman, Tr. 2651-52).

4. Final settlement agreement

370. Ms. Somerville, ESI's outside counsel, later sent a more formal draft agreement to Mr. Herman, accompanied by a transmittal letter. (Herman, Tr. 2538; CX 478). That initial draft does not accurately reflect what the parties agreed to that evening with Judge Rueter. (Herman, Tr. 2539; SPX 1266 at 181-82; CX 478). Paragraph 16 of the draft characterizes all the payments as royalty payments, when only $15 million of the $30 million were royalty payments. (Herman, Tr. 2539; CX 478).

371. This error was corrected in the final drafts of the agreements. (Herman, Tr. 2539; CX 479; CX 480). The final drafts of the agreements were prepared by Schering's outside counsel, Covington & Burling. (Herman, Tr. 2539). The final agreement was reached in June 1998. (Herman, Tr. 2539; Hoffman, Tr. 2652; CX 479).

372. Under the final settlement agreement, dated June 19, 1998, Schering agreed to pay ESI a $5 million noncontingent payment and an additional $10 million contingent on ESI's FDA approval. (Hoffman, Tr. 2643; CX 479). Schering granted under the '743 patent a royalty free license to ESI effective, January 1, 2004. (Hoffman, Tr. 2643; CX 479).

373. The final settlement agreement also provides that Schering wishes to market in Europe certain pharmaceutical products for which ESI has filed ANDAs with the FDA. (CX 479).

374. As provided in the earlier handwritten agreement, Schering and ESI also entered into a contemporaneous license agreement, dated June 19, 1998, whereby AHP and ESI granted to Schering the licenses to enalpril and buspirone in exchange for $15 million. The license agreement includes a statement that the parties desire to eliminate the uncertainties and costs of the patent litigation between

Schering and ESI over the '743 patent. (CX 479).

375. Schering paid ESI $5 million ten days after the execution and delivery of the June 19, 1998 final settlement agreement. (Schering Answer at ¶ 59). Shortly before the June 1999, $10 million payment deadline, ESI received approval from the FDA. (Hoffman, Tr. 2646). Schering then paid ESI $10 million. (Hoffman, Tr. 2646).

5. Settlement language related to other products

376. The terms of the final settlement agreement that were added after the agreement in principle was reached included: (1) ESI could not market any potassium chloride product that is 'therapeutically equivalent or bioequivalent to, or otherwise substitutable on a generic basis for, K-Dur 10 or K-Dur 20" until January 1, 2004; (2) ESI cannot market more than one new potassium chloride product that is 'therapeutically equivalent or bioequivalent to, or otherwise substitutable on a generic basis for, K-Dur 10 or K-Dur 20" between January 1, 2004 and September 5, 2006; (3) ESI cannot conduct, sponsor, file, or support a bioequivalence study or a substitutability study of a potassium chloride product to K-Dur 10 or K-Dur 20 until Schering's patent expires in 2006; (4) if ESI acquires a business, the new business could not seek FDA approval for a potassium chloride product that is 'therapeutically equivalent or bioequivalent to, or otherwise substitutable on a generic basis for, K-Dur 10 or K-Dur 20" prior to September 5, 2006; and (5) ESI cannot transfer ESI's ANDA. (CX 479).

377. The inclusion of clauses in the settlement agreements that affected ESI's exploitation of products similar to K-Dur 20 for a period of time prevent ESI from making minor, insubstantial modifications to its product and filing another ANDA with an infringing product. (SPX 1228 at 159-60 (Dey I.H.)).

6. Complaint Counsel did not prove that Schering's payment to ESI was a payment to delay entry

378. Complaint Counsel introduced fact evidence only in the form of deposition and investigational hearing testimony of Schering and ESI personnel who negotiated the settlement, and a few documents relating to the settlement negotiations. It offered opinion evidence in the form of about fifteen minutes of testimony about the ESI settlement by Professor Bresnahan. (Bresnahan, Tr. 618-40).

379. Professor Bresnahan testified that to reach a conclusion that the agreement between Schering and ESI delayed competition, he relied upon what he characterized as an "assumption" that if ESI had won its patent suit, it might have been able to enter before March 2002. (Bresnahan, Tr. 620-21). This unfounded opinion, based only on speculation, does not demonstrate that the patent case would have settled any earlier for any reason.

380. Complaint Counsel offered insufficient evidence to show that the $15 million was not

paid for the licenses to enalapril and buspirone. Dr. Levy, Complaint Counsel's valuation expert, was not asked his opinion on the value of enalapril and buspirone. Complaint Counsel offered insufficient evidence of what the fair value of enalapril and buspirone was.

381. Schering has made no sales from either enalapril or buspirone. (Schering Answer at ¶ 56). Schering has been pursuing registration of both enalapril and buspirone in Europe and anticipates filing for approval in 2002. (SPX 1242 at 133-35 (Kapur Dep.)).

382. A statement made in an investigational hearing by Michael Dey, an ESI official involved in the settlement negotiations, that "if Schering had been willing to allow [ESI] onto the market before 2004," ESI "may have" been willing to settle for less money is insufficient to demonstrate that Schering paid ESI only for delay or that the case would have settled sooner for any reason. (Bresnahan, Tr. 632-33 (quoting Dey I.H.)). This is not sufficient to prove payment only for delay.

383. Complaint Counsel offered insufficient evidence to demonstrate that the patent case would have settled without the provision for the product license.

384. Schering's expert witnesses, Robert Mnookin, testified that society benefits when settlements allow the parties to conserve resources and avoid transaction costs, which may include not only legal fees, but also the time and distraction of the parties and their personnel. (Mnookin, Tr. 2675-76.) Mnookin also testified that settlements can mitigate uncertainty and allow the parties to avoid the risks of litigation, thus creating economic efficiencies. (Mnookin, Tr. 2675-76.)

I. Whether Schering's Payments to Upsher-Smith and AHP Were for Delay

385. A patent owner is given the exclusive right to preclude others from making, selling, using or vending the subject matter of the invention covered by the claim. (35 U.S.C. § 271(a); Miller, Tr. 3310-11). To enforce a patent, the patentee is given the right to sue in a federal court for patent infringement. (35 U.S.C. § 271; 28 U.S.C. § 1338; Miller, Tr. 3316).

386. The '743 patent gives Schering the right to "exclude others from making, using, offering for sale, and selling the invention throughout the United States," together with certain additional rights provided in the statute. 35 U.S.C. § 154. The '743 patent expires on September 5, 2006. (Miller, Tr. 3311; SPX 1275 at ¶ 8). Hence, Schering has the right to exclude infringing products from the market until September 5, 2006. (Miller, Tr. 3311).

387. An applicant who has filed an ANDA with a Paragraph IV certification must notify the branded drug manufacturer and the patent holder of the filing of its ANDA, and provide a detailed statement of the factual and legal bases for the ANDA filer's opinion that the patents will not be infringed or are invalid. (21 U.S.C. § 355 (j)(2)(B)(i) and (ii); Hoffman, Tr. 2217-18).

388. Under Hatch-Waxman, the branded drug manufacturer has 45 days after receiving such notice to file a patent infringement suit against the ANDA applicant in order to automatically trigger a stay of FDA approval of the ANDA. If a patent infringement suit is filed within this 45-day window, the FDA cannot give final approval for the ANDA until the earliest of: (1) the date the patent is judicially determined to be invalid or not infringed; (2) a judicial determination of the patent litigation, or (3) the expiration of an automatic 30-month waiting period, which may be extended or shortened by the court. (Hoffman, Tr. 2218; Rosenthal, Tr. 1575-76; 21 U.S.C. § 355 (j)(5)(B)(iii)).

389. The patent holder, if successful in proving that the generic product infringes his patent in the patent infringement litigation, can keep the ANDA from being approved and enjoin the marketing of the generic product until the patent expires. (Miller, Tr. 3316-17; Rosenthal, Tr. 1576).

390. A generic drug company could be involved in patent litigation with the patent holder, and at the end of the 30-month stay of FDA approval receive final approval from the FDA for its product, but still not enter the market given the risks of patent infringement and potential treble damages. (Rosenthal, Tr. 1578-81). There are numerous situations in which companies have not gone to market with their generic alternatives, even though they have FDA approval, specifically out of fear of an adverse ruling in an ongoing patent infringement suit. (Rosenthal, Tr. 1582-87; Kerr, Tr. 6259-60; 6901-02).

391. In November 1998, Upsher-Smith received final FDA approval to market its Klor Con M20 generic version of Schering's K-Dur 20. (Dritsas, Tr. 4902-03). Shortly before June 1999, ESI received approval from the FDA for its generic version of K-Dur 20. (Hoffman, Tr. 2646). However, it would be "foolhardy" for a generic to enter the market while patent litigation is pending because of the potential "very, very severe penalties." Kerr, Tr. 6738. Paul Kralovec, Upsher-Smith's CFO, testified that for Upsher-Smith to have launched Klor Con M20 while the Schering '743 patent challenge was unresolved would have been "financial suicide." (Kralovec, Tr. 5038). ("[I]f we had lost the case, it could have been significant financial obligation for us to pay as far as damages go."). Schering's lead counsel on the patent infringement case brought by Key Pharmaceuticals against ESI Lederle, Anthony Herman, a partner at the law firm of Covington & Burling, testified that in his practice he has never encountered a generic manufacturer who sought to enter the market after the 30-month stay had expired but while patent litigation was ongoing. (Herman, Tr. 2484-2568).

392. Thus, even though Upsher-Smith and ESI had final FDA approval as of November 1998 and June 1999 respectively, it is highly unlikely that either would have marketed on those dates while patent litigation was still pending. (F. 391).

393. There is no way to determine the date or the outcome of the judicial determination of the patent litigation. Schering's expert, Mr. James O'Shaughnessy, a patent trial lawyer testified that patent litigation is by its very nature unpredictable. (CCPTB at p. 71; Miller, Tr. 7065). Schering's patent expert, Mr. Charles Miller testified there is no recognized methodology for handicapping trials or for

testing the reliability of predictions of litigation outcomes. (CCPTB at p. 73; Miller, Tr. 3296). Opinions on the merits of cases that settle before the court decides them can never be tested. (CCPTB at p. 73; Miller, Tr. 3296).

394. Complaint Counsel acknowledges that the outcome of the patent litigation cannot be predicted. (CCPTB at p. 71). Complaint counsel's patent litigation expert, Professor Martin Adelman, testified that patent infringement cases can take up to five years to litigate in some federal district courts, not including appeals. (Adelman, Tr. 7773-74). Intellectual property litigation is more uncertain than other types of litigation. The Federal Circuit, which hears intellectual property appeals, has a 50 percent reversal rate, making it extremely difficult to predict the outcomes of intellectual property litigation. (O'Shaughnessy, Tr. 7065-66).

J. 180 Day Exclusivity Period

1. No firm was actually blocked from introducing a generic 20 mEq potassium chloride supplement

395. Lawrence Rosenthal, Executive Vice President of Sales and Marketing at Andrx testified that Andrx [**redacted**] *(Rosenthal, Tr. 1553, 1591, 1734-35).* [**redacted** **redacted** **redacted**] *(Rosenthal, Tr. 1728-31).* [**redacted** **redacted** **redacted**] *(Rosenthal, Tr. 1735).*

396. Executives at Upsher-Smith were not aware of any other potential competitors blocked from the market. (Dritsas, Tr. 4667, 4686-87; Troup, Tr. 5494-95).

397. Professor Bresnahan testified that he is not aware of any potential competitors who were blocked from entering the alleged product market for K-Dur 20 as a result of the June 17, 1997 Agreement. (Bresnahan, Tr. 912). Despite the running of the 180-day period, Bresnahan admitted that there were currently three generic 20 mEq potassium tablet products on the market during the period: Warrick (Schering), Klor Con M20 (Upsher-Smith), and Qualitest. (Bresnahan, Tr. 929). Bresnahan also testified that the change in law regarding 180-day exclusivity was not attributable to Upsher-Smith's or Schering's conduct. (Bresnahan, Tr. 982).

398. Complaint Counsel introduced no evidence of any competitor blocked from entry into the market because of Upsher-Smith's 180 exclusivity.

2. The 180-day period was not discussed between Schering-Plough and Upsher Smith

399. The 180-day exclusivity period was never discussed during settlement negotiations between Schering Plough and Upsher-Smith. (Troup, Tr. 5492-93; Hoffman, Tr. 3550-51). Nowhere in Schering or Upsher-Smith documents or in the settlement agreement is the 180-day exclusivity mentioned as a consideration in creating the settlement agreement. (Bresnahan, Tr. 914-17); CX 348; Troup, Tr. 5493).

K. Monopolization

1. Market share

400. In March 1995, seventy-one percent of the potassium chloride prescriptions were for products other than K-Dur 20. (Bresnahan, Tr. 1275; CX 13 at SP 003044). In April 1996, sixty-eight percent of the potassium chloride prescriptions were for products other than K-Dur 20. (Bresnahan, Tr. 1276-1277; CX 746, CX 18). Of total prescriptions between 1994 and 1999, the total number of K-Dur 20 prescriptions was only slightly higher than the total number of generic prescriptions, with K-Dur 20 comprising 25.7% versus the generics' 24.1% (1994); K-Dur 20's 28.4% versus the generics' 27.4% (1995); K-Dur 20's 30.9% versus the generics' 28.9% (1996); K-Dur 20's 33.0% versus the generics' 31.1% (1997); K-Dur 20's 34.8% versus the generics' 32.7% (1998); and K-Dur 20's 35.8 % versus the generics 33.6% (1999). (CX 1389 at SP 23 00016).

401. As reflected in a July 1, 1996 Schering document entitled "K-Dur Marketing Research Backgrounder," K-Dur 20 represented 32 percent of total prescriptions. (CX 746 at SP 2300382). The 1998 K-Dur Marketing Plan represents that the market share for K-Dur 20 as of August 1997 was less than 38 percent. (Bresnahan, Tr. 1279; CX 747 at SP 23 00091).

402. The market share of generic potassium chloride rose as fast or faster than K-Dur 20 in every year from 1997 through 2000. CX 62 at SP 089326 for 1997 generic KCL growth. However, at the time relevant to the Bresnahan test, June 1997, generic potassium tablets/capsules were almost as large in market share as all of K-Dur 20, 31.0% of total potassium chloride prescriptions. (CX 62 at 089327). With K-Dur 20 at 33.0% of total potassium chloride prescriptions, *id.*, other brands of potassium chloride, such as K-Tab, Micro K, Micro-K 10, Klotrix, Kaon-Cl, Klotrix, Klor Con 8 and Klor Con 10, accounted for 27.6% of total potassium chloride prescriptions as of June 1997. Ray Russo testified that generics were a major competitor to K-Dur due to substitution. (Russo, Tr. 3421-2212).

403. Between 1995 and 1999, other Schering documents calculated the market share of K-Dur 20 at between 30 and 40 percent. (Bresnahan, Tr. 1169-70). No Schering documents gave Schering a 100% market share.

404. Schering's market share does not indicate that Schering had monopoly power. (Addanki, Tr. 5719, 5724, 6209; Bresnahan, Tr. 876).

2. Lack of entry barriers and the ability of rivals to expand output

405. Professor Bresnahan did not analyze entry into potassium chloride supplements by Ethex, Apothecon, ESI Lederle, Medeva or Biocraft in 1996 as part of his economic analysis in this case. (Bresnahan, Tr. 8185). Professor Bresnahan did not analyze how long it took these firms to begin selling potassium chloride. *[Bresnahan, Tr. 8185-86]*.

406. As of 1997, there were over 30 products competing in the potassium chloride market, all of which had entered at some point. (Addanki, Tr. 5721-22). A number of new competitors entered the market in recent years. (Addanki, Tr. 5721; Dritsas, Tr. 4715). Several companies entered the potassium chloride market in 1996, including Apothecon, ESI, Medeva and Biocraft. (Dritsas, Tr. 4717; USX 626; USL 15228). Apothecon in particular was a very low-priced competitor with a wide range of generic products, including 10 mEq potassium product. (Dritsas, Tr. 4717-18). There were at least two other products that had already been approved, K-Norm and K-Lease, that could enter the market, but which were not yet in the market. (CX 4 at 184403).

407. Firms already in the market could expand output. (Addanki, Tr. 5722-23). Apothecon's 10 mEq market grew 80 percent in 1998, which was a significant shift in sales of potassium chloride. (Addanki, Tr. 6177; CX 75 at USL 142364; CX 73 at USL 143202-03). In 1999, Ethex and Major increased their 10 mEq potassium chloride capsule sales revenue by 68.4 and 19.7 percent, respectively, and increased unit output by 56.6 and 6.1 percent, respectively. (CX 76 at 162110). Among 10 mEq wax matrix producers, K-Tab, Qualitest, Major and Apothecon increased unit sales by 17, 100, 51 and 60 percent, respectively. (CX 76 at 162109; Addanki, Tr. 6181; USL at 162109). Another product, Slow-K, showed a unit increase of 41% from 1994 to 1995. (Addanki, Tr. 6181; USX 380).

