IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF NEW JERSEY

FEDERAL TRADE COMMISSION, Plaintiff, v. **HACKENSACK MERIDIAN HEALTH, INC.,** and **ENGLEWOOD HEALTHCARE FOUNDATION,** Defendants.	Civil Action No. 20-cv-18140-JMV-JBC **UNDER SEAL**

REPLY MEMORANDUM IN SUPPORT OF FEDERAL TRADE COMMISSION'S MOTION FOR A PRELIMINARY INJUNCTION

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The FTC's opening brief presents a straightforward case: Bergen County is an area "where, within the area of competitive overlap, the effect of the merger on competition will be direct and immediate"[1] for the sale of inpatient GAC services and in which the Acquisition will result in a substantial loss of competition. The Acquisition is presumptively illegal whether one looks at Bergen County by patients residing there—taking account of all hospitals they visit, including those outside Bergen County—or by hospitals located in Bergen County. Ordinary course evidence confirms the presumption. Defendants are important competitors to each other for Bergen County patients, and the Acquisition's elimination of that competition will result in increased prices and diminished quality and services. Defendants' made-for-litigation efficiencies cannot satisfy the high standard required to rebut the strong presumption of illegality.

Defendants' brief fails to engage with the FTC's case or evidence. Instead, Defendants seek to distract the Court by mischaracterizing the FTC's case and setting up straw men. Defendants also mischaracterize evidence throughout their brief, and present evidence that is irrelevant. Defendants' heavy reliance on the *Jefferson*[2] decision and their claim that the FTC's brief is "fatal[ly]" flawed because it "simply ignores it," Opp. 4-5, exemplifies the issue. Defendants rest almost entirely on this decision, citing it nearly 20 times. But the FTC did not

[1] *United States v. Philadelphia Nat'l Bank*, 374 U.S. 321, 357 (1963).
[2] *FTC v. Thomas Jefferson University*, 2020 WL 7227250 (E.D. Pa. Dec. 8, 2020).

address *Jefferson* because it is irrelevant. In *Jefferson*, the FTC presented the presumption based solely on shares for a particular set of hospitals located in a geographic area. 2020 WL 7227250 at *18. Here, the FTC accounts for all hospitals visited by Bergen County patients, regardless of location. This attack, and others like it, leave the FTC's actual case unrebutted. Thus, for the reasons stated in the FTC's opening brief and below, this Court should grant the injunction.

I. The FTC Will Likely Succeed on the Merits

The FTC stated the appropriate standards for this case in its opening brief, Mem. 10-13, and does not repeat them here. The FTC clarifies the proper standard under Section 13(b), however, because Defendants repeatedly overstate it. *E.g.*, Opp. 5. Section 13(b)'s public interest standard is lower than the traditional equity standard for injunctive relief. *See FTC v. Penn State Hershey Med. Ctr.*, 838 F.3d 327, 337 (3d Cir. 2016); *FTC v. H.J. Heinz*, 246 F.3d 708, 714-15 (D.C. Cir. 2001). The FTC "has demonstrated a likelihood of success . . . if it raises questions going to the merits so serious, substantial, difficult and doubtful as to make them fair ground for thorough investigation, study, deliberation and determination by the FTC in the first instance." *FTC v. Warner Commc'ns*, 742 F.2d 1156, 1162 (9th Cir. 1984).[3] Defendants' claim that they will abandon their merger if a preliminary injunction issues is a business decision that has no bearing on the legal standard.

[3] *See also, e.g.*, *Heinz*, 246 F.3d at 714-15; *FTC v. Univ. Health*, 938 F.2d 1206, 1218 (11th Cir. 1991).

A. Defendants Do Not Seriously Contest the Relevant Product Market

Defendants do not dispute that the FTC has correctly defined a relevant product market as inpatient GAC services, except for a single throwaway sentence implying that it was wrong to include only overlapping inpatient GAC services—*i.e.*, services that both Englewood and HMH's Bergen County hospitals provide. Opp. 8. Defendants' critique finds no support in the case law on hospital or physician service mergers, where the FTC has consistently alleged, and courts have defined, product markets limited to overlapping services.[4] This makes fundamental sense because a merger will not reduce competition for non-overlapping services. Regardless, as the FTC's opening brief explains, the vast majority of services (over 97% of discharges) provided by Englewood and HMH's Bergen County hospitals *do* overlap.[5] Thus, unsurprisingly, an analysis of market shares and concentrations based on *all* inpatient GAC services offered by either Defendant in Bergen County shows that the Acquisition is still presumptively unlawful.[6]

B. Defendants' Attacks on the FTC's Geographic Market Fail

The purpose of defining a relevant market is to specify the "line of commerce. . . [and] section of the country" in which the merger raises a

[4] *See, e.g.*, *FTC v. ProMedica Health Sys., Inc.*, No. 3:11 CV 47, 2011 WL 1219281, at *55 (N.D. Ohio Mar. 29, 2011); *Saint Alphonsus Med. Center-Nampa Inc. v. St. Luke's Health Sys., Ltd.*, 778 F.3d 775 (9th Cir. 2015).
[5] Mem. 17; PX8000 (Dafny Rpt.) ¶¶ 130, 132, 682, Fig. 26.
[6] PX8002 (Dafny Rebuttal Rpt.) ¶ 58, Fig. 11.

competitive concern. 15 U.S.C. §18. Once a market is defined, market participants can be identified and market shares calculated. Ample evidence points to Bergen County as an area "where, within the area of competitive overlap, the effect of the merger on competition will be direct and immediate." *United States v. Philadelphia Nat'l Bank*, 374 U.S. 321, 357 (1963).[7] Bergen County is therefore the FTC's relevant geographic market, and the FTC used two valid methods for calculating market shares and concentration levels for this market. The FTC's primary method focused on patients residing in Bergen County, measuring where these patients seek inpatient GAC services. This method accounts for *all* hospitals used by those patients—including all the New York and New Jersey hospitals. Mem. 26-29; PX8000 (Dafny Rpt.) Fig. 15. The FTC also presented an alternative approach to assessing market shares and concentration levels based on the hospitals located in Bergen County. Both methods yield market shares and concentrations that exceed the presumption for an unlawful transaction. *See Merger Guidelines* § 4.2; Mem. 26-29; PX8000 (Dafny Rpt.) ¶¶ 161-66, Fig. 16.

Rather than engage with this evidence, Defendants mischaracterize the FTC's market, the facts, and the law. In particular, Defendants ignore that the FTC accounts for the very same hospitals Defendants claim the market excludes, rendering Defendants' arguments moot. Defendants also mischaracterize evidence,

[7] This evidence is described at Mem. 17-26.

citing to documents and testimony that contradict their own arguments. Finally, Defendants' proposed adjustments to the geographic market do not negate the FTC's market and result in markets that still trigger the presumption of illegality.

1. Defendants' Attack on the FTC's Market Shares and Concentration Levels Fails Because It Ignores Which Hospitals the FTC Included

Defendants' attack on the FTC's approach to measuring concentration levels and market shares hinges on their incorrect claim that the FTC's Bergen County market excludes all hospitals outside of Bergen County. Opp. 3-4, 24-25. Defendants' claim is wrong. The FTC's primary method for measuring market shares and concentration levels accounts for *all* hospitals used by Bergen County patients. Under this method, which is highly favorable to Defendants, HMH's acquisition of Englewood results in a combined share of roughly 47%, an HHI increase of 841—four times the 200-point threshold—and a highly concentrated market of 2,835. Mem. 26-29. These figures well exceed the presumption for an unlawful transaction. *See Merger Guidelines* § 4.2; Mem. 26-29.

These shares confirm the commercial reality that more distant hospitals do not meaningfully compete for patients who reside in Bergen County, and thus they are not meaningful substitutes for Bergen County hospitals for insurers constructing networks. *All* New Jersey hospitals outside Bergen County collectively have only an 8.2% share of discharges of Bergen County residents, and *all* New York hospitals collectively have only a 13.9% share of discharges of

Bergen County residents. Mem. 29; PX8000 (Dafny Rpt.) Fig. 15. The preceding "outmigration" figures are consistent with those calculated by Defendants in the ordinary course.[8] Defendants highlight St. Joseph's University Medical Center, St. Mary's General Hospital, and Hudson Regional Hospital, Opp. 24, but these hospitals see only 1.8%, 0.7%, and 0.2% shares, respectively, of Bergen County residents. PX8000 (Dafny Rpt.) Fig. 25. [redacted].[9] Similarly, Defendants point to NYP-Columbia, Mount Sinai's hospitals, Memorial Sloan Kettering, and the Hospital for Special Surgery, Opp. 26, but NYP-Columbia (the New York hospital closest to Bergen County) sees only a 3.2% share of Bergen County residents, while the others each have less than a 2% share. PX8000 (Dafny Rpt.) Fig. 25. Documents produced [redacted] show as much.[10]

The FTC also presented an alternative approach to measuring market shares and concentration levels for the Bergen County market that focuses on the six Bergen County hospitals. While Defendants' critiques primarily address this alternative approach, they do not dispute that a Bergen County hospital market satisfies the HMT. Opp. 11-12. Nor could they. Undisputed evidence shows that a hypothetical monopolist of all Bergen County hospitals could profitably impose a

[8] *See, e.g.*, [redacted]; PX1295-007, -065; PX2080-033; PX1139-013.
[9] *See, e.g.*, PX4085-004; [redacted]; [redacted]; [redacted]; [redacted].
[10] *See, e.g.*, PX4017 at 14, 31-36; [redacted]; PX4158-036; [redacted].

SSNIP.[11] Calculating market shares for the Bergen County market this way is entirely supported by the evidence, and results in dramatically higher concentration levels—HMH would have a 65% share post-Acquisition, and the HHI would increase by 1,510 points to more than 5,000. Mem. 27-29.[12]

Instead of refuting that the Bergen County market satisfies the HMT, Defendants rely almost entirely on a single district court decision to argue that a geographic market that satisfies the HMT must also satisfy a separate, additional "commercial realities" test. Opp. 11-12. This is wrong and irrelevant. First, uniform circuit court precedent for healthcare provider mergers holds that a proposed market that satisfies the HMT constitutes a relevant geographic market, without the need for yet another test. *See, e.g.*, *Hershey*, 838 F.3d at 346 (where the FTC satisfied the inquiry under the HMT, "the Government has met its burden to properly define the relevant geographic market").[13] The HMT already accounts for

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[11] Mem. 25-26; PX8000 (Dafny Rpt.) ¶¶ 150-51, Fig. 13. A geographic market that includes all hospitals visited by Bergen County patients for inpatient GAC services unquestionably satisfies the HMT—a hypothetical monopolist of all such hospitals could impose a SSNIP on insurers serving Bergen County residents. *Id.* ¶ 148.

[12] Defendants falsely claim that the FTC's proposed geographic market is "the smallest geographic market the FTC has ever proposed." Opp. 3. Even as to a market consisting of the six Bergen County hospitals, this claim is wrong. *See, e.g.*, *FTC v. OSF Healthcare System*, 852 F. Supp. 2d 1069, 1077 (N.D.Ill. 2012) (three hospital market). In *ProMedica*, the relevant geographic market was a single county with less than half of Bergen County's population. 749 F.3d at 561-62, 565.

[13] *See also FTC v. Advocate Health Care Network*, 841 F.3d 460, 464, 468 (7th Cir 2016); *St. Luke's*, 778 F.3d at 784; *FTC v. Sanford Health*, 926 F.3d 959, 963 (8th Cir. 2019).

commercial realities. Second, even if there were a second test for commercial realities, those realities resoundingly confirm that insurers must include Bergen County hospitals for plans sold to Bergen County residents. *See* Mem. 25; *see also infra* at 10-12.[14]

2. Defendants' Remaining Attacks on the Bergen County Market Rest on Mischaracterizations and Red Herrings

The FTC's opening brief presented abundant testimony and ordinary course evidence demonstrating that Bergen County is a relevant market. Mem. 17-24. Defendants fail to rebut this evidence, and their remaining criticisms of the FTC's Bergen County market lack merit for the reasons described below.

First, Defendants argue that a geographic market should incorporate Defendants' primary service areas ("PSAs"), and that both HUMC and Englewood's PSAs extend well beyond Bergen County. Opp. 20-24. This argument is legally immaterial and factually wrong—Defendants' representation of Englewood's PSA is not supported by a *single* document Defendants cite. [redacted]. Instead, as shown in the map on the next page [redacted]), these documents show that [redacted] Defendants' own ordinary course documents also refer to [redacted].

[14] Defendants' geographic market discussion also features an extended argument against diversion ratios. Opp. 13-14. While diversion ratios are highly informative of substitutability, the FTC's geographic market *did not rely* on diversion ratios.

[redacted]

Not only do the Defendants' cited documents fail to refute the FTC's geographic market, they confirm the anticompetitive nature of the Acquisition. These same documents reflect that HMH and Englewood have a combined [redacted] and [redacted][15] And even if Defendants were correct about the documents' contents, hospital service areas need not be the focus of geographic market definition,[16] and Defendants cite no evidence supporting their claim that insurers consider PSAs in building their provider networks. Opp. 22. To whatever extent Defendants' PSAs extend beyond Bergen County, that implies nothing about the competitive effect of the transaction on Bergen County residents. *See* PX8002 (Dafny Rebuttal Rpt.) ¶¶ 32-33; *Hershey*, 838 F.3d at 339; *Advocate*, 841 F.3d at 469-70, 476.

[15] [redacted] (citing [redacted]; [redacted]).
[16] *See* PX8002 (Dafny Rebuttal Rpt.) ¶¶ 32-34.

Defendants turn to [redacted] testimony, but [redacted] is of no help to them.[17] Defendants claim that [redacted] testified that a hypothetical monopolist of Bergen County hospitals [redacted] But [redacted] testimony was that its contractual provisions, formulas, size, and relationships would protect it from a price increase.[18] This testimony is irrelevant to defining a geographic market, which considers neither private contracts nor existing insurer bargaining leverage. *Hershey*, 838 F.3d at 344 ("private contracts between merging parties and their customers have no place in the relevant geographic market analysis"); *id.* at 346 (payer leverage irrelevant to the HMT). The relevant [redacted] testimony is its admission that it could not market to Bergen County residents and employers a health plan that excluded all Bergen County hospitals.[19] *See Hershey*, 838 F.3d at 346. [redacted].[20]

Defendants then chide the FTC for not rebutting statements by some employers that an unspecified number of people leave Bergen County for

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[17] The FTC addresses [redacted] estimony *infra* at 17. Even if correctly cited by Defendants—and it is not—this testimony would be irrelevant to market definition. Contrary to Defendants' claim, the test for defining a geographic market is whether a hypothetical monopolist could profitably raise prices, not whether *the Acquisition* will cause an insurer to pay a higher price. *Hershey*, 838 F.3d at 346.

[18] [redacted]

[19] [redacted].

[20] [redacted]; [redacted]; PX7051 at 192-94; [redacted]; [redacted]. Medicare Advantage insurers also confirm that Bergen County hospitals must be in network. *E.g.*, [redacted]; [redacted].

unspecified types of healthcare. Opp. 19-20.[21] But such statements are not inconsistent with the FTC's geographic market. As the FTC has explained, Mem. 43-44, the Third Circuit and other courts reject attempts to disprove hospital markets by looking at whether some people leave the market for care. As with [redacted], though, these employers did provide testimony relevant to *Hershey*'s inquiry—they would not buy a product that *excludes* Bergen County hospitals from its network. Becton Dickinson testified that it would not offer its employees a health plan that excluded Bergen County hospitals.[22] The Meadowlands Chamber of Commerce's CEO was unaware of any Bergen County members that have insurance plans that lack access to Bergen County hospitals.[23] [redacted], testified that it is important for clients with a significant number of Bergen County employees to have in-network access to Bergen County hospitals.[24]

3. Defendants' Proposed Changes to the Geographic Market Are Irrelevant and Inappropriate

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[21] Defendants also again misstate the testimony they cite. For example, Defendants claim that the Meadowlands Chamber of Commerce's declaration states that its "member employees generally are not concerned about the merger," Opp. 19, but the declaration contains no such statement. DX2902.

[22] [redacted]. *See also id.* [redacted]

[23] PX7044 at 90-91.

[24] [redacted].

While Defendants do not submit an alternative geographic market, their experts propose "adjustments" to the FTC's geographic market. But Defendants here make an important concession—even in their misleadingly broad markets, the combined hospital system's market share would exceed the Supreme Court's 30% market share threshold for presuming harm.[25] *See Philadelphia Nat'l Bank*, 374 U.S. at 364; *see also FTC v. Swedish Match N. Am., Inc.*, 131 F. Supp. 2d 151, 166 (D.D.C. 2000). Consequently, contrary to Defendants' claims, "modest adjustments to the FTC's geographic market" do *not* "eliminate any presumption of anticompetitive effect." Opp. 29. Moreover, these adjustments, if applied correctly, also result in changes in concentration levels well above the threshold for a presumptively anticompetitive merger. *See Merger Guidelines* § 5.3.[26]

The Court need not choose between Defendants' proposed markets and the FTC's, however. Firms compete in multiple markets, some broader and some narrower. Recognizing this, the Supreme Court and lower courts recognize that proof of broader markets does not "negative the existence" of narrower ones, *see, e.g.*, *United States v. Cont'l Can*, 378 U.S. at 458, and courts must look to narrower markets—"submarkets" or smaller areas "within the competitive

[25] Specifically, under Dr. Wu's calculations, Defendants' 20-minute drive-time adjustment yields a combined market share of 41.9% and Defendants' (incorrect) *Advocate*-based adjustments yield a combined market share of 31%. Opp. 29-30.
[26] Applying an actual 20-minute drive time and the correct *Advocate* methodology, which Defendants fail to do, results in concentration levels above the Merger Guidelines presumption. PX8002 (Dafny Rebuttal Rpt.) ¶¶ 38-39, 40-41, Figs. 3, 5.

overlap"—to assess a merger's legality. *See Brown Shoe Co. v. United States*, 370 U.S. 294, 325, 337 (1962); *Philadelphia Nat'l Bank*, 374 U.S. at 357-58; *Advocate*, 841 F.3d at 472 ("If the analysis uses geographic markets that are too large, consumers will be harmed because the likely anticompetitive effects of hospital mergers will be understated.").

C. The FTC's Evidence of Competitive Harm Stands Unrebutted

The FTC's opening brief presented extensive ordinary course evidence of competition between Englewood and HMH's Bergen County hospitals—including [redacted]. Defendants do not attempt to refute this evidence. [redacted]

Instead, Defendants contend their anticompetitive transaction should be allowed because HUMC and Englewood are complements, not substitutes—a claim at odds with the case law and the evidence, including Defendants' own documents. First, the Acquisition would not be lawful even if Englewood offered significantly fewer services than HUMC. In *Hershey*, the Third Circuit preliminarily enjoined the acquisition by Hershey, "a leading academic medical

center" that "specializes in more complex, specialized services that are unavailable at most other hospitals," of Pinnacle, a health system that "focuses on cost-effective primary and secondary services and offers only a limited range of more complex services." 838 F.3d at 334; *see also ProMedica Health Sys., Inc. v. FTC*, 749 F.3d 559, 562, 567 (6th Cir. 2014) (enjoining acquisition by ProMedica, which provided tertiary services, of St. Luke's, which offered virtually none).

The Court need not rely on this precedent, though, because HMH and Englewood are competitors that provide substantially similar services. Defendants do not cite to a *single* ordinary course document supporting their contention that HMH and Englewood are mere "complements." Instead, Defendants' documents are rife with references to each other as "competitors."[27] Defendants once again ask the Court to ignore ordinary course evidence in favor of expert opinion, Opp. 30, a frequent theme in Defendants' brief and an approach already rejected by the Supreme Court. *Brooke Grp. Ltd. v. Brown & Williamson Tobacco Corp.*, 509 U.S. 209, 242 (1993) ("Expert testimony is useful as a guide to interpreting market facts, but it is not a substitute for them.").

Review of Defendants' discharges further confirms that they are competitors. Approximately 97.5% of discharges at HMH's Bergen County

[27] *See, e.g.*, PX1102-015; PX1143-026; PX1107; PX1205-002; [redacted]; PX1055-001; [redacted]; PX1106-001-02; PX1127-012; PX2089-001; PX2121-011; [redacted]; PX2125-014-15; PX2119-024-25; [redacted].

hospitals are for services offered at Englewood, while more than 99.9% of discharges at Englewood are for services also offered at HMH's Bergen County hospitals. PX8000 (Dafny Rpt.) ¶ 682, Fig. 26. Defendants do not dispute the accuracy of this analysis, and Defendants' own experts and arguments acknowledge the extensive overlap between HUMC and Englewood. [redacted]. Relatedly, Defendants label Englewood a mere "community" hospital when arguing that HUMC and Englewood do not compete, Opp. 31, but their efficiencies claims rest on the exact opposite idea—[redacted]; [redacted]. Defendants also contradict their arguments about the significance of overlapping services in claiming that specialty hospitals providing exclusively orthopedics (Hospital for Special Surgery) or cancer care (Memorial Sloan Kettering) are meaningful competitors to Defendants. Opp. 3-4, 26.

Defendants are thus left again to mischaracterize evidence from insurers, evidence that highlights HMH and Englewood are competitors. First, neither

[redacted] nor [redacted] testified that HMH and Englewood were complements rather than substitutes.[28] [redacted] testified that that HMH is Englewood's "closest GAC inpatient competitor in Bergen County" because "HUMC is close to Englewood geographically and offers a similar set of GAC inpatient services," and that "for a large number of services, [Englewood and HUMC] compete for the same patient base."[29] Likewise, [redacted], acknowledged that HMH and Englewood are competitors and that HMH's Bergen County hospitals are alternatives to Englewood (and vice versa) for Bergen County residents. [redacted]

[redacted]

Defendants also point to [redacted] but ignore that—on the same page Defendants cite—[redacted] testified that, if it lacked HUMC in-network, having Englewood in-network would be more important. [redacted]

Defendants' repeated distortion of [redacted] testimony is especially notable. Opp. 33-34. [redacted] never testified that there would be [redacted] Rather, [redacted]

[redacted]

[28] Opp. 31 [redacted]

[29] [redacted]

[redacted]. This testimony firmly supports the FTC's case.

Defendants' bald claim that insurers' testimony on competition between HMH and Englewood is not "supported by contemporaneous documentary evidence" or "real-world analysis," Opp. 36, is likewise demonstrably false.[30] As the FTC previously explained, [redacted] performed analyses estimating that a substantial portion of their members would switch to HUMC if Englewood were terminated from their networks. Mem. 34-35. [redacted] also performed termination analyses for HUMC and Pascack Valley estimating that, if either hospital were not in network, [redacted] of its patients would go to Englewood. [redacted]. Analyses [redacted] consultant prepared in developing [redacted] *see also* PX1036-002, 005 (including Englewood as a Tier 1 rather than Tier 2 hospital in OMNIA lowers the opportunity to "steer" patients to HUMC by about 15%). And during 2019 negotiations with HMH, [redacted] identified Englewood as [redacted]

[30] Defendants make a thinly reasoned argument that insurer testimony is biased, but there is no reason to think [redacted] would be more biased than [redacted]

[redacted].[31] Thus, a broad spectrum of evidence from the insurers supports the FTC's case.