408. Complaint Counsel presented no evidence that Schering had any ability to restrict the output of the more than 20 firms selling therapeutically equivalent potassium chloride supplements.

3. Sales of K-Dur were expanding

409. Schering's documents reflect that Schering was seeking to expand sales and to engage in advertising and promotional activities that stimulate demand for the product. (Addanki, Tr. 5744). Such activities have the effect of expanding output. (Addanki, Tr. 5744). Dr. Addanki analyzed Schering's output as part of his analysis of whether Schering had monopoly power. (Addanki, Tr. 5744).

410. Schering's sales of K-Dur 20 did expand. From 1990-1996, K-Dur 20 grew more

rapidly in units than did the rest of the potassium chloride market. (CX 79 at USL 138066). Schering's sales continued to expand between 1996 and 2000. (Bresnahan, Tr. 8181). According to Professor Bresnahan, between 1997 and 2001, K-Dur output increased by one-quarter (25 percent). (Bresnahan, Tr. 8181).

411. Schering outspent all of its potassium supplement competitors combined by more than a 4 to 1 margin on advertising and physician awareness activities. Addanki, Tr. 5726-28. Schering outspent Upsher-Smith in its marketing of Klor Con 10 by a factor of 100 to 1. (Bresnahan, Tr. 734). (CX 746 at 00384 (Appendix A-5, K-Dur Marketing Research Backgrounder, July 1, 1996). This extensive advertising campaign was designed to compete against generic forms of potassium supplements. (Addanki, Tr. 5730-32).

412. Schering invested millions in promotion and field force effort, with a number of significant promotional programs over that approximate ten-year period that heavily promoted and marketed K-Dur 10 and K-Dur 20. (Russo, Tr. 3418-19, 3425-26).

413. Schering's executives recognized that marketing was a key to gaining market share from the other potassium firms: "Detailing by sales representatives is the most effective way to educate providers on the importance of K-DUR and move market share." CX 18 (1997 K-DUR Marketing Plan, Sept. 10, 1996 at SP 23 00039).

4. Bresnahan's conclusion that K-Dur 20 was a monopoly was not based on a thorough examination of the potassium supplement industry

414. Complaint Counsel's economic expert, Professor Bresnahan opined that Schering has monopoly power in the K-Dur 20 market. Under Professor Bresnahan's test, the issue of whether or not the June 1997 Settlement Agreement of the '743 patent infringement case was "anticompetitive" turns on the following three questions:

(1) Does the patent holder have monopoly power?
(2) Is there a threat to that power? The threat need not be a certainty; all that is required is that there be a probability of entry and competition.
(3) Is there a payment to the potential entrant to delay its entry? The payment can take any form, as long as it is a net positive value to the entrant.

Bresnahan, Tr. 655-58.

415. The three elements of the Bresnahan Test are to be assessed as of the date the

Agreement was entered into, June 17, 1997. Bresnahan, Tr. 659.

416. If Schering-Plough was not proven to be a monopolist in June 1997, then the first prong of Bresnahan's test would not be satisfied. Bresnahan, Tr. 660-661.

417. Bresnahan also testified that if the patent holder did not have monopoly power, then the agreement would not be anticompetitive. Bresnahan, Tr. 419 ("Only if there's some competition absent, which might happen, can you have an anti-competitive act. If rather than being products with market power or monopoly power they were products that already had enough competition to constrain them, an anti-competitive act couldn't – wouldn't do anything to harm competition.").

418. Professor Bresnahan incorrectly determined that Schering had unlawful monopoly power. (F. 30).

419. Bresnahan did not study systematically Schering's pricing of K-Dur 20, Upsher-Smith's pricing for its Klor Con 10 or Klor Con 8 potassium products, or the pricing of other potassium manufacturers' potassium products because he did not have access to a data set of such pricing data for the period 1995 to 2001. (Bresnahan, Tr. 834-35).

420. Bresnahan did not calculate the pricing differential (if any) between the various firms' potassium products and the price charged by Schering for equivalent does of K-Dur 20. (Bresnahan, Tr. 1071; USX 72).

421. Bresnahan conducted no econometric analyses comparing sales of 10 mEq tablets with sales of 20 mEq tablets or comparing the sales of 20 mEq potassium powders with 20 mEq tablets. (Bresnahan, Tr. 685-89).

422. Bresnahan did not study the cross-elasticity of demand between K-Dur 20 and other products. (Bresnahan, Tr. 810-11). Bresnahan did not study the direct price elasticity between K-Dur 20 and other potassium products.

423. Bresnahan did not attempt a study of the costs of Schering's K-Dur 20 products or the relationship between Schering's costs for producing K-Dur 20 and the price Schering charged for K-Dur 20. (Bresnahan, Tr. 834, 1274, 1003, 8148-50).

424. Bresnahan did not study the level of rebates that Schering gave back to its customers who purchased K-Dur 20 potassium products in 1995, 1996 or 1997. (Bresnahan, Tr. 702). Bresnahan conceded that there was significant promotional spending by Schering to promote its K-Dur 20 product, but he did not study this spending. (Bresnahan, Tr. 651-52, 735, 763, 1176).

425. Bresnahan did not make any formal study of the impact of Schering-Plough's marketing on the total market demand for potassium chloride products. (Bresnahan, Tr. 651-52).

426. Bresnahan did not study "first mover effects," the effects of being the first to sell a particular product – of K-Dur 20. (Bresnahan, Tr. 653).

427. Bresnahan made no analysis of promotional expenditures by Schering on K-Dur 20 in his report. (Bresnahan, Tr. 734-35). But Bresnahan acknowledged that Schering outspent Micro-K in by a factor of ten to one and outspent Upsher-Smith in its marketing of Klor Con 10 by a factor of 100 to one. (Bresnahan, Tr. 734.)

428. Bresnahan had no access to monthly sales data or pricing data from any firm aside from Respondents. (Bresnahan, Tr. 867-68).

429. Bresnahan did not review any marketing documents from other potassium supplement manufacturers. (Bresnahan, Tr. 867). Bresnahan did not systematically evaluate the levels of promotional spending by other potassium supplement firms over the period 1997 to 2001, such as the manufacturers of the branded potassium products Micro-K, Slow K, K-Tab. (Bresnahan, Tr. 8134).

430. Professor Bresnahan was unaware of clinical trials that compare patient compliance attributes of taking two 10 mEq tablets versus one 20 mEq tablet. (Bresnahan, Tr. 692).

431. Bresnahan did not evaluate or analyze the fact that four firms entered the U.S. potassium chloride market in 1996. (Bresnahan, Tr. 8184-85).

III. CONCLUSIONS OF LAW AND ANALYSIS

A. Jurisdiction

The Complaint charges Schering and Upsher-Smith ("Respondents") with violations of Section 5 of the FTC Act. 15 U.S.C. § 45. Section 5 of the FTC Act gives the Commission jurisdiction to prevent unfair methods of competition by "persons, partnerships, or corporations." 15 U.S.C. § 45. Schering and Upsher-Smith are corporations engaged in the interstate sale of pharmaceutical products. F. 1-9. The Commission has jurisdiction over acts or practices "in or affecting commerce," providing that their effect on commerce is substantial. *McLain v. Real Estate Bd. of New Orleans, Inc.*, 444 U.S. 232, 241-42 (1980); *Hosp. Bldg. Co. v. Trs. of Rex Hosp.*, 425 U.S. 738, 745-46 (1976). Respondents' challenged activities relating to the sale of 20 mEq potassium supplements have an obvious nexus to interstate commerce. F. 1-9. Accordingly, the Commission has jurisdiction over Respondents and the subject matter of this proceeding.

B. Burden of Proof

An initial decision must be supported by "reliable, probative and substantive evidence." Commission Rule 3.51(c), 16 C.F.R. § 3.51(c)(1). "Substantial evidence is more than a mere scintilla. It means such evidence as a reasonable mind would accept as adequate to support a conclusion. It must be of such character as to afford a substantial basis of fact from which the fact in issue can be reasonably inferred. It excludes vague, uncertain or irrelevant matter. It implies a quality and character of proof which induces conviction and makes a lasting impression on reason." *Carlay Co. v. FTC*, 153 F.2d 493, 496 (7th Cir. 1946).

"Counsel representing the Commission . . . shall have the burden of proof, but the proponent of any factual proposition shall be required to sustain the burden of proof with respect thereto." Commission Rule 3.43(a), 16 C.F.R. § 3.43(a). This is consistent with Section 556(d) of the Administrative Procedure Act ("APA"): "Except as otherwise provided by statute, the proponent of a rule or order has the burden of proof." 5 U.S.C. § 556(d). Further, under the APA, an order may not be issued "except on consideration of the whole record or those parts thereof cited by a party and supported by and in accordance with the reliable, probative, and substantial evidence." 5 U.S.C. § 556(d); *see also In re Standard Oil Co. of California*, 84 F.T.C. 1401, 1446-47 (1974) (finding that under the APA, "[c]omplaint counsel have failed to satisfy their burden to establish by 'reliable, probative and substantial evidence' that the results mentioned in the preceding findings do not support [respondent's] advertising claims").

"[T]he antitrust plaintiff must present evidence sufficient to carry its burden of proving that there was [an anticompetitive] agreement." *Monsanto Co. v. Spray-Rite Serv. Corp.*, 465 U.S. 752, 763 (1984). The government bears the burden of establishing a violation of antitrust law. *United States v. E.I. duPont de Nemours & Co.*, 366 U.S. 316, 334 (1961).

C. Statutory and Regulatory Framework

As set forth in the findings of fact, this case arises from the agreements to settle patent infringement suits brought by Schering, as the manufacturer of the brand name drug K-Dur 20, protected by the '743 patent, against Upsher-Smith and against ESI, as manufacturers of generic drugs, each of which had filed an Abbreviated New Drug Application ("ANDA") with the FDA that contained a Paragraph IV certification that the '743 patent was invalid or not infringed. In order to fully understand the issues involved herein, an overview of the statutory and regulatory framework from which the challenged agreements arose is necessary.

1. Patent Law

Article I, Section 8, Clause 8 of the U.S. Constitution empowers Congress "[t]o promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries." Patent laws confer upon the patentee the exclusive right to make, use or sell the patented invention during the patent term, and authorize the patentee to exclude others – for example, by the initiation of infringement litigation – from manufacturing, using and/or selling the invention during the patent term. *See* 35 U.S.C. § § 101, 154, 271, 281. (The "Patent Act," 35 U.S.C. § § 1 *et seq.*). The Patent Act also expressly provides that a patent is assignable: the patent owner may "grant and convey an exclusive right under his application for patent . . . to the whole or any specified part of the United States." 35 U.S.C. § 261.

The exclusive rights provided for in patent laws are intended to offer an incentive for investors to take risks in performing research and development. *Kewanee Oil Co. v. Bicron Corp.*, 416 U.S. 470, 480-81, 484 (1974); *Sears, Roebuck & Co. v. Stiffel Co.*, 376 U.S. 225, 229-30 (1964). The Federal Trade Commission recognizes the role of intellectual property laws in promoting innovation and enhancing consumer welfare.

> The intellectual property laws provide incentives for innovation and its dissemination and commercialization by establishing enforceable property rights for the creators of new and useful products, more efficient processes, and original works of expression. In the absence of intellectual property rights, imitators could more rapidly exploit the efforts of innovators and investors without competitors. Rapid imitation would reduce the commercial value of innovation and erode incentives to invest, ultimately to the detriment of consumers.

U.S. Dep't of Justice and Federal Trade Comm'n, *Antitrust Guidelines for the Licensing of Intellectual Property* § 1.0 (1995), *reprinted in* 4 Trade Reg. Rep. (CCH) ¶ 13,132, at 20,734. The role of patent law in interpreting claims brought under antitrust law is discussed more fully in Section E.4.b. *infra.*

2. The Hatch-Waxman Act

The Federal Food, Drug, and Cosmetic Act ("FFDCA"), as amended by the Drug Price Competition and Patent Term Restoration Act of 1984, authorizes the Food and Drug Administration ("FDA") to regulate the marketing and sale of drugs in the United States. 21 U.S.C. §§ 301-397.

An applicant seeking to market a new brand-name drug usually must prepare a New Drug Application ("NDA") for FDA consideration. 21 U.S.C. § 355. Preparing an NDA is frequently a time-intensive and costly process, because among other things, it must contain detailed clinical studies of the drug's safety and efficacy. F.13; *Mylan Pharmaceuticals, Inc. v. Thompson*, 268 F.3d 1323, 1325 (Fed. Cir. 2001). The NDA must also include a list of patents which claim the drug. 21 U.S.C. § 355(b)(1). If the FDA approves the NDA, it publishes a listing of the drug and patents on the drug's approved aspects in Approved Drug Products with Therapeutic Equivalence Evaluations, otherwise known as the "Orange Book." 21 U.S.C. § 355(j)(7)(A)(iii).

In 1984, Congress enacted the Drug Price Competition and Patent Term Restoration Act, known as the Hatch-Waxman Act, which simplified the procedure for obtaining approval of generic drugs. Pub. L. No. 98-417, 98 Stat. 1585 (1984), codified at 21 U.S.C. § 355. Under the Hatch-Waxman Act, manufacturers of generic drugs are required to submit an Abbreviated New Drug Application ("ANDA"). 21 U.S.C. § 355(j). An ANDA offers an expedited approval process for generic drug manufacturers. *Mylan Pharmaceuticals,* 268 F.3d at 1325. Instead of filing a full NDA with new safety and efficacy studies, in an ANDA a generic manufacturer may rely in part on the pioneer manufacturer's work by submitting data demonstrating the generic product's bioequivalence with the previously approved drug. 21 U.S.C. § 355 (j)(2)(A).

When a brand name drug is protected by one or more patents, an ANDA applicant that intends to market its generic product prior to expiration of any patent must certify that the patent on the brand name drug is invalid or will not be infringed by the manufacture, use, or sale of the drug for which the ANDA applicant seeks approval. 21 U.S.C. §§ 355(j)(2)(A)(vii)(I) to (IV). This is known as a "Paragraph IV Certification." If the ANDA contains a Paragraph IV certification, the ANDA applicant must provide notice to each owner of the patent that is the subject of the certification and to the holder of the approved NDA to which the ANDA refers. 21 U.S.C. § 355(j)(2)(B)(i). Upon receiving notice of a Paragraph IV certification, the patent holder has 45 days in which to file a patent infringement suit against the generic manufacturer. 21 U.S.C. § 355(j)(5)(B)(iii). If a patent infringement suit is initiated against the ANDA applicant, the FDA must stay its final approval of the ANDA for the generic drug until the earliest of (1) the patent expiration, (2) a judicial determination of the patent litigation, or (3) the expiration of a 30-month waiting period. 21 U.S.C. § 355(j)(5)(B)(iii).

The statutory framework of the Hatch-Waxman Act creates the potential for costly patent litigation against the generic maker that files a Paragraph IV-certified ANDA. *Mylan Pharms., Inc. v. Thompson*, 139 F. Supp. 2d 1, 7 (D.D.C. 2001), *rev'd on other grounds*, 268 F.3d 1323, 1325

(Fed. Cir. 2001). As an incentive to the first generic maker to expose itself to the risk of costly patent litigation, Hatch-Waxman provides that the first to file a Paragraph-IV certified ANDA ("the first filer") is eligible for a 180 day period of exclusivity ("the 180 day Exclusivity Period"). *Id.*; 21 U.S.C. § 355(j)(5)(B)(iv). That is, during those 180 days, the FDA will not approve any other ANDA for the same generic product until the earlier of the date on which (1) the first firm begins commercial marketing of its generic version of the drug, or (2) a court finds the patent claiming the brand name drug are invalid or not infringed. *Mylan,* 139 F. Supp. 2d at 7; 21 U.S.C. § 355(j)(5)(B)(iv).

The provisions of the Hatch-Waxman Amendments "emerged from Congress' efforts to balance two conflicting policy objectives: to induce name brand pharmaceutical firms to make the investments necessary to research and develop new drug products, while simultaneously enabling competitors to bring cheaper, generic copies of those drugs to market." *Abbott Labs. v. Young,* 920 F.2d 984, 991 (D.C. Cir. 1990) (Edwards, J., dissenting on other grounds). Thus, although the declared purpose of this legislation was to "make available more low cost generic drugs by establishing a generic drug approval procedure for pioneer drugs first approved after 1962[,]" H.R. Rep. No. 98-857, pt. 1 at 14 (1984), 1984 U.S.C.C.A.N. 2647, Congress expressly recognized the importance of patents.

> Patents are designed to promote innovation by providing the right to exclude others from making, using, or selling an invention. They enable innovators to obtain greater profits than could have been obtained if direct competition existed. These profits act as incentives for innovative activities.

H.R. Rep. No. 98-857, pt. 1 at 17, 1984 U.S.C.C.A.N. at 2650. Hatch-Waxman does not compel the holder of a valid patent to relinquish the rights it holds pursuant to that patent prior to the expiration date of that patent.

D. Relevant Geographic and Product Market

The determination of the relevant market is essential to all four violations alleged in the Complaint. Violations One and Two of the Complaint allege that the agreements entered into between Schering and Upsher-Smith and between Schering and AHP (ESI) unreasonably restrained commerce. Complaint ¶ 68, 69. Establishing the relevant market is the starting point in a rule of reason case. *California Dental Ass'n v. FTC*, 224 F.3d 942, 952 (9th Cir. 2000) (proof of relevant geographic and product market necessary for proving injury to competition in rule of reason case); *Stratmore v. Goodbody*, 866 F.2d 189, 194 (6th Cir. 1989) ("The starting point in a rule of reason case is to identify the relevant product and geographic markets."). *See also Twin City Sportservice, Inc. v. Finley & Co., Inc.*, 676 F.2d 1291, 1300 (9th Cir. 1982) ("It is also worth noting that the effort to find a relevant market in this litigation was not performed without purpose. A definition of a relevant market was necessary in order to assess possible Sherman Act violations."). The plaintiff bears the burden of proof of defining the relevant market. *Brokerage Concepts v. U.S. Healthcare, Inc.*, 140 F.3d 494,

513 (3rd Cir. 1998) ("The burden is on the plaintiff to define both components [geographic and product] of the relevant market."); *Double D Spotting Serv. v. Supervalu, Inc.*, 136 F.3d 554, 560 (8th Cir. 1998). As discussed in Section E.4, *infra*, rule of reason analysis is required in this case.

Determination of relevant product market is an especially important inquiry here, where Complaint Counsel's proof that the agreements are anticompetitive is based on a finding that Schering had monopoly power. Complaint Counsel's economic expert, Professor Bresnahan, used a three-part test to determine whether the patent settlements between Schering and Upsher-Smith and between Schering and AHP (ESI) were anticompetitive. F. 414. The three-part test asks:

(1) Does the patent holder have monopoly power?
(2) Is there a threat to that power? The threat need not be a certainty; all that is required is that there be a probability of entry and competition.
(3) Is there a payment to the potential entrant to delay its entry? The payment can take any form, as long as it is a net positive value to the entrant.

F. 414. If Schering-Plough was not proven to be a monopolist in June 1997, then the first prong of Bresnahan's test would not be satisfied. F. 415-16. Bresnahan also testified that if the patent holder did not have monopoly power, then the agreement would not be anticompetitive. F. 414. ("Only if there's some competition absent, which might happen, can you have an anti-competitive act. If rather than being products with market power or monopoly power they were products that already had enough competition to constrain them, an anti-competitive act couldn't – wouldn't do anything to harm competition."). By making monopoly power an integral part of that expert's testimony, a determination of relevant market is an integral part of Complaint Counsel's case.

In its post trial briefs, Complaint Counsel suggests that it need not define the relevant product market. Complaint Counsel asserts that direct evidence of anticompetitive effects "obviates the need, as a matter of law, to undertake the market definition exercise respondents advance." Complaint Counsel's Post Trial Brief ("CCPTB") at 47. Complaint Counsel argues that the Supreme Court "in *FTC v. Indiana Fed'n of Dentists* . . . made clear that proof of actual anticompetitive effects make market *definition* and market *power* inquiries unnecessary." CCPTB at 83. However, *Indiana Fed'n of Dentists* does not relieve Complaint Counsel of its obligation to *define* the relevant market. Rather, *Indiana Fed'n of Dentists* holds that proof of actual detrimental effects can obviate the need for an inquiry into market *power*. *FTC v. Indiana Fed'n of Dentists* 476 U.S. 447, 460-61 (1986). Complaint Counsel further relies on *Toys "R" Us, Inc. v. FTC*, which holds that, "in a properly defined relevant market," direct evidence of anticompetitive effects is one way to prove market power. 221 F.3d 928, 937 (7th Cir. 2000). Thus, while *Toys R' Us* may relieve Complaint Counsel of proving market power, it does not relieve Complaint Counsel from properly defining the market.

Further, Complaint Counsel's suggestion that, because it has presented evidence of anticompetitive effects, it need not present evidence of monopoly power is illogical. Complaint Counsel cannot prove an effect without first proving by market definition what is claimed to be affected.

Moreover, Complaint Counsel's position that it need not prove or define the relevant market clearly undermines the theory and opinions of Complaint Counsel's expert witness, as his test is premised on finding a monopoly and a threat to the monopoly. *See* CX 1590 (the "three pies" chart); F. 414-16 (if Schering was not a "monopolist" then the Bresnahan Test is not satisfied for anticompetitive agreements).

To prove that the agreements did have anticompetitive effects, Complaint Counsel relied on the testimony of Professor Bresnahan who reached this conclusion based on his finding that Schering was a monopoly and had market power. Without a proper market definition, Bresnahan's opinions are without proper foundation and lose credibility. The case that was brought involved proof of a relevant product market and the expert premised his analysis on the proof of a monopolist within a relevant product market. Accordingly, Complaint Counsel's proof was not built upon a proper determination of market power or monopoly power.

Violations Three and Four of the Complaint allege that Schering has monopoly power in the manufacture and sale of potassium chloride supplements approved by the FDA and the narrower markets contained therein and engaged in conduct to unlawfully preserve such monopoly power and that Schering conspired separately with Upsher-Smith and AHP to monopolize the relevant markets. Complaint ¶ 70, 71. Establishing the relevant market is also necessary to assess whether a defendant possesses monopoly power. *Spectrum Sports, Inc., v. McQuillan*, 506 U.S. 447, 455-56 (1993) (to establish monopolization or attempted monopolization it is "necessary to appraise the exclusionary power of the illegal patent claim in terms of the relevant market for the product involved.") (citations omitted); *Walker Process Equip. Inc., v. Food Mach. and Chem. Corp.*, 382 U.S. 172, 177 (1965) ("Without a definition of that market there is no way to measure [the respondent's] ability to lessen or destroy competition.").

Complaint Counsel bears the burden to establish the relevant market, which is "an indispensable element of any monopolization case." *Intergraph Corp. v. Intel Corp.*, 195 F.3d 1346, 1355 (Fed Cir. 1999); *see Elliot v. United Ctr.*, 126 F.3d 1003, 1003-04 (7th Cir. 1997); *Alcatel USA, Inc. v. DGI Techs., Inc.*, 166 F.3d 772, 781 (5th Cir. 1999); *H.J., Inc. v. Int'l Tel. & Tel.*, 867 F.2d 1531, 1537 (8th Cir. 1989) ("The plaintiff carries the burden of describing a well-defined relevant market, both geographically and by product, which the defendants monopolized."). Complaint Counsel did not meet its burden of establishing the relevant product market.

1. Geographic Market

The relevant geographic market is the region "in which the seller operates, and to which the purchaser can practicably turn for supplies." *Tampa Elec. Co. v. Nashville Coal Co.*, 365 U.S. 320, 327 (1961). Purchasers of potassium chloride supplements in the United States can purchase these products only from manufacturers who market in the United States, and whose products have been approved for sale in the United States by the FDA. F. 26. Schering and Upsher-Smith have FDA approval and do sell their potassium chloride supplements in the United States. F. 25-28. Therefore, the relevant geographic market for assessing the allegations of the Complaint is the United States. F. 25-28

2. Product Market

The Complaint alleges:

> The relevant markets are the manufacture and sale of all potassium chloride supplements approved by the FDA, and narrower markets contained therein, including manufacture and sale of 20 milliequivalent extended-release potassium chloride tablets and capsules.

Complaint ¶ 21. At trial, Complaint Counsel's position was that the relevant product market is 20 milliequivalent potassium chloride tablets and capsules. F. 30.

Respondents argue that the evidence does not support Complaint Counsel's alleged product market of 20 mEq sustained release potassium chloride tablets.

The greater weight of credible evidence shows that the relevant product market is all oral potassium supplements that can be prescribed by a physician for a patient in need of a potassium supplement. F. 29-118.

a. Functional interchangeability of potassium supplements

The relevant market for purposes of antitrust litigation is the "area of effective competition" within which the defendant operates. *Tampa Elec.*, 365 U.S. at 327-28. As the Supreme Court explained in *E.I. du Pont Nemours*:

> The 'market' which one must study to determine when a producer has monopoly power will vary with the part of commerce under consideration. The tests are constant. The market is composed of products that have reasonable interchangeability for the purposes for which they are produced -- price, use and qualities considered.

351 U.S. at 404.

In defining a relevant product market, courts look to determine if products are "reasonably interchangeable." Courts consistently look to reasonable interchangeability as the primary indicator of a product market. *See United States v. Continental Can Co.*, 378 U.S. 441, 453-57 (1964) (glass jars and metal cans sufficiently interchangeable to be in the same market); *Tunis Bros. Co. v. Ford Motor Co.*, 952 F.2d 715, 722, 726 (3d Cir. 1991) (relevant product market consisted of "Ford and other comparable tractors" based on reasonable interchangeability); *Kaiser Aluminum & Chem. Corp. v. F.T.C.*, 652 F.2d 1324, 1330 (7th Cir. 1981) ("the clearest indication that products should be included in the same market is if they are actually used by consumers in a readily interchangeable manner"); *F.T.C. v. R.R. Donnelley & Sons Co.*, 1990-2 Trade Cas. (CHH) ¶ 69,239 at 64,854-55 (D.D.C. 1990) (offset and gravure print processes interchangeable and in the same product market); *In re Liggett & Myers, Inc.*, 87 F.T.C. 1074, 1163 (1976) (premium and economy dog food found to be in the same market in view of interchangeability of use). *See also In re Cardizem CD Antitrust Litig.*, 200 F.R.D. 297, 310-11 (E.D. Mich. 2001) ("The pharmaceutical market is fundamentally different from the market for other products. In the pharmaceutical industry, there is a government-assured complete interchangeability of drug products.").

The first step in determining interchangeability of potassium supplements is to determine who makes the selection regarding which potassium supplement to be used. Potassium supplements are given by doctors to hypertensive patients to treat or prevent hypokalemia, a lack of potassium caused by the use of diuretic medications. F. 38. The doctor is the most important link in the chain of those involved in the decision of which potassium supplement to prescribe. F. 38, 118. The doctor diagnoses that a potassium supplement is required for the patient. F. 38, 118. The doctor is the one who is knowledgeable about what products/drugs are available to meet the patient's needs. Professor Bresnahan acknowledged that the demand for potassium begins with a patient presenting himself/herself to a doctor and receiving a potassium supplement prescription. F. 38, 118.

There is insufficient evidence to show that the patient has any control over this decision. After the doctor makes the diagnosis and writes the prescription, the pharmacy fills that prescription. F. 39, 118. The patient and/or medical insurance pay for the prescription. The credible evidence demonstrates that the pharmacist has little or no control over which potassium supplement product to dispense. In many states, the law allows no change. In some states, a generic may be substituted. F. 22-23. Thus, between the doctor, the pharmacist, and the patient, it is the doctor who exercises most, if not all, control over which potassium supplement product is selected for any given patient. Accordingly, the only logical place from which to determine the relevant product market is from the array of therapeutically substitutable choices available to the doctor.

In 1997, more than 25 firms sold potassium supplements, including Schering-Plough and Upsher-Smith. F. 31-37. All forms of potassium are considered to be therapeutically equivalent; they all deliver potassium. F. 43-48. The high degree of interchangeability between various potassium products, including 20 mEq sustained-release products, was confirmed by Complaint Counsel's fact witnesses, Dean Goldberg and Russell Teagarden. F. 49-55.

Dean Goldberg of United HealthCare ("UHC") testified that there is a substantial "degree of choice" in the potassium chloride market. F. 50. Goldberg further testified that most, if not all, potassium chloride products are therapeutically equivalent. F. 50. Goldberg also confirmed that reasonable substitutes exist to the 20 mEq sustained release potassium chloride product and, that physicians consistently prescribe those products. F. 50.

Russell Teagarden, a licensed pharmacist, of Merck-Medco, the nation's largest Physician Benefits Manager ("PBM"), testified that there is no separate listing for 20 mEq potassium chloride products on its formulary. F. 51-54. If Merck-Medco and other PBMs thought that unique characteristics existed that warrant a separate market for just 20 mEq sustained-release potassium chloride products, there would be a separate classification on Merck-Medco's formulary. F. 51-54. He also testified that at many times, for example in 1993, 1994, and 1995-96, Merck-Medco did not even list K-Dur 20 as a prescription drug on its formulary. F. 51-54. Instead, Merck-Medco's formularies at those times simply listed other potassium supplements sold by other pharmaceutical companies. F. 51.

In addition, Professor Bresnahan conceded that K-Dur 20, Klor Con 8 and 10, Micro-K, K-Tab, Slow K, K-Lyte, Klotrix, Apothecon KCl and Ethex potassium chloride were all prescribed for the same "purpose" of treating potassium deficiency. F. 87.

The evidence demonstrates that many types of potassium supplements are interchangeable with K-Dur 20. Accordingly, because there are many other acceptable potassium supplements which may be substituted, the relevant market is not limited to 20 mEq potassium supplements.

b. Pricing of potassium supplements

Complaint Counsel has taken the position that the proper inquiry to determine the relevant market is not whether the products are functionally interchangeable, but whether the products constrained each other's prices. CCPTB at 85-86. Complaint Counsel relies on *In re Coca-Cola Bottling Co. of the Southwest*, which held that the relevant inquiry in conducting an antitrust analysis is not whether "certain [products] competed against each other in a broad sense," but instead whether such "products were sufficiently substitutable that they could constrain" each other's pricing. 118 F.T.C. 452, 541-42 (1994). *Coca-Cola Bottling* was a merger case with an overriding focus on the combined power to influence the market which would be wielded by the proposed merger partners. In addition, as stated below, *Coca-Cola Bottling* cited *Brown Shoe* with approval. *Id.*

The Commission has not limited the inquiry to whether certain products are sufficiently substitutable that they could constrain each others products. *E.g.*, *Int'l Assoc. of Conference Interpreters*, 123 F.T.C. 465, 640 (1997) (Section 2 case) (the Commission generally examines what products are reasonable substitutes for one another through a consideration of price, use and qualities). Moreover, in the context of prescription of drugs, the Commission in, *In re Warner Lambert Co.*, 87

F.T.C. 812, 877 (1976), found that branded and unbranded thyroid products constituted a single product market despite "lack of price elasticity."

Complaint Counsel cites to numerous cases for the assertion that a price difference can lead to a finding of a separate product market. CCPTB at 85 and 86 n.33. But these cases utilize the Supreme Court's *Brown Shoe* analysis and virtually always consider other *Brown Shoe* factors such as special characteristics, industry recognition, distinct customers, and other *Brown Shoe* "practical indicia." *See FTC v. Staples*, 970 F. Supp. 1066, 1075-80 (D.D.C. 1997) (extensive reliance on *Brown Shoe* "practical indicia" for product market, including special characteristics of office superstores, industry recognition, extensive evidence of cross-elasticity of demand); *FTC v. Cardinal Health, Inc.*, 12 F. Supp. 2d 34, 45 (D.D.C. 1998) (relies on *Brown Shoe*, in particular unique features of the drug wholesaling industry, including specialized customers such as hospitals dependent on wholesalers, to find a distinct product market; merger case); *Coca-Cola*, 118 F.T.C. at 541-42 (citing *Brown Shoe* with approval and conducting extensive review of sales channel differences between home market and cold drink market); *In re Olin Corp.*, 113 F.T.C. 400, 603 (1990) (liquid chlorine pool bleach in separate market from dry pool sanitizer where "physical and technical characteristics" differed; chemical concentration of active ingredient, chlorine, differed; shelf life differed; and customers were geographically distinct and functionally distinct – pool service companies vs. homeowners).