Defendants also fail to rebut economic analyses predicting substantial harm from the Acquisition. Defendants do not contest the accuracy of diversion estimates measuring significant substitution among Defendants' hospitals.[32] Defendants likewise do not contest analyses showing that the Acquisition will lead to a substantial increase in willingness to pay ("WTP")—which implies that the merged entity will have the incentive and ability to increase price by a meaningful amount. PX8000 (Dafny Rpt.) ¶¶ 117, 195-96. Defendants quibble with Dr. Dafny's translation of WTP increases to estimated price increases, Opp. 37, but Dr. Dafny's methodology is supported by substantial theoretical and empirical economic literature, including literature written by Defendants' own expert.[33]

Defendants err again in claiming that the FTC and Dr. Dafny's analysis did not address Valley's new hospital, Bergen New Bridge's small growth in commercial patients, and the modest increase in outmigration to New York

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[31] Defendants reference narrow and tiered networks, Opp. 34, but ignore such networks centered on Englewood like [redacted] tried to form a narrow network excluding HMH but including Englewood, [redacted]

[32] *See* Mem. 36-37; PX8000 (Dafny Rpt.) ¶¶ 177, 178, 692, Figs. 17, 32. Defendants complain that this analysis does not include 2020 data, but 2020 data are not yet available and could be misleading due to the coronavirus pandemic.

[33] PX8002 (Dafny Rebuttal Rpt.) ¶¶ 83-86.

hospitals. Opp. 38-39. These factors were explicitly accounted for. *See* Mem. 43, 45; PX8000 (Dafny Rpt.) Section IX.A & Fig. 21, Section IX.B & Fig. 21. Under each analysis, the Acquisition remains presumptively unlawful and the WTP increase is substantial. PX8000 (Dafny Rpt.) Fig. 21.[34]

Finally, *after* the FTC filed its opening brief observing that the Acquisition would lead to immediate, significant price increases [redacted] Opp. 40. It is hard to imagine conduct more clearly made for litigation than these letters—which offer no business justification for HMH's [redacted]. *See United States v. Aetna Inc.*, 240 F. Supp. 3d 1, 79-80 (D.D.C. 2017); *see also Chicago Bridge & Iron Co. N.V. v. FTC*, 534 F.3d 410, 434-35 (5th Cir. 2008); *Hosp. Corp. of Am. v. FTC*, 807 F.2d 1381, 1384 (7th Cir. 1986). [redacted] do nothing to prevent harms that would result from the loss of competition from the Acquisition: the merged system could still use its enhanced bargaining leverage to increase prices in subsequent insurer contract negotiations, and it would face less pressure to improve quality.

[34] Defendants' claim that the Acquisition will reduce prices by addressing HUMC's claimed capacity problems fails, as explained below in Section I.D.

D. Defendants' Claimed Benefits are Speculative, Unsupported, and Not Merger Specific, and Thus Fail to Rebut the FTC's Prima Facie Case

Defendants assert that their merger will yield cost savings and improved quality that "offset" the harm caused by the loss of competition. The Third Circuit is "skeptical that such an efficiencies defense even exists," *Hershey*, 838 F.3d at 347-48, and the Supreme Court has suggested that it does not: "Congress was aware that some mergers which lessen competition may also result in economies but it struck the balance in favor of protecting competition," *FTC v. Procter & Gamble Co.*, 386 U.S. 568, 580 (1967).[35]

Given this defense's status, and the fact that Defendants alone possess the relevant information, efficiencies claims are subjected to "demanding scrutiny," and the burden is on the "Hospitals [to] clearly show" that any claimed efficiencies meet the defense's requirements. *Hershey*, 838 F.3d at 348-49. These requirements include that the efficiencies be both merger specific and verifiable—thus, the "efficiency claim must represent a type of cost saving that could not be achieved without the merger and the estimate of the predicted saving must be reasonably verifiable by an independent party." *United States v. H&R Block, Inc.*, 833 F. Supp. 2d 36, 89 (D.D.C. 2011); *see also Hershey*, 838 F.3d at 347-49. Further, "the

[35] Defendants' claim that "quality of care and other health care improvements are not mere efficiencies but procompetitive effects that must be taken into account when evaluating whether the FTC has carried its burden," Opp. 46, finds no support in the page it cites from *Hershey*, 838 F.3d at 350, nor in other case law. *See, e.g.*, *St. Luke's*, 778 F.3d at 791-92; *Sanford*, 926 F.3d at 965-66.

Hospitals must demonstrate that such a benefit would ultimately be passed on to consumers," which "requires more than speculative assurances that a benefit enjoyed by the Hospitals will also be enjoyed by the public." *Hershey*, 838 at 351.

Defendants' claimed efficiencies fail each of these requirements. Most are based on expert analyses or made-for-litigation documents that Defendants attempt to substitute for rigorous planning in the ordinary course of business, and it is therefore highly uncertain whether Defendants can or will realize the purported benefits. Other claims rest on speculative predictions about multi-step chains of events. Moreover, most claimed efficiencies are facially non-cognizable because Defendants have obvious alternatives that are less anticompetitive.

The primary efficiencies Defendants claim derive from a professed plan to transfer some tertiary care patients from HUMC to Englewood to relieve alleged capacity problems at HUMC. Opp. 41-44.[36] These are not cognizable efficiencies.

As a threshold matter, the severity of HUMC's capacity problems is questionable. According to Defendants' expert, [redacted][37] [redacted].[38]

[36] The Service Optimization Plan that Defendants reference is a February 27, 2021 document first produced on February 28, *see* PX1221, with a subsequent version, DX3601, produced the final day of fact discovery. HMH prepared this document long after it decided to acquire Englewood and crafted its litigation strategy.

[37] [redacted]

Insurers and neighboring hospitals are unaware of HUMC having capacity problems.[39] HUMC has also been steadily growing inpatient services across numerous high-acuity service lines.[40] For the new Second Street Pavilion at HUMC, HMH elected to build exclusively private patient rooms (as well as to convert existing semi-private rooms to private rooms) [redacted].[41] These actions do not suggest serious, insoluble capacity problems.

Furthermore, HMH has multiple options to resolve the alleged capacity problems without the purchase of Englewood and "the concomitant loss of a competitor." *Hershey*, 838 F.3d at 348. Rather than move tertiary patients out of HUMC, HMH could redirect lower acuity patients from HUMC to nearby community hospitals, including its own hospitals that all operate well under capacity—Pascack Valley[42] in Bergen County and Mountainside and Palisades just

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[38] *See, e.g.*, P[redacted] PX1091-010; PX7015 at 95-96; [redacted];

[39] [redacted];

[40] *See* PX1050; PX1244-058.

[41] PX9055-002; PX1244-061; [redacted].

[42] Indeed, HMH's Certificate of Need application to acquire Pascack Valley stated that a primary reason was to "use [Pascack Valley] as a pressure relief valve for the overflow of patients at HUMC." PX9096-013. Despite this, HMH has *not* used Pascack Valley as a relief valve, leaving it underutilized at a capacity of 30-40%. PX8001 (Romano Rpt.) ¶ 54.

outside it.[43] HUMC could take actions to improve throughput, [redacted]. [44] Indeed, a [redacted]. [45] Even if HUMC [redacted], that would create more additional capacity than the proposed Acquisition.

Fundamentally, though, patient transfers are not in themselves cognizable efficiencies. Defendants must show that the transfers result in cost or quality improvements for consumers. Defendants offer nothing but vague, unsubstantiated claims that transfers will improve quality. Defendants' claimed cost improvements are likewise speculative: they rest mostly on the dubious assumption that Englewood's prices will remain the same post-acquisition, Opp. 44, which is unlikely given that the Acquisition will increase HMH's leverage to raise prices, especially at Englewood. The remaining cost improvements rest on the theory that HUMC will attract patients from higher-priced New York facilities by adding a few new quaternary services. Opp. 42, 44. But there is insufficient evidence that HUMC will timely add these services, some of which require a Certificate of Need from the state. Whether patients will choose HUMC for quaternary services over more prestigious and experienced New York hospitals is also uncertain, as are the

[43] PX8001 (Romano Rpt.) ¶¶ 53-64.
[44] PX7034 at 92-95, [redacted].
[45] [redacted].

prices HUMC will charge. Moreover, these benefits are not merger specific, as HMH was already expanding complex tertiary and quaternary services at HUMC before agreeing to merge with Englewood, [redacted].[46]

Defendants' other claimed quality benefits likewise are not substantiated. Defendants have not shown that quality of care at Englewood is lacking or would be enhanced by the Acquisition. Englewood receives frequent recognition for its quality and is ranked higher than HMH hospitals in many areas.[47] Dr. Meyer, Defendants' expert, has not identified specific deficiencies in Englewood's clinical performance, quality infrastructure, or policies and procedures; indeed, when looking at quality metrics such as patient experience, employee engagement, and effective infection control, Englewood outperforms HUMC.[48] Defendants' executives—as opposed to their expert—have made no progress toward identifying specific quality improvements or planning strategies to implement quality improvements.[49] Further, HMH has an inconsistent track record of improving quality at its acquired hospitals.[50] Indeed, an HMH board member expressed concerns about HMH's recent "spotty quality results" and the effect on HMH's quality of acquiring hospitals, questioning "the extent to which the culture of

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[46] *See* PX1244-058; [redacted]; PX1124.
[47] PX9043-001; PX9029; [redacted]; PX1055.
[48] PX8001 (Romano Rpt.) ¶¶ 15, 98, 102-13, Table 3, Appendix D.
[49] [redacted]; PX7020 at 55-56, 69-70.
[50] *See* PX8001 (Romano Rpt.) ¶ 109; [redacted]; PX7020 at 99, 104-05.

Quality that has been touted as the cornerstone of [HMH's] Vision is a reality[.]"[51]

[redacted],[52] as [redacted].[53]

Finally, Defendants have not shown that any prospective quality improvements are merger specific. Their expert did not consider whether any of his claimed benefits are attainable through a merger between Englewood and another health system.[54] [redacted].[55] Indeed, Defendants emphasize the "infusion of resources" and the "specific capital investments" from HMH that will allow Englewood to improve quality of care, Opp. 46, but that investment would be matched or exceeded by other bidders.[56]

Finally, the theoretical cost savings identified by Defendants' expert, Lisa Ahern, find no support in ordinary course planning documents because Defendants made no plans in the ordinary course to achieve these savings. Projections "generated outside of the usual business planning process" may be "viewed with

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[51] PX1185; PX1273-002.

[52] PX7019 at 27, [redacted]; PX7018 at 18-20, [redacted], [redacted], 322.

[53] [redacted]

[54] PX8001 (Romano Rpt.) ¶¶ 116-18.

[55] [redacted]; [redacted], [redacted]; [redacted].

[56] *See, e.g.*, [redacted] PX4083-001-02.

skepticism." *Merger Guidelines* § 10; *ProMedica*, 2011 WL 1219281, at *40–41.[57] Ms. Ahern's estimates rely on flawed [redacted].[58] But the business judgment of executives is not an adequate basis for efficiencies analysis.[59] More significantly, Ms. Ahern's claimed savings utterly fail the merger-specificity requirement. Most are predicated on the idea that HMH, as a large hospital system, has more favorable purchasing contracts, more robust in-house capabilities, more available capital, and back-office staffing that is duplicative of Englewood's.[60] But the same is doubtless true of the other large hospital systems, [redacted] that bid for Englewood. *See FTC v. Arch Coal, Inc.*, 329 F. Supp. 2d 109, 151 (D.D.C. 2004).

II. The Equities Favor a Preliminary Injunction

The parties agree that, in evaluating the equities, the Court must "consider whether the *injunction*, not the *merger*, would be in the public interest." *Hershey*,

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[57] The only support for Defendants' claim that "HMH and Englewood developed a detailed plan regarding cost savings and efficiencies" is deposition testimony that Defendants are in the process of developing a plan, not any actual plan. Opp. 48.

[58] *See, e.g.*, [redacted] produced no notes from Ms. Ahern's interviews.

[59] *See H&R Block*, 833 F. Supp. 2d at 91 (rejecting claims based on "judgment of experienced executives" because "the lack of a verifiable method of factual analysis resulting in the cost estimates renders them not cognizable by the Court").

[60] *See, e.g.*, [redacted] 101-04. Many are also non-cognizable fixed cost savings. *E.g.*, [redacted]; *see also* PX8002 (Dafny Rebuttal Rpt.) ¶¶ 183-84.

838 F.3d at 353. For the reasons stated in the FTC's opening brief, a preliminary injunction is manifestly in the public interest. Mem. 47-48. As in *Hershey,* "[a]ll of the Hospitals' alleged benefits will still be available upon consummation of the merger, even if [the Court] were to grant an injunction and the FTC were to subsequently determine the merger is lawful." *Id.* "[E]ven accepting the Hospitals' assertion that they would abandon the merger following issuance of the injunction, the result . . . would be the Hospitals' doing" and not the Court's or the FTC's. *Id.* On the other hand, if a preliminary injunction does not issue, Defendants can immediately combine their operations, at which point "it is extraordinarily difficult to unscramble the egg," making it "too late to preserve competition." *Id.*

CONCLUSION

The FTC respectfully requests that the Court preliminarily enjoin the proposed Acquisition for the reasons stated here and in the FTC's opening brief.

Dated: April 29, 2021

Respectfully Submitted,

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CERTIFICATE OF SERVICE

I HEREBY CERTIFY that on the 29th day of April, 2021, I served the foregoing on the following counsel via electronic mail:

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PX9029

Awards and Honors

englewoodhealth.org/about-englewood-health/awards-and-honors

Hospital-wide Awards

The Leapfrog Group

- Top Hospital – Top 6% in Nation
- Hospital Safety Grade "A" – Fall 2020

Service-specific Awards

Gastroenterology

CareChex Patient Safety Award

Gastrointestinal Hemorrhage – Top 10% in Nation

General Surgery

CareChex Medical Excellence Award

- Gall Bladder Removal – Top 10% in Nation
- Trauma Care – Top 45 in nation; Top 10% in nation; Top 10% in NJ

CareChex Patient Safety Award

Gall Bladder Removal – Top 10% in Nation

Healthgrades 5-Star Recipient

- Appendectomy – Four years in a row
- Gallbladder Surgery – Two years in a row

Heart & Vascular

CareChex Patient Safety Awards

- Cardiac Care – Top 80 in nation; Top 10% in nation; Top 10% in NJ
- Heart Failure Treatment – Top 10% in nation
- Interventional Coronary Care – Top 10% in nation; Top 10% in NJ
- Major Cardiac Surgery – Top 10% in NJ

Healthgrades 5-Star Recipient

Carotid Procedures – Two years in a row

Neurology & Neurosurgery

CareChex Patient Safety Awards

- Neurological Care – Top 10% in nation
- Major Neurosurgery – Top 10% in NJ
- Stroke Care – Top 10% in nation

Oncology

CareChex Patient Safety Award

Cancer Care – Top 80 in nation; Top 10% in nation; Top 10% in NJ

Orthopedic Surgery

CareChex Medical Excellence Award

Hip Fracture – Top 10% in NJ

CareChex Patient Safety Awards

Hip Fracture – Top 60 in nation; Top 10% in nation; Top 10% in NJ

Healthgrades 5-Star Recipient

Hip Fracture – Two years in a row

Pulmonology

CareChex Medical Excellence Award

Pneumonia Care – Top 10% in Nation

Women's Health

CareChex Patient Safety Award

Women's Health – Top 85 in nation; Top 10% in nation and NJ

Healthgrades Excellence Awards

- Obstetrics and Gynecology – Four years in a row; Top 10% of hospitals evaluated
- Labor and Delivery – Four years in a row; Top 10% of hospitals evaluated

Healthgrades 5-Star Recipient

- Vaginal Delivery – Four years in a row
- C-section Delivery – Four years in a row

Information Technology

College of Healthcare Information Management Executives (CHIME) – Most Wired

- Englewood Hospital – Level 8/10
- Englewood Health Physician Network – Level 8/10

PX9043

Englewood Hospital and Medical Center

350 Engle Street
Englewood, NJ 07631-1898

View this hospital's Leapfrog Hospital Survey Results

This Hospital's Grade

A

FALL 2020

▼ Hide Recent Past Grades

2020	2019		2018		2017	
A	A	B	B	B	A	A
SPRING 2020	FALL 2019	SPRING 2019	FALL 2018	SPRING 2018	FALL 2017	SPRING 2017

More about past grades

Detailed table view

Learn how to use the Leapfrog Hospital Safety Grade

Infections | Problems with Surgery | Practices to Prevent Errors | Safety Problems | Doctors, Nurses & Hospital Staff

MRSA Infection

C. diff Infection

Infection in the blood

Infection in the urinary tract

Surgical site infection after colon surgery

Hospital Performs Below Average — Above Average

This Hospital's Score:
0.525

Best Hospital's Score:
0.000

Average Hospital's Score:
0.791

Worst Hospital's Score:
2.863

MRSA infection

Staph bacteria are common in hospitals, but Methicillin-resistant Staphylococcus aureus (MRSA) is a type of staph bacteria that is resistant to (cannot be killed by) many antibiotics. MRSA can be found in bed linens or medical equipment and can be spread if providers do not properly wash their hands between patients. MRSA can cause life-threatening bloodstream infections, pneumonia and surgical site infections.

This number represents a comparison of the number of infections that actually happened at this hospital to the number of infections expected for this hospital, given the number of patients they care for on a daily basis and how widespread MRSA infection is in their local community. A number lower than one means fewer infections than expected; a number more than one means more infections than expected. Timing of the data.

What safer hospitals do:

Doctors and nurses should clean their hands after caring for every patient. Hospital rooms and medical equipment should be thoroughly cleaned often. Safer hospitals will also keep MRSA patients separate from other patients and require providers and visitors to wear gloves and gowns around these patients.

Notes and Definitions

1. Declined to Report: The hospital was asked to provide this information to the public, but did not.

2. Not Available: "Not Available" means that the hospital does not have data for this measure. This could be because the measure is related to a service the hospital does not provide. For example, a hospital that does not have an ICU would not be able to report data about ICUs. It could also be because the hospital had too few patients or cases to report data for a particular condition or procedure. A "Not Available" result does not mean that the hospital withheld information from the public.

The Leapfrog Hospital Safety Grade is a public service provided by The Leapfrog Group, an independent nonprofit organization committed to driving quality, safety, and transparency in the U.S. health system.

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- How to Use the Grade
- Choosing the Best Hospital
- Lives Lost and Lives Saved
- Frequently Asked Questions

What You Can Do to Stay Safe

- Preparing for Your Hospital Stay
- Talking with Your Doctor About Safety
- Other Patient Resources
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For Hospitals

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PX9050

Horizontal Merger Guidelines

U.S. Department of Justice

and the

Federal Trade Commission

Issued: August 19, 2010

Table of Contents

1. Overview

These Guidelines outline the principal analytical techniques, practices, and the enforcement policy of the Department of Justice and the Federal Trade Commission (the "Agencies") with respect to mergers and acquisitions involving actual or potential competitors ("horizontal mergers") under the federal antitrust laws.[1] The relevant statutory provisions include Section 7 of the Clayton Act, 15 U.S.C. § 18, Sections 1 and 2 of the Sherman Act, 15 U.S.C. §§ 1, 2, and Section 5 of the Federal Trade Commission Act, 15 U.S.C. § 45. Most particularly, Section 7 of the Clayton Act prohibits mergers if "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."

The Agencies seek to identify and challenge competitively harmful mergers while avoiding unnecessary interference with mergers that are either competitively beneficial or neutral. Most merger analysis is necessarily predictive, requiring an assessment of what will likely happen if a merger proceeds as compared to what will likely happen if it does not. Given this inherent need for prediction, these Guidelines reflect the congressional intent that merger enforcement should interdict competitive problems in their incipiency and that certainty about anticompetitive effect is seldom possible and not required for a merger to be illegal.

These Guidelines describe the principal analytical techniques and the main types of evidence on which the Agencies usually rely to predict whether a horizontal merger may substantially lessen competition. They are not intended to describe how the Agencies analyze cases other than horizontal mergers. These Guidelines are intended to assist the business community and antitrust practitioners by increasing the transparency of the analytical process underlying the Agencies' enforcement decisions. They may also assist the courts in developing an appropriate framework for interpreting and applying the antitrust laws in the horizontal merger context.

These Guidelines should be read with the awareness that merger analysis does not consist of uniform application of a single methodology. Rather, it is a fact-specific process through which the Agencies, guided by their extensive experience, apply a range of analytical tools to the reasonably available and reliable evidence to evaluate competitive concerns in a limited period of time. Where these Guidelines provide examples, they are illustrative and do not exhaust the applications of the relevant principle.[2]

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[1] These Guidelines replace the Horizontal Merger Guidelines issued in 1992, revised in 1997. They reflect the ongoing accumulation of experience at the Agencies. The Commentary on the Horizontal Merger Guidelines issued by the Agencies in 2006 remains a valuable supplement to these Guidelines. These Guidelines may be revised from time to time as necessary to reflect significant changes in enforcement policy, to clarify existing policy, or to reflect new learning. These Guidelines do not cover vertical or other types of non-horizontal acquisitions.

[2] These Guidelines are not intended to describe how the Agencies will conduct the litigation of cases they decide to bring. Although relevant in that context, these Guidelines neither dictate nor exhaust the range of evidence the Agencies may introduce in litigation.

The unifying theme of these Guidelines is that mergers should not be permitted to create, enhance, or entrench market power or to facilitate its exercise. For simplicity of exposition, these Guidelines generally refer to all of these effects as enhancing market power. A merger enhances market power if it is likely to encourage one or more firms to raise price, reduce output, diminish innovation, or otherwise harm customers as a result of diminished competitive constraints or incentives. In evaluating how a merger will likely change a firm's behavior, the Agencies focus primarily on how the merger affects conduct that would be most profitable for the firm.

A merger can enhance market power simply by eliminating competition between the merging parties. This effect can arise even if the merger causes no changes in the way other firms behave. Adverse competitive effects arising in this manner are referred to as "unilateral effects." A merger also can enhance market power by increasing the risk of coordinated, accommodating, or interdependent behavior among rivals. Adverse competitive effects arising in this manner are referred to as "coordinated effects." In any given case, either or both types of effects may be present, and the distinction between them may be blurred.

These Guidelines principally describe how the Agencies analyze mergers between rival suppliers that may enhance their market power as sellers. Enhancement of market power by sellers often elevates the prices charged to customers. For simplicity of exposition, these Guidelines generally discuss the analysis in terms of such price effects. Enhanced market power can also be manifested in non-price terms and conditions that adversely affect customers, including reduced product quality, reduced product variety, reduced service, or diminished innovation. Such non-price effects may coexist with price effects, or can arise in their absence. When the Agencies investigate whether a merger may lead to a substantial lessening of non-price competition, they employ an approach analogous to that used to evaluate price competition. Enhanced market power may also make it more likely that the merged entity can profitably and effectively engage in exclusionary conduct. Regardless of how enhanced market power likely would be manifested, the Agencies normally evaluate mergers based on their impact on customers. The Agencies examine effects on either or both of the direct customers and the final consumers. The Agencies presume, absent convincing evidence to the contrary, that adverse effects on direct customers also cause adverse effects on final consumers.

Enhancement of market power by buyers, sometimes called "monopsony power," has adverse effects comparable to enhancement of market power by sellers. The Agencies employ an analogous framework to analyze mergers between rival purchasers that may enhance their market power as buyers. See Section 12.

2. Evidence of Adverse Competitive Effects

The Agencies consider any reasonably available and reliable evidence to address the central question of whether a merger may substantially lessen competition. This section discusses several categories and sources of evidence that the Agencies, in their experience, have found most informative in predicting the likely competitive effects of mergers. The list provided here is not exhaustive. In any given case, reliable evidence may be available in only some categories or from some sources. For each category of evidence, the Agencies consider evidence indicating that the merger may enhance competition as well as evidence indicating that it may lessen competition.

2.1 Types of Evidence

2.1.1 Actual Effects Observed in Consummated Mergers

When evaluating a consummated merger, the ultimate issue is not only whether adverse competitive effects have already resulted from the merger, but also whether such effects are likely to arise in the future. Evidence of observed post-merger price increases or other changes adverse to customers is given substantial weight. The Agencies evaluate whether such changes are anticompetitive effects resulting from the merger, in which case they can be dispositive. However, a consummated merger may be anticompetitive even if such effects have not yet been observed, perhaps because the merged firm may be aware of the possibility of post-merger antitrust review and moderating its conduct. Consequently, the Agencies also consider the same types of evidence they consider when evaluating unconsummated mergers.

2.1.2 Direct Comparisons Based on Experience

The Agencies look for historical events, or "natural experiments," that are informative regarding the competitive effects of the merger. For example, the Agencies may examine the impact of recent mergers, entry, expansion, or exit in the relevant market. Effects of analogous events in similar markets may also be informative.

The Agencies also look for reliable evidence based on variations among similar markets. For example, if the merging firms compete in some locales but not others, comparisons of prices charged in regions where they do and do not compete may be informative regarding post-merger prices. In some cases, however, prices are set on such a broad geographic basis that such comparisons are not informative. The Agencies also may examine how prices in similar markets vary with the number of significant competitors in those markets.

2.1.3 Market Shares and Concentration in a Relevant Market

The Agencies give weight to the merging parties' market shares in a relevant market, the level of concentration, and the change in concentration caused by the merger. See Sections 4 and 5. Mergers that cause a significant increase in concentration and result in highly concentrated markets are presumed to be likely to enhance market power, but this presumption can be rebutted by persuasive evidence showing that the merger is unlikely to enhance market power.

2.1.4 Substantial Head-to-Head Competition

The Agencies consider whether the merging firms have been, or likely will become absent the merger, substantial head-to-head competitors. Such evidence can be especially relevant for evaluating adverse unilateral effects, which result directly from the loss of that competition. See Section 6. This evidence can also inform market definition. See Section 4.

2.1.5 Disruptive Role of a Merging Party

The Agencies consider whether a merger may lessen competition by eliminating a "maverick" firm, i.e., a firm that plays a disruptive role in the market to the benefit of customers. For example, if one of the merging firms has a strong incumbency position and the other merging firm threatens to

disrupt market conditions with a new technology or business model, their merger can involve the loss of actual or potential competition. Likewise, one of the merging firms may have the incentive to take the lead in price cutting or other competitive conduct or to resist increases in industry prices. A firm that may discipline prices based on its ability and incentive to expand production rapidly using available capacity also can be a maverick, as can a firm that has often resisted otherwise prevailing industry norms to cooperate on price setting or other terms of competition.

2.2 Sources of Evidence

The Agencies consider many sources of evidence in their merger analysis. The most common sources of reasonably available and reliable evidence are the merging parties, customers, other industry participants, and industry observers.

2.2.1 Merging Parties

The Agencies typically obtain substantial information from the merging parties. This information can take the form of documents, testimony, or data, and can consist of descriptions of competitively relevant conditions or reflect actual business conduct and decisions. Documents created in the normal course are more probative than documents created as advocacy materials in merger review. Documents describing industry conditions can be informative regarding the operation of the market and how a firm identifies and assesses its rivals, particularly when business decisions are made in reliance on the accuracy of those descriptions. The business decisions taken by the merging firms also can be informative about industry conditions. For example, if a firm sets price well above incremental cost, that normally indicates either that the firm believes its customers are not highly sensitive to price (not in itself of antitrust concern, see Section 4.1.3[3]) or that the firm and its rivals are engaged in coordinated interaction (see Section 7). Incremental cost depends on the relevant increment in output as well as on the time period involved, and in the case of large increments and sustained changes in output it may include some costs that would be fixed for smaller increments of output or shorter time periods.

Explicit or implicit evidence that the merging parties intend to raise prices, reduce output or capacity, reduce product quality or variety, withdraw products or delay their introduction, or curtail research and development efforts after the merger, or explicit or implicit evidence that the ability to engage in such conduct motivated the merger, can be highly informative in evaluating the likely effects of a merger. Likewise, the Agencies look for reliable evidence that the merger is likely to result in efficiencies. The Agencies give careful consideration to the views of individuals whose responsibilities, expertise, and experience relating to the issues in question provide particular indicia of reliability. The financial terms of the transaction may also be informative regarding competitive effects. For example, a purchase price in excess of the acquired firm's stand-alone market value may indicate that the acquiring firm is paying a premium because it expects to be able to reduce competition or to achieve efficiencies.

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[3] High margins commonly arise for products that are significantly differentiated. Products involving substantial fixed costs typically will be developed only if suppliers expect there to be enough differentiation to support margins sufficient to cover those fixed costs. High margins can be consistent with incumbent firms earning competitive returns.

2.2.2 Customers

Customers can provide a variety of information to the Agencies, ranging from information about their own purchasing behavior and choices to their views about the effects of the merger itself.

Information from customers about how they would likely respond to a price increase, and the relative attractiveness of different products or suppliers, may be highly relevant, especially when corroborated by other evidence such as historical purchasing patterns and practices. Customers also can provide valuable information about the impact of historical events such as entry by a new supplier.

The conclusions of well-informed and sophisticated customers on the likely impact of the merger itself can also help the Agencies investigate competitive effects, because customers typically feel the consequences of both competitively beneficial and competitively harmful mergers. In evaluating such evidence, the Agencies are mindful that customers may oppose, or favor, a merger for reasons unrelated to the antitrust issues raised by that merger.

When some customers express concerns about the competitive effects of a merger while others view the merger as beneficial or neutral, the Agencies take account of this divergence in using the information provided by customers and consider the likely reasons for such divergence of views. For example, if for regulatory reasons some customers cannot buy imported products, while others can, a merger between domestic suppliers may harm the former customers even if it leaves the more flexible customers unharmed. See Section 3.

When direct customers of the merging firms compete against one another in a downstream market, their interests may not be aligned with the interests of final consumers, especially if the direct customers expect to pass on any anticompetitive price increase. A customer that is protected from adverse competitive effects by a long-term contract, or otherwise relatively immune from the merger's harmful effects, may even welcome an anticompetitive merger that provides that customer with a competitive advantage over its downstream rivals.

> *Example 1:* As a result of the merger, Customer C will experience a price increase for an input used in producing its final product, raising its costs. Customer C's rivals use this input more intensively than Customer C, and the same price increase applied to them will raise their costs more than it raises Customer C's costs. On balance, Customer C may benefit from the merger even though the merger involves a substantial lessening of competition.

2.2.3 Other Industry Participants and Observers

Suppliers, indirect customers, distributors, other industry participants, and industry analysts can also provide information helpful to a merger inquiry. The interests of firms selling products complementary to those offered by the merging firms often are well aligned with those of customers, making their informed views valuable.

Information from firms that are rivals to the merging parties can help illuminate how the market operates. The interests of rival firms often diverge from the interests of customers, since customers normally lose, but rival firms gain, if the merged entity raises its prices. For that reason, the Agencies do not routinely rely on the overall views of rival firms regarding the competitive effects of the

merger. However, rival firms may provide relevant facts, and even their overall views may be instructive, especially in cases where the Agencies are concerned that the merged entity may engage in exclusionary conduct.

> *Example 2:* Merging Firms A and B operate in a market in which network effects are significant, implying that any firm's product is significantly more valuable if it commands a large market share or if it is interconnected with others that in aggregate command such a share. Prior to the merger, they and their rivals voluntarily interconnect with one another. The merger would create an entity with a large enough share that a strategy of ending voluntary interconnection would have a dangerous probability of creating monopoly power in this market. The interests of rivals and of consumers would be broadly aligned in preventing such a merger.

3. Targeted Customers and Price Discrimination

When examining possible adverse competitive effects from a merger, the Agencies consider whether those effects vary significantly for different customers purchasing the same or similar products. Such differential impacts are possible when sellers can discriminate, e.g., by profitably raising price to certain targeted customers but not to others. The possibility of price discrimination influences market definition (see Section 4), the measurement of market shares (see Section 5), and the evaluation of competitive effects (see Sections 6 and 7).

When price discrimination is feasible, adverse competitive effects on targeted customers can arise, even if such effects will not arise for other customers. A price increase for targeted customers may be profitable even if a price increase for all customers would not be profitable because too many other customers would substitute away. When discrimination is reasonably likely, the Agencies may evaluate competitive effects separately by type of customer. The Agencies may have access to information unavailable to customers that is relevant to evaluating whether discrimination is reasonably likely.

For price discrimination to be feasible, two conditions typically must be met: differential pricing and limited arbitrage.

First, the suppliers engaging in price discrimination must be able to price differently to targeted customers than to other customers. This may involve identification of individual customers to which different prices are offered or offering different prices to different types of customers based on observable characteristics.

> *Example 3:* Suppliers can distinguish large buyers from small buyers. Large buyers are more likely than small buyers to self-supply in response to a significant price increase. The merger may lead to price discrimination against small buyers, harming them, even if large buyers are not harmed. Such discrimination can occur even if there is no discrete gap in size between the classes of large and small buyers.

In other cases, suppliers may be unable to distinguish among different types of customers but can offer multiple products that sort customers based on their purchase decisions.

Second, the targeted customers must not be able to defeat the price increase of concern by arbitrage, e.g., by purchasing indirectly from or through other customers. Arbitrage may be difficult if it would void warranties or make service more difficult or costly for customers. Arbitrage is inherently impossible for many services. Arbitrage between customers at different geographic locations may be

impractical due to transportation costs. Arbitrage on a modest scale may be possible but sufficiently costly or limited that it would not deter or defeat a discriminatory pricing strategy.

4. Market Definition

When the Agencies identify a potential competitive concern with a horizontal merger, market definition plays two roles. First, market definition helps specify the line of commerce and section of the country in which the competitive concern arises. In any merger enforcement action, the Agencies will normally identify one or more relevant markets in which the merger may substantially lessen competition. Second, market definition allows the Agencies to identify market participants and measure market shares and market concentration. See Section 5. The measurement of market shares and market concentration is not an end in itself, but is useful to the extent it illuminates the merger's likely competitive effects.

The Agencies' analysis need not start with market definition. Some of the analytical tools used by the Agencies to assess competitive effects do not rely on market definition, although evaluation of competitive alternatives available to customers is always necessary at some point in the analysis.

Evidence of competitive effects can inform market definition, just as market definition can be informative regarding competitive effects. For example, evidence that a reduction in the number of significant rivals offering a group of products causes prices for those products to rise significantly can itself establish that those products form a relevant market. Such evidence also may more directly predict the competitive effects of a merger, reducing the role of inferences from market definition and market shares.

Where analysis suggests alternative and reasonably plausible candidate markets, and where the resulting market shares lead to very different inferences regarding competitive effects, it is particularly valuable to examine more direct forms of evidence concerning those effects.

Market definition focuses solely on demand substitution factors, i.e., on customers' ability and willingness to substitute away from one product to another in response to a price increase or a corresponding non-price change such as a reduction in product quality or service. The responsive actions of suppliers are also important in competitive analysis. They are considered in these Guidelines in the sections addressing the identification of market participants, the measurement of market shares, the analysis of competitive effects, and entry.

Customers often confront a range of possible substitutes for the products of the merging firms. Some substitutes may be closer, and others more distant, either geographically or in terms of product attributes and perceptions. Additionally, customers may assess the proximity of different products differently. When products or suppliers in different geographic areas are substitutes for one another to varying degrees, defining a market to include some substitutes and exclude others is inevitably a simplification that cannot capture the full variation in the extent to which different products compete against each other. The principles of market definition outlined below seek to make this inevitable simplification as useful and informative as is practically possible. Relevant markets need not have precise metes and bounds.

Defining a market broadly to include relatively distant product or geographic substitutes can lead to misleading market shares. This is because the competitive significance of distant substitutes is unlikely to be commensurate with their shares in a broad market. Although excluding more distant substitutes from the market inevitably understates their competitive significance to some degree, doing so often provides a more accurate indicator of the competitive effects of the merger than would the alternative of including them and overstating their competitive significance as proportional to their shares in an expanded market.

> *Example 4:* Firms A and B, sellers of two leading brands of motorcycles, propose to merge. If Brand A motorcycle prices were to rise, some buyers would substitute to Brand B, and some others would substitute to cars. However, motorcycle buyers see Brand B motorcycles as much more similar to Brand A motorcycles than are cars. Far more cars are sold than motorcycles. Evaluating shares in a market that includes cars would greatly underestimate the competitive significance of Brand B motorcycles in constraining Brand A's prices and greatly overestimate the significance of cars.

Market shares of different products in narrowly defined markets are more likely to capture the relative competitive significance of these products, and often more accurately reflect competition between close substitutes. As a result, properly defined antitrust markets often exclude some substitutes to which some customers might turn in the face of a price increase even if such substitutes provide alternatives for those customers. However, a group of products is too narrow to constitute a relevant market if competition from products outside that group is so ample that even the complete elimination of competition within the group would not significantly harm either direct customers or downstream consumers. The hypothetical monopolist test (see Section 4.1.1) is designed to ensure that candidate markets are not overly narrow in this respect.

The Agencies implement these principles of market definition flexibly when evaluating different possible candidate markets. Relevant antitrust markets defined according to the hypothetical monopolist test are not always intuitive and may not align with how industry members use the term "market."

Section 4.1 describes the principles that apply to product market definition, and gives guidance on how the Agencies most often apply those principles. Section 4.2 describes how the same principles apply to geographic market definition. Although discussed separately for simplicity of exposition, the principles described in Sections 4.1 and 4.2 are combined to define a relevant market, which has both a product and a geographic dimension. In particular, the hypothetical monopolist test is applied to a group of products together with a geographic region to determine a relevant market.

4.1 Product Market Definition

When a product sold by one merging firm (Product A) competes against one or more products sold by the other merging firm, the Agencies define a relevant product market around Product A to evaluate the importance of that competition. Such a relevant product market consists of a group of substitute products including Product A. Multiple relevant product markets may thus be identified.

4.1.1 The Hypothetical Monopolist Test

The Agencies employ the hypothetical monopolist test to evaluate whether groups of products in candidate markets are sufficiently broad to constitute relevant antitrust markets. The Agencies use the

hypothetical monopolist test to identify a set of products that are reasonably interchangeable with a product sold by one of the merging firms.

The hypothetical monopolist test requires that a product market contain enough substitute products so that it could be subject to post-merger exercise of market power significantly exceeding that existing absent the merger. Specifically, the test requires that a hypothetical profit-maximizing firm, not subject to price regulation, that was the only present and future seller of those products ("hypothetical monopolist") likely would impose at least a small but significant and non-transitory increase in price ("SSNIP") on at least one product in the market, including at least one product sold by one of the merging firms.[4] For the purpose of analyzing this issue, the terms of sale of products outside the candidate market are held constant. The SSNIP is employed solely as a methodological tool for performing the hypothetical monopolist test; it is not a tolerance level for price increases resulting from a merger.

Groups of products may satisfy the hypothetical monopolist test without including the full range of substitutes from which customers choose. The hypothetical monopolist test may identify a group of products as a relevant market even if customers would substitute significantly to products outside that group in response to a price increase.

> *Example 5:* Products A and B are being tested as a candidate market. Each sells for $100, has an incremental cost of $60, and sells 1200 units. For every dollar increase in the price of Product A, for any given price of Product B, Product A loses twenty units of sales to products outside the candidate market and ten units of sales to Product B, and likewise for Product B. Under these conditions, economic analysis shows that a hypothetical profit-maximizing monopolist controlling Products A and B would raise both of their prices by ten percent, to $110. Therefore, Products A and B satisfy the hypothetical monopolist test using a five percent SSNIP, and indeed for any SSNIP size up to ten percent. This is true even though two-thirds of the sales lost by one product when it raises its price are diverted to products outside the relevant market.

When applying the hypothetical monopolist test to define a market around a product offered by one of the merging firms, if the market includes a second product, the Agencies will normally also include a third product if that third product is a closer substitute for the first product than is the second product. The third product is a closer substitute if, in response to a SSNIP on the first product, greater revenues are diverted to the third product than to the second product.

> *Example 6:* In Example 5, suppose that half of the unit sales lost by Product A when it raises its price are diverted to Product C, which also has a price of $100, while one-third are diverted to Product B. Product C is a closer substitute for Product A than is Product B. Thus Product C will normally be included in the relevant market, even though Products A and B together satisfy the hypothetical monopolist test.

The hypothetical monopolist test ensures that markets are not defined too narrowly, but it does not lead to a single relevant market. The Agencies may evaluate a merger in any relevant market

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[4] If the pricing incentives of the firms supplying the products in the candidate market differ substantially from those of the hypothetical monopolist, for reasons other than the latter's control over a larger group of substitutes, the Agencies may instead employ the concept of a hypothetical profit-maximizing cartel comprised of the firms (with all their products) that sell the products in the candidate market. This approach is most likely to be appropriate if the merging firms sell products outside the candidate market that significantly affect their pricing incentives for products in the candidate market. This could occur, for example, if the candidate market is one for durable equipment and the firms selling that equipment derive substantial net revenues from selling spare parts and service for that equipment.

satisfying the test, guided by the overarching principle that the purpose of defining the market and measuring market shares is to illuminate the evaluation of competitive effects. Because the relative competitive significance of more distant substitutes is apt to be overstated by their share of sales, when the Agencies rely on market shares and concentration, they usually do so in the smallest relevant market satisfying the hypothetical monopolist test.

> *Example 7:* In Example 4, including cars in the market will lead to misleadingly small market shares for motorcycle producers. Unless motorcycles fail the hypothetical monopolist test, the Agencies would not include cars in the market in analyzing this motorcycle merger.

4.1.2 Benchmark Prices and SSNIP Size

The Agencies apply the SSNIP starting from prices that would likely prevail absent the merger. If prices are not likely to change absent the merger, these benchmark prices can reasonably be taken to be the prices prevailing prior to the merger.[5] If prices are likely to change absent the merger, e.g., because of innovation or entry, the Agencies may use anticipated future prices as the benchmark for the test. If prices might fall absent the merger due to the breakdown of pre-merger coordination, the Agencies may use those lower prices as the benchmark for the test. In some cases, the techniques employed by the Agencies to implement the hypothetical monopolist test focus on the difference in incentives between pre-merger firms and the hypothetical monopolist and do not require specifying the benchmark prices.

The SSNIP is intended to represent a "small but significant" increase in the prices charged by firms in the candidate market for the value they contribute to the products or services used by customers. This properly directs attention to the effects of price changes commensurate with those that might result from a significant lessening of competition caused by the merger. This methodology is used because normally it is possible to quantify "small but significant" adverse price effects on customers and analyze their likely reactions, not because price effects are more important than non-price effects.

The Agencies most often use a SSNIP of five percent of the price paid by customers for the products or services to which the merging firms contribute value. However, what constitutes a "small but significant" increase in price, commensurate with a significant loss of competition caused by the merger, depends upon the nature of the industry and the merging firms' positions in it, and the Agencies may accordingly use a price increase that is larger or smaller than five percent. Where explicit or implicit prices for the firms' specific contribution to value can be identified with reasonable clarity, the Agencies may base the SSNIP on those prices.

> *Example 8:* In a merger between two oil pipelines, the SSNIP would be based on the price charged for transporting the oil, not on the price of the oil itself. If pipelines buy the oil at one end and sell it at the other, the price charged for transporting the oil is implicit, equal to the difference between the price paid for oil at the input end and the price charged for oil at the output end. The relevant product sold by the pipelines is better described as "pipeline transportation of oil from point A to point B" than as "oil at point B."

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[5] Market definition for the evaluation of non-merger antitrust concerns such as monopolization or facilitating practices will differ in this respect if the effects resulting from the conduct of concern are already occurring at the time of evaluation.

Example 9: In a merger between two firms that install computers purchased from third parties, the SSNIP would be based on their fees, not on the price of installed computers. If these firms purchase the computers and charge their customers one package price, the implicit installation fee is equal to the package charge to customers less the price of the computers.

Example 10: In Example 9, suppose that the prices paid by the merging firms to purchase computers are opaque, but account for at least ninety-five percent of the prices they charge for installed computers, with profits or implicit fees making up five percent of those prices at most. A five percent SSNIP on the total price paid by customers would at least double those fees or profits. Even if that would be unprofitable for a hypothetical monopolist, a significant increase in fees might well be profitable. If the SSNIP is based on the total price paid by customers, a lower percentage will be used.

4.1.3 Implementing the Hypothetical Monopolist Test

The hypothetical monopolist's incentive to raise prices depends both on the extent to which customers would likely substitute away from the products in the candidate market in response to such a price increase and on the profit margins earned on those products. The profit margin on incremental units is the difference between price and incremental cost on those units. The Agencies often estimate incremental costs, for example using merging parties' documents or data the merging parties use to make business decisions. Incremental cost is measured over the change in output that would be caused by the price increase under consideration.

In considering customers' likely responses to higher prices, the Agencies take into account any reasonably available and reliable evidence, including, but not limited to:

- how customers have shifted purchases in the past in response to relative changes in price or other terms and conditions;
- information from buyers, including surveys, concerning how they would respond to price changes;
- the conduct of industry participants, notably:
  - sellers' business decisions or business documents indicating sellers' informed beliefs concerning how customers would substitute among products in response to relative changes in price;
  - industry participants' behavior in tracking and responding to price changes by some or all rivals;
- objective information about product characteristics and the costs and delays of switching products, especially switching from products in the candidate market to products outside the candidate market;
- the percentage of sales lost by one product in the candidate market, when its price alone rises, that is recaptured by other products in the candidate market, with a higher recapture percentage making a price increase more profitable for the hypothetical monopolist;
- evidence from other industry participants, such as sellers of complementary products;

- legal or regulatory requirements; and
- the influence of downstream competition faced by customers in their output markets.

When the necessary data are available, the Agencies also may consider a "critical loss analysis" to assess the extent to which it corroborates inferences drawn from the evidence noted above. Critical loss analysis asks whether imposing at least a SSNIP on one or more products in a candidate market would raise or lower the hypothetical monopolist's profits. While this "breakeven" analysis differs from the profit-maximizing analysis called for by the hypothetical monopolist test in Section 4.1.1, merging parties sometimes present this type of analysis to the Agencies. A price increase raises profits on sales made at the higher price, but this will be offset to the extent customers substitute away from products in the candidate market. Critical loss analysis compares the magnitude of these two offsetting effects resulting from the price increase. The "critical loss" is defined as the number of lost unit sales that would leave profits unchanged. The "predicted loss" is defined as the number of unit sales that the hypothetical monopolist is predicted to lose due to the price increase. The price increase raises the hypothetical monopolist's profits if the predicted loss is less than the critical loss.