The pharmaceutical industry case Complaint Counsel cites, *Smith-Kline Corp. v. Eli Lilly & Co.*, 575 F.2d 1056 (3d Cir. 1978), found cephalosporin antibiotics to be a distinct product market from other antibiotics not because of price difference, but because, applying *Brown Shoe*, the Third Circuit found cephalosporins had special characteristics. Cephalosporins were (a) broad spectrum antibiotics "effective against a wider range of infectious organisms than are other antibiotics;" *id.* at 1064; ("cephalosporins are effective against the organism Klebsiella" staphylococci and gram negative bacilli, as contrasted with penicillins that "tend to be active against one but not the other"); (b) used for specialized patients: "cephalosporins are generally used in treating penicillin-allergic patients," *id.* at 1064; and (c) were "less toxic" than some other anti-infectives. *Id.* These "sufficiently unique features" are not present here where K-Dur 20 and other potassium chloride products contain precisely the same therapeutic agent and are "therapeutically equivalent."

c. Complaint Counsel did not prove a single brand market

Although Complaint Counsel claims it does not have to prove relevant market, Complaint Counsel alleges that Schering had market power and a monopoly in the market for 20 mEq potassium supplement. However, at all times relevant, Schering had a valid patent for the 20 mEq potassium supplement. Therefore any monopolization or market power existed by virtue of the '743 patent. *See Jefferson Parish Hosp. Dist. No. 2 v. Hyde*, 466 U.S. 2, 16 (1984) (When the government has granted the seller "a patent or similar monopoly over a product, it is fair to presume that the inability to buy the product elsewhere gives the seller market power.")

d. Complaint Counsel did not present pricing data to support an *Indiana Federation of Dentists* analysis

Complaint Counsel cites to *Indiana Fed'n of Dentists*, 476 U.S. at 460-61, to show that "proof of actual detrimental effects . . . can obviate" the need for an inquiry into market power. CCPTB at 83. However, as discussed *infra*, the pricing evidence offered by Complaint Counsel's expert is inadequate in many respects and does not support an *Indiana Federation* analysis.

Complaint Counsel's expert Professor Bresnahan did not study systematically Schering's pricing of K-Dur 20, Upsher-Smith's pricing for Klor Con 10 or Klor Con 8 potassium products and did not have or offer pricing data on other competitors. F. 419. Complaint Counsel's expert did not study the costs of Schering or other potassium supplement producers. F. 423. Complaint Counsel's expert did not study rebates, promotional allowances, or free goods, that affect the net pricing that Schering's customers received. F. 424.

Although Complaint Counsel sought to demonstrate that the price of K-Dur 20 rose, proof of one firm's prices rising, in a vacuum, cannot lead to any inference as to the relative price increase or decrease of Schering's K-Dur 20 product over time. An analysis under *Indiana Federation* requires that more be proven. *See Levine v. Central Florida Med. Affiliates*, 72 F.3d 1538, 1552 (11th Cir. 1996) (plaintiff's proof that defendant's prices (doctor's fees) had risen was legally insufficient because there was no proof of other doctors' fees or costs to compare those price increases with). Also, potassium purchasers had more than 20 firms to choose from to obtain therapeutically equivalent product, F. 31-37, clearly sufficient alternative choices to defeat an *Indiana Federation* claim. *See Flegel v. Christian Hosp., N.E.-N.W.*, 4 F.3d 682, 689 (8th Cir. 1993) (plaintiff provided insufficient evidence of detrimental effects under *Indiana Federation* where patients had the option of receiving care at other hospitals).

e. Complaint Counsel did not present a legally cognizable submarket under *Brown Shoe*

Brown Shoe v. United States, 370 U.S. 294, 325 (1962) introduced into merger law the concept of submarkets within the relevant market. *Rothery Storage & Van Co. v. Atlas Van Lines, Inc.*, 792 F.2d 210, 218 (D.C. Cir. 1986). The Supreme Court identified several "practical indicia" that may be used to delineate submarkets:

> The boundaries of such a submarket may be determined by examining such practical indicia as industry or public recognition of the submarket as a separate economic entity, the product's peculiar characteristics and uses, unique production facilities, distinct customers, distinct prices, sensitivity to price changes, and specialized vendors.

Brown Shoe, 370 U.S. at 325. "These indicia seem to be evidentiary proxies for direct proof of substitutability." *Rothery Storage*, 792 F.2d at 218; *H.J., Inc.*, 867 F.2d at 1540 ("[T]he same proof which establishes the existence of a relevant product market also shows (or in this case, fails to show) the existing of a product submarket.").

Complaint Counsel argues that a *Brown Shoe* analysis is not appropriate. Nevertheless, the Complaint specifically defined 20 milliequivalent extended-release potassium chloride tablets and capsules as a "narrower market" contained within the relevant market of all potassium chloride supplements approved by the FDA. Complaint at ¶ 21. Thus to determine whether "20 milliequivalent extended-release potassium chloride tablets and capsules" is a separate submarket, a *Brown Shoe* analysis follows.

1. "Industry Or Public Recognition" Of Distinct Markets

Complaint Counsel did not prove that the industry recognizes the existence of distinct markets between potassium chloride products and 20 mEq sustained-release potassium chloride tablets and capsules. Complaint Counsel's fact witnesses from Merck-Medco and United HealthCare, two important industry participants, provided no testimony to prove that the industry recognizes 20 mEq sustained-release potassium chloride products as a separate and distinct market from the overall potassium chloride market. F. 49-55.

In applying this factor, courts look to industry publications, the classification of a class of products in a separate class, perceptions of customers and the firms' marketing documents. *See, e.g., Moore Corp. v. Wallace Computer Servs., Inc.*, 907 F. Supp. 1545, 1576 (D. Del. 1995) (citation omitted). These materials uniformly support a broad potassium supplement market; Professor Bresnahan admitted that he could not cite any pharmaceutical trade periodicals that treat K-Dur 20 as a product with unique features. F. 81. Data from IMS has a single category, 60110, for "Potassium Supplement Chloride" in which K-Dur 20 is but one of more than 30 products sold by more than 25 different firms tracked by IMS. F. 83.

Professor Bresnahan conceded that Schering's marketing documents for K-Dur 20 use the entire potassium chloride supplement market as a measure of performance and also consider other products such as 10 mEq potassium chloride products as competitors to K-Dur 20. F. 60. Schering tracked the progress of its substantial investment in advertising and marketing by monitoring market share gains in terms of the overall potassium market. F. 60. Even Bresnahan and Complaint Counsel relied on Schering business documents that combined K-Dur 10 and K-Dur 20 in the same charts and business plans. F. 60. The marketing documents of Schering's potassium rival, Upsher-Smith, demonstrate that one of the major competitors to the Upsher-Smith Klor Con product line, including the Klor Con 10 wax matrix, was K-Dur 20. F. 60 Upsher-Smith targeted K-Dur 20 in a series of advertisements urging doctors to substitute two Klor Con 10s for a 20. F. 64-69. Thus, the marketing perceptions of both companies were that K-Dur 20 competed in the broader potassium market. *See,*

e.g., *Moore*, 907 F. Supp. at 1576 ("neither company has historically considered [the product at issue] as a category unto itself;" finding broader product market under *Brown Shoe*).

2. "Product's Peculiar Characteristics And Uses"

As detailed in the preceding section, Complaint Counsel did not prove that K-Dur 20 has "peculiar characteristics and uses" than other potassium supplements. All potassium supplements have the same purpose: to deliver potassium to hypokalemic patients. F. 43-48.

3. "Unique Production Facilities"

Complaint Counsel presented no evidence that K-Dur 20 and its generic equivalents are manufactured in different plants or require different production facilities. In fact, Professor Bresnahan conceded at trial that the 10 and 20 mEq products are produced in the same plant. F. 85-86. With the same production facilities, the product facility factor cannot support a separate K-Dur 20 product market. *See, e.g., United States v. Consol. Foods Corp.*, 455 F. Supp. 108, 125 (E.D. Pa. 1978) (fresh and frozen institutional pies in same product market under *Brown Shoe* where "[m]anufacturing facilities for both products are virtually the same").

4. "Distinct Customers"

Complaint Counsel did not prove that K-Dur 20 is directed toward a distinct class of customers. In fact, Bresnahan testified that there is no distinct class of customers that prefer K-Dur 20. F. 87-88 (Bresnahan unaware of any group of potassium deficient patients that cannot by treated by Klor Con 10; Bresnahan "has seen nothing in those terms."). Similarly, Phillip Dritsas testified that there is no unique subgroup of patients that can only take K-Dur 20. F. 87-88.

5. "Distinct Prices"

Under this factor, for product lines to be considered separate, each potentially definable market must have distinct prices. *See U.S. Healthcare, Inc. v. Healthsources, Inc.*, 986 F.2d 589, 598-99 (1st Cir. 1993). Complaint Counsel failed to introduce sufficient evidence or testimony of distinct prices in the 20 mEq sustained-release potassium chloride tablet and capsule market, as compared with other potassium products. Instead, Complaint Counsel's witness, Mr. Teagarden, conceded that K-Dur has the same relative price as other potassium chloride supplements. F. 89. Bresnahan conceded that branded potassium products had "comparable" prices to K-Dur 20. F. 89.

The only specific pricing difference that appeared in Bresnahan's Report was a 30% pricing difference between only a small group of the potassium unbranded generic products, and this difference actually proved the cross-elasticity of demand between unbranded generics and K-Dur 20 in 1996. Bresnahan presented no statistical pricing study, and did not even have a pricing data set for K-

Dur 20, a price data set for K-Dur 10 or for Klor Con 10, and for its competitors in the sale of potassium supplements. F. 91, 419, 428.

Bresnahan concedes that a pricing difference alone does not suffice to prove a separate product market. F. 91 Nor did he study the demand for various forms of potassium to calculate demand elasticities. F. 422. Professor Bresnahan did not study the ratio of Schering's prices to costs, so he is unable to evaluate any rise in Schering's price for K-Dur 20 as related or unrelated to costs. F. 423.

6. "Sensitivity To Price Changes"

Complaint Counsel did not introduce sufficient evidence to demonstrate that there is price sensitivity between other potassium chloride supplements and K-Dur 20. Complaint Counsel's sole expert economist failed to conduct the analysis necessary to determine the degree of price sensitivity between 20 mEq sustained-release products and other potassium products. F. 112, 113, 419-23. Bresnahan had no pricing data sets for Schering, Upsher-Smith, Apothecon, or any other potassium competitor. F. 419. Lack of this evidence undermines Complaint Counsel's claims. *See, e.g., Lantec, Inc. v. Novell, Inc.*, 146 F. Supp. 2d 1140, 1148-49 (D. Utah 2001) (granting defendants' motion for judgment as a matter of law against Section 1 and 2 claims "[b]ecause there is no evidence on the costs of the various products or of how the consumer would react to a price increase in such costs, there is no evidence of price sensitivity" under *Brown Shoe* and thus plaintiffs' "evidence is insufficient to establish their definition of the relevant market").

The record evidence actually shows not only price sensitivity in the market, but also K-Dur 20 losing some market share to other potassium chloride products. The record evidence showed that the 30% price difference between K-Dur 20 and the unbranded generic potassium products was causing the sales of the generic products to rise, as set forth in the K-DUR Marketing Plan (CX 20), written just six weeks after the June 1997 Agreement became effective:

> Klor Con 10, a branded generic, has grown to 16% of total prescriptions. The category of generics has grown over a full point to 30% of total prescriptions. The growth in the generic market is due in part to the 30% price advantage over K-DUR 20, but managed care also plays a significant role.

F. 110; CX 20 (1998 K-Dur Marketing Plan, August 1, 1997, at SP 4040).

Similarly, the price sensitivity of the market to price reductions was dramatically demonstrated by the shift in sales to Apothecon, a new entrant in the sale of potassium supplements. F. 104-08. Price discounting was repeatedly noted in Upsher-Smith's potassium marketing documents. F. 104-08.

Furthermore, Bresnahan did not evaluate the brand advertising conducted by Schering. F. 424. Schering-Plough put millions of dollars into promoting the K-Dur brand and K-Dur 20 during the 1995-1997 time period. F. 411. Schering also invested heavily in free goods, rebates and other forms of discounting and marketing. 114-16. The magnitude of these expenditures demonstrates the price sensitivity of potassium supplement purchasers and the fact that Schering viewed itself as facing competition from various forms of potassium supplements prior to September 1, 2001. From October 1, 1997 to June 30, 2001, Schering spent $136 million in rebates it paid K-Dur customers. F. 115.

Schering outspent all of its potassium supplement competitors combined by more than a 4 to 1 margin on advertising and physician awareness activities. F. 411. This extensive advertising campaign was designed to compete against generic forms of potassium supplements. F. 411.

7. "Specialized Vendors"

The last *Brown Shoe* factor asks whether there are "specialized vendors" unique to K-Dur 20. No specialized vendors serve only 20 milliequivalent extended-release potassium chloride tablets and capsules. Patients who are hypokalemic receive prescriptions for a potassium supplement when they visit the doctor. F. 118. Prescriptions for extended-release potassium chloride supplements are dispensed at pharmacies. F. 118.

Complaint Counsel's witnesses did not establish by sufficient evidence any of these factors in order to prove that K-Dur 20 and its generic equivalents are a separate product market. Thus, an application of these "practical indicia" to the evidence presented at trial reveals that "K-Dur 20 and its generic equivalents" is not a separate product market.

E. First and Second Violations of the Complaint

The Complaint charges Respondents with four violations. The First and Second Violations of the Complaint charge that the agreements between Schering and its horizontal competitors, Upsher-Smith and AHP, unreasonably restrained commerce and therefore each agreement was an unfair method of competition.

1. The Legal Framework for Analysis of Horizontal Restraints

The FTC Act's prohibition of "unfair methods of competition" encompasses violations of other antitrust laws, including Section 1 of the Sherman Act, which prohibits agreements in restraint of trade. *California Dental Ass'n*, 526 U.S. at 763 n.3. The Commission relies on Sherman Act law in adjudicating cases alleging unfair competition. *E.g.*, *Indiana Fed'n. Dentists*, 476 U.S. at 451-52 (Commission based its ruling that the challenged policy amounted to a conspiracy in restraint of trade that was unreasonable and hence unlawful under the standards for judging such restraint developed in

the Supreme Court's precedents interpreting § 1 of the Sherman Act); *In re California Dental Assn.*, 121 F.T.C. 190, 292 n.5 (1996); *In re American Med. Assoc.*, 94 F.T.C. 701, 994 (1979).

Restraints on trade have been held unlawful under Section 1 of the Sherman Act, either when they fall within the class of restraints that have been held to be unreasonable per se, or when they are found to be unreasonable after a case-specific application of the rule of reason. In some circumstances, an abbreviated, or "quick look" rule of reason analysis may be appropriate. *California Dental,* 526 U.S. at 770. Complaint Counsel asserts that the challenged agreements are unreasonable restraints of trade under either the per se or rule of reason analysis. Although Complaint Counsel does not specifically urge "quick look" treatment, because many of the arguments Complaint Counsel advances relate to an abbreviated rule of reason approach, this method of analyzing the agreements is also addressed. Regardless of the method of analysis employed, the essential inquiry remains the same -- whether or not the challenged restraint enhances or impairs competition. *National Collegiate Athletic Assn. v. Bd. of Regents,* 468 U.S. 85, 104 (1984) (*"NCAA"*).

2. The Per Se Approach Is Not Applicable

"[M]ost antitrust claims are analyzed under a 'rule of reason' . . . ." *State Oil Co. v. Kahn,* 522 U.S. 3, 10 (1997) (citations omitted); *Standard Oil,* 221 U.S. 1, 62 (1911); *Chicago Bd. of Trade v. United States,* 246 U.S. 231, 238 (1918) (courts generally determine the reasonableness of a particular agreement by reference to the surrounding facts and circumstances under the rule of reason). Courts are free to depart from this analysis, and adopt per se rules, only in limited circumstances, after they have had sufficient experience with a particular type of restraint to know that it is manifestly anticompetitive. *Broadcast Music, Inc. v. Columbia Broad. Sys., Inc.*, 441 U.S. 1, 9 (1979); *Continental T.V. Inc. v. GTE Sylvania Inc.*, 433 U.S. 36, 50 (1977) (the per se rule should only apply to conduct that has a "pernicious effect on competition" and "lack[s] . . . any redeeming virtue"). Examples of such practices are horizontal price fixing, *United States v. Socony-Vacuum Oil Co.*, 310 U.S. 150 (1940), *FTC v. Sup. Ct. Trial Lawyers Ass'n*, 493 U.S. 411 (1990); agreements to reduce output, *NCAA*, 468 U.S. at 99; territorial divisions among competitors, *United States v. Topco Assoc., Inc.*, 405 U.S. 596, 608 (1972); and certain group boycotts. *Northwest Wholesale Stationers v. Pac. Stationery & Printing Co.*, 472 U.S. 284, 289-90 (1985). "[C]ertain agreements, such as horizontal price fixing and market allocation, are thought so inherently anticompetitive that each is illegal *per se* without inquiry into the harm it has actually caused." *Copperweld Corp. v. Independence Tube Corp.*, 467 U.S. 752, 768 (1984). *See also Palmer v. BRG of Georgia, Inc.*, 498 U.S. 46 (1990); *Topco Assoc., Inc.*, 405 U.S. 596, 608 (1972).