The Agencies consider all of the evidence of customer substitution noted above in assessing the predicted loss. The Agencies require that estimates of the predicted loss be consistent with that evidence, including the pre-merger margins of products in the candidate market used to calculate the critical loss. Unless the firms are engaging in coordinated interaction (see Section 7), high pre-merger margins normally indicate that each firm's product individually faces demand that is not highly sensitive to price.[6] Higher pre-merger margins thus indicate a smaller predicted loss as well as a smaller critical loss. The higher the pre-merger margin, the smaller the recapture percentage necessary for the candidate market to satisfy the hypothetical monopolist test.

Even when the evidence necessary to perform the hypothetical monopolist test quantitatively is not available, the conceptual framework of the test provides a useful methodological tool for gathering and analyzing evidence pertinent to customer substitution and to market definition. The Agencies follow the hypothetical monopolist test to the extent possible given the available evidence, bearing in mind that the ultimate goal of market definition is to help determine whether the merger may substantially lessen competition.

4.1.4 Product Market Definition with Targeted Customers

If a hypothetical monopolist could profitably target a subset of customers for price increases, the Agencies may identify relevant markets defined around those targeted customers, to whom a hypothetical monopolist would profitably and separately impose at least a SSNIP. Markets to serve targeted customers are also known as price discrimination markets. In practice, the Agencies identify price discrimination markets only where they believe there is a realistic prospect of an adverse competitive effect on a group of targeted customers.

> *Example 11:* Glass containers have many uses. In response to a price increase for glass containers, some users would substitute substantially to plastic or metal containers, but baby food manufacturers would not. If a

[6] While margins are important for implementing the hypothetical monopolist test, high margins are not in themselves of antitrust concern.

hypothetical monopolist could price separately and limit arbitrage, baby food manufacturers would be vulnerable to a targeted increase in the price of glass containers. The Agencies could define a distinct market for glass containers used to package baby food.

The Agencies also often consider markets for targeted customers when prices are individually negotiated and suppliers have information about customers that would allow a hypothetical monopolist to identify customers that are likely to pay a higher price for the relevant product. If prices are negotiated individually with customers, the hypothetical monopolist test may suggest relevant markets that are as narrow as individual customers (see also Section 6.2 on bargaining and auctions). Nonetheless, the Agencies often define markets for groups of targeted customers, i.e., by type of customer, rather than by individual customer. By so doing, the Agencies are able to rely on aggregated market shares that can be more helpful in predicting the competitive effects of the merger.

4.2 Geographic Market Definition

The arena of competition affected by the merger may be geographically bounded if geography limits some customers' willingness or ability to substitute to some products, or some suppliers' willingness or ability to serve some customers. Both supplier and customer locations can affect this. The Agencies apply the principles of market definition described here and in Section 4.1 to define a relevant market with a geographic dimension as well as a product dimension.

The scope of geographic markets often depends on transportation costs. Other factors such as language, regulation, tariff and non-tariff trade barriers, custom and familiarity, reputation, and service availability may impede long-distance or international transactions. The competitive significance of foreign firms may be assessed at various exchange rates, especially if exchange rates have fluctuated in the recent past.

In the absence of price discrimination based on customer location, the Agencies normally define geographic markets based on the locations of suppliers, as explained in subsection 4.2.1. In other cases, notably if price discrimination based on customer location is feasible as is often the case when delivered pricing is commonly used in the industry, the Agencies may define geographic markets based on the locations of customers, as explained in subsection 4.2.2.

4.2.1 Geographic Markets Based on the Locations of Suppliers

Geographic markets based on the locations of suppliers encompass the region from which sales are made. Geographic markets of this type often apply when customers receive goods or services at suppliers' locations. Competitors in the market are firms with relevant production, sales, or service facilities in that region. Some customers who buy from these firms may be located outside the boundaries of the geographic market.

The hypothetical monopolist test requires that a hypothetical profit-maximizing firm that was the only present or future producer of the relevant product(s) located in the region would impose at least a SSNIP from at least one location, including at least one location of one of the merging firms. In this exercise the terms of sale for all products produced elsewhere are held constant. A single firm may operate in a number of different geographic markets, even for a single product.

> *Example 12:* The merging parties both have manufacturing plants in City X. The relevant product is expensive to transport and suppliers price their products for pickup at their locations. Rival plants are some distance away in City Y. A hypothetical monopolist controlling all plants in City X could profitably impose a SSNIP at these plants. Competition from more distant plants would not defeat the price increase because supplies coming from more distant plants require expensive transportation. The relevant geographic market is defined around the plants in City X.

When the geographic market is defined based on supplier locations, sales made by suppliers located in the geographic market are counted, regardless of the location of the customer making the purchase.

In considering likely reactions of customers to price increases for the relevant product(s) imposed in a candidate geographic market, the Agencies consider any reasonably available and reliable evidence, including:

- how customers have shifted purchases in the past between different geographic locations in response to relative changes in price or other terms and conditions;
- the cost and difficulty of transporting the product (or the cost and difficulty of a customer traveling to a seller's location), in relation to its price;
- whether suppliers need a presence near customers to provide service or support;
- evidence on whether sellers base business decisions on the prospect of customers switching between geographic locations in response to relative changes in price or other competitive variables;
- the costs and delays of switching from suppliers in the candidate geographic market to suppliers outside the candidate geographic market; and
- the influence of downstream competition faced by customers in their output markets.

4.2.2 Geographic Markets Based on the Locations of Customers

When the hypothetical monopolist could discriminate based on customer location, the Agencies may define geographic markets based on the locations of targeted customers.[7] Geographic markets of this type often apply when suppliers deliver their products or services to customers' locations. Geographic markets of this type encompass the region into which sales are made. Competitors in the market are firms that sell to customers in the specified region. Some suppliers that sell into the relevant market may be located outside the boundaries of the geographic market.

The hypothetical monopolist test requires that a hypothetical profit-maximizing firm that was the only present or future seller of the relevant product(s) to customers in the region would impose at least a SSNIP on some customers in that region. A region forms a relevant geographic market if this price increase would not be defeated by substitution away from the relevant product or by arbitrage,

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[7] For customers operating in multiple locations, only those customer locations within the targeted zone are included in the market.

e.g., customers in the region travelling outside it to purchase the relevant product. In this exercise, the terms of sale for products sold to all customers outside the region are held constant.

> *Example 13:* Customers require local sales and support. Suppliers have sales and service operations in many geographic areas and can discriminate based on customer location. The geographic market can be defined around the locations of customers.

> *Example 14:* Each merging firm has a single manufacturing plant and delivers the relevant product to customers in City X and in City Y. The relevant product is expensive to transport. The merging firms' plants are by far the closest to City X, but no closer to City Y than are numerous rival plants. This fact pattern suggests that customers in City X may be harmed by the merger even if customers in City Y are not. For that reason, the Agencies consider a relevant geographic market defined around customers in City X. Such a market could be defined even if the region around the merging firms' plants would not be a relevant geographic market defined based on the location of sellers because a hypothetical monopolist controlling all plants in that region would find a SSNIP imposed on all of its customers unprofitable due to the loss of sales to customers in City Y.

When the geographic market is defined based on customer locations, sales made to those customers are counted, regardless of the location of the supplier making those sales.

> *Example 15:* Customers in the United States must use products approved by U.S. regulators. Foreign customers use products not approved by U.S. regulators. The relevant product market consists of products approved by U.S. regulators. The geographic market is defined around U.S. customers. Any sales made to U.S. customers by foreign suppliers are included in the market, and those foreign suppliers are participants in the U.S. market even though located outside it.

5. Market Participants, Market Shares, and Market Concentration

The Agencies normally consider measures of market shares and market concentration as part of their evaluation of competitive effects. The Agencies evaluate market shares and concentration in conjunction with other reasonably available and reliable evidence for the ultimate purpose of determining whether a merger may substantially lessen competition.

Market shares can directly influence firms' competitive incentives. For example, if a price reduction to gain new customers would also apply to a firm's existing customers, a firm with a large market share may be more reluctant to implement a price reduction than one with a small share. Likewise, a firm with a large market share may not feel pressure to reduce price even if a smaller rival does. Market shares also can reflect firms' capabilities. For example, a firm with a large market share may be able to expand output rapidly by a larger absolute amount than can a small firm. Similarly, a large market share tends to indicate low costs, an attractive product, or both.

5.1 Market Participants

All firms that currently earn revenues in the relevant market are considered market participants. Vertically integrated firms are also included to the extent that their inclusion accurately reflects their competitive significance. Firms not currently earning revenues in the relevant market, but that have committed to entering the market in the near future, are also considered market participants.

Firms that are not current producers in a relevant market, but that would very likely provide rapid supply responses with direct competitive impact in the event of a SSNIP, without incurring

significant sunk costs, are also considered market participants. These firms are termed "rapid entrants." Sunk costs are entry or exit costs that cannot be recovered outside the relevant market. Entry that would take place more slowly in response to adverse competitive effects, or that requires firms to incur significant sunk costs, is considered in Section 9.

Firms that produce the relevant product but do not sell it in the relevant geographic market may be rapid entrants. Other things equal, such firms are most likely to be rapid entrants if they are close to the geographic market.

> *Example 16:* Farm A grows tomatoes halfway between Cities X and Y. Currently, it ships its tomatoes to City X because prices there are two percent higher. Previously it has varied the destination of its shipments in response to small price variations. Farm A would likely be a rapid entrant participant in a market for tomatoes in City Y.
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> *Example 17:* Firm B has bid multiple times to supply milk to School District S, and actually supplies milk to schools in some adjacent areas. It has never won a bid in School District S, but is well qualified to serve that district and has often nearly won. Firm B would be counted as a rapid entrant in a market for school milk in School District S.

More generally, if the relevant market is defined around targeted customers, firms that produce relevant products but do not sell them to those customers may be rapid entrants if they can easily and rapidly begin selling to the targeted customers.

Firms that clearly possess the necessary assets to supply into the relevant market rapidly may also be rapid entrants. In markets for relatively homogeneous goods where a supplier's ability to compete depends predominantly on its costs and its capacity, and not on other factors such as experience or reputation in the relevant market, a supplier with efficient idle capacity, or readily available "swing" capacity currently used in adjacent markets that can easily and profitably be shifted to serve the relevant market, may be a rapid entrant.[8] However, idle capacity may be inefficient, and capacity used in adjacent markets may not be available, so a firm's possession of idle or swing capacity alone does not make that firm a rapid entrant.

5.2 Market Shares

The Agencies normally calculate market shares for all firms that currently produce products in the relevant market, subject to the availability of data. The Agencies also calculate market shares for other market participants if this can be done to reliably reflect their competitive significance.

Market concentration and market share data are normally based on historical evidence. However, recent or ongoing changes in market conditions may indicate that the current market share of a particular firm either understates or overstates the firm's future competitive significance. The Agencies consider reasonably predictable effects of recent or ongoing changes in market conditions when calculating and interpreting market share data. For example, if a new technology that is important to long-term competitive viability is available to other firms in the market, but is not available to a particular firm, the Agencies may conclude that that firm's historical market share

[8] If this type of supply side substitution is nearly universal among the firms selling one or more of a group of products, the Agencies may use an aggregate description of markets for those products as a matter of convenience.

overstates its future competitive significance. The Agencies may project historical market shares into the foreseeable future when this can be done reliably.

The Agencies measure market shares based on the best available indicator of firms' future competitive significance in the relevant market. This may depend upon the type of competitive effect being considered, and on the availability of data. Typically, annual data are used, but where individual transactions are large and infrequent so annual data may be unrepresentative, the Agencies may measure market shares over a longer period of time.

In most contexts, the Agencies measure each firm's market share based on its actual or projected revenues in the relevant market. Revenues in the relevant market tend to be the best measure of attractiveness to customers, since they reflect the real-world ability of firms to surmount all of the obstacles necessary to offer products on terms and conditions that are attractive to customers. In cases where one unit of a low-priced product can substitute for one unit of a higher-priced product, unit sales may measure competitive significance better than revenues. For example, a new, much less expensive product may have great competitive significance if it substantially erodes the revenues earned by older, higher-priced products, even if it earns relatively few revenues. In cases where customers sign long-term contracts, face switching costs, or tend to re-evaluate their suppliers only occasionally, revenues earned from recently acquired customers may better reflect the competitive significance of suppliers than do total revenues.

In markets for homogeneous products, a firm's competitive significance may derive principally from its ability and incentive to rapidly expand production in the relevant market in response to a price increase or output reduction by others in that market. As a result, a firm's competitive significance may depend upon its level of readily available capacity to serve the relevant market if that capacity is efficient enough to make such expansion profitable. In such markets, capacities or reserves may better reflect the future competitive significance of suppliers than revenues, and the Agencies may calculate market shares using those measures. Market participants that are not current producers may then be assigned positive market shares, but only if a measure of their competitive significance properly comparable to that of current producers is available. When market shares are measured based on firms' readily available capacities, the Agencies do not include capacity that is committed or so profitably employed outside the relevant market, or so high-cost, that it would not likely be used to respond to a SSNIP in the relevant market.

> *Example 18:* The geographic market is defined around customers in the United States. Firm X produces the relevant product outside the United States, and most of its sales are made to customers outside the United States. In most contexts, Firm X's market share will be based on its sales to U.S. customers, not its total sales or total capacity. However, if the relevant product is homogeneous, and if Firm X would significantly expand sales to U.S. customers rapidly and without incurring significant sunk costs in response to a SSNIP, the Agencies may base Firm X's market share on its readily available capacity to serve U.S. customers.

When the Agencies define markets serving targeted customers, these same principles are used to measure market shares, as they apply to those customers. In most contexts, each firm's market share is based on its actual or projected revenues from the targeted customers. However, the Agencies may instead measure market shares based on revenues from a broader group of customers if doing so would more accurately reflect the competitive significance of different suppliers in the relevant market. Revenues earned from a broader group of customers may also be used when better data are thereby available.

5.3 Market Concentration

Market concentration is often one useful indicator of likely competitive effects of a merger. In evaluating market concentration, the Agencies consider both the post-merger level of market concentration and the change in concentration resulting from a merger. Market shares may not fully reflect the competitive significance of firms in the market or the impact of a merger. They are used in conjunction with other evidence of competitive effects. See Sections 6 and 7.

In analyzing mergers between an incumbent and a recent or potential entrant, to the extent the Agencies use the change in concentration to evaluate competitive effects, they will do so using projected market shares. A merger between an incumbent and a potential entrant can raise significant competitive concerns. The lessening of competition resulting from such a merger is more likely to be substantial, the larger is the market share of the incumbent, the greater is the competitive significance of the potential entrant, and the greater is the competitive threat posed by this potential entrant relative to others.

The Agencies give more weight to market concentration when market shares have been stable over time, especially in the face of historical changes in relative prices or costs. If a firm has retained its market share even after its price has increased relative to those of its rivals, that firm already faces limited competitive constraints, making it less likely that its remaining rivals will replace the competition lost if one of that firm's important rivals is eliminated due to a merger. By contrast, even a highly concentrated market can be very competitive if market shares fluctuate substantially over short periods of time in response to changes in competitive offerings. However, if competition by one of the merging firms has significantly contributed to these fluctuations, perhaps because it has acted as a maverick, the Agencies will consider whether the merger will enhance market power by combining that firm with one of its significant rivals.

The Agencies may measure market concentration using the number of significant competitors in the market. This measure is most useful when there is a gap in market share between significant competitors and smaller rivals or when it is difficult to measure revenues in the relevant market. The Agencies also may consider the combined market share of the merging firms as an indicator of the extent to which others in the market may not be able readily to replace competition between the merging firms that is lost through the merger.

The Agencies often calculate the Herfindahl-Hirschman Index ("HHI") of market concentration. The HHI is calculated by summing the squares of the individual firms' market shares,[9] and thus gives proportionately greater weight to the larger market shares. When using the HHI, the Agencies

[9] For example, a market consisting of four firms with market shares of thirty percent, thirty percent, twenty percent, and twenty percent has an HHI of 2600 ($30^2 + 30^2 + 20^2 + 20^2 = 2600$). The HHI ranges from 10,000 (in the case of a pure monopoly) to a number approaching zero (in the case of an atomistic market). Although it is desirable to include all firms in the calculation, lack of information about firms with small shares is not critical because such firms do not affect the HHI significantly.

consider both the post-merger level of the HHI and the increase in the HHI resulting from the merger. The increase in the HHI is equal to twice the product of the market shares of the merging firms.[10]

Based on their experience, the Agencies generally classify markets into three types:

- Unconcentrated Markets: HHI below 1500
- Moderately Concentrated Markets: HHI between 1500 and 2500
- Highly Concentrated Markets: HHI above 2500

The Agencies employ the following general standards for the relevant markets they have defined:

- *Small Change in Concentration:* Mergers involving an increase in the HHI of less than 100 points are unlikely to have adverse competitive effects and ordinarily require no further analysis.
- *Unconcentrated Markets:* Mergers resulting in unconcentrated markets are unlikely to have adverse competitive effects and ordinarily require no further analysis.
- *Moderately Concentrated Markets:* Mergers resulting in moderately concentrated markets that involve an increase in the HHI of more than 100 points potentially raise significant competitive concerns and often warrant scrutiny.
- *Highly Concentrated Markets:* Mergers resulting in highly concentrated markets that involve an increase in the HHI of between 100 points and 200 points potentially raise significant competitive concerns and often warrant scrutiny. Mergers resulting in highly concentrated markets that involve an increase in the HHI of more than 200 points will be presumed to be likely to enhance market power. The presumption may be rebutted by persuasive evidence showing that the merger is unlikely to enhance market power.

The purpose of these thresholds is not to provide a rigid screen to separate competitively benign mergers from anticompetitive ones, although high levels of concentration do raise concerns. Rather, they provide one way to identify some mergers unlikely to raise competitive concerns and some others for which it is particularly important to examine whether other competitive factors confirm, reinforce, or counteract the potentially harmful effects of increased concentration. The higher the post-merger HHI and the increase in the HHI, the greater are the Agencies' potential competitive concerns and the greater is the likelihood that the Agencies will request additional information to conduct their analysis.

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[10] For example, the merger of firms with shares of five percent and ten percent of the market would increase the HHI by 100 ($5 \times 10 \times 2 = 100$).

6. Unilateral Effects

The elimination of competition between two firms that results from their merger may alone constitute a substantial lessening of competition. Such unilateral effects are most apparent in a merger to monopoly in a relevant market, but are by no means limited to that case. Whether cognizable efficiencies resulting from the merger are likely to reduce or reverse adverse unilateral effects is addressed in Section 10.

Several common types of unilateral effects are discussed in this section. Section 6.1 discusses unilateral price effects in markets with differentiated products. Section 6.2 discusses unilateral effects in markets where sellers negotiate with buyers or prices are determined through auctions. Section 6.3 discusses unilateral effects relating to reductions in output or capacity in markets for relatively homogeneous products. Section 6.4 discusses unilateral effects arising from diminished innovation or reduced product variety. These effects do not exhaust the types of possible unilateral effects; for example, exclusionary unilateral effects also can arise.

A merger may result in different unilateral effects along different dimensions of competition. For example, a merger may increase prices in the short term but not raise longer-term concerns about innovation, either because rivals will provide sufficient innovation competition or because the merger will generate cognizable research and development efficiencies. See Section 10.

6.1 Pricing of Differentiated Products

In differentiated product industries, some products can be very close substitutes and compete strongly with each other, while other products are more distant substitutes and compete less strongly. For example, one high-end product may compete much more directly with another high-end product than with any low-end product.

A merger between firms selling differentiated products may diminish competition by enabling the merged firm to profit by unilaterally raising the price of one or both products above the pre-merger level. Some of the sales lost due to the price rise will merely be diverted to the product of the merger partner and, depending on relative margins, capturing such sales loss through merger may make the price increase profitable even though it would not have been profitable prior to the merger.

The extent of direct competition between the products sold by the merging parties is central to the evaluation of unilateral price effects. Unilateral price effects are greater, the more the buyers of products sold by one merging firm consider products sold by the other merging firm to be their next choice. The Agencies consider any reasonably available and reliable information to evaluate the extent of direct competition between the products sold by the merging firms. This includes documentary and testimonial evidence, win/loss reports and evidence from discount approval processes, customer switching patterns, and customer surveys. The types of evidence relied on often overlap substantially with the types of evidence of customer substitution relevant to the hypothetical monopolist test. See Section 4.1.1.

Substantial unilateral price elevation post-merger for a product formerly sold by one of the merging firms normally requires that a significant fraction of the customers purchasing that product view

products formerly sold by the other merging firm as their next-best choice. However, unless pre-merger margins between price and incremental cost are low, that significant fraction need not approach a majority. For this purpose, incremental cost is measured over the change in output that would be caused by the price change considered. A merger may produce significant unilateral effects for a given product even though many more sales are diverted to products sold by non-merging firms than to products previously sold by the merger partner.

> *Example 19:* In Example 5, the merged entity controlling Products A and B would raise prices ten percent, given the product offerings and prices of other firms. In that example, one-third of the sales lost by Product A when its price alone is raised are diverted to Product B. Further analysis is required to account for repositioning, entry, and efficiencies.

In some cases, the Agencies may seek to quantify the extent of direct competition between a product sold by one merging firm and a second product sold by the other merging firm by estimating the diversion ratio from the first product to the second product. The diversion ratio is the fraction of unit sales lost by the first product due to an increase in its price that would be diverted to the second product. Diversion ratios between products sold by one merging firm and products sold by the other merging firm can be very informative for assessing unilateral price effects, with higher diversion ratios indicating a greater likelihood of such effects. Diversion ratios between products sold by merging firms and those sold by non-merging firms have at most secondary predictive value.

Adverse unilateral price effects can arise when the merger gives the merged entity an incentive to raise the price of a product previously sold by one merging firm and thereby divert sales to products previously sold by the other merging firm, boosting the profits on the latter products. Taking as given other prices and product offerings, that boost to profits is equal to the value to the merged firm of the sales diverted to those products. The value of sales diverted to a product is equal to the number of units diverted to that product multiplied by the margin between price and incremental cost on that product. In some cases, where sufficient information is available, the Agencies assess the value of diverted sales, which can serve as an indicator of the upward pricing pressure on the first product resulting from the merger. Diagnosing unilateral price effects based on the value of diverted sales need not rely on market definition or the calculation of market shares and concentration. The Agencies rely much more on the value of diverted sales than on the level of the HHI for diagnosing unilateral price effects in markets with differentiated products. If the value of diverted sales is proportionately small, significant unilateral price effects are unlikely.[11]

Where sufficient data are available, the Agencies may construct economic models designed to quantify the unilateral price effects resulting from the merger. These models often include independent price responses by non-merging firms. They also can incorporate merger-specific efficiencies. These merger simulation methods need not rely on market definition. The Agencies do not treat merger simulation evidence as conclusive in itself, and they place more weight on whether their merger simulations consistently predict substantial price increases than on the precise prediction of any single simulation.

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[11] For this purpose, the value of diverted sales is measured in proportion to the lost revenues attributable to the reduction in unit sales resulting from the price increase. Those lost revenues equal the reduction in the number of units sold of that product multiplied by that product's price.

A merger is unlikely to generate substantial unilateral price increases if non-merging parties offer very close substitutes for the products offered by the merging firms. In some cases, non-merging firms may be able to reposition their products to offer close substitutes for the products offered by the merging firms. Repositioning is a supply-side response that is evaluated much like entry, with consideration given to timeliness, likelihood, and sufficiency. See Section 9. The Agencies consider whether repositioning would be sufficient to deter or counteract what otherwise would be significant anticompetitive unilateral effects from a differentiated products merger.

6.2 Bargaining and Auctions

In many industries, especially those involving intermediate goods and services, buyers and sellers negotiate to determine prices and other terms of trade. In that process, buyers commonly negotiate with more than one seller, and may play sellers off against one another. Some highly structured forms of such competition are known as auctions. Negotiations often combine aspects of an auction with aspects of one-on-one negotiation, although pure auctions are sometimes used in government procurement and elsewhere.

A merger between two competing sellers prevents buyers from playing those sellers off against each other in negotiations. This alone can significantly enhance the ability and incentive of the merged entity to obtain a result more favorable to it, and less favorable to the buyer, than the merging firms would have offered separately absent the merger. The Agencies analyze unilateral effects of this type using similar approaches to those described in Section 6.1.

Anticompetitive unilateral effects in these settings are likely in proportion to the frequency or probability with which, prior to the merger, one of the merging sellers had been the runner-up when the other won the business. These effects also are likely to be greater, the greater advantage the runner-up merging firm has over other suppliers in meeting customers' needs. These effects also tend to be greater, the more profitable were the pre-merger winning bids. All of these factors are likely to be small if there are many equally placed bidders.

The mechanisms of these anticompetitive unilateral effects, and the indicia of their likelihood, differ somewhat according to the bargaining practices used, the auction format, and the sellers' information about one another's costs and about buyers' preferences. For example, when the merging sellers are likely to know which buyers they are best and second best placed to serve, any anticompetitive unilateral effects are apt to be targeted at those buyers; when sellers are less well informed, such effects are more apt to be spread over a broader class of buyers.

6.3 Capacity and Output for Homogeneous Products

In markets involving relatively undifferentiated products, the Agencies may evaluate whether the merged firm will find it profitable unilaterally to suppress output and elevate the market price. A firm may leave capacity idle, refrain from building or obtaining capacity that would have been obtained absent the merger, or eliminate pre-existing production capabilities. A firm may also divert the use of capacity away from one relevant market and into another so as to raise the price in the former market. The competitive analyses of these alternative modes of output suppression may differ.

A unilateral output suppression strategy is more likely to be profitable when (1) the merged firm's market share is relatively high; (2) the share of the merged firm's output already committed for sale at prices unaffected by the output suppression is relatively low; (3) the margin on the suppressed output is relatively low; (4) the supply responses of rivals are relatively small; and (5) the market elasticity of demand is relatively low.

A merger may provide the merged firm a larger base of sales on which to benefit from the resulting price rise, or it may eliminate a competitor that otherwise could have expanded its output in response to the price rise.

> *Example 20:* Firms A and B both produce an industrial commodity and propose to merge. The demand for this commodity is insensitive to price. Firm A is the market leader. Firm B produces substantial output, but its operating margins are low because it operates high-cost plants. The other suppliers are operating very near capacity. The merged firm has an incentive to reduce output at the high-cost plants, perhaps shutting down some of that capacity, thus driving up the price it receives on the remainder of its output. The merger harms customers, notwithstanding that the merged firm shifts some output from high-cost plants to low-cost plants.

In some cases, a merger between a firm with a substantial share of the sales in the market and a firm with significant excess capacity to serve that market can make an output suppression strategy profitable.[12] This can occur even if the firm with the excess capacity has a relatively small share of sales, if that firm's ability to expand, and thus keep price from rising, has been making an output suppression strategy unprofitable for the firm with the larger market share.

6.4 Innovation and Product Variety

Competition often spurs firms to innovate. The Agencies may consider whether a merger is likely to diminish innovation competition by encouraging the merged firm to curtail its innovative efforts below the level that would prevail in the absence of the merger. That curtailment of innovation could take the form of reduced incentive to continue with an existing product-development effort or reduced incentive to initiate development of new products.

The first of these effects is most likely to occur if at least one of the merging firms is engaging in efforts to introduce new products that would capture substantial revenues from the other merging firm. The second, longer-run effect is most likely to occur if at least one of the merging firms has capabilities that are likely to lead it to develop new products in the future that would capture substantial revenues from the other merging firm. The Agencies therefore also consider whether a merger will diminish innovation competition by combining two of a very small number of firms with the strongest capabilities to successfully innovate in a specific direction.

The Agencies evaluate the extent to which successful innovation by one merging firm is likely to take sales from the other, and the extent to which post-merger incentives for future innovation will be lower than those that would prevail in the absence of the merger. The Agencies also consider whether the merger is likely to enable innovation that would not otherwise take place, by bringing together

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[12] Such a merger also can cause adverse coordinated effects, especially if the acquired firm with excess capacity was disrupting effective coordination.

complementary capabilities that cannot be otherwise combined or for some other merger-specific reason. See Section 10.

The Agencies also consider whether a merger is likely to give the merged firm an incentive to cease offering one of the relevant products sold by the merging parties. Reductions in variety following a merger may or may not be anticompetitive. Mergers can lead to the efficient consolidation of products when variety offers little in value to customers. In other cases, a merger may increase variety by encouraging the merged firm to reposition its products to be more differentiated from one another.

If the merged firm would withdraw a product that a significant number of customers strongly prefer to those products that would remain available, this can constitute a harm to customers over and above any effects on the price or quality of any given product. If there is evidence of such an effect, the Agencies may inquire whether the reduction in variety is largely due to a loss of competitive incentives attributable to the merger. An anticompetitive incentive to eliminate a product as a result of the merger is greater and more likely, the larger is the share of profits from that product coming at the expense of profits from products sold by the merger partner. Where a merger substantially reduces competition by bringing two close substitute products under common ownership, and one of those products is eliminated, the merger will often also lead to a price increase on the remaining product, but that is not a necessary condition for anticompetitive effect.

> *Example 21:* Firm A sells a high-end product at a premium price. Firm B sells a mid-range product at a lower price, serving customers who are more price sensitive. Several other firms have low-end products. Firms A and B together have a large share of the relevant market. Firm A proposes to acquire Firm B and discontinue Firm B's product. Firm A expects to retain most of Firm B's customers. Firm A may not find it profitable to raise the price of its high-end product after the merger, because doing so would reduce its ability to retain Firm B's more price-sensitive customers. The Agencies may conclude that the withdrawal of Firm B's product results from a loss of competition and materially harms customers.

7. Coordinated Effects

A merger may diminish competition by enabling or encouraging post-merger coordinated interaction among firms in the relevant market that harms customers. Coordinated interaction involves conduct by multiple firms that is profitable for each of them only as a result of the accommodating reactions of the others. These reactions can blunt a firm's incentive to offer customers better deals by undercutting the extent to which such a move would win business away from rivals. They also can enhance a firm's incentive to raise prices, by assuaging the fear that such a move would lose customers to rivals.

Coordinated interaction includes a range of conduct. Coordinated interaction can involve the explicit negotiation of a common understanding of how firms will compete or refrain from competing. Such conduct typically would itself violate the antitrust laws. Coordinated interaction also can involve a similar common understanding that is not explicitly negotiated but would be enforced by the detection and punishment of deviations that would undermine the coordinated interaction. Coordinated interaction alternatively can involve parallel accommodating conduct not pursuant to a prior understanding. Parallel accommodating conduct includes situations in which each rival's response to competitive moves made by others is individually rational, and not motivated by

retaliation or deterrence nor intended to sustain an agreed-upon market outcome, but nevertheless emboldens price increases and weakens competitive incentives to reduce prices or offer customers better terms. Coordinated interaction includes conduct not otherwise condemned by the antitrust laws.

The ability of rival firms to engage in coordinated conduct depends on the strength and predictability of rivals' responses to a price change or other competitive initiative. Under some circumstances, a merger can result in market concentration sufficient to strengthen such responses or enable multiple firms in the market to predict them more confidently, thereby affecting the competitive incentives of multiple firms in the market, not just the merged firm.

7.1 Impact of Merger on Coordinated Interaction

The Agencies examine whether a merger is likely to change the manner in which market participants interact, inducing substantially more coordinated interaction. The Agencies seek to identify how a merger might significantly weaken competitive incentives through an increase in the strength, extent, or likelihood of coordinated conduct. There are, however, numerous forms of coordination, and the risk that a merger will induce adverse coordinated effects may not be susceptible to quantification or detailed proof. Therefore, the Agencies evaluate the risk of coordinated effects using measures of market concentration (see Section 5) in conjunction with an assessment of whether a market is vulnerable to coordinated conduct. See Section 7.2. The analysis in Section 7.2 applies to moderately and highly concentrated markets, as unconcentrated markets are unlikely to be vulnerable to coordinated conduct.

Pursuant to the Clayton Act's incipiency standard, the Agencies may challenge mergers that in their judgment pose a real danger of harm through coordinated effects, even without specific evidence showing precisely how the coordination likely would take place. The Agencies are likely to challenge a merger if the following three conditions are all met: (1) the merger would significantly increase concentration and lead to a moderately or highly concentrated market; (2) that market shows signs of vulnerability to coordinated conduct (see Section 7.2); and (3) the Agencies have a credible basis on which to conclude that the merger may enhance that vulnerability. An acquisition eliminating a maverick firm (see Section 2.1.5) in a market vulnerable to coordinated conduct is likely to cause adverse coordinated effects.

7.2 Evidence a Market is Vulnerable to Coordinated Conduct

The Agencies presume that market conditions are conducive to coordinated interaction if firms representing a substantial share in the relevant market appear to have previously engaged in express collusion affecting the relevant market, unless competitive conditions in the market have since changed significantly. Previous express collusion in another geographic market will have the same weight if the salient characteristics of that other market at the time of the collusion are comparable to those in the relevant market. Failed previous attempts at collusion in the relevant market suggest that successful collusion was difficult pre-merger but not so difficult as to deter attempts, and a merger may tend to make success more likely. Previous collusion or attempted collusion in another product market may also be given substantial weight if the salient characteristics of that other market at the time of the collusion are closely comparable to those in the relevant market.

A market typically is more vulnerable to coordinated conduct if each competitively important firm's significant competitive initiatives can be promptly and confidently observed by that firm's rivals. This is more likely to be the case if the terms offered to customers are relatively transparent. Price transparency can be greater for relatively homogeneous products. Even if terms of dealing are not transparent, transparency regarding the identities of the firms serving particular customers can give rise to coordination, e.g., through customer or territorial allocation. Regular monitoring by suppliers of one another's prices or customers can indicate that the terms offered to customers are relatively transparent.

A market typically is more vulnerable to coordinated conduct if a firm's prospective competitive reward from attracting customers away from its rivals will be significantly diminished by likely responses of those rivals. This is more likely to be the case, the stronger and faster are the responses the firm anticipates from its rivals. The firm is more likely to anticipate strong responses if there are few significant competitors, if products in the relevant market are relatively homogeneous, if customers find it relatively easy to switch between suppliers, or if suppliers use meeting-competition clauses.

A firm is more likely to be deterred from making competitive initiatives by whatever responses occur if sales are small and frequent rather than via occasional large and long-term contracts or if relatively few customers will switch to it before rivals are able to respond. A firm is less likely to be deterred by whatever responses occur if the firm has little stake in the status quo. For example, a firm with a small market share that can quickly and dramatically expand, constrained neither by limits on production nor by customer reluctance to switch providers or to entrust business to a historically small provider, is unlikely to be deterred. Firms are also less likely to be deterred by whatever responses occur if competition in the relevant market is marked by leapfrogging technological innovation, so that responses by competitors leave the gains from successful innovation largely intact.

A market is more apt to be vulnerable to coordinated conduct if the firm initiating a price increase will lose relatively few customers after rivals respond to the increase. Similarly, a market is more apt to be vulnerable to coordinated conduct if a firm that first offers a lower price or improved product to customers will retain relatively few customers thus attracted away from its rivals after those rivals respond.

The Agencies regard coordinated interaction as more likely, the more the participants stand to gain from successful coordination. Coordination generally is more profitable, the lower is the market elasticity of demand.

Coordinated conduct can harm customers even if not all firms in the relevant market engage in the coordination, but significant harm normally is likely only if a substantial part of the market is subject to such conduct. The prospect of harm depends on the collective market power, in the relevant market, of firms whose incentives to compete are substantially weakened by coordinated conduct. This collective market power is greater, the lower is the market elasticity of demand. This collective market power is diminished by the presence of other market participants with small market shares and little stake in the outcome resulting from the coordinated conduct, if these firms can rapidly expand their sales in the relevant market.

Buyer characteristics and the nature of the procurement process can affect coordination. For example, sellers may have the incentive to bid aggressively for a large contract even if they expect strong responses by rivals. This is especially the case for sellers with small market shares, if they can realistically win such large contracts. In some cases, a large buyer may be able to strategically undermine coordinated conduct, at least as it pertains to that buyer's needs, by choosing to put up for bid a few large contracts rather than many smaller ones, and by making its procurement decisions opaque to suppliers.

8. Powerful Buyers

Powerful buyers are often able to negotiate favorable terms with their suppliers. Such terms may reflect the lower costs of serving these buyers, but they also can reflect price discrimination in their favor.

The Agencies consider the possibility that powerful buyers may constrain the ability of the merging parties to raise prices. This can occur, for example, if powerful buyers have the ability and incentive to vertically integrate upstream or sponsor entry, or if the conduct or presence of large buyers undermines coordinated effects. However, the Agencies do not presume that the presence of powerful buyers alone forestalls adverse competitive effects flowing from the merger. Even buyers that can negotiate favorable terms may be harmed by an increase in market power. The Agencies examine the choices available to powerful buyers and how those choices likely would change due to the merger. Normally, a merger that eliminates a supplier whose presence contributed significantly to a buyer's negotiating leverage will harm that buyer.

> *Example 22:* Customer C has been able to negotiate lower pre-merger prices than other customers by threatening to shift its large volume of purchases from one merging firm to the other. No other suppliers are as well placed to meet Customer C's needs for volume and reliability. The merger is likely to harm Customer C. In this situation, the Agencies could identify a price discrimination market consisting of Customer C and similarly placed customers. The merger threatens to end previous price discrimination in their favor.

Furthermore, even if some powerful buyers could protect themselves, the Agencies also consider whether market power can be exercised against other buyers.

> *Example 23:* In Example 22, if Customer C instead obtained the lower pre-merger prices based on a credible threat to supply its own needs, or to sponsor new entry, Customer C might not be harmed. However, even in this case, other customers may still be harmed.

9. Entry

The analysis of competitive effects in Sections 6 and 7 focuses on current participants in the relevant market. That analysis may also include some forms of entry. Firms that would rapidly and easily enter the market in response to a SSNIP are market participants and may be assigned market shares. See Sections 5.1 and 5.2. Firms that have, prior to the merger, committed to entering the market also will normally be treated as market participants. See Section 5.1. This section concerns entry or adjustments to pre-existing entry plans that are induced by the merger.

As part of their full assessment of competitive effects, the Agencies consider entry into the relevant market. The prospect of entry into the relevant market will alleviate concerns about adverse competitive effects only if such entry will deter or counteract any competitive effects of concern so the merger will not substantially harm customers.

The Agencies consider the actual history of entry into the relevant market and give substantial weight to this evidence. Lack of successful and effective entry in the face of non-transitory increases in the margins earned on products in the relevant market tends to suggest that successful entry is slow or difficult. Market values of incumbent firms greatly exceeding the replacement costs of their tangible assets may indicate that these firms have valuable intangible assets, which may be difficult or time consuming for an entrant to replicate.

A merger is not likely to enhance market power if entry into the market is so easy that the merged firm and its remaining rivals in the market, either unilaterally or collectively, could not profitably raise price or otherwise reduce competition compared to the level that would prevail in the absence of the merger. Entry is that easy if entry would be timely, likely, and sufficient in its magnitude, character, and scope to deter or counteract the competitive effects of concern.

The Agencies examine the timeliness, likelihood, and sufficiency of the entry efforts an entrant might practically employ. An entry effort is defined by the actions the firm must undertake to produce and sell in the market. Various elements of the entry effort will be considered. These elements can include: planning, design, and management; permitting, licensing, or other approvals; construction, debugging, and operation of production facilities; and promotion (including necessary introductory discounts), marketing, distribution, and satisfaction of customer testing and qualification requirements. Recent examples of entry, whether successful or unsuccessful, generally provide the starting point for identifying the elements of practical entry efforts. They also can be informative regarding the scale necessary for an entrant to be successful, the presence or absence of entry barriers, the factors that influence the timing of entry, the costs and risk associated with entry, and the sales opportunities realistically available to entrants.

If the assets necessary for an effective and profitable entry effort are widely available, the Agencies will not necessarily attempt to identify which firms might enter. Where an identifiable set of firms appears to have necessary assets that others lack, or to have particularly strong incentives to enter, the Agencies focus their entry analysis on those firms. Firms operating in adjacent or complementary markets, or large customers themselves, may be best placed to enter. However, the Agencies will not presume that a powerful firm in an adjacent market or a large customer will enter the relevant market unless there is reliable evidence supporting that conclusion.

In assessing whether entry will be timely, likely, and sufficient, the Agencies recognize that precise and detailed information may be difficult or impossible to obtain. The Agencies consider reasonably available and reliable evidence bearing on whether entry will satisfy the conditions of timeliness, likelihood, and sufficiency.

9.1 Timeliness

In order to deter the competitive effects of concern, entry must be rapid enough to make unprofitable overall the actions causing those effects and thus leading to entry, even though those actions would be profitable until entry takes effect.

Even if the prospect of entry does not deter the competitive effects of concern, post-merger entry may counteract them. This requires that the impact of entrants in the relevant market be rapid enough that customers are not significantly harmed by the merger, despite any anticompetitive harm that occurs prior to the entry.

The Agencies will not presume that an entrant can have a significant impact on prices before that entrant is ready to provide the relevant product to customers unless there is reliable evidence that anticipated future entry would have such an effect on prices.

9.2 Likelihood

Entry is likely if it would be profitable, accounting for the assets, capabilities, and capital needed and the risks involved, including the need for the entrant to incur costs that would not be recovered if the entrant later exits. Profitability depends upon (a) the output level the entrant is likely to obtain, accounting for the obstacles facing new entrants; (b) the price the entrant would likely obtain in the post-merger market, accounting for the impact of that entry itself on prices; and (c) the cost per unit the entrant would likely incur, which may depend upon the scale at which the entrant would operate.

9.3 Sufficiency

Even where timely and likely, entry may not be sufficient to deter or counteract the competitive effects of concern. For example, in a differentiated product industry, entry may be insufficient because the products offered by entrants are not close enough substitutes to the products offered by the merged firm to render a price increase by the merged firm unprofitable. Entry may also be insufficient due to constraints that limit entrants' competitive effectiveness, such as limitations on the capabilities of the firms best placed to enter or reputational barriers to rapid expansion by new entrants. Entry by a single firm that will replicate at least the scale and strength of one of the merging firms is sufficient. Entry by one or more firms operating at a smaller scale may be sufficient if such firms are not at a significant competitive disadvantage.

10. Efficiencies

Competition usually spurs firms to achieve efficiencies internally. Nevertheless, a primary benefit of mergers to the economy is their potential to generate significant efficiencies and thus enhance the merged firm's ability and incentive to compete, which may result in lower prices, improved quality, enhanced service, or new products. For example, merger-generated efficiencies may enhance competition by permitting two ineffective competitors to form a more effective competitor, e.g., by combining complementary assets. In a unilateral effects context, incremental cost reductions may reduce or reverse any increases in the merged firm's incentive to elevate price. Efficiencies also may lead to new or improved products, even if they do not immediately and directly affect price. In a

coordinated effects context, incremental cost reductions may make coordination less likely or effective by enhancing the incentive of a maverick to lower price or by creating a new maverick firm. Even when efficiencies generated through a merger enhance a firm's ability to compete, however, a merger may have other effects that may lessen competition and make the merger anticompetitive.

The Agencies credit only those efficiencies likely to be accomplished with the proposed merger and unlikely to be accomplished in the absence of either the proposed merger or another means having comparable anticompetitive effects. These are termed merger-specific efficiencies.[13] Only alternatives that are practical in the business situation faced by the merging firms are considered in making this determination. The Agencies do not insist upon a less restrictive alternative that is merely theoretical.

Efficiencies are difficult to verify and quantify, in part because much of the information relating to efficiencies is uniquely in the possession of the merging firms. Moreover, efficiencies projected reasonably and in good faith by the merging firms may not be realized. Therefore, it is incumbent upon the merging firms to substantiate efficiency claims so that the Agencies can verify by reasonable means the likelihood and magnitude of each asserted efficiency, how and when each would be achieved (and any costs of doing so), how each would enhance the merged firm's ability and incentive to compete, and why each would be merger-specific.

Efficiency claims will not be considered if they are vague, speculative, or otherwise cannot be verified by reasonable means. Projections of efficiencies may be viewed with skepticism, particularly when generated outside of the usual business planning process. By contrast, efficiency claims substantiated by analogous past experience are those most likely to be credited.

Cognizable efficiencies are merger-specific efficiencies that have been verified and do not arise from anticompetitive reductions in output or service. Cognizable efficiencies are assessed net of costs produced by the merger or incurred in achieving those efficiencies.

The Agencies will not challenge a merger if cognizable efficiencies are of a character and magnitude such that the merger is not likely to be anticompetitive in any relevant market.[14] To make the requisite determination, the Agencies consider whether cognizable efficiencies likely would be sufficient to reverse the merger's potential to harm customers in the relevant market, e.g., by preventing price

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[13] The Agencies will not deem efficiencies to be merger-specific if they could be attained by practical alternatives that mitigate competitive concerns, such as divestiture or licensing. If a merger affects not whether but only when an efficiency would be achieved, only the timing advantage is a merger-specific efficiency.

[14] The Agencies normally assess competition in each relevant market affected by a merger independently and normally will challenge the merger if it is likely to be anticompetitive in any relevant market. In some cases, however, the Agencies in their prosecutorial discretion will consider efficiencies not strictly in the relevant market, but so inextricably linked with it that a partial divestiture or other remedy could not feasibly eliminate the anticompetitive effect in the relevant market without sacrificing the efficiencies in the other market(s). Inextricably linked efficiencies are most likely to make a difference when they are great and the likely anticompetitive effect in the relevant market(s) is small so the merger is likely to benefit customers overall.

increases in that market.[15] In conducting this analysis, the Agencies will not simply compare the magnitude of the cognizable efficiencies with the magnitude of the likely harm to competition absent the efficiencies. The greater the potential adverse competitive effect of a merger, the greater must be the cognizable efficiencies, and the more they must be passed through to customers, for the Agencies to conclude that the merger will not have an anticompetitive effect in the relevant market. When the potential adverse competitive effect of a merger is likely to be particularly substantial, extraordinarily great cognizable efficiencies would be necessary to prevent the merger from being anticompetitive. In adhering to this approach, the Agencies are mindful that the antitrust laws give competition, not internal operational efficiency, primacy in protecting customers.