To fit its allegations into the per se category, Complaint Counsel advances two theories. First, Complaint Counsel characterizes the agreements as "temporal market allocations," dividing the time remaining on Schering's patent. Second, Complaint Counsel asserts that the agreements reduced output and increased prices by keeping Upsher-Smith's and AHP's cheaper generic versions of K-Dur 20 off the market until September 2001 and January 2004, respectively. However, the settlement

agreements fit neither of these molds. Further, because an agreement to settle patent litigation must be examined in the context in which the agreement arose, the per se approach is not appropriate.

a. Complaint Counsel has not presented a per se market division case

Complaint Counsel asserts, "[e]ach agreement is in economic substance a temporal market allocation arrangement, in which sales of K-Dur 20 are reserved to Schering for several years, while Upsher-Smith and AHP are required to refrain from selling their generic versions of K-Dur 20 during that time period. As such, each constitutes a horizontal market allocation agreement, a classic *per se* violation." CCPTB at 65. However, this case does not present a straightforward market division case. Rather, the claims, as framed by Complaint Counsel, raise two novel issues. First, whether a patent holder and a challenger to that patent can settle patent litigation with an agreement that divides the time remaining on the patent. Second, whether a patent holder can make a "reverse payment" to settle a patent dispute.

The classic per se violation cases involve territorial or geographic divisions of markets. *Palmer*, 498 U.S. at 49-50 (competitors agreed not to enter each other's territories and to share profits from sales in one of those territories); *Topco Assoc.*, 405 U.S. at 607-08 ("One of the classic examples of a violation of § 1 is an agreement between competitors at the same level of the market structure to allocate territories in order to minimize competition"). With the exception of the *Cardizem* and *Terazosin* cases, Complaint Counsel has cited no case that holds that a "temporal market allocation" is a per se violation and no case that prohibits a patent holder from allocating the time remaining under its patent by retaining the exclusive rights guaranteed by the patent for a number of years and then granting licences under the patent to allow manufacturers of generic versions to compete for the remaining time. *See In re Cardizem CD Antitrust Litig.*, 105 F. Supp. 2d 682 (E.D. Mich. 2000); *In re Terazosin Hydrochloride Antitrust Litig.*, 164 F. Supp. 2d 1340 (S.D. Fla. 2000). *See also Andrx Pharms., Inc. v. Biovail Corp. Int'l*, 256 F.3d 799, 811 (D.C. Cir. 2001).

The *Cardizem* and *Terazosin* cases can be distinguished on numerous grounds. The critical difference, though, is that those agreements did not involve final settlements of patent litigation; and they did not involve agreements permitting the generic company to market its product before patent expiration. In *Terazosin*, the court found: "Abbott's confidential agreement with Geneva did not resolve its action before the Northern District of Illinois; in fact, it tended to prolong that dispute to Abbott's advantage." 164 F. Supp. 2d at 1350. Likewise, in *Cardizem*, the challenged agreement "did not resolve the pending patent claims; . . . Rather than facilitating or fostering an expeditious resolution of the HMRI/Andrx patent infringement suit, . . . [the agreement and payments] created the incentive to pursue the litigation beyond the district court and through the appellate courts." 105 F. Supp. 2d at 705.

In addition, Complaint Counsel's challenge to what Complaint Counsel has characterized as "reverse payments" is far from an "established" antitrust violation. The novelty of challenges to "reverse payment" patent infringement settlements was acknowledged by Complaint Counsel's expert witnesses at trial. Professor Bresnahan testified that there was no economic literature on the topic of reverse payments prior to the filing of suit in this case. Bresnahan, Tr. 644-45. Professor Bazerman testified that he had never heard of the phrase "reverse payments" prior to his work in this case. Bazerman, Tr. 8569. Applying a per se rule to a practice that is so new would be inappropriate. *Broadcast Music, Inc.*, 441 U.S. at 9; *Arizona v. Maricopa County Med. Soc'y*, 457 U.S. 332, 344 (1982).

Courts have been reluctant to create new per se rules. *Indiana Fed'n of Dentists*, 476 U.S. 447, 458-59 (1986) ("We have been slow . . . to extend *per se* analysis to restraints imposed in the context of business relationships where the economic impact of certain practices is not immediately obvious."); *Broadcast Music, Inc.*, 441 U.S. at 9 ("[I]t is only after considerable experience with certain business relationships that courts classify them as *per se* violations.") *See also Maricopa County*, 457 U.S. 332, 344 (1982) ("Once experience with a particular kind of restraint enables the Court to predict with confidence that the rule of reason will condemn it, it has applied a conclusive presumption that the restraint is unreasonable.").

The few decisions by U.S. district courts adjudicating claims arising from the agreements entered into between Hoechst Marion Roussell and Andrx and between Abbott and Zenith and Geneva hardly constitute "considerable" experience. Further, the factual differences between the challenged agreements in *Cardizem* and *Terazosin* and the challenged agreements here distinguish those cases from the instant one. Without established case law holding that temporal market allocations pursuant to a patent or payments in connection with the settlement of patent litigation are per se violations, the "considerable experience" needed to support per se condemnation is lacking and application of the per se rule is inappropriate.

b. Complaint Counsel has not presented a per se case of reduced output and increased prices

Complaint Counsel alleges "that the challenged payments to stay off the market directly limit competition on price and output and are inherently likely to delay the entry of lower-priced alternatives and to enable Schering to maintain high prices without fear of losing market share." CCPTB at 65. This case, however, does not present a straightforward case of an agreement to reduce output or set prices.

The agreements, on their face, set no limits on output or prices and Complaint Counsel does not argue that Schering dictated the price at which Upsher-Smith and ESI may sell their products or the quantities they may sell upon entry. The agreements do, however, establish that Upsher-Smith and ESI may not enter the market with their generic versions of K-Dur 20 until September 2001 and January 2004, respectively. Complaint Counsel makes the argument that, by setting these entry dates,

Respondents, in effect, limited the output – by eliminating Upsher-Smith's and ESI's output – that would have been available for the periods of up until September 2001 and January 2004. Complaint Counsel further argues that, because Schering was unrestrained from competition from the generics, the agreements enabled Schering to increase prices by charging supra competitive prices for K-Dur 20.

Complaint Counsel's argument ignores the critical fact that these agreements are agreements to settle patent litigation. There is no evidence that the '743 patent is invalid. F. 124. There is no evidence that Schering's initiation of the patent infringement suits against Upsher-Smith and ESI was not for purposes of defending the '743 patent. F. 128, 331. Indeed, Hatch-Waxman encourages patent holders to initiate patent litigation to defend their patents by requiring ANDA applicants to notify patent holders of Paragraph IV Certifications and imposing a 45 day framework for patent holders to initiate patent infringement suits against generic manufacturers. 21 U.S.C. § 355(j); *Mylan*, 139 F. Supp. 2d at 9. Unless determined to be invalid, the '743 patent gives Schering the right to limit output - by excluding manufacturers of infringing drugs from the market until September 2006. *See* 35 U.S.C. § § 101, 271, 281. *Zenith Radio Corp. v. Hazeltine Research*, 395 U.S. 100, 135 (1969) ("The heart of his legal monopoly is the right to . . . prevent others from utilizing his discovery without his consent."). And, this patent gives Schering the right to charge monopolistic prices for its patented product. "Such an exclusion of competitors and charging of supracompetitive prices are at the core of the patentee's rights, and are legitimate rewards of the patent monopoly." *United States v. Studiengesellschaft Kohle, M.B.H.*, 670 F.2d 1122, 1128 (D.C. Cir. 1981).

It is not immediately obvious whether output was reduced and prices were increased by operation of Schering's legal, patented monopoly or by operation of the agreements entered into between Schering and Upsher-Smith and Schering and ESI. Further, because it is not immediately obvious that Upsher-Smith or ESI could have entered the market sooner than the agreed upon dates, it is not immediately obvious that output was reduced. "[T]he Supreme Court has made it clear that the *per se* rule is a 'demanding' standard that should be applied only in clear cut cases." *Law v. NCAA*, 134 F.3d 1010, 1019 (10th Cir. 1998) (*citing Continental T.V.*, 433 U.S. at 50). Because this case does not present a clear cut case of restraints where the economic impact is "immediately obvious" (*Indiana Fed'n of Dentists*, 476 U.S. at 459), per se treatment is not appropriate and a full rule of reason analysis is required.

c. The agreements challenged by Complaint Counsel are not in the class of agreements with no redeeming virtues

Settlements of intellectual property lawsuits are not in a class of per se agreements that, in the words of the Supreme Court in *White Motor Co. v. United States*, 372 U.S. 253 (1963) "lack ... any redeeming virtue." *Id.* at 263. All settlements have redeeming virtue, providing important procompetitive benefits that must be taken into consideration in any antitrust analysis. *See, e.g., Speed Shore Corp. v. Denda*, 605 F.2d 469, 473 (9th Cir. 1979) (court must balance "deeply-instilled policy of settlement[s]" against claim that patent settlement unreasonably restrained trade); *Aro*

Corp. v. Allied Witan Co., 531 F.2d 1368, 1372 (6th Cir. 1976) ("Settlement is of particular value in patent litigation, the nature of which is often inordinately complex and time consuming. . . . By such agreements are the burdens of trial spared to the parties, to other litigants waiting their turn before over-burdened courts, and to the citizens whose taxes who support the latter. An amicable compromise provides the more speedy and reasonable remedy for the dispute."). For example, one of Schering's expert witnesses, Robert Mnookin, testified that society benefits when settlements allow the parties to conserve resources and avoid transaction costs, which may include not only legal fees, but also the time and distraction of the parties and their personnel. F. 384. Mr. Mnookin also testified that settlements can mitigate uncertainty and allow the parties to avoid the risks of litigation, thus creating economic efficiencies. F. 384. This is especially true of settlements of patent infringement cases, like the Upsher-Smith and ESI settlements. *See Grunin v. Int'l House of Pancakes*, 53 F.2d 114, 123 (8th Cir.), *cert. denied*, 423 U.S. 864 (1975) ("The very purpose of compromise is to avoid the delay and expense of such a trial."); *Boston Scientific Corp. v. Schneider (Europe) AG*, 983 F. Supp. 245, 270-71 (D. Mass. 1997) (upheld settlement agreement as not anticompetitive based on the "general rule that settlements and cross-licensing agreements do not, without something more, violate the antitrust laws."). Under the Upsher-Smith settlement agreement, for example, consumers are enjoying low priced generic versions of K-Dur 20 today. In the absence of the settlement, it is impossible for anyone to say whether there would be generic competition today or not because we can't know who would have won the litigation. *See* Bresnahan, Tr. 8230.

Although the Supreme Court has utilized the per se approach in cases involving settlements of patent disputes, in each of those cases, the patent holder engaged in conduct that reached beyond the rights conferred by the patent and engaged in conduct that was in violation of antitrust law. *E.g., United States v. Masonite Corp.*, 316 U.S. 265, 282-83 (1942) (finding licensing agreement where patent holder set prices a violation of Sherman Act); *United States v. Singer Mfr. Co.*, 374 U.S. 174, 197 (1963) (finding patent interference settlement unlawful where the dominant purpose of a settlement was not to settle priority, but to exclude a mutual competitor of the parties); *U.S. v. New Wrinkle Inc.*, 342 U.S. 371, 380 (1952) (finding a licensing agreement between patent owner and manufacturer which served as means for owner to set prices a per se violation of Sherman Act); *U.S. v. Line Material Co.*, 333 U.S. 287, 314-15 (1948) (finding agreements to cross license patents which fixed the price of the patented device a per se violation). As analyzed below, the conduct engaged in by Schering was not proven to be beyond the rights conferred by the patent. Accordingly, these cases do not command the application of the per se rule.

d. The effects of the agreements cannot be presumed

Complaint Counsel argues that the anticompetitive effects of these agreements are so clear that the restraints should be deemed per se unreasonable. CCPTB at 46, 65. *Northern Pacific Ry. v. United States*, 356 U.S. 1, 5 (1958) ("[T]here are certain agreements or practices which because of their pernicious effect on competition and lack of any redeeming virtue are conclusively presumed to be unreasonable."). It is inappropriate in this case, however, to presume effects, for to do so would

require a presumption that the '743 patent was either invalid or not infringed by Upsher-Smith's and ESI's products. As discussed in Section E.4.b. *infra.*, to make this presumption would be contrary to law and the substantial, reliable evidence presented at trial. Accordingly, effects will not be presumed and the agreements will be analyzed under the rule of reason approach.

3. The Quick Look Approach Is Not Applicable

An abbreviated or "quick look" analysis under the rule of reason may be utilized when "the great likelihood of anticompetitive effects can easily be ascertained." *California Dental Ass'n*, 526 U.S. at 770. Quick look analysis may be appropriate to analyze agreements to restrict output. *NCAA*, 468 U.S. at 110 ("naked restraint on price and output requires some competitive justification even in the absence of a detailed market analysis"). However, where the "anticompetitive effects of given restraints are far from intuitively obvious, the rule of reason demands a more thorough enquiry into the consequences of those restraints" than can be performed using an abbreviated rule of reason analysis. *California Dental Ass'n*, 526 U.S. at 759.

The case presented by Complaint Counsel fails to present a situation in which the likelihood of anticompetitive effects is obvious. It is possible that Upsher-Smith and ESI might have entered the market prior to September 2001 and January 2004, respectively. However, it is also of course possible that they might not have entered the market until September 2006, upon the expiration of Schering's patent, or not at all. Faced with a set of different conflicting possibilities, the Supreme Court in *California Dental Ass'n*, held "that the plausibility of competing claims about the effects of the professional advertising restrictions rules out the indulgently abbreviated review to which the Commission's order was treated. The obvious anticompetitive effect that triggers abbreviated analysis has not been shown." 526 U.S. at 778.

Here, Complaint Counsel has presented one plausible explanation for Schering's payments of $60 million to Upsher-Smith and of $15 million to ESI – that these were payments to delay the generics' entry in the market. But, as analyzed *infra*, this explanation is based largely on the opinion testimony of Complaint Counsel's economic expert that manufacturers of brand name drugs have economic incentives to keep generic manufacturers off the market in order to retain monopoly profits. This explanation is also based on the opinion testimony of Complaint Counsel's valuation expert who testified that Schering's payment to Upsher-Smith was grossly excessive. Respondents also offer plausible explanations, supported by evidence, - that the payments were made to settle legitimate patent disputes and for separate pharmaceutical products at fair value. Given the plausibility of competing claims about whether the payments were only for delay, the obvious anticompetitive effect "that triggers abbreviated analysis has not been shown" (*California Dental Ass'n*, 526 U.S. at 778) in this case.

4. Under the Rule of Reason, Complaint Counsel Has Not Demonstrated That These Agreements Are Illegal

a. Complaint Counsel must prove effect on competition

In a rule of reason case, Complaint Counsel must prove that the challenged agreements had the effect of injuring competition. "The Supreme Court has made clear that the rule of reason contemplates a flexible enquiry, examining a challenged restraint in the detail necessary to understand its competitive effect." *In re California Dental Assoc.*, 121 F.T.C. at 308 (*citing NCAA,* 468 U.S. at 103-110) "An analysis of the reasonableness of particular restraints includes consideration of the facts peculiar to the business in which the restraint is applied, the nature of the restraint and its effects, and the history of the restraint and the reasons for its adoption." *Topco Assoc.*, 405 U.S. at 607. *See also Todd v. Exxon Corp.*, 275 F.3d 191, 214 (2d Cir. 2001) (plaintiff must present evidence to support allegation that challenged conduct had anticompetitive effect); *All Care Nursing Service, Inc. v. High Tech Staffing Servs., Inc.*, 135 F.3d 740, 749 (11th Cir. 1998) ("To satisfy the rule of reason, the plaintiff must prove that the [conduct] had an adverse effect on competition.").

The fact that a case proceeds under Section 5 of the FTC Act does not alter the requirement that anti-competitive effects must be proved with evidence. *See California Dental Assoc. v. FTC*, 224 F.3d 942, 958-59 (9th Cir. 2000) (FTC's failure to demonstrate substantial evidence of a net anticompetitive effect resulted in remand with direction that the FTC dismiss its case). *See also Boise Cascade Corp. v. FTC*, 637 F.2d 573, 582 (9th Cir. 1980) (absence of evidence reflecting an anticompetitive effect rendered Commission order unenforceable); *see also E.I. duPont de Nemours & Co. v. FTC*, 729 F.2d 128, 141 (2d Cir. 1984) (challenged practice can only be found to be unfair method of competition under § 5 if weight of evidence shows competition substantially lessened and clear nexus between challenged conduct and adverse effects); *see also Interpreters*, 123 F.T.C. at 640 (Complaint Counsel failed to demonstrate anticompetitive effects of certain association rules).