In the Agencies' experience, efficiencies are most likely to make a difference in merger analysis when the likely adverse competitive effects, absent the efficiencies, are not great. Efficiencies almost never justify a merger to monopoly or near-monopoly. Just as adverse competitive effects can arise along multiple dimensions of conduct, such as pricing and new product development, so too can efficiencies operate along multiple dimensions. Similarly, purported efficiency claims based on lower prices can be undermined if they rest on reductions in product quality or variety that customers value.

The Agencies have found that certain types of efficiencies are more likely to be cognizable and substantial than others. For example, efficiencies resulting from shifting production among facilities formerly owned separately, which enable the merging firms to reduce the incremental cost of production, are more likely to be susceptible to verification and are less likely to result from anticompetitive reductions in output. Other efficiencies, such as those relating to research and development, are potentially substantial but are generally less susceptible to verification and may be the result of anticompetitive output reductions. Yet others, such as those relating to procurement, management, or capital cost, are less likely to be merger-specific or substantial, or may not be cognizable for other reasons.

When evaluating the effects of a merger on innovation, the Agencies consider the ability of the merged firm to conduct research or development more effectively. Such efficiencies may spur innovation but not affect short-term pricing. The Agencies also consider the ability of the merged firm to appropriate a greater fraction of the benefits resulting from its innovations. Licensing and intellectual property conditions may be important to this enquiry, as they affect the ability of a firm to appropriate the benefits of its innovation. Research and development cost savings may be substantial and yet not be cognizable efficiencies because they are difficult to verify or result from anticompetitive reductions in innovative activities.

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[15] The Agencies normally give the most weight to the results of this analysis over the short term. The Agencies also may consider the effects of cognizable efficiencies with no short-term, direct effect on prices in the relevant market. Delayed benefits from efficiencies (due to delay in the achievement of, or the realization of customer benefits from, the efficiencies) will be given less weight because they are less proximate and more difficult to predict. Efficiencies relating to costs that are fixed in the short term are unlikely to benefit customers in the short term, but can benefit customers in the longer run, e.g., if they make new product introduction less expensive.

11. Failure and Exiting Assets

Notwithstanding the analysis above, a merger is not likely to enhance market power if imminent failure, as defined below, of one of the merging firms would cause the assets of that firm to exit the relevant market. This is an extreme instance of the more general circumstance in which the competitive significance of one of the merging firms is declining: the projected market share and significance of the exiting firm is zero. If the relevant assets would otherwise exit the market, customers are not worse off after the merger than they would have been had the merger been enjoined.

The Agencies do not normally credit claims that the assets of the failing firm would exit the relevant market unless all of the following circumstances are met: (1) the allegedly failing firm would be unable to meet its financial obligations in the near future; (2) it would not be able to reorganize successfully under Chapter 11 of the Bankruptcy Act; and (3) it has made unsuccessful good-faith efforts to elicit reasonable alternative offers that would keep its tangible and intangible assets in the relevant market and pose a less severe danger to competition than does the proposed merger.[16]

Similarly, a merger is unlikely to cause competitive harm if the risks to competition arise from the acquisition of a failing division. The Agencies do not normally credit claims that the assets of a division would exit the relevant market in the near future unless both of the following conditions are met: (1) applying cost allocation rules that reflect true economic costs, the division has a persistently negative cash flow on an operating basis, and such negative cash flow is not economically justified for the firm by benefits such as added sales in complementary markets or enhanced customer goodwill;[17] and (2) the owner of the failing division has made unsuccessful good-faith efforts to elicit reasonable alternative offers that would keep its tangible and intangible assets in the relevant market and pose a less severe danger to competition than does the proposed acquisition.

12. Mergers of Competing Buyers

Mergers of competing buyers can enhance market power on the buying side of the market, just as mergers of competing sellers can enhance market power on the selling side of the market. Buyer market power is sometimes called "monopsony power."

To evaluate whether a merger is likely to enhance market power on the buying side of the market, the Agencies employ essentially the framework described above for evaluating whether a merger is likely to enhance market power on the selling side of the market. In defining relevant markets, the Agencies

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[16] Any offer to purchase the assets of the failing firm for a price above the liquidation value of those assets will be regarded as a reasonable alternative offer. Liquidation value is the highest value the assets could command for use outside the relevant market.

[17] Because the parent firm can allocate costs, revenues, and intra-company transactions among itself and its subsidiaries and divisions, the Agencies require evidence on these two points that is not solely based on management plans that could have been prepared for the purpose of demonstrating negative cash flow or the prospect of exit from the relevant market.

focus on the alternatives available to sellers in the face of a decrease in the price paid by a hypothetical monopsonist.

Market power on the buying side of the market is not a significant concern if suppliers have numerous attractive outlets for their goods or services. However, when that is not the case, the Agencies may conclude that the merger of competing buyers is likely to lessen competition in a manner harmful to sellers.

The Agencies distinguish between effects on sellers arising from a lessening of competition and effects arising in other ways. A merger that does not enhance market power on the buying side of the market can nevertheless lead to a reduction in prices paid by the merged firm, for example, by reducing transactions costs or allowing the merged firm to take advantage of volume-based discounts. Reduction in prices paid by the merging firms not arising from the enhancement of market power can be significant in the evaluation of efficiencies from a merger, as discussed in Section 10.

The Agencies do not view a short-run reduction in the quantity purchased as the only, or best, indicator of whether a merger enhances buyer market power. Nor do the Agencies evaluate the competitive effects of mergers between competing buyers strictly, or even primarily, on the basis of effects in the downstream markets in which the merging firms sell.

> *Example 24:* Merging Firms A and B are the only two buyers in the relevant geographic market for an agricultural product. Their merger will enhance buyer power and depress the price paid to farmers for this product, causing a transfer of wealth from farmers to the merged firm and inefficiently reducing supply. These effects can arise even if the merger will not lead to any increase in the price charged by the merged firm for its output.

13. Partial Acquisitions

In most horizontal mergers, two competitors come under common ownership and control, completely and permanently eliminating competition between them. This elimination of competition is a basic element of merger analysis. However, the statutory provisions referenced in Section 1 also apply to one firm's partial acquisition of a competitor. The Agencies therefore also review acquisitions of minority positions involving competing firms, even if such minority positions do not necessarily or completely eliminate competition between the parties to the transaction.

When the Agencies determine that a partial acquisition results in effective control of the target firm, or involves substantially all of the relevant assets of the target firm, they analyze the transaction much as they do a merger. Partial acquisitions that do not result in effective control may nevertheless present significant competitive concerns and may require a somewhat distinct analysis from that applied to full mergers or to acquisitions involving effective control. The details of the post-acquisition relationship between the parties, and how those details are likely to affect competition, can be important. While the Agencies will consider any way in which a partial acquisition may affect competition, they generally focus on three principal effects.

First, a partial acquisition can lessen competition by giving the acquiring firm the ability to influence the competitive conduct of the target firm. A voting interest in the target firm or specific governance rights, such as the right to appoint members to the board of directors, can permit such influence. Such

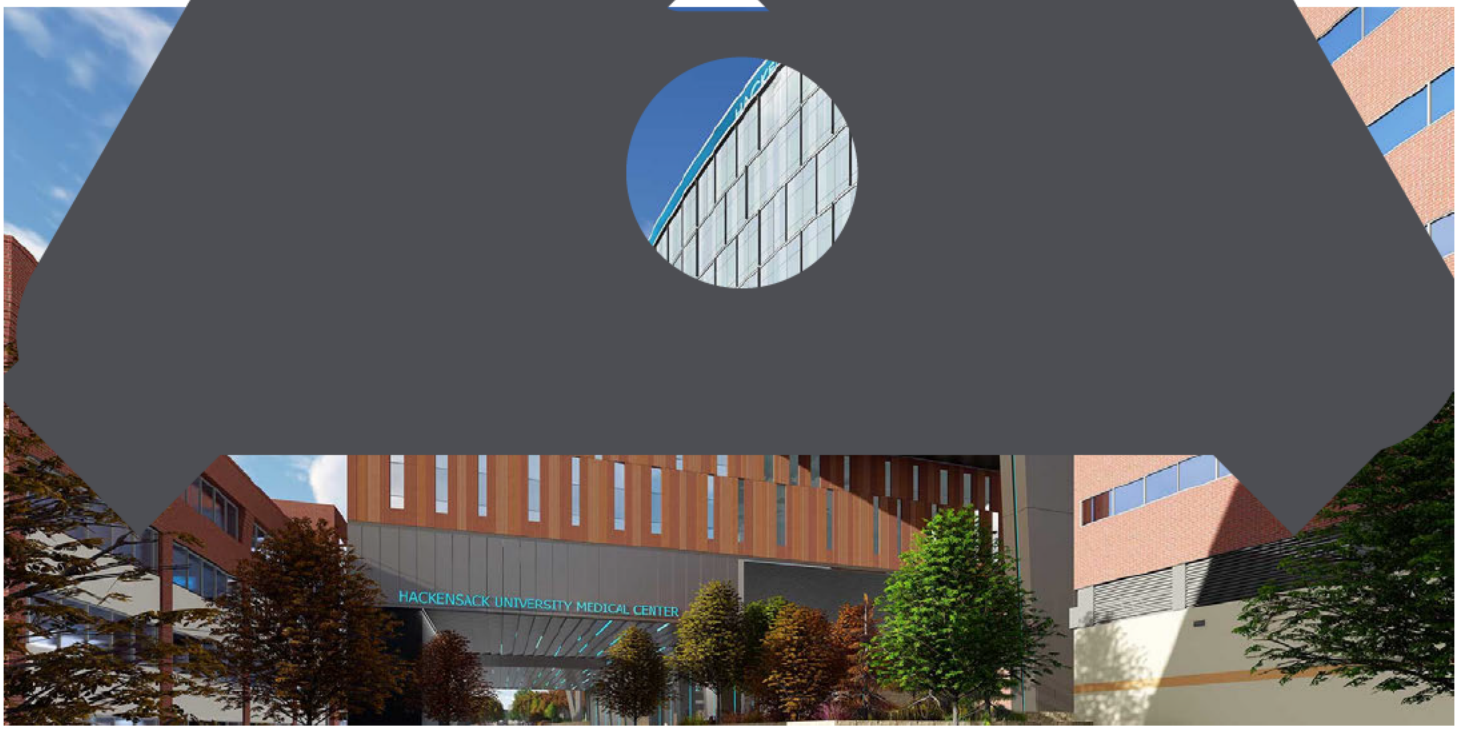
influence can lessen competition because the acquiring firm can use its influence to induce the target firm to compete less aggressively or to coordinate its conduct with that of the acquiring firm.

Second, a partial acquisition can lessen competition by reducing the incentive of the acquiring firm to compete. Acquiring a minority position in a rival might significantly blunt the incentive of the acquiring firm to compete aggressively because it shares in the losses thereby inflicted on that rival. This reduction in the incentive of the acquiring firm to compete arises even if cannot influence the conduct of the target firm. As compared with the unilateral competitive effect of a full merger, this effect is likely attenuated by the fact that the ownership is only partial.

Third, a partial acquisition can lessen competition by giving the acquiring firm access to non-public, competitively sensitive information from the target firm. Even absent any ability to influence the conduct of the target firm, access to competitively sensitive information can lead to adverse unilateral or coordinated effects. For example, it can enhance the ability of the two firms to coordinate their behavior, and make other accommodating responses faster and more targeted. The risk of coordinated effects is greater if the transaction also facilitates the flow of competitively sensitive information from the acquiring firm to the target firm.

Partial acquisitions, like mergers, vary greatly in their potential for anticompetitive effects. Accordingly, the specific facts of each case must be examined to assess the likelihood of harm to competition. While partial acquisitions usually do not enable many of the types of efficiencies associated with mergers, the Agencies consider whether a partial acquisition is likely to create cognizable efficiencies.

PX9055



The Second Street Pavilion

Where Innovation and Comfort Come Together

Hackensack University Medical Center is creating a state-of-the-art new facility on Second Street which will transform the way we provide patient care. The nine-story Second Street Pavilion will bring together the latest medical technology with the best in patient comfort, including private patient rooms.

Construction starts the summer of 2019 and is expect to be completed sometime in 2022.

This new pavilion will be a "Green" building design with LEED (Leadership in Energy and Environmental Design) Silver Certification, ensuring it is environmentally efficient.

This innovative project reflects the deep commitment of Hackensack Meridian *Health* to better serve the needs of our patients and their families and provide an enhanced patient experience while preserving the privacy, respect, and dignity that patients and families deserve.

Private Rooms for All

The Second Street Pavilion will include three floors of private rooms for patients. After the Pavilion opens, the semi-private rooms in the current hospital will be converted to private rooms, with the goal of providing single rooms for all inpatients over the next decade.

New Operating Suites

- There will be 24 new operating rooms—a 50 percent increase—enabling our surgeons to take on more cases.
- Six of the operating rooms will house robotic surgical equipment, allowing surgeons to perform minimally invasive operations through smaller incisions and enabling patients to leave the hospital sooner and recover more quickly.
- Intraoperative magnetic resonance imaging (MRI) will provide surgeons with real-time guidance in the OR for the most complex surgical procedures, such as neurosurgery.

Exceptional Orthopedic Care

The Second Street Pavilion will include dedicated space for the Orthopedic Institute, featuring 50 beds just for inpatients having orthopedic procedures.

Expanded Critical Care

Patients in need of intensive care will benefit from a new Intensive Care Unit (ICU) with 50 private rooms.

RSC Architects of Hackensack, in partnership with EYP Architects of Houston, is serving as the lead architect of the Pavilion. The RSC/EYP team has extensive experience in the design of healthcare facilities, including others in the Hackensack Meridian *Health* network.

PX9096

CERTIFICATE OF NEED
Department Staff Project Summary, Analysis & Recommendations

Name of Facility:	Hackensack University Medical Center (HUMC) North	CN# FR 110603-02-01
Name of Applicant:	PV Joint Ventures	Project Cost: $39,590,409
Location:	Westwood	Equity Contribution: $39,590,409
Service Area:	Bergen County	

Applicant's Project Description:

This application is in response to the certificate of need (CN) call issued by the Department of Health and Senior Services (Department) on February 18, 2011, for a new general hospital in Bergen County. PV Joint Venture is the applicant whose sole members are HUMC, a not for profit hospital, and LHP Hospital Group, Inc. (LHP), a privately held Delaware corporation that provides essential capital and expertise to not-for-profit hospitals and health care systems.

HUMC North, the proposed hospital, would be located on the former site of Pascack Valley Hospital (PVH) in Westwood. The overall acute care bed capacity at HUMC North would consist of 128 acute care beds, of which 87 would be medical/surgical beds, 18 obstetric beds, 18 ICU/CCU beds and 5 intermediate bassinets with a Community Perinatal Center - Intermediate designation as well as a new low risk catheterization laboratory. The hospital's service complement would include Inpatient and Same Day Surgery Operating rooms, Cystoscopy rooms, MRI services, CT services, and Acute Hemodialysis services.

The applicant has considerably reduced the total bed capacity at HUMC North in comparison to the previous provider PVH. HUMC North's entire bed inventory totals 128 including intermediate bassinets while PVH had 280 beds including intermediate bassinets. The applicant is committed to operating HUMC North as a general acute care hospital to serve area residents and indigent patients without any disruption to the other health care providers in the neighboring communities.

Applicant's Justification of Need:

PV Joint Venture, the applicant, demonstrated its eligibility in the certificate of need filing addressing how establishing HUMC North as the new general hospital in Bergen County would meet and exceed the five specific criteria contained in the CN call. The first criteria in the call notice requires the applicant to demonstrate its compliance with N.J.A.C. 8:33-4.4(a) that it has or will have control or authority over the proposed location of the new general hospital. As a result of a bankruptcy auction, substantially all the assets of PVH, including property, plant and equipment were purchased by a

limited liability company formed by Hackensack University Medical Center (HUMC) and Touro University College of Medicine (Touro). In 2011, Touro sold its interest in the limited liability company to HUMC making HUMC in control of the entire property. When the CN is approved, HUMC North would be conveyed to Pascack Valley Health System, LLC, a New Jersey limited liability company (PV Joint Venture), the applicant whose members are HUMC and LHP. The applicant holds that its full control of the entire property has been established and the criteria met.

With respect to the second criteria, which requires the applicant demonstrate that this new general hospital in Bergen County will enhance and increase physician education and retention in New Jersey and provide additional residency slots, the applicant believes the opening of the new hospital would create a unique opportunity to address the critical and growing physician shortage problem in New Jersey by adding vital residency slots that can be funded by the Centers for Medicare and Medicaid Services. The new facility is capable of providing a venue at which physicians could be trained in four specialties: family medicine, emergency medicine, obstetrics/gynecology, and general surgery. The applicant estimates that 18 family practice residents could be supported, along with up to four residents in each of the other three specialties, for a total of up to 30 residency positions at HUMC North. This would be a significant increase in training slots and provide training opportunities for residents in areas where New Jersey's shortage is most serious, i.e., family medicine, obstetrics/gynecology, and general surgery.

In addition, the applicant would implement the same physician employment model at HUMC North that has been used at HUMC over the past few years for retaining physicians in this state. Under this model, the hospital may support the retention of the newly graduated physician by financing the physician and other staff salaries (in part or in full), employee benefits, malpractice insurance and lease costs. This employment model could provide the economic incentives sufficient for newly graduated physicians to remain in the state to practice primary care while they develop their practices. This employment model might also be utilized to support new graduates in underserved areas and place new graduates in practices of retiring physicians, so these new physicians would become financially self supporting over time. The applicant believes this criterion has been successfully satisfied.

The third criterion requires that the project will enhance quality of care and promote integration within the overall system of service provided in Bergen County. HUMC ranks among the top hospitals in the United States in quality measures and is nationally known for its standard of care. HUMC was the first hospital in the United States to receive Magnet Designation for Nursing Excellence (after the demonstration hospital); appears routinely in U.S. News and World Report, HealthGrades, and other top hospital lists. It has an outstanding medical staff, many of whom are recognized by Castle Connolly each year. The applicant is confident that this superior level of clinical and service excellence will be replicated at HUMC North. The applicant envisions the medical staffs at HUMC and HUMC North working closely together promoting clinical integration. The new hospital as planned would have a minimal impact on other local hospitals. The applicant is confident criteria #3 has been satisfied.

The fourth criterion stipulates the applicant has the ability to license the project within two years of any CN approval. Despite HUMC establishing a satellite emergency department (SED) subsequent to the closure of PVH, elected officials, local physicians, emergency responders, local residents, and other community groups have consistently appealed for a replacement hospital at the Westwood site. HUMC North, the proposed hospital at this location, would be comprised of 128 beds (medical/surgical, ICU/CCU, obstetrics, and intermediate bassinets) along with services very similar in scope to those provided previously at this location. It will be renovated at a total project cost of $39,590,409 and will open in late 2012, much sooner than the CN call for applications requires. The applicant's plan to implement the new hospital satisfies criteria #4.

The fifth criteria specifics that the applicant will limit its total number of licensed beds and bassinets to the lowest number of beds and bassinets required to meet the need identified in its application. HUMC North plans to serve the same "core market" of 14 municipalities as the former PVH and like its predecessor HUMC North will be the only hospital convenient to those rural communities in the far northeastern corner of Bergen County as well as nearby communities in Rockland County, New York. At 128 licensed beds including five intermediate bassinets, HUMC North would be a considerably smaller hospital than its predecessor, which operated 280 beds including intermediate bassinets. The reduction in bed capacity from 280 to 128 will adequately serve the local communities and ensure no negative impact on other existing hospitals in Bergen County. The applicant believes criteria #5 is satisfied.

The applicant is locating HUMC North at the former PVH location because PVH did not close as a result of community need for its health care services but rather due to poor management and careless overexpansion. HUMC's current efforts to establish a satellite emergency department (SED) and a seamless transition for MICU services were implemented to preserve critical health services in the area and stabilize the institutional environment.

The applicant believes that the need for HUMC North is justified. Population growth for Bergen County in the age cohort 65 and over according to the Department of Labor and Workforce Development will increase 37.7 percent between 2008 and 2028 creating additional demand for the core market area of HUMC North. This need will be exacerbated for this aging population since there is no primary road system in the Pascack Valley or Northern Valley. The applicant also points out that the cost of this new hospital is well below the national figure of $1.6 million per bed, and the total project cost is $39,590,409 represents a cost saving of over 80 percent to construct these 128 beds.

The applicant believes that it is appropriately sized and will not negatively impact the other regional providers because it will allow HUMC to shift some of its volume from its main campus to the Westwood facility. Long range, the applicant has conservatively estimated that without adversely impacting any of the existing hospitals, 8,378 projected cases would be generated at HUMC North by its second year of operation, resulting in an 80.7% occupancy rate based on a 128 bed inventory. This application is made with the intent to

meet current and future demands in the area based on the applicant's forecasted population projections showing sufficient growth to support these additional beds and the needed care generated from this population growth.

The applicant projects that HUMC North will generate 8,378 cases per year in its second year of operation while not disturbing "…the traditional markets of any other hospitals in Bergen County." Aside from the mathematic calculations in the application, the applicant drew this conclusion based on a number of driving community forces. First, patients living in the northeastern region of Bergen County have consistently maintained that travel to more distant hospitals is difficult and that they "prefer to be treated closer to home." The recent massive flooding has made travel from northeastern region of Bergen County to Valley Hospital all but impossible in case of a true emergency. Second, residents of the Pascack Valley and Northern Valley towns have consistently supported the reopening of their hospital and the results of a November 2009 referendum vote shows approximately 75 percent of the voters in northeastern Bergen County support the reopening of this hospital. Third, HUMC has a national reputation for providing superior clinical care, and this reputation will draw patients to utilize HUMC North. Fourth, HUMC North is located within three miles of the Rockland County, New York border making it very accessible to New York residents. Fifth, the applicant has concluded that excluding the 8,378 cases per year as referenced above that will be generated by HUMC North, there will be 4,187 cases left for other providers. The applicant believes these cases are sufficient to maintain the existing service levels at the other area hospitals.

First and foremost, the establishment of a new hospital would be of benefit to the patient community adding closer services without any disruption to the delivery of the existing health care services. The applicant views this transaction as an opportunity to provide more consumer choice and for the sharing of services, administrative coordination and other benefits between HUMC and HUMC North to achieve improved efficiencies and better integrated care for their communities.

With respect to charity care, the applicant has estimated that HUMC during 2011 will provide $5.4 million in charity care to residents of the 14 core market towns. The applicant points out that according to the 2000 US Census, approximately three percent of the residents of the core market towns are living below the poverty level. The applicant will adopt and implement at HUMC North the policies for uncompensated care presently utilized at HUMC. HUMC North will not discriminate based on ability to pay for services and will provide care to the indigent consistent with the needs of the local population. This will avoid service delivery gaps and incongruous care for the underinsured and uninsured of the region.

Applicant's Statement of Compliance with Statutory and Regulatory Requirements:

The applicant has stated the following to demonstrate its compliance with the statutory criteria contained in the Health Care Facilities Planning Act, as amended at, N.J.S.A. 26:2H-1 et seq. and N.J.A.C. 8:33-1.1 et seq. as follows:

1. **The availability of facilities or services which may serve as alternatives or substitutes:**
   According to the Applicant

   HUMC is among the 10 highest volume hospitals in the United States despite the addition of over 200 medical/surgical beds during the last three decades. HUMC's occupancy rate has remained consistently over the State's upper occupancy target of 85 percent. According to the New Jersey Fast Report, the occupancy rate for HUMC was at 87.1% for 2010. The closures of the combined Passaic Beth Israel hospitals in the City of Passaic, Barnert in Paterson, and PVH in Westwood have exacerbated this problem. HUMC North will help to relieve the strain of excess volume which can be accomplished in a very economical way. There is no other economical substitute to accommodate the needs of the population residing in the far northeastern corner of Bergen County.

   The addition of 128 acute care beds at Pascack Valley will have minimal impact on other hospitals in Bergen County. The applicant contends that there will be minimal (if any) impact on Englewood Hospital, since there will be 4,187 cases available from Bergen County for other inpatient care providers after the opening of HUMC North. Furthermore, Valley Hospital, which is undergoing a major expansion project to address increasing volume, has already eliminated its inpatient acute psychiatry unit and converted it for medical/surgical use to address the high bed demand being experienced there. Therefore, HUMC North will not have a negative impact on Valley Hospital, either.

   The applicant acknowledges that there are other hospitals in Bergen County; however, the Pascack Valley and Northern Valley regions are supported only by a secondary road system of local streets making travel extremely difficult and time consuming especially during morning and evening peak hours to reach these other hospitals. Without a primary road system, access into and travel around the region is extremely cumbersome, especially in the event of an emergency. The applicant believes that availability of HUMC North will have an immediate and positive impact on the delivery of care for residents of these regions.

2. **The need for special equipment and services in the area:**

   According to the Applicant:

   Residents of the local communities of Westwood and environs, local elected officials, local practicing physicians, first responders, health related professional organizations, labor, and others have long been in agreement regarding the need to reopen an acute care hospital in Westwood. The applicant believes that the need to open HUMC North has been thoroughly documented throughout this CN application. The approval of HUMC North would provide better community access and more manageable county wide occupancy rates. In addition, the

opening of HUMC North will help to address the critical physician shortage in New Jersey, which is considered among the top priorities of the NJDHSS.

3. **The adequacy of financial resources and sources of present and future revenues:**

   According to the Applicant:

   In contrast with many New Jersey hospitals, HUMC has maintained a net surplus and is in excellent financial condition. The partnership with LHP**,** which has the financial backing of CCMP Capital Advisors, LLC, as well as the CPP (Canada Pension Plan) Investment Board, ensures that adequate financial resources will be available for HUMC North. In contrast with many recent hospitals in New Jersey, HUMC North will require no infusion of public dollars whatsoever to guarantee its success.

4. **The availability of sufficient manpower in the several professional disciplines:**

   According to the Applicant:

   HUMC was the second hospital in the United States to receive the Magnet Award for Nursing Excellence and has a long and distinguished history of full staffing, even during periods when other hospitals were experiencing nursing shortage crises. The annual nursing turnover rate at HUMC during 2010 was 12.4 percent, versus a national nursing turnover rate of 13.8 percent. The HUMC's general recognition within the community as one of the top hospitals in the US has raised visibility among health care professionals. This visibility has contributed to our consistent success in attracting and retaining top talent in the health care professions.

5. **Will not have an adverse economic or financial impact on the delivery of health care services in the region or statewide and will contribute to the orderly development of adequate and effective health care services:**

   According to the Applicant:

   The applicant believes that establishing HUMC North as a new general hospital, in and of itself, would not have an adverse impact on the health care delivery system in Bergen County. However, the applicant is convinced that non-approval of the CN to establish HUMC North as a new general hospital would result in dire consequences for health care delivery in Bergen County.

Public Hearing:

On October 19, 2011, a public hearing was held at Westwood Regional Junior Senior High School located at 701 Ridgewood Road in the Township of Washington from 6:00

p.m. to 8:00 p.m. Approximately 1,000 people were in attendance. Public comment was divided 18 to one in support of the application, with 36 people speaking in favor and two opposing. The majority of speakers support the new hospital because it provides needed health care services for this area, creates jobs, and relieves taxpayers from the burden of millions of dollars in debt payments. A number of supporting comments praised the track record of HUMC crediting it for financial solvency. Those opposing the transfer commented that HUMC North would be short lived and advocated for more stringent oversight conditions on the transfer. The Department also received hundreds of letters from members of the public in support of the application.

It is also noted in the application that HUMC North provided letters of support from state, county and local elected government officials, including State Senator Gerald Cardinale, Assemblywoman Charlotte Vandervalk, Bergen County Executive Dennis McNerney, Woodcliff Lakes Councilwoman Josephine Higgens, Westwood Mayor John Birkner, Rockland County Executive C. Scott Vanderhoef and Park Ridge Mayor Donald Ruschmann. The application also contains resolutions of support from the Bergen County Board of Chosen Freeholders, Bergen County League of Municipalities, Northern Valley Mayors' Association, Passaic Valley Mayors' Association, Mayor and Council of the Borough of Bergenfield, Borough of Closter, Borough of Emerson, Borough of Harrington, Borough of Hillsdale, Borough of Norwood, Borough of Old Tappan, Borough of Park Ridge, River Vale Township, Borough of Rockleigh, Washington Twp., Borough of Westwood, and Borough of Woodcliff Lakes. In addition, letters from the following health care and professional organizations were filed in support of the applications: New Jersey Council of Teaching Hospitals, Greater New York Hospital Association, Pascack Valley Volunteer Ambulance Association, Bergen County Economic Development Corporation, Bergen Community College, Commercial Real Estate Services and Meadowlands Regional Chamber.

Additional documents were filed after the CN application was submitted for review. Valley Hospital filed an official response in opposition to HUMC North's CN application in the form of a presentation to the Department dated September 14, 2011. Beattie Padovano, LLC, counsel representing the Westwood Taxpayers Alliance filed comments in support of HUMC North's CN application dated September 8, 2011. Englewood Hospital and Medical Center filed an official response in opposition to the re-opening of the former Pascack Valley Hospital as a general acute care hospital dated September 21, 2011, and met with the Department on that same date.

Department Staff Analysis:

Introduction:

Based on the staff analysis, this project is being recommended to the State Health Planning Board (SHPB) for approval. Department staff concluded that the CN provides adequate justification for a recommendation to approve based on the applicable administrative rules at N.J.A.C. 8:33-1.1 et seq. and the general statutory standards at N.J.S.A. 26:2H-1 et seq.

Staff consulted the following data sources to reach its conclusions:

- Summary Inpatient Utilization (B2) data for licensed and maintained beds for the service categories that HUMC North proposes to offer;
- Total admissions to the six area hospitals and total admissions to the former PVH in the service categories that HUMC North proposes to offer; and
- Population projections for Bergen County.

Adequacy of Services:

As part of its analysis, the Department assessed the availability of facilities or services which may serve as alternatives or substitutes, as set forth at N.J.S.A. 26:2H-8, to the proposed new hospital in the CN application seeking to operate at the former PVH site in Westwood. There are five neighboring hospitals in Bergen County that are within a 12-mile radius of the former PVH. Two of these hospitals, Bergen Regional in Paramus and Valley in Ridgewood, are within six miles of the former PVH site. The other hospitals in the region include Englewood, HUMC and Holy Name in Teaneck. Department staff, in reviewing the geographic distribution of services in the region, found a wide range of inpatient services available in the region. However, it also found that the travel time for the residents in this area to reach these other hospitals especially in an emergency situation would be impeded by the lack of a primary road system making these alternatives difficult to reach. Morning and evening rush hour further compounds travel to these alternative hospitals for care. Area residents have documented their travel problems and the need for more accessible care (see Appendix A).

It is noted that the expansion of any beds in the categories proposed by the applicant (i.e., medical/surgical, OB, ICU/CCU beds or cardiac catheterization laboratories) at any of the region's existing hospitals does not require a CN. Since these hospitals are not constrained from expanding their current bed capacity in any of these bed categories to meet unanticipated future need, the issue is not the availability of services but more the lack of accessibility to such services due to the increased travel times.

Department Staff Bed Need Analysis

Bed Occupancy Overview:

The CN application to establish HUMC North shows that this hospital proposes to restrict its bed categories to medical/surgical, obstetric and OB/GYN, ICU/CCU beds and intermediate bassinets. Staff focused its assessment efforts primarily on the first three bed categories. Staff reviewed B-2 data for licensed and maintained beds to assess historical occupancy rates and admissions data for these bed categories both prior to and after PVH's closure in 2007. This review evaluates the data in the context of the Department's statutory and regulatory authority in order to gain a fuller

understanding of the impact that HUMC North may have on the region's hospitals. The years selected were 2006, 2007, 2008, 2009, 2010 and the first two quarters of 2011. Please note that PVH ceased operation in November of 2007 and only reported data for the first two quarters of that year.

Licensed Beds – Occupancy:

The Department analysis relies on an 83% occupancy rate for maintained beds used by the New Jersey Commission on Rationalizing Health Care Resources, which stated that this 83% rate is widely considered among experts to be "full occupancy" for hospitals. While the 83% was applied to maintained beds in the Commission's Report, staff has applied it as a standard of efficiency to both licensed beds and maintained beds.

The overall annual occupancy figures for 2008 for all three licensed bed categories collectively applying the 83% desired target occupancy established in the Commission's report showed that only Valley Hospital met and exceeded the 83% rate for its licensed beds, although HUMC would also have exceeded the 83% rate had it not increased its number of licensed beds from 600 to 683 in 2007.

The B-2 data for Valley Hospital's licensed medical/surgical beds in 2008 showed that Valley Hospital, at the same licensed bed capacity of 331 as in 2006, had an annual occupancy rate increase of 10 percent (to 97.24%), but the rate in subsequent years had returned to a level only slightly higher than it had been in 2006[1]. HUMC's annual occupancy rate decreased by nearly 10% (to 83.38%) after increasing its licensed medical/surgical bed capacity from 496 in the second quarter of 2007 to 555 in the third quarter of 2007. Had HUMC not increased its licensed bed capacity, the occupancy rate would have jumped to 93.29% in 2008 and would have remained around 90% in subsequent years. In 2008, the other existing area hospitals were operating at lower occupancy rates for this bed category, with Holy Name having the next highest annual occupancy rate at 65.99%.

The trend for licensed beds seen in 2008, the year after the closure of PVH, did not continue in subsequent years. The B-2 inpatient utilization for Englewood Medical Center showed a return to the 2007 rates in 2009 and subsequent years. Valley Hospital also showed lower rates in 2009 and subsequent years, but not quite as low as the rates had been in 2008. Holy Name and Bergen Regional showed relatively small changes in the rates for the three service categories of Med/Surg, OB/GYN and ICU/CCU in 2009 and 2010. Generally, the utilization changes that occurred in 2008 indicate that the gains associated with the closing of PVH were considered a one-time event. The data shows that only HUMC sustained its utilization gains regardless of its increase in licensed beds, and Valley retained some of its utilization gains.

[1] Note: Beginning in 2009, Valley Hospital did not include Same Day Caths and Endoscopies in its B-2 reports. Those numbers have been added back to give a proper comparison of admissions and patient days with those of the other hospitals which did include this type of data in their B-2 reports.

Historically, even when PVH was operational, HUMC has always been the hospital with the highest occupancy and average length of stay. HUMC numbers indicate that it has not had a negative effect on the other providers, and its plans to open HUMC North with fewer beds than previously operated at PVH site does not seem to place the other hospitals at any further significant risk. Thus, the application complies with N.J.S.A. 26:2H-8 and N.J.A.C. 8:33-4.9(a), 4.9(a)1, 4.10(a)1, 4.10(a)2 and 4.10(a)4 (see Appendix B).

Maintained Beds - Occupancy:

Staff reviewed the 2006-2010 B-2 data for maintained beds in terms of total annual occupancy rates for the three service categories of medical/surgical, OB/GYN and ICU/CCU, which are inpatient services HUMC North proposes to offer. In 2006, only HUMC and Valley Hospital met or exceeded the 83% occupancy target with annual rates respectively of 98.3% and 87.3%. The remaining four hospitals had annual occupancy rates of between 78.2% (Englewood) to 54.7% (Bergen Regional). In 2008, the occupancy rates for maintained beds in the noted categories increased from 2006 for all hospitals except HUMC (95.9%) and Englewood (76.0%). Both of these hospitals increased their medical/surgical bed capacities in 2008 which lowered their occupancy rates.

Application of the annualized rate derived from using the last two quarters of 2010 and the first two quarters of 2011 disclosed that the occupancy rates for maintained beds in the noted categories were down from 2008 for Valley Hospital, Englewood Medical Center and Holy Name and up for Bergen Regional and HUMC. However, HUMC and Valley Hospital remained the only hospitals in the area meeting or exceeding the 83% target. For the three bed categories proposed at HUMC North, HUMC's annual occupancy rate was at 91.01% for 602 beds while Valley's rate was at 90.39% with 417 beds. A closer look at the medical/surgical beds in 2010 at these two hospitals showed Valley at 93.69% for 331 beds compared to HUMC at 92.13% for 489 beds. Even though HUMC is further away from the PVH location, its utilization at a higher number of beds collectively and by medical/surgical beds is comparable (see Appendix C).

Total Bergen County Hospital Admissions and Average Daily Census (ADC):

It is also noted that for the period of 2006 to 2008, the combined ADC increased at all hospitals except HUMC. When the B-2 data was annualized using the last two quarters of 2010 and the first two quarters of 2011, the trend showed that HUMC had the highest ADC with most beds in the county compared to other operating hospitals. Total combined ADC for all hospitals decreased from 1,460 in 2006 to 1,426 in 2008 and to 1,373 in 2010, while medical/surgical ADC remained essentially stable decreasing slightly from 1,223 to 1,211 in 2008 and 1,147 in 2010. However, the B-2 data also showed for medical/surgical beds for 2010 that HUMC had the highest ADC in the county compared to the other operating hospitals and maintained the most beds (see Appendix C).

Total admissions for the three bed categories at all Bergen County hospitals actually decreased from 133,823 in 2006 to 133,329 in 2008 then to 133,168 in 2011 (when

annualized using the last two quarters of 2010 and the first two quarters of 2011). Total medical/surgical admissions for these hospitals decreased from 117,716 in 2006 to 116,301 in 2008 and fell further to 116,155 in 2011 (when annualized using the last two quarters of 2010 and the first two quarters of 2011). By hospital, total and medical/surgical admissions increased at all hospitals except HUMC in 2008 from 2006 and 2007. When admissions are examined closer, the B-2 data shows that admissions for medical/surgical beds and for the three bed categories collectively were highest at HUMC. This trend continues and is reflected into 2011 (using an annualized rate comprised of the last two quarters of 2010 and the first two quarters of 2011) when the rate fell to 116,155 (see Appendix D).

The above data on admissions and ADC indicates a temporary increase in utilization in 2008 from 2006 and 2007 but does not show any of these increases are sustained in 2010 and 2011. The data clearly depicts HUMC as having the most admissions and the highest ADC, but these figures are lower than its 2008 reported numbers.

Outpatient and Same Day Surgery:

Outpatient surgery in the county steadily declined from 2006 (25,888) to 2010 (9,951). However, these totals are mostly reflective of HUMC's decline (16,223 in 2006 to 8,452 in 2010), as HUMC had the vast majority of outpatient surgeries of all the Bergen County Hospitals. Of the remaining hospitals' outpatient surgeries, Valley Hospital and Holy Name remained fairly stable (although Holy Name had a temporary rise in 2008); Bergen Regional and Englewood showed a significant decrease (see Appendix E).

Same day surgery in the county dropped considerably with the PVH closure but increased from that drop in the years following (44,169 in 2006, 40,871 in 2008, and 42,197 in 2010). HUMC, Bergen Regional, Holy Name and Englewood showed a slight increase over the years while Valley Hospital showed a decrease in the years following the initial increase after PVH's closure. In all, the elimination of same day surgeries performed at PVH did not significantly affect the numbers performed at the other hospitals in the county (see Appendix E).

The statewide trends appear to have illustrated an increase in surgeries at ambulatory surgery centers accounting for this overall decline at the operational hospitals. Despite the decline, HUMC still remains first in the county for generating the most patients in either of these areas.

Adequancy of financial resources and sources of present and future revenue:

HUMC North is a new corporation, and it does not have historical financial information. Projections included with the CN application forecast 4,400 and 7,402 inpatient admissions in 2013 and 2014 respectively. Based on these volume projections, HUMC North forecasts positive operating margins of 2.3% and 14.0% in 2013 and 2014, respectively. Although days cash on hand is projected to be only four days at the end of 2013, the applicant has stated that it will have access to working capital through a revolving credit and cash management agreement with an affiliate of LHP Hospital Group. Days cash on hand is projected to rise to 45 days in 2014.

Demographics:

With respect to the population growth, for this service area and the county, the New Jersey Department of Labor and Workforce Development projects continued steady population growth in Bergen County through 2028 as well as population growth in Passaic and Hudson counties. The population of Bergen County is expected to increase from 889,900 in 2008 to 895,300 in 2018 and 903,100 in 2028. Likewise, the senior population in Bergen County will increase from 132,900 in 2008 to 152,500 in 2018 and 183,000 in 2028. This means that the population cohort age 65 and over in Bergen County will increase by 37.7% between 2008 and 2028. According to New Jersey hospital resource utilization data, seniors are admitted to the hospital 3.7 times more frequently than younger age cohorts, and when admitted, they utilize far more hospital resources. Future demand for a new hospital would be generated as a result of the growth in the county wide population and population cohort age 65 and over. This projected demographic growth to the same degree more or less would also be experienced in the HUMC North area supporting the proposal for the additional 128 beds in the area (see Appendix F).

Department Staff Recommendations and Rationale:

Department staff has concluded that the applicant has adequately documented proposed compliance with the applicable CN rules at N.J.A.C. 8:33-1.1 et seq. and general statutory standards at N.J.S.A. 26:2H-1 et seq. as well as demonstrated need as set forth in the Certificate of Need Call for a Proposed New General Hospital to Serve Bergen County.

After carefully reviewing the available data from the B-2 reports, staff believes that the additional beds at HUMC North would not have a significant negative impact on the ability of the existing hospitals to continue providing their current service levels or financial stability. Staff recognizes that after the closure of PVH, most of the hospitals in Bergen County experienced a growth spurt in later months of 2007 and 2008, but B-2 data shows this growth to have leveled off. These patient gains were unsustainable moving into 2010 and the early part 2011. Moreover, staff realizes that the health care service landscape is constantly changing due to new technologies, physician practice and consumer preferences.

This does not mean that staff believes there will be no impact to other hospitals in the county. Clearly, some patients will, in fact, choose to use the new facility rather than any other hospital in the county. The application projects that the new hospital will attract about half of the patients from the 14 town core market area who formerly used the PVH. However, staff believes that the new hospital will at least partly serve as an overflow of HUMC's main campus where occupancy is high. In addition, the small size of the new hospital will be limiting factor on the number of patients that can be served. It is noted that Condition #4 below prohibits the addition of beds at the new hospital for three years after licensing which will provide all hospitals in the county with time to adjust to the new facility. Thus, staff believes that any negative impact on other hospitals will be limited.

It appears that the closure of PVH has had very little effect on HUMC since its utilization has generally remained stable. HUMC had the most beds in the three categories with higher occupancy, admissions, patient days and utilization of outpatient services. HUMC has increased its number of licensed beds to coincide with market conditions. HUMC has historically attracted more patients than the other hospitals and its forecasts show that this will continue. The projections made by HUMC show that its intention is to use HUMC North as a pressure relief valve for the overflow of patients at HUMC.

Department staff acknowledges HUMC presently has little or no room to expand on site. The addition of beds at its present location to lower its occupancy rate to an 83% target is not realistic. Reactivating the existing PVH site into functioning community hospital again would solve HUMC's high occupancy problem while bringing back services into Westwood and the surrounding communities. The creation of HUMC North would provide greater accessibility to hospital services for this area, especially in an emergency situation. Due to the lack of a primary road system, residents have complained of reduced access to inpatient and outpatient health care services. The additional traffic at the morning and evening rush hour further compounds the travel time for residents from the 14 towns surrounding PVH to reach any of the existing hospitals.

Department staff believes that the patient forecast for HUMC North is a realistic assessment of the geographic service area for this hospital. The major source of patients for HUMC North would be HUMC. It is only logical that HUMC could also draw 50% of its patients from the 14 towns surrounding the former PVH site since the residents have spearheaded this initiative for a new hospital. These patient numbers certainly are not so large that the existing hospitals would be adversely affected causing them financial hardship. HUMC–North's location within three miles of the Rockland County border would have at least the same appeal to these Rockland patients as PVH, if not more given HUMC's reputation. The 538 patients projected by the applicant, based on the number of Rockland County residents presently treated at HUMC, does not appear to be overstated. HUMC North will serve as an expansion of HUMC similar to that which could have been served by the hospital adding these beds at its main site if its property could support the addition of these beds.

HUMC already has control of the property on which PVH was located and is operating a Satellite Emergency Department (SED) and providing outpatient services. The projected cost for HUMC–North is $39,590,409, which includes renovation, design, and upgrading the facility to meet life safety codes. This cost is viewed as an economical approach when compared to other ongoing projects for bed additions throughout the state. The implementation of HUMC North is seen as a practical solution to serving a specific area of Bergen County that now has reduced access to health care services and has developed some service gaps in the care available.

Two indicators that Department staff examined to determine whether HUMC North would successfully be integrated into the area without disrupting other services are the utilization of the SED and the admissions from the SED to HUMC. Since the opening of the SED at the former PVH site in September 2008, the reporting data showed 23,135

residents from the core market towns have been treated at this facility. The applicant reported that the total volume of patients treated at the SED through August 2011 was 33,779. This number included patients within and outside of the core market area of the former PVH. The largest percentage of patients (42.4%) treated at SED is derived from Westwood, Old Tappan and River Vale. The towns making up the remaining 57.6% in descending order are Hillsdale (11.6%), Emerson (11.0%), Park Ridge (7.3%), Closter (5.9%), Northvale/Rockleigh (5.2%), Harrington Park (5.1%), Norwood (5.0%), Montvale (4.4%), Washington Township (1.5%), and Woodcliff Lake (0.5%).

With respect to the patients transferred from the SED to area hospitals for admission, between October 2008 and August 28, 2011, a total of 2,298 were transferred to a full service hospital. More than half of those patients (1,295) transferred were then admitted to the HUMC's main campus. The remaining numbers of patients were transferred to the other hospitals within and outside of Bergen County. Of the other receiving hospitals, the two hospitals with the most patient transfers after HUMC were Valley Hospital at 725 patients and Englewood at 281 patients. Department staff believes that if HUMC North were licensed as a relatively small community general acute care hospital at least 50% or more of the patients would still select HUMC as the data clearly indicates. Department staff believes that this market share would remain constant among these hospitals with little variation.

In essence, Department staff is recommending the approval of this CN on the basis that implementation of HUMC North would not adversely impact other hospitals in Bergen County nor detract from the health care delivery in Bergen County. Its implementation will strengthen health care resources and improve access in the PVH core area. The evidence is clear that after the closure of PVH, there was no long lasting significant increase in the number of patients treated at any of the remaining hospitals. The downsized HUMC North in comparison to the former PVH should not disrupt or place at risk any of the operating hospitals in Bergen County.