The cases relied upon by Complaint Counsel, *Summit Health, Ltd. v. Pinhas,* 500 U.S. 322, 330 (1991) and *Goldfarb v. Virginia State Bar*, 421 U.S. 773, 785 (1975), do not support Complaint Counsel's proposition that Complaint Counsel need not prove or quantify actual effects to support a claim under Section 5. *Summit Health* holds that a defendant need not prove an actual effect on interstate commerce in order to establish federal jurisdiction. 500 U.S. at 330 ("'If establishing jurisdiction required a showing that the unlawful conduct itself had an effect on interstate commerce, jurisdiction would be defeated by a demonstration that the alleged restraint failed to have its intended anticompetitive effect. This is not the rule of our cases.'") (citation omitted). *Goldfarb* holds that in order to establish that a challenged activity affects interstate commerce, plaintiff need not quantify the expected effect. 421 U.S. at 785. "[O]nce an effect is shown, no specific magnitude need be proved." *Id.* Thus, Complaint Counsel is not relieved of showing effects simply because this case was brought under Section 5 of the FTC Act, and not under Section 1 of the Sherman Act.

b. Complaint Counsel has not proven that the agreements delayed competition

Complaint Counsel alleges that the agreements between Schering and Upsher-Smith and between Schering and ESI harmed competition because the agreements had the effect of delaying the introduction of Upsher-Smith's Klor Con M20 and ESI's Micro-K20 to the market. It is undisputed that the '743 patent gave Schering the lawful right to exclude infringing products from the market until September 5, 2006. It is undisputed that under the June 17, 1997 Agreement, Upsher-Smith gained a license under the '743 patent to sell a 20 mEq microencapsulated form of potassium chloride more than five years earlier than the expiration of the'743 patent. F. 156. It is undisputed that under the handwritten settlement agreement and final settlement agreement between Schering and ESI, ESI gained a license under the '743 patent to sell a 20 mEq microencapsulated form of potassium chloride more than two and a half years earlier than the expiration of the '743 patent. F. 367, 372. And, it is undisputed that under license Upsher-Smith began selling Klor Con M20 on September 1, 2001. F. 94.

What is disputed is whether Upsher-Smith and ESI could have entered the market any earlier than September 1, 2001 and January 1, 2004, respectively. If Upsher-Smith and ESI could have legally entered the market prior to September 2001 and January 2004, but were paid only for delay and not as part of a legitimate settlement, as Complaint Counsel alleges, then the challenged agreements would have anticompetitive effects. Thus, to prove anticompetitive effects, Complaint Counsel must prove that better settlement agreements or litigation results would have resulted in Upsher-Smith and ESI selling their generic equivalents prior to September 1, 2001 and January 1, 2004. Complaint Counsel did not demonstrate this. Nor has Complaint Counsel brought forth evidence that the entry dates agreed upon were "unreasonable." Thus, without sufficient evidence to prove that Upsher-Smith or ESI would have entered the market sooner than the agreements allow, Complaint Counsel failed to prove that any unlawful delay resulted from the agreements.

(i) The '743 patent operates to exclude all non-infringing products until September 5, 2006

"A patent shall be presumed valid." 35 U.S.C. § 282. This is long established law that cannot be ignored. *E.g., Doddridge v. Thompson*, 22 U.S. 469, 483 (1824) (a patent is presumed to be valid, until the contrary is shown); *Cordis Corp. v. Medtronic, Inc.* 780 F.2d 991, 995 (Fed. Cir. 1995) (patents are presumed to be valid; until invalidity is proven, the patentee should ordinarily be permitted to enjoy the fruits of his invention). *But see Cardizem,* 105 F. Supp. 2d at 700 (characterizing defendants' arguments as based on "erroneous presumptions" by Andrx regarding whether a generic drug would infringe the patent). However, *Cardizem* cites no authority to support this apparent presumption of the pending patent case and to the extent it is a presumption of invalidity or non-infringement, it is contrary to well settled precedent. A presumption of infringement or invalidity of a patent is tantamount to grafting a section onto the Hatch-Waxman Act which is clearly not there. The making of the laws is a function of our Congress.

Under its '743 patent, Schering had the legal right to exclude Upsher-Smith from the market until Upsher-Smith either proved that the '743 patent was invalid or that its product, Klor Con M20, did not infringe Schering's patent. Similarly, Schering had the legal right under its '743 patent to exclude ESI from the market until ESI either proved that the '743 patent was invalid, or that its product, Micro-K20, did not infringe Schering's patent. *Doddridge*, 22 U.S. at 483; *Cordis,* 780 F.2d at 995. Application of antitrust law to markets affected by exclusionary statutes such as the Patent Act cannot ignore the rights of the patent holder. *In re Independent Service Organizations Antitrust Litig.*, 203 F.3d 1322, 1326 (Fed. Cir. 2000) (court must give "due consideration to the exclusivity that inheres in the patent grant"); *Intergraph Corp. v. Intel Corp.*, 195 F.3d 1346, 1362 (Fed. Cir. 1999) ("[S]ome measure must guaranteed that the jury account for the procompetitive effects and statutory rights extended by the intellectual property laws."); *Bement v. National Harrow Co.*, 186 U.S. 70, 88 (1902).

While Complaint Counsel acknowledges that the '743 patent gives Schering the right to exclude all infringing products, Complaint Counsel argues that antitrust laws prohibit Schering from paying Upsher-Smith and ESI to stay off the market. However, Complaint Counsel has not established that Schering paid Upsher-Smith and ESI to stay off the market because Complaint Counsel has not proved that Upsher-Smith or ESI could have even been on the market prior to the expiration of the '743 patent.

Indeed, Complaint Counsel acknowledges that it cannot prove that Upsher-Smith and ESI could have been on the market prior to September 5, 2006. In its post trial brief, Complaint Counsel states that it is impossible to reliably determine whether the Upsher-Smith and ESI products did not infringe Schering's patent or whether the alleged infringers would have prevailed in the infringement suits. CCPTB at 67-76. The evidence presented at trial confirms that the likely outcome of the patent disputes cannot reliably be predicted. *Id.*; F. 394. And because the outcome of the patent disputes cannot be predicted, the date on which Upsher-Smith and ESI could have entered, but for the agreements, cannot be determined. Complaint Counsel argues:

> Respondents, in advocating a test for competitive harm that cannot be done reliably, urge a rule that would effectively immunize settlements involving payments not to compete. Given the undeniable incentives for branded drug manufacturers and potential generic entrants to reach patent settlements that involve payments for delayed entry, the threat of serious harm to consumers is too great, and the likelihood of deterring procompetitive agreements is too small, to justify the approach advocated by respondents.

CCPTB at 67-76

Complaint Counsel's argument may hold intellectual appeal. However, simply because, based upon the theories it advanced in this case, Complaint Counsel cannot prove whether Upsher-Smith and

ESI would have come on the market earlier than September 2001 and January 2004, but for the $60 million and $15 million payments, does not relieve Complaint Counsel of its burden of proof. In *Andrx Pharm.*, 256 F.3d 799, the court, on a motion to dismiss, held, "[o]ne can fairly infer . . . that but for the Agreement, Andrx would have entered the market." *Id.* at 809. The court noted that Hoechst's ten million dollar quarterly payments were presumably in return for something that Andrx would not otherwise do, that is, delay marketing of its generic. *Id.* at 813. But in this case, after a lengthy trial, there is substantial evidence to support Respondents' defense that the agreements were legitimate agreements to settle vigorously contested patent litigation, and, in the case of Upsher-Smith, that the payment from Schering to Upsher-Smith was for Niacor-SR and the other drugs licensed from Upsher-Smith to Schering; and, in the case of ESI, that the patent litigation would not have settled without a payment from Schering to ESI and the licensing of other drugs from ESI to Schering. In the face of this substantial evidence, to agree with Complaint Counsel would require an inference or presumption of what Complaint Counsel has not proved and would effectively shift the burden of proof to Respondents, contrary to law, as discussed *supra*.

Complaint Counsel, relying on *United States v. Microsoft Corp.*, 253 F.3d 34, 79 (D.C. Cir. 2001), argues that it is not required to prove what would have happened, "but for" the challenged conduct. In *Microsoft*, the court noted, "neither plaintiffs nor the court can confidently reconstruct a product's hypothetical technological development in a world absent the defendant's exclusionary conduct." *Id.* The challenge for Complaint Counsel here is much narrower. Complaint Counsel is not asked to reconstruct a hypothetical technological development, but to demonstrate that, absent Schering's payments to Upsher-Smith and ESI, Upsher-Smith and ESI would have come on the market earlier than the agreements allowed. Complaint Counsel has not done so.

Further, even though the government in *Microsoft* was not required to reconstruct a product's hypothetical development in a world absent the defendant's exclusionary conduct, the government was required to prove effects:

> First, to be condemned as exclusionary, a monopolist's act must have an 'anticompetitive *effect*.' . . . Second, the plaintiff, on whom the burden of proof of course rests, ... must demonstrate that the monopolist's conduct indeed has the requisite anticompetitive *effect*.

Microsoft, 253 F.3d at 58-59 (emphasis added). Thus, *Microsoft* does not relieve Complaint Counsel of proving the payments delayed entry.

(ii) Upsher-Smith and ESI would not have come on the market until the resolution of the patent infringement suits

The Hatch-Waxman Act does not provide immunity for patent infringement damages and there is no substantial evidence to demonstrate that Upsher-Smith and ESI would have entered the market before resolution of the patent infringement suits. The court, in *Cardizem*, accepted the plaintiffs' allegations as true, as it must on a motion to dismiss, that Andrx's generic drug would have entered the U.S. market on or about July 9, 1998, the date on which Andrx received FDA approval, but for its agreement with Hoechst. *Cardizem*, 105 F. Supp. 2d at 649. However, FDA approval does not mean generic entry will occur while patent disputes are unresolved. Since FDA approval of an ANDA does not shield a generic manufacturer from liability. 35 U.S.C. § 284; *King Instruments Corp. v. Perego*, 65 F.3d 941, 948 (Fed. Cir. 1995). The prudent practice, then, is for generic manufacturers to await the conclusion of patent litigation before marketing a product and risking financial ruin.

In this case, Upsher-Smith and ESI each received final FDA approval to market their generic versions of Schering's K-Dur 20 by November 1998 and June 1999, respectively. At the conclusion of trial, there is no credible evidence of when, if ever, ESI would have otherwise entered the market and, there is credible evidence that Upsher-Smith would not have entered the market if it was still entangled in patent litigation, even at the end of the 30-month stay and upon FDA approval. F. 391-92. For Upsher-Smith to have launched Klor Con M20 while the Schering '743 patent challenge was unresolved would have been "foolhardy" and potentially could have had dire consequences. F. 391-92.

c. Complaint Counsel did not prove that the payments were not to settle the infringement cases and for drugs licensed to Schering

(i) Upsher-Smith

The claims against Schering and Upsher-Smith rest upon the allegation that the $60 million payment from Schering to Upsher-Smith was not a bona fide royalty payment under a license for Niacor SR and five other products. The Complaint alleges: "The $60 million payment from Schering to Upsher-Smith was unrelated to the value of the products Upsher-Smith licensed to Schering." Complaint ¶ 45. The Complaint alleges that the royalty payments were in fact payments to delay the introduction of Upsher-Smith's AB-rated generic to K-Dur 20. Complaint ¶ 64. Complaint Counsel have described the $60 million in royalty payments as a "veil," "disguise," "sham," and "cover." CCPTB at 2-3, 6, 8, 26, 34.

Prior to trial, Complaint Counsel acknowledged that its case would fail if it could not prove that Schering paid Upsher-Smith for delay. At a July 25, 2001 hearing, Complaint Counsel answered a question from the bench as follows:

> JUDGE: I guess I need to ask you one more question. Then are you saying the Government has to prove the payment was for delay in order to win this case?

MR. KADES: Absolutely. That's what we will prove at trial. . . .

7/25/01 Tr. at 34. In its Post Trial Brief, Complaint Counsel reaffirmed that the Complaint requires them to prove that the $60 million was for delay rather than for a bona fide product license: "This case does not challenge the settlement of patent disputes by an agreement on a date of entry, standing alone, or the payment of fair market value in connection with 'side deals' to such an agreement." CCPTB at 43. Complaint Counsel's expert witness economist, Professor Bresnahan, agreed that a side deal at fair value did not raise competitive concerns:

> Q: All right, sir. Now, similarly had Upsher-Smith and Schering-Plough entered into an agreement that contained a side deal at fair value, same negotiation, they negotiate entry date and then they have a side licensing deal, and it contains fair market value consideration being exchanged between the parties, that would not flunk the Bresnahan test. That would not be anticompetitive according to you. Is that correct?
>
> A: That's right.
>
> Q: All right. So you don't have a problem with side agreements, as such; you want to make sure there's no net positive value flowing to the generic firm. Is that correct?
>
> A: That's — that's my test, yes.

F. 172. Professor Bresnahan confirmed that the determination of fair value was a subjective standard measured at the time of the transaction: "if Schering-Plough had made a stand-alone determination that it was getting as much in return from those products as it was paying, then I would infer that they were not paying for delay." F. 172.

At trial, the evidence established that the June 17, 1997 Agreement between Schering and Upsher-Smith was a type of transaction that Complaint Counsel and their economist concede to be permissible: it was a settlement of a patent dispute by an agreement on a date of entry, with a side deal supported by fair value as determined at that time. The fact testimony at trial was unrebutted and credible in establishing that the licensing agreement was a bona fide arms-length transaction, and that Schering's royalty payments to Upsher-Smith were payments for the products being licensed to Schering, together with certain production rights. Contemporaneous documentary evidence, such as Mr. Audibert's commercial assessment and Schering's Board Presentation, corroborated that testimony. The opinion testimony of Complaint Counsel's expert witnesses, based largely upon theory, did not impeach that unrebutted and credible fact evidence. The substantial, reliable evidence refutes

Complaint Counsel's allegation that the $60 million paid to Upsher-Smith was "unrelated" to the products being licensed.

(A) The Evidence Establishes That The Niacor-SR License Was a Bona Fide Side Deal For Fair Value

Abundant evidence at trial established that the $60 million paid by Schering was fair value for Niacor-SR and the other licensed products. Upsher-Smith had for years invested heavily in Niacor-SR and in mid-1997 it appeared to be a highly promising product. F. 191-92. Start-up company Kos Pharmaceuticals had achieved a market capitalization of approximately $400 million almost entirely on the promise of its extended-release niacin product Niaspan, which, like Niacor-SR, had not yet obtained FDA approval for marketing. F. 152. Schering had a documented, pre-existing interest in an extended-release niacin product to enter the cholesterol-fighting market. F. 201-19. In the months preceding the licensing agreement with Upsher-Smith, Schering had engaged in extended negotiations with Kos over a possible U.S. co-promotion venture. F. 201-08. Schering had made a substantial written proposal to Kos, but Kos rejected it. F. 214-19. Shortly thereafter, the Niacor-SR opportunity arose. F. 138.

When the Upsher-Smith opportunity arose, Schering's James Audibert undertook a commercial assessment of Niacor-SR. F. 228. Mr. Audibert had extensive experience in the marketing of extended-release formulations, had considerable experience with cholesterol-reducing drugs, and had been involved in Schering's discussions with Kos relating to Niaspan. When he prepared his valuation of Niacor-SR, Mr. Audibert was not aware that the licensing opportunity had arisen in the context of a side deal to a patent settlement and was not aware of the amount of money that was being asked for the license rights by Upsher-Smith. F. 251. Mr. Audibert stated in his commercial assessment: "Niacor SR is expected to be launched in early 1999 with 3rd-year sales of $114 million." F. 251. "In summary, Niacor SR offers a $100+ million sales opportunity for Schering-Plough." F. 254.

The other pharmaceutical products that Upsher-Smith licensed to Schering, prevalite, Klor-Con 8, 10 and M20, and pentoxifylline, also had value. According to the presentation given to Schering's Board of Directors, Schering's staff forecasted sales "to be $8 million a year in the first full year of launch, growing to $12 million a year in the second full year, and then gradually declining in year four and thereafter." F. 165.

The June 17, 1997 agreement was contingent on approval by the Schering Board of Directors. F. 163. The presentation given to Schering's Board of Directors stated that, in the course of Schering's discussions with Upsher-Smith, Upsher-Smith indicated that a prerequisite of any deal would be to provide them with a guaranteed income stream to make up for the income that they had projected to earn from sales of Klor-Con, had they been successful in their suit. F. 163. The Board

was informed that Schering had made it clear to Upsher-Smith that any such deal would have to stand on its own merit, independent of the settlement. The Board presentation provided sales projections for Niacor-SR of $100 million plus in annual sales and showed a net present value of $225-265 million for the Niacor license. F. 164.

(B) Complaint Counsel did not meet its burden of proving that the Niacor-SR License was not a bona fide side deal for fair value

(i) Dr. Levy

To prove that the $60 million payment from Schering to Upsher-Smith was not a bona fide royalty payment under a license for Niacor SR and five other products, Complaint Counsel proffered Dr. Nelson L. Levy, an expert "in the field of pharmaceutical licensing and pharmaceutical valuation." F. 174. Dr. Levy testified that the $60 million payment made by Schering to Upsher-Smith cannot be considered to have been a license fee for Niacor-SR and the five generic products licensed. F. 315. Dr. Levy had three bases for this opinion. First, Levy concluded that the $60 million non-contingent fee was grossly excessive for Niacor-SR and the other licensed products, and greatly surpassed the non-contingent fees paid by Schering in other unrelated pharmaceutical transactions. F. 290, 296. Second, Levy bases his conclusion on his opinion that the due diligence conducted by Schering for Niacor-SR was strikingly superficial relative to industry standards on due diligence and Schering's own due diligence practices. F. 301-03. Third, Levy bases his conclusion on his opinion that after the settlement agreement was executed, neither Schering nor Upsher-Smith undertook behavior consistent with parties who had just entered into a licensing transaction, for which Schering committed to pay $60 million. F. 315-18.

Dr. Levy's testimony is contradicted by the greater weight of the evidence. Schering presented substantial, reliable evidence demonstrating that Niacor-SR and the other licensed products were valued at $60 million. F. 258-61. Schering presented substantial, reliable evidence demonstrating that Schering performed due diligence on Niacor-SR. F. 243-61. And, Respondents presented substantial, reliable evidence to explain Respondents' post deal conduct and attendant decisions not to pursue Niacor-SR. F. 262-74.

Furthermore, Dr. Levy's testimony is accorded less weight for three reasons. First, he performed no quantitative analysis of Niacor-SR or any of the other 5 products Schering received under the license agreement and did not consider the market value of Kos. F. 293. Second, Dr. Levy's opinions regarding value of Niacor-SR are founded in part on his conclusions regarding the safety and efficacy of Niacor-SR and his testimony demonstrated he lacked expertise in the area of cholesterol-lowering drugs and niacin. F. 308-14. Third, Dr. Levy's conclusion that the parties' post deal conduct is not behavior consistent with parties who had just entered into a licensing transaction for which Schering committed to pay $60 million is rebutted by the evidence Respondents presented on

their post deal conduct and discredited because Levy did not review many of the documents reflecting the parties' communications and continued work on the licensed products. F. 315-18.

(ii) Professor Bresnahan

Complaint Counsel also offered the expert testimony of Professor Bresnahan to prove Schering's payment was not for the Niacor license. Bresnahan did not attempt to value the rights Schering obtained under the licensing agreement and did not challenge the Niacor-SR sales projections, estimated cost of goods sold, net profit, or the economic value of $225-265 million presented to Schering's Board of Directors. F. 319. Instead, Bresnahan applied a "revealed preference" test and a "market test" and analyzed the parties' incentives to opine that the $60 million payment was not for the Niacor license. F. 320-26.

Under Bresnahan's "revealed preference" test, Bresnahan concluded that Schering's turning down of Kos' Niaspan "revealed" that Schering was not willing to make a large upfront payment for the comparable Niacor-SR product. F. 320. However, Schering demonstrated a genuine interest in Kos' sustained-release niacin product, projected substantial sales for that product, engaged in an extended dialogue with Kos, and made a serious offer incorporating a major financial commitment commensurate with the profit split under the contemplated co-promotion arrangement. F. 201-19. The substantial, reliable evidence demonstrates legitimate, credible reasons for Schering's preference of a licensing deal with Upsher-Smith over a co-marketing arrangement with Kos. F. 217-19.

Professor Bresnahan testified that because no other company had made Upsher-Smith an offer that included a substantial non-contingent payment for the licenses, Niacor-SR was not highly valued enough in the marketplace to justify a non-contingent payment, and therefore the $60 million non-contingent payment made by Schering to Upsher-Smith was not for Niacor-SR. However, in June 1997, Upsher-Smith was still in active discussions with a variety of companies to market Niacor-SR. F. 325, 196. Upsher-Smith executives believed that potential European licensees were showing "strong interest" in Niacor-SR and that a substantial up-front payment was warranted. Because Upsher-Smith terminated its marketing efforts after signing the exclusive agreement with Schering on June 17, 1997, no conclusions as to Niacor-SR's value can be drawn from this ongoing process. The substantial, reliable evidence presented by Schering demonstrates the factors Schering considered in valuing the Niacor-SR licence. F. 326. This evidence refutes the conclusion Bresnahan reached using his market test.

Professor Bresnahan also testified that Schering and Upsher-Smith had incentives to engage in a transaction trading a payment for delay and acted on those incentives. Ultimately, Professor Bresnahan was compelled to acknowledge that theoretical "incentives" hardly constitute evidence of actual improper conduct:

Q: Professor, is it your view that if a person has an economic incentive to violate the law, that leads to the conclusion that they did so?

A: No.

Bresnahan, Tr. 1105. These "incentives" are not legally dispositive. *See, e.g., Serfeez v. Jewel Food Stores*, 67 F.3d 591, 600 (7th Cir. 1995) (holding that "the presence of an economic motive is of very little probative value" and that "[t]he mere existence of mutual economic advantage, by itself, . . . supplies no basis for inferring a conspiracy"). Contrary to the theory offered by Bresnahan, the record testimony from all of the participants in the negotiations provides direct evidence that the parties did not exchange money for delay. F. 322-26.

The presentation made to Schering's Board of Directors when it approved the licensing agreement reported that Upsher-Smith had expressed a desire for "an income stream to replace the income that [it] had anticipated earning if it were able successfully to defend against Key's infringement claims." F. 163. As Professor Bresnahan acknowledged, (Bresnahan, Tr. 572-573), the presentation also reported: "we informed them that any such deal should stand on its own merit independent of the settlement." F. 163. The remainder of the presentation contained a detailed discussion and financial analysis justifying the licensing opportunity on its own merit. F. 163-66. Despite Professor Bresnahan's opinion otherwise, the Schering Board presentation confirms Schering's insistence that any licensing royalty payment to Upsher-Smith had to be independently supported by fair value.

(C) The terms of the June 17, 1997 agreement

Professor Bresnahan opined that Paragraph 11 of the June 17, 1997 agreement "links" Schering's royalty payments to the September 1, 2001 entry date. Bresnahan, Tr. 535-536. Paragraph 11 expressly describes the three payments totaling $60 million as "up-front royalty payment[s]." As evidenced by the negotiations leading up to June 17, 1997 agreement, Upsher-Smith and Schering each intended the term "royalty" to reflect that Schering would be paying for the licenses and associated production rights it was receiving from Upsher-Smith. This understanding of "royalty" comports with the common understanding of the term. *See, e.g., Sierra Club, Inc. v. C.I.R.*, 86 F.3d 1526, 1531 (9th Cir. 1996) (noting that "'royalty' commonly refers to a payment made to the owner of property for permitting another to use the property") (citing *Black's Law Dictionary* 1330-31 (6th ed. 1979)); *see also* Dennis W. Carlton and Jeffrey M. Perloff, *Modern Industrial Organization* 528 (3d ed. 2000) ("The patent holder may produce the product (or use its new process) or *license* (permit) others to produce it in exchange for a payment called a *royalty*.") (emphasis in original). Furthermore, in Paragraph 11, the designated payor of the "royalty" payments is "SP Licensee." "SP Licensee," which is first defined in Paragraph 7, is the recipient of Upsher-Smith's licenses in Paragraphs 7 through 10. F. 156, 161. The only natural and normal reading of Paragraph 11 is that "SP Licensee" is paying "royalties" for the licenses it is receiving in Paragraphs 7 through 10.

(ii) ESI

Complaint Counsel contends that the payment from Schering Plough to ESI was only made to delay generic entry by ESI. This is not a case of a naked payment to delay an entrant who is legally ready and able to compete with Schering because Schering's patent, as discussed *supra,* is presumed valid. Complaint Counsel introduced a dearth of evidence about the ESI settlement agreement in its case in chief. It introduced fact evidence only in the form of deposition testimony and investigational hearing transcripts of Schering and ESI personnel who negotiated the settlement, and a few documents relating to the settlement negotiations. Complaint Counsel offered opinion evidence in the form of about fifteen minutes of testimony about the ESI settlement by Professor Bresnahan. F. 378. Dr. Levy, Complaint Counsel's valuation expert, was not asked his opinion on the value of enalapril and buspirone. F. 380. Thus, no evidence of fair value was offered.

As discussed *supra*, Complaint Counsel has the burden of proof on all violations alleged in the Complaint. Respondent Schering had no duty or requirement to offer any evidence on the ESI agreement should Complaint Counsel not do so. Complaint Counsel did not present sufficient substantial, reliable evidence to support a conclusion that ESI could have or would have entered the market before the date set on the settlement agreement. Complaint Counsel also did not present sufficient substantial, reliable evidence to support a conclusion that the Schering-ESI patent litigation would have settled without the provision for the licensing agreement for enalapril and buspirone being part of that settlement or that any payment was not for fair value. Accordingly, there is no substantial, reliable evidence to conclude that the $15 million was paid only for unlawful delay.

Moreover, it is clear that parties to a patent dispute may exchange consideration to settle this litigation. The Supreme Court has rejected the argument that consideration renders an agreement unlawful. *See Standard Oil Co. v. United States*, 283 U.S. 163, 170-71 n.5 (1931) (noting that the interchange of rights and royalties in a settlement agreement "may promote rather than restrain competition").

d. Complaint Counsel has not demonstrated anticompetitive effects sufficient to shift the burden to Respondents to show procompetitive effects

Once a plaintiff has demonstrated that "great likelihood of anticompetitive effects" from agreements "can easily be ascertained," the burden shifts to a defendant to come forward with plausible procompetitive justifications. *California Dental Ass'n*, 526 U.S. at 770; *NCAA*, 468 U.S. at 113. Because Complaint Counsel has not demonstrated anticompetitive effects, analysis of Respondents' proffered justifications is not necessary.

5. Complaint Counsel Did Not Prove That The "Any Other Sustained Release Microencapsulated Potassium Chloride Tablet" Clause Restricted Competition

Complaint Counsel's position is that the Schering and Upsher-Smith settlement agreement contains additional collateral restraints which are anticompetitive. CCRB at 64. However, Complaint Counsel conceded that parties may settle patent litigation "by an agreement on a date of entry." CCPTB at 43. Any such settlement must necessarily identify the products that are the subject of the agreement – *i.e.* what the alleged infringer is permitted to market and what the alleged infringer is prohibited from marketing under the agreement. F. 168. This degree of specification is necessary in order to limit the alleged infringer's ability to go to market with another infringing product under the agreement. F. 168. It is not enough just to identify the subject of the agreement as "infringing products," as the parties involved in patent litigation necessarily disagree over what does or does not infringe the patent. F. 168. Such a specification would likely lead to renewed litigation, with its attendant costs and inefficiency. Thus, an "ancillary restraint" is ordinarily required to specify the products covered in the agreement by providing an objective description of what can and cannot be marketed prior to the agreed-upon entry date.

Ancillary restraints are permitted if, and precisely because, they are "reasonably necessary" to accomplish a contract's efficiency-enhancing purposes. *See Law v. NCAA*, 134 F.3d 1010, 1019 (10th Cir. 1998) (inquiring whether the challenged conduct is "reasonably necessary to achieve legitimate objectives"); *Orson, Inc. v. Miramax Film Corp.*, 79 F.3d 1358, 1367-68 (3d Cir. 1996) (inquiring whether the restraint is "reasonably necessary to achieve the stated objective"); *Rothery Storage*, 792 F.2d at 224 ("The ancillary restraint is subordinate and collateral in the sense that it serves to make the main transaction more effective in accomplishing its purpose.").

The efficiency-enhancing objectives of a patent settlement are clear. *Aro Corp. v. Allied Witan Co.*, 531 F.2d 1368, 1372 (6th Cir. 1976) ("Public policy strongly favors settlement of disputes without litigation. Settlement is of particular value in patent litigation, the nature of which is often inordinately complex and time consuming."). *See also Schlegal Mfg. Co. v. U.S.M. Corp.*, 525 F.2d 775, 783 (6th Cir. 1975) ("The importance of encouraging settlement of patent-infringement litigation . . . cannot be overstated.").

Under the Schering/Upsher-Smith settlement, the scope of products subject to the September 1, 2001 entry date agreement was as narrow as was "reasonably necessary" to accomplish the objectives of the settlement. Schering's '743 patent claims a "controlled release [microencapsulated] potassium chloride tablet . . . ." USX 713 at ESI EXH 000003. The Schering/Upsher-Smith settlement likewise covers any "sustained release microencapsulated potassium chloride tablet . . . ." F. 167. Upsher-Smith's witnesses verified that no other products in Upsher-Smith's pipeline were delayed by the ancillary restraint contained in paragraph 3, nor was such a result intended. F. 170.

Complaint Counsel's witness on this point, Bresnahan, testified that he had "no evidence" that anyone at Schering-Plough or Upsher-Smith had any product other than Klor Con M20 in mind at the time of the agreement. F. 171. With reference to paragraph 3, Bresnahan admitted that he had not examined Upsher-Smith's product pipeline between 1997 and 2001. F. 171.

Complaint Counsel's economist expert, Professor Bresnahan, expressly conceded that, assuming the settlement agreement is otherwise lawful, this provision expanding its coverage to a broader category of products is reasonable. F. 171. Accordingly, Complaint Counsel has failed to prove that the settlement agreement was broader than was "reasonably necessary" to settle the litigation.

6. Complaint Counsel Did Not Prove That the Schering/ Upsher-Smith Agreement Had the Effect of Blocking Other Potential Generic Competitors

The Complaint alleges that the June 1997 Settlement Agreement "has the effect of delaying entry into the relevant market by any other potential generic competitor," (Complaint at. ¶ 66) and specifically identifies only Andrx Corporation as the firm that "cannot market its product until Upsher-Smith's 180-day Exclusivity Period has run." Complaint at ¶ 62. Complaint Counsel failed to prove that any potential competitors were blocked or that the exclusivity period was manipulated or even discussed by Schering and Upsher-Smith.

The Complaint only alleges that one specific firm, Andrx, was blocked by Upsher-Smith's exclusivity. Complaint at ¶¶ 61-62. Lawrence Rosenthal, Executive Vice President of Sales and Marketing at Andrx, testified that [**redacted** **redacted** **redacted**] F. 395.

Executives at Upsher-Smith were not aware of any other potential competitors blocked from the market. F. 396. Professor Bresnahan testified that he is not aware of any potential competitors who were blocked from entering the alleged product market for K-Dur 20 as a result of the June 17, 1997 Agreement. F. 397.

The 180-day exclusivity period was never discussed between Schering and Upsher-Smith during their settlement negotiations. F. 399. Nowhere in Schering or Upsher-Smith documents or in the settlement agreement is the 180-day exclusivity mentioned as a consideration in creating the settlement agreement. F. 399. Schering-Plough, similarly, acknowledges that the agreement did not make any reference to exclusivity and the subject was never even discussed. F. 399.

In the absence of proof that any other firm was blocked or that Schering and Upsher-Smith discussed the 180-day exclusivity period in their settlement negotiations, Complaint Counsel has failed

to prove that the June 1997 Settlement Agreement unlawfully delayed entry by other potential generic competitors.

F. Third and Fourth Violations of the Complaint

The Third and Fourth Violations of the Complaint allege that Schering has monopoly power in the manufacture and sale of potassium chloride supplements approved by the FDA and the narrower markets contained therein and engaged in conduct to unlawfully preserve such monopoly power and that Schering conspired separately with Upsher-Smith and ESI to monopolize the relevant markets. Complaint ¶ 70, 71. As detailed in Section D, *supra*, to establish monopolization or attempted monopolization, it is necessary to appraise the exclusionary power in terms of the relevant market for the product involved. *Spectrum Sports,* 506 U.S. at 455-56. The relevant market in this case is all oral potassium supplements that a physician can prescribe to a patient in need of a potassium supplement.

1. Complaint Counsel Did Not Prove That Schering Had Monopoly Power

Monopoly power is defined "as the power to control prices in the relevant market or to exclude competitors." *Aspen Skiing Co. v. Aspen Highlands Skiing Corp.*, 472 U.S. 585, 596, n.20 (1985). The critical inquiry is whether Schering had monopoly power in the relevant market at the time it entered the challenged agreements. Bresnahan, Tr. 659-60. Complaint Counsel asserts that Schering must have had monopoly power because it otherwise would not have paid Upsher-Smith and ESI not to enter the market. This circular argument is not evidence to support a finding of monopoly power. *See Interpreters*, 123 F.T.C. at 642 (the fact that some members charged the agreed upon price does not necessarily mean that they have market power).
Instead, monopoly power is determined through an analysis of market shares, barriers to entry and the ability of rivals to expand output in that market. *Rebel Oil Co. v. Atl. Richfield Co.*, 51 F.3d 1421, 1434 (9th Cir. 1995).

a. Market share

Complaint Counsel presented insufficient evidence on Schering's market share in the market for all oral potassium supplements. Schering's share of the market for potassium supplements between 1995 and 1999 was between 30 and 40 percent. F. 400-04. Schering's market share of less than 50 percent cannot as a matter of law support an inference of monopoly power. *See, e.g., Bailey v. Allgas, Inc.*, 284 F.3d 1237, 1250 (11th Cir. 2002) ("A market share at or less than 50% is inadequate as a matter of law to constitute monopoly power"); *Blue Cross & Blue Shield United v. Marshfield Clinic*, 65 F.3d 1406, 1411 (7th Cir. 1995) ("50 percent is below any accepted benchmark for inferring monopoly power from market share").

b. Lack of barriers to entry and the ability of rivals to expand output

Complaint Counsel did not prove high entry barriers into the market for all oral potassium chloride supplements. The evidence demonstrates that there were over 30 products competing as of 1997 in the potassium chloride market, all of which had entered at some point, and that a number of new competitors entered the market in recent years. F. 405-08. Absent evidence of high entry barriers, an inference of monopoly power is inappropriate. *See, e.g., Western Parcel Express v. UPS, Inc.*, 190 F.3d 974, 977 (9th Cir. 1999) ("'A high market share, though it may ordinarily raise an inference of monopoly power, will not do so in a market with low entry barriers or other evidence of a defendant's inability to control prices or exclude competitors'") (citations omitted). Complaint Counsel did not prove the inability of other firms to expand output in the face of a price increase or output reduction by Schering. F. 405-08. When firms can rapidly expand output, as here, an inference of monopoly power is inappropriate. *See, e.g., Rebel Oil Co.*, 51 F.3d at 1441 (power over price "depends largely on the ability of existing firms to quickly increase their own output in response to a contraction by the defendant").

c. Pricing

Contrary to Complaint Counsel's contention, pricing above marginal cost does not establish monopoly power or market power. *See* I Herbert Hovenkamp and Mark A. Lemley, *IP and Antitrust* § 4.1c, at 4-5 thru 4-7 (Aspen Law & Business 2002) (use of marginal cost "for measuring power is very hard to make workable in the case of intellectual property"); *see id.* at 4-9 ("the underlying theory of intellectual property rights is that an anticipated stream of above cost prices creates the incentive to engage in research or creativity in the first place") Even if it could, Complaint Counsel failed to prove that K-Dur was sold above marginal cost for extended periods of time. The fact that someone could undersell K-Dur 20 does not prove that contention, and Complaint Counsel offered no other evidence.

Further, higher prices for a branded product do not establish monopoly power. *SMS Sys. Maintenance Serv., Inc. v. Digital Equip. Corp.*, 188 F.3d 11, 17 (1st Cir. 1999) ("In any market with some degree of product differentiation, goods of a single brand will enjoy a certain degree of uniqueness. . . , that fact, without more, does not suffice to establish that the manufacturer enjoys monopoly power in that market."), *cert. denied*, 528 U.S. 1188 (2000). Evidence of higher prices is ambiguous at best, and insufficient evidence of monopoly power in the absence of market analysis. *Tarrant Serv. Agency v. Am. Standard, Inc.*, 12 F.3d 609, 615 (6th Cir. 1993) (higher prices for genuine parts was not evidence of monopoly power in market that included generic parts).

Complaint Counsel asserts that it proved monopoly power because Schering priced K-Dur 20 at an elevated price. Pricing evidence alone is not sufficient to prove monopoly power. *See, e.g., Forsyth v. Humana, Inc.*, 114 F.3d 1467, 1476 (9th Cir. 1997) (evidence that firm "routinely charged higher prices than [competitors] while reaping high profits" did not constitute "direct evidence of market

power" because there was no evidence of "restricted output"); *Blue Cross & Blue Shield,* 65 F.3d at 1411-12 (higher prices "may reflect a higher quality more costly to provide . . . it is always treacherous to try to infer monopoly power from a high rate of return"); *In re IBM Peripheral EDP Devices Antitrust Litig.,* 481 F. Supp. 965, 981 (N.D. Cal. 1979), *aff'd* 698 F.2d 1377 (9th Cir. 1983) ("[The inference that a defendant that enjoys healthy profits only does so because of an unhealthy market structure is not a strong one. Good management, superior efficiency and differences in accounting provide explanations that are just as plausible, and none of those explanations is inconsistent with an effectively competitive market."). In this case, as in *Forsyth,* it is conceded by Complaint Counsel that at all times Schering was expanding its output of K-Dur 20. F. 409-13. Also, Schering had no ability to restrict the output of the more than 20 other firms selling "therapeutically equivalent" potassium chloride supplements. F. 408.

In addition, Complaint Counsel did not prove that Schering's pricing was at a monopoly level. Complaint Counsel's expert witness did not conduct a thorough examination of Schering's prices. Professor Bresnahan did not have a data set of Schering's prices or of competitors pricing; thus he could not compute the relative price level of K-Dur 20 to other products. F. 419 Professor Bresnahan did no study of costs so he is unable to evaluate the price increases for K-Dur 20. F. 423. Professor Bresnahan's failure to study competitive product pricing means that he cannot demonstrate that any price increase of K-Dur 20 over a 5 year period was more or less than the price increases of competitive potassium products. F. 423.

Complaint Counsel also asserts that the failure to lose sales despite a price rise to be evidence of a monopoly. This is not sufficient evidence to prove monopoly power. The price of K-Dur 10 rose every time that the price of K-Dur 20 rose. F. 101-03. And K-Dur 10 was at all times more expensive per dose that K-Dur 20. F. 101-03. By this logic, K-Dur 10 should be a "monopoly." Both Professor Bresnahan and Dr. Addanki refused to conclude that K-Dur 10 was a separate "monopoly" unto itself. F. 101-03.

A single firm's price increase data without data from other firms is not helpful. Without knowing systematically what the other firms were doing on price, it is impossible to know the relative price of K-Dur 20 to other firm's products. Nor is it possible to discern if product costs or firm costs are rising. And net pricing — considering rebates, allowances and free goods — was also missing from this analysis. These critical aspects of Schering's K-Dur pricing were not studied by Professor Bresnahan. F. 418- 29. A strong common feature of K-Dur 10 and K-Dur 20 was the heavy promotion of both products by Schering. F. 80. *See Levine*, 72 F.3d at 1552 (price increases do not prove actual direct effects without competitors' pricing and costs being examined).

d. Sensitivity to promotion and advertising

Professor Bresnahan conceded that Schering's advertising increased demand for potassium chloride and in particular K-Dur 20. Ray Russo testified that potassium chloride was highly sensitive to

promotions. Schering outspent branded potassium competitors such as Upsher-Smith by more than 100 to 1. F. 427. These levels of advertising were tremendous relative to the size of the potassium marketplace. F. 79-80; Russo, Tr. 3418-19 ("these are relatively I think promotion-sensitive markets. . . . We invested heavily in field force effort . . . we had a number of significant promotional programs over that approximate ten-year period that heavily promoted and marketed K-Dur – K-Dur 10 and K-Dur 20").

The fact that Schering's sales increased during the 1994 – 2000 period attests to the power of Schering's detailing and rebate activity. In fact, the approximately $200 million spent by Schering on rebates alone between 1995 and summer 2001 attests to the stiff competition Schering faced prior to the advent of AB-rated substitutes. F. 114-16. Schering also invested millions in promotion. F. 412.

Pharmaceutical promotions are pro-competitive, and Professor Bresnahan testified that aggressive marketing such as that practiced by Schering was not anticompetitive. Yet Professor Bresnahan made no attempt to assess the role of advertising on demand in this case or the relative strength of advertising efforts by potassium firms. Professor Addanki did so and found strong and pronounced effects from Schering's advertising. F. 411-13. Schering's executives recognized that marketing was the key to gaining market share from the other potassium firms: "Detailing by sales representatives is the most effective way to educate providers on the importance of K-DUR and move market share." CX 18 (1997 K-DUR Marketing Plan, Sept. 10, 1996 at SP 23 00039). F. 411-13.

e. K-Dur 10 sales demonstrate that K-Dur 20 was not a monopoly

K-Dur 10 in June 1997 amounted to 5% of the total prescriptions for potassium chloride in the United States. F. 101. Even if the 10 mEq segment were studied in isolation, K-Dur 10 had less than 9% of new prescriptions of 10 mEq strength potassium chloride. USX 626 at USL 15232 (listing more than 19 10 mEq strength potassium supplements; K-Dur 10 had 8.7% of NRx in 1996). F. 101.

Yet, despite K-Dur 10's non-monopoly status, K-Dur 10 sales performed just as Schering's K-Dur 20 performed. K-Dur 10's sales rose over time due to Schering's promotions. Despite the price increases for K-Dur 10, K-Dur 10's sales rose and in fact rose faster than K-Dur 20's sales. F. 101. K-Dur 10 demonstrates that avowedly non-monopoly branded products will perform in exactly the same way that K-Dur 20 performed when it is promoted.

f. Generic potassium products grew at a faster rate than K-Dur 20

Generic potassium – rather than branded potassium – grew at a faster rate than K-Dur 20, demonstrating the price sensitivity of many potassium purchasers. F. 402. Complaint Counsel assert that the sales of K-Dur 20 grew rapidly in the 1997-2000 period, implying that K-Dur 20 outsold all competing potassium despite price increases. The market share of generic potassium chloride rose as fast or faster than K-Dur 20 in every year from 1997 through 2000. F. 402. However, at the time

relevant to the Bresnahan test, June 1997, generic potassium tablets/capsules were almost as large in market share as all of K-Dur 20, 31.0% of total potassium chloride prescriptions. F. 402. With K-Dur 20 at 33.0% of total potassium chloride prescriptions, *id.*, other brands of potassium chloride, such as K-Tab, Micro K, Micro-K 10, Klotrix, Kaon-Cl, Klotrix, Klor Con 8 and Klor Con 10, accounted for 27.6% of total potassium chloride prescriptions as of June 1997. Ray Russo testified that generics were a major competitor to K-Dur due to substitution. F. 402.

2. Complaint Counsel Did Not Prove the Requisite Specific Intent for a Conspiracy to Monopolize the Market for Potassium Supplements

"Specific intent to monopolize is the heart of a conspiracy charge." *Salco Corp. v. Gen. Motors Corp.*, 517 F.2d 567, 576 (10th Cir. 1975). It is more demanding than the general-intent requirement of Section 1 claims. *See, e.g., Wagner v. Magellan Health Servs., Inc.*, 121 F. Supp. 2d 673, 681 (N.D. Ill. 2000) ("A conspiracy to monopolize under Section 2 is somewhat different than its Section 1 counterpart because of its heightened intent element, i.e., concerted action by knowing participants who have a specific intent to achieve a monopoly"). As one court recently stated, specific intent "signifies something more than willing, voluntary, and knowing participation in the illegal course of conduct that [defendant] is alleged to have pursued." *In re Microsoft Corp. Antitrust Litig.*, 127 F. Supp. 2d 728, 731 (D. Md. 2001). Rather, "[i]t means participating in that course of conduct for the specific, shared purpose of maintaining" Schering's monopoly. *Id.* (citation omitted).

A mere confluence of economic interests between the parties does not establish a specific intent to monopolize. *See Building Indus. Fund v. Local Union No. 3*, 992 F. Supp. 162, 186 (E.D.N.Y. 1996) ("The essence of a conspiracy is not simply a commonality of interest. It involves an agreement by two or more people to accomplish a specific illegal objective"); *Genetic Sys. Corp. v. Abbott Labs.*, 691 F. Supp. 407, 422 (D.D.C. 1988) (rejecting theory that "mutual purposes and intended effects" could satisfy specific intent standard) (citation omitted).

There is insufficient evidence to demonstrate that Upsher-Smith or Schering "specifically intended" to further Schering's alleged unlawful monopoly in the sale of K-Dur 20. Moreover, there were numerous legitimate business justifications offered for Upsher-Smith's and Schering's conduct, including ending the expensive and acrimonious patent litigation, obtaining a date certain for entry of Upsher-Smith's generic product five years before the expiration of Schering's patent, opening the door for other generic mEq sustained-release potassium chloride supplements to enter the market, freeing up resources at Upsher-Smith for future pharmaceutical R&D and marketing of potassium products; and giving Upsher-Smith overseas distribution capability for six of its pharmaceutical products.

As the court in *Microsoft* explained, to establish a Section 2 conspiracy, "what plaintiffs must prove is that when confronted with Microsoft's demands, the OEM defendants stepped back and concluded that maintaining Microsoft's monopolies was a goal that they themselves desired to

accomplish." *Microsoft,* 127 F. Supp. 2d at 731. The credible evidence demonstrates that far from seeking to further Schering's alleged monopoly, Upsher-Smith fought hard to bring its product to market and competed vigorously with Schering before, during and after the execution of the settlement agreement.

IV. SUMMARY OF CONCLUSIONS OF LAW

2. The Federal Trade Commission has jurisdiction over the subject matter of this proceeding and over Respondents Schering-Plough Corporation ("Schering") and Upsher-Smith Laboratories, Inc. ("Upsher-Smith").

3. Schering is a corporation, as "corporation" is defined in Section 4 of the Federal Trade Commission Act, 15 U.S.C. § 44.

4. Schering's acts and practices, including the acts and practices alleged in the Complaint, are in or affect commerce as "commerce" is defined in Section 4 of the Federal Trade Commission, 15 U.S.C. § 44.

5. Upsher-Smith is incorporated, has shares of capital or capital stock, and is authorized to carry on business for its own profit, and is, therefore, a corporation, as "corporation" is defined in Section 4 of the Federal Trade Commission Act, 15 U.S.C. § 44.

6. Upsher-Smith's business activities are in or affect commerce as "commerce" is defined in Section 4 of the Federal Trade Commission Act, 15 U.S.C. § 44.

7. Complaint Counsel bears the burden of proof of establishing each element of the violations of the Complaint.

8. The relevant geographic market for assessing the allegations of the Complaint is the United States.

9. The relevant product market for assessing the allegations of the Complaint is all oral potassium supplements that can be prescribed by a physician for a patient in need of a potassium supplement.

10. Complaint Counsel failed to prove or properly define the relevant product market.

11. Patent laws confer upon the patentee the exclusive right to make, use or sell the patented invention during the patent term, and authorize the patentee to exclude others – for example, by the initiation of infringement litigation – from manufacturing, using and/or selling the invention during the patent term.

12. The agreement between Schering Plough and Upsher-Smith did not unreasonably restrain competition and was not an unfair method of trade.

13. The agreement between Schering Plough and ESI did not unreasonably restrain competition and was not an unfair method of trade.

14. Schering-Plough does not have monopoly power in the relevant product market.

15. Schering-Plough did not engage in conduct to unlawfully preserve monopoly power in the relevant product market.

16. Schering-Plough did not conspire with Upsher-Smith or ESI to unlawfully preserve monopoly power in the relevant product market.

17. Complaint Counsel failed to meet its burden of proof in support of the Violations alleged in the Complaint.

18. The Complaint should be and is dismissed.

ORDER

For the reasons stated above,

IT IS ORDERED that all violations of the Complaint be, and hereby are, dismissed.

ORDERED:

D. Michael Chappell
Administrative Law Judge

Dated: June 27, 2002

Everything Old is New Again: Health Care and Competition in the 21st Century

Prepared Remarks of

Timothy J. Muris*
Chairman

Federal Trade Commission

Before

7th Annual Competition in Health Care Forum

Chicago, Illinois

November 7, 2002

*This speech does not necessarily reflect the views of the Commission or any other individual Commissioner.

Exhibit 7

high quality care, by assuring consumers a range of different health care products and services, empowering purchasers to define quality for themselves, and improving access through price competition.

Quality is obviously an important part of the competitive mix when purchasing health care, and competition law does not hinder the delivery of high quality care. The Commission is always willing to consider arguments about how a particular transaction or conduct will improve quality, and it will pay close attention to such arguments in weighing the competitive implications. Moreover, because quality is so important in health care, we should err on the side of conduct that promises to improve patient care.

Clinical integration that increases quality of care is one example of permissible pro-competitive collective conduct. As I mentioned earlier, the staff recently issued an advisory opinion to MedSouth on this issue. The physicians proposed an innovative form of clinical integration that would allow them to treat patients more effectively. The staff concluded that the collective negotiation of fees was reasonably related to the physicians' clinical integration and quality objectives, even though there was no financial integration. As I also mentioned previously, the Commission recently closed an investigation in which physician collaboration resulted in a substantial degree of market concentration because the group demonstrated that considerable efficiencies resulted, including dramatically improved quality of care.

Collaborative conduct of this sort does not violate the antitrust laws, because there are substantial pro-competitive benefits. However, if a group has no justifications for its price fixing, the inquiry ends and the conduct is summarily (and appropriately) condemned by the antitrust laws.

CERTIFICATE OF SERVICE

I hereby certify that on January 27, 2005, copies of the foregoing ***Appendix to Pretrial Brief of Respondent Evanston Northwestern Healthcare Corporation*** **(Public Record Version)** were served (unless otherwise indicated) by email and first class mail, postage prepaid, on:

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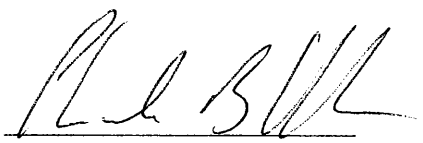

Charles B. Klein