In addition, Department staff looked to Department of Labor and Workforce Development Population projections, which showed an increase over the next several years. Department staff reviewed the population projections and used them as a basis for the projection of future admissions and patient days at HUMC. Those projections indicate that HUMC's occupancy rates would rise beyond capacity without some adjustment. In order for HUMC to maintain a target 83% occupancy rate, it would need to increase the number of beds by an estimated 84 to 123 beds by 2020. Adding those beds at HUMC could be done without a CN if HUMC had the room to expand. Adding those beds at HUMC North, would relieve this volume strain and better serve the medical needs of the core area residents (see Appendix F).

It is noted that for convenience the above staff analysis used an 83% occupancy for all beds. Since OB, Adult ICU/CCU and intermediate bassinets are, in all hospitals, significantly fewer in number than medical/surgical beds, occupancy standards for these are lower than for medical/surgical. It is noted that in the maintained bed data described above, only HUMC has consistently had OB occupancies over 80% and only HUMC and Valley Hospital have ever had ICU/CCU occupancies over 80%.

The establishment of a low risk diagnostic cardiac catheterization laboratory is an expedited review CN service set forth at N.J.A.C. 8:33-5.1, which does not require State Health Planning Board (SHPB) review. Since the applicant incorporated the establishment of a low risk diagnostic cardiac catheterization laboratory within its full review CN for the establishment of an acute care hospital, the Department provides the SHPB with the applicant's completeness responses for the cardiac service under review. It is noted that all other hospitals in Bergen County except Bergen Regional have full catheterization labs. The minimum volume for a full service catheterization lab is 400 annually. In 2010, each of these four full service catheterization labs had volume over 400.

The Department finds that the applicant has satisfied the statutory criteria (which are the same for all CN applicants) for establishing a low risk diagnostic cardiac catheterization laboratory contained in the Health Care Facilities Planning Act (N.J.S.A. 26:2H-1.1 et seq.), the regulatory criteria for Low Risk Adult Diagnostic Cardiac Catheterization as set forth at N.J.A.C. 8:33E, including minimum facility (200 annually) and physician volumes, staffing, training, quality improvement and community access requirements, and the CN administrative process rules as set forth at N.J.A.C. 8:33. Department staff recommends approval of the establishment of a low risk diagnostic cardiac catheterization laboratory for HUMC North with conditions set forth below.

Staff Recommendations:

1. The staff believes that HUMC North is appropriately sized and will not significantly impact the other regional providers because it will allow HUMC to shift some of its volume from its main campus to the HUMC North in Westwood. In addition, the applicant's projections contained in the application are not unreasonable.

2. Staff agrees that the applicant will promote clinical integration between HUMC and HUMC North thereby enhancing quality of care at both facilities.

3. HUMC's current efforts in operating a satellite emergency department (SED) at HUMC North and the seamless transition for MICU services that were implemented to preserve emergency health services in the area should serve as a model for the same kind of seamless transition that will occur when implementing inpatient services.

4. Hackensack University Medical Center's occupancy rate for its maintained beds has remained consistently over 85 percent. The closures of the combined Passaic Beth Israel hospitals in the City of Passaic, Barnert in Paterson, and PVH in Westwood have exacerbated this problem. HUMC North will help to relieve the strain of excess volume and can be accomplished in a very economical way. There is no other economical substitute to accommodate the needs of the population residing in the far northeastern corner of Bergen County.

5. The approval of HUMC North would provide better community access and more manageable county wide occupancy rates. The opening of HUMC North will help to address the critical physician shortage in New Jersey.

6. The proposed project serves in meeting the health related needs of members of medically underserved communities and the medically indigent. (N.J.A.C. 8:33-4.9(a), 4.9(a)1, 4.10(a)1, 4.10(a)2 and 4.10(a)4.)

7. Failure to establish HUMC North would place the residents of the Pascack Valley and Northern Valley at greater risk when health care emergencies arise and immediate care is essential.

8. Department of Labor and Workforce Development Population projections, reviewed by Department staff and used as a basis for projection of future admissions and patient days at HUMC, indicate that in order for HUMC to maintain a target 83% occupancy rate, an estimated 84 to 123 beds would be needed to be added by 2020. Adding those beds at HUMC could be done without a CN if HUMC had the room to expand. Adding those beds at HUMC North would relieve this volume strain and better serve the medical needs of the core area residents and at a relatively low cost.

Conditions:

Based on this documentation of compliance with regulatory and statutory criteria, Department staff recommends approving HUMC North as a new general hospital in Bergen County with following conditions:

1. The applicant shall file a licensing application with the Department's Certificate of Need and Healthcare Facility Licensure Program (CNHCFL) to execute the licensure of the new hospital.

2. HUMC North shall comply with N.J.A.C. 8:43G-5.21(a), which requires, "[a]ll hospitals . . . provide on a regular and continuing basis, out-patient and preventive services, including clinical services for medically indigent patients, for those services provided on an in-patient basis."

3. In accordance with N.J.S.A. 26:2H-18.64 and N.J.A.C. 8:43G-5.2(c), HUMC North shall not only comply with federal EMTALA requirements but also provide care for all patients who present themselves at HUMC North without regard to its ability to pay or payment source and with no upper limit on the amount of charity care to be provided.

4. HUMC North shall not add additional beds to its approved CN bed inventory of 128 on a permanent basis until at least three years after licensure.

5. Within 30 days of the issuance of the hospital's new license, HUMC North shall provide the Department with an organizational chart of the hospital and each service that shows lines of authority, responsibility, and communication and an explanation of any changes from the chart presented in the application.

6. HUMC North shall hold an annual public Board meeting pursuant to N.J.S.A. 26:2H-12.50 and develop mechanisms for the meeting that address the following:

   a. An opportunity for members of the local community to present their concerns regarding local health care needs and hospital operations and how HUMC North should address these and

   b. A method for HUMC North to publicly respond to the concerns expressed by community members at the annual public board meeting.

   HUMC North shall develop these mechanisms within 90 days of this approval and share them with the Department's CNHCFL Program.

7. An outreach plan shall be placed into effect to ensure that all residents of the hospital service area, especially the medically indigent, have access to the available services at the location. A self-evaluation of this effort shall be conducted on a yearly basis beginning the first full year after licensure and for six years thereafter to measure its effectiveness including any payments accounted for activities, including but not limited to, outreach, community programs, and health professional education and shall be submitted to the Department every year for review and comment and presented to the public at the hospital's annual public Board meeting.

8. HUMC North shall for five years annually submit a written report to measure its progress on establishing and maintaining a residency program supporting up to 30 residency positions, which includes 18 family practice residents along with four residents in each of the three specialties (emergency medicine, obstetrics/gynecology, and general surgery) to address New Jersey's physician shortage in these areas. The first report shall be due one year from the initialing licensing date.

9. Within 30 days of the date of approval, the applicant shall contact the Office of Health Care Quality Assessment at (609) 341-5558 to ensure accurate and timely reporting of low risk diagnostic cardiac catheterization data.

10. Prior to the commencement of low risk diagnostic cardiac catheterization services at HUMC North, the applicant shall file a licensing amendment application and obtain licensure approval from the Office of Certificate of Need and Healthcare Facility Licensure.

11. Prior to licensure of low risk diagnostic cardiac catheterization services at HUMC North, the applicant shall provide a signed and dated transfer agreement with Hackensack University Medical Center.

12. HUMC North shall report annually and/or as required by a specific condition to the Department's CNHCFL Program.

13. All the above conditions shall also apply to any successor organization to HUMC North which acquires HUMC North within five years from the date of the CN approval.

APPENDIX A

Drive Time from proposed HUMC North to Area Hospitals Located in Bergen County within 12 Driving Miles of Proposed HUMC North

250 Old Hook Road
Westwood, NJ 07675

Hospitals within 12 miles of PVH	Distance as per MapQuest (miles)	MapQuest drive time estimate (minutes)	Estimated drive time 8:00AM (minutes)	Estimated drive time noon (minutes)	Estimated drive time after 5:00PM (minutes)	Estimated drive time after 7:00PM (minutes)
Bergen Regional Medical Center - 10201 230 East Ridgewood Avenue Paramus, NJ 07652	4.73	11	15	11	17	11
Valley Hospital - 10211 223 N Van Dien Avenue Ridgewood, NJ 07450	5.73	15	18	15	21	15
Englewood Hospital and Medical Center - 10202 350 Engle St Englewood, NJ 07631	8.45	20	30	21	32	21
Holy Name Hospital - 10205 718 Teaneck Road Teaneck, NJ 07666	9.23	22	28	21	30	21
Hackensack University Medical Center (HUMC) - 10204 30 Prospect Ave Hackensack, NJ 07601	9.51	22	27	21	29	21

Source: MapQuest, Application

Hospitals within 12 miles of HUMC North	Distance from HUMC North (miles)	8:00 AM Drive (minutes)	Noon Drive (minutes)	5:00 PM Drive (minutes)
Bergen Regional	5	15	15	25
Valley	6.1	18	17	20
Englewood	8.8	27	30	30
Holy Name	12.4	33	25	26
HUMC	12.4	27	25	46

Source: Department Survey Staff, 2009

Appendix B
Licensed Beds

2006					
		Med/Surg	**OB/GYN**	**ICU/CCU**	**Combined**
Pascack Valley Hospital	Beds	215	18	18	251
	OccRt	37.35%	54.63%	63.11%	40.44%
	ADC	80.31	9.83	11.36	101.50
Bergen Regional	Beds	164	0	9	173
	OccRt	34.43%	0.00%	28.55%	34.12%
	ADC	56.47	0.00	2.60	59.04
Valley Hospital	Beds	331	38	48	417
	OccRt	86.85%	63.77%	74.07%	83.28%
	ADC	287.48	24.23	35.55	347.27
Englewood	Beds	397	30	42	469
	OccRt	40.27%	57.49%	39.97%	41.34%
	ADC	159.86	17.25	16.79	193.90
Holy Name Hospital	Beds	278	25	19	322
	OccRt	63.89%	43.25%	71.97%	62.76%
	ADC	177.61	10.81	13.67	202.10
Hackensack University MC	Beds	496	50	54	600
	OccRt	93.05%	104.97%	78.17%	92.70%
	ADC	461.51	52.48	42.21	556.21

2007					
		Med/Surg	**OB/GYN**	**ICU/CCU**	**Combined**
Pascack Valley Hospital	Beds	215	18	18	251
	OccRt	17.87%	22.68%	63.11%	19.01%
	ADC	38.42	4.08	11.36	47.72
Bergen Regional	Beds	164	0	9	173
	OccRt	37.71%	0.00%	40.91%	37.88%
	ADC	61.85	0.00	3.68	65.53
Valley Hospital	Beds	331	38	48	417
	OccRt	88.54%	65.21%	71.44%	84.44%
	ADC	293.06	24.78	34.29	352.13
Englewood	Beds	397	30	42	469
	OccRt	41.47%	55.05%	42.68%	42.45%
	ADC	164.65	16.52	17.93	199.09
Holy Name Hospital	Beds	278	25	19	322
	OccRt	59.13%	43.05%	72.63%	58.68%
	ADC	164.39	10.76	13.80	188.96
Hackensack University MC	Beds	526	58	59	643
	OccRt	89.83%	99.47%	67.78%	88.68%
	ADC	472.52	57.69	39.99	570.20

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Licensed Beds

2008					
		Med/Surg	OB/GYN	ICU/CCU	Combined
Pascack Valley Hospital	Beds	0	0	0	0
	OccRt	0.00%	0.00%	0.00%	0.00%
	ADC	0.00	0.00	0.00	0.00
Bergen Regional	Beds	164	0	9	173
	OccRt	39.55%	0.00%	51.76%	40.19%
	ADC	64.87	0.00	4.66	69.52
Valley Hospital	Beds	331	38	48	417
	OccRt	97.24%	64.33%	80.20%	92.28%
	ADC	321.88	24.45	38.50	384.82
Englewood	Beds	397	30	42	469
	OccRt	44.82%	54.84%	40.33%	45.06%
	ADC	177.92	16.45	16.94	211.31
Holy Name Hospital	Beds	278	25	19	322
	OccRt	65.99%	47.06%	76.92%	65.17%
	ADC	183.46	11.77	14.62	209.84
Hackensack University MC	Beds	555	65	63	683
	OccRt	83.38%	90.61%	46.07%	80.62%
	ADC	462.74	58.90	29.03	550.67

2009					
		Med/Surg	OB/GYN	ICU/CCU	Combined
Pascack Valley Hospital	Beds	0	0	0	0
	OccRt	0.00%	0.00%	0.00%	0.00%
	ADC	0.00	0.00	0.00	0.00
Bergen Regional	Beds	164	0	9	173
	OccRt	39.71%	0.00%	55.59%	40.53%
	ADC	65.12	0.00	5.00	70.12
Valley Hospital	Beds	331	38	48	417
	OccRt	93.74%	78.63%	80.09%	90.79%
	ADC	310.27	29.88	38.44	378.59
Englewood	Beds	397	30	42	469
	OccRt	42.20%	55.83%	42.43%	43.09%
	ADC	167.54	16.75	17.82	202.11
Holy Name Hospital	Beds	278	25	19	322
	OccRt	66.17%	49.01%	65.28%	64.79%
	ADC	183.95	12.25	12.40	208.61
Hackensack University MC	Beds	555	65	63	683
	OccRt	79.86%	86.34%	65.98%	79.19%
	ADC	443.2	56.12	41.56	540.88

Beginning in 2009, Valley Hospital did not include Same Day Caths and Endoscopies in its B-2 reports. Those numbers have been added back to give a proper comparison of admissions and patient days with those of the other hospitals.

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Licensed Beds

2010					
		Med/Surg	OB/GYN	ICU/CCU	Combined
Pascack Valley Hospital	Beds	0	0	0	0
	OccRt	0.00%	0.00%	0.00%	0.00%
	ADC	0.00	0.00	0.00	0.00
Bergen Regional	Beds	164	0	9	173
	OccRt	40.54%	0.00%	54.43%	41.27%
	ADC	66.49	0.00	4.90	71.39
Valley Hospital	Beds	331	38	48	417
	OccRt	93.69%	76.33%	78.77%	90.39%
	ADC	310.11	29.01	37.81	376.93
Englewood	Beds	397	30	42	469
	OccRt	42.25%	49.63%	41.08%	42.62%
	ADC	167.73	14.89	17.25	199.87
Holy Name Hospital	Beds	278	25	19	322
	OccRt	64.07%	46.22%	69.98%	63.03%
	ADC	178.10	11.56	13.30	202.95
Hackensack University MC	Beds	555	65	63	683
	OccRt	81.17%	91.86%	59.80%	80.22%
	ADC	450.52	59.71	37.67	547.90

2011 - 1st Quarter					
		Med/Surg	OB/GYN	ICU/CCU	Combined
Pascack Valley Hospital	Beds	0	0	0	0
	OccRt	0.00%	0.00%	0.00%	0.00%
	ADC	0.00	0.00	0.00	0.00
Bergen Regional	Beds	164	0	9	173
	OccRt	44.48%	0.00%	53.09%	44.93%
	ADC	72.94	0.00	4.78	77.72
Valley Hospital	Beds	331	38	48	417
	OccRt	90.83%	72.92%	81.50%	88.13%
	ADC	300.66	27.71	39.12	367.49
Englewood	Beds	397	30	42	469
	OccRt	41.92%	51.67%	43.10%	42.65%
	ADC	166.41	15.50	18.10	200.01
Holy Name Hospital	Beds	278	25	19	322
	OccRt	66.15%	43.16%	71.64%	64.69%
	ADC	183.89	10.79	13.61	208.29
Hackensack University MC	Beds	555	65	63	683
	OccRt	97.57%	91.33%	40.00%	91.66%
	ADC	541.49	59.37	25.20	626.06

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2011 – 2nd Quarter					
		Med/Surg	**OB/GYN**	**ICU/CCU**	**Combined**
Pascack Valley Hospital	Beds	0	0	0	0
	OccRt	0.00%	0.00%	0.00%	0.00%
	ADC	0.00	0.00	0.00	0.00
Bergen Regional	Beds	164	0	9	173
	OccRt	39.51%	0.00%	47.13%	39.91%
	ADC	64.80	0.00	4.24	69.04
Valley Hospital	Beds	331	38	48	417
	OccRt	90.79%	74.70%	75.27%	87.54%
	ADC	300.52	28.39	36.13	365.03
Englewood	Beds	397	30	42	469
	OccRt	42.59%	56.70%	37.99%	43.08%
	ADC	169.09	17.01	15.96	202.05
Holy Name Hospital	Beds	278	25	19	322
	OccRt	64.59%	45.10%	67.15%	63.23%
	ADC	179.57	11.28	12.76	203.60
Hackensack University MC	Beds	555	65	63	683
	OccRt	90.51%	92.76%	36.40%	85.73%
	ADC	502.32	60.30	22.93	585.55

Annualized 2010-Last 2 Quarters – 2011 – 1st 2 Quarters					
		Med/Surg	**OB/GYN**	**ICU/CCU**	**Combined**
Pascack Valley Hospital	Beds	0	0	0	0
	OccRt	0.00%	0.00%	0.00%	0.00%
	ADC	0.00	0.00	0.00	0.00
Bergen Regional	Beds	164	0	9	173
	OccRt	41.60%	0.00%	51.51%	42.12%
	ADC	68.23	0.00	4.64	72.86
Valley Hospital	Beds	331	38	48	417
	OccRt	92.66%	74.79%	76.11%	89.13%
	ADC	306.72	28.42	36.53	371.68
Englewood	Beds	397	30	42	469
	OccRt	41.74%	51.91%	38.71%	42.12%
	ADC	165.70	15.57	16.26	197.53
Holy Name Hospital	Beds	278	25	19	322
	OccRt	63.57%	44.67%	69.68%	62.46%
	ADC	176.72	11.17	13.24	201.12
Hackensack University MC	Beds	555	65	63	683
	OccRt	87.05%	92.94%	45.35%	83.76%
	ADC	483.13	60.41	28.57	572.10

Source: DHSS Health Care Financing Systems Summary of Inpatient Utilization (B-2)

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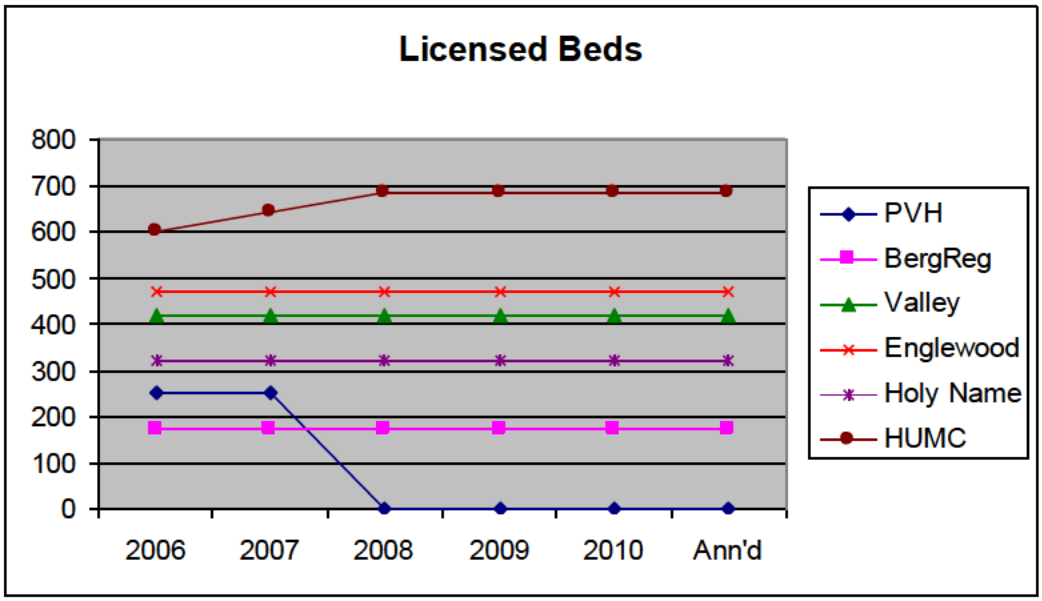
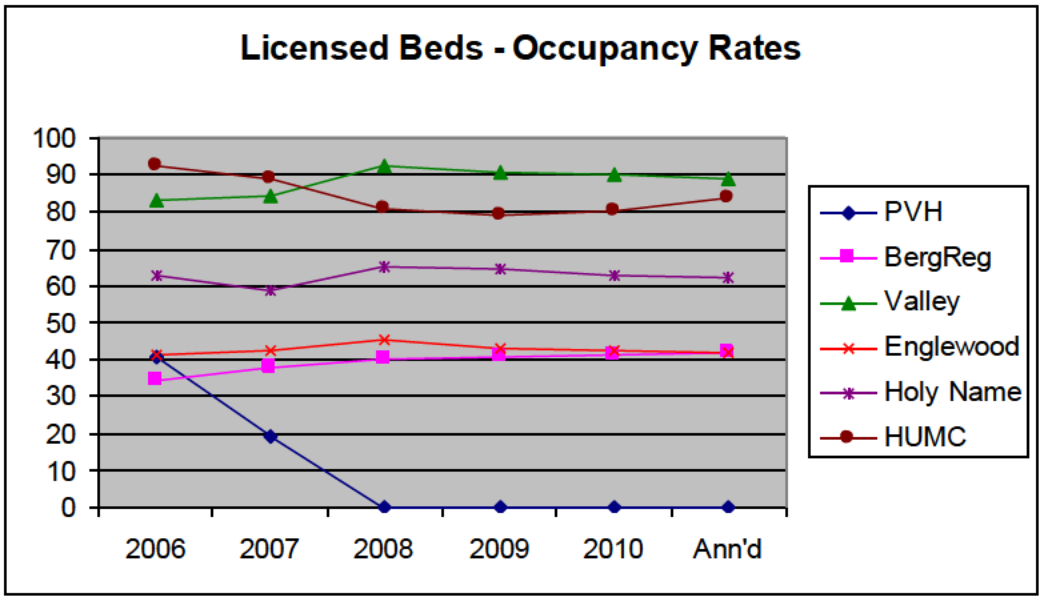
Licensed Beds





Appendix C
Maintained Beds

2006					
		Med/Surg	OB/GYN	ICU/CCU	Combined
Pascack Valley Hospital	Beds	103	18	18	139
	OccRt	37.35%	54.63%	63.11%	40.44%
	ADC	80.31	9.83	11.36	101.50
Bergen Regional	Beds	99	0	9	108
	OccRt	57.04%	0.00%	28.55%	54.66%
	ADC	56.46	0.00	2.60	59.04
Valley Hospital	Beds	312	38	48	398
	OccRt	94.14%	63.77%	74.07%	87.25%
	ADC	287.48	24.23	35.55	347.27
Englewood	Beds	193	30	25	248
	OccRt	82.83%	57.49%	67.16%	78.18%
	ADC	159.86	17.25	16.79	193.90
Holy Name Hospital	Beds	220	29	19	268
	OccRt	80.73%	37.29%	71.97%	75.41%
	ADC	177.61	10.81	13.67	202.10
Hackensack University MC	Beds	457	61	48	566
	OccRt	100.99%	86.04%	87.94%	98.27%
	ADC	461.51	52.48	42.21	556.21

2007					
		Med/Surg	OB/GYN	ICU/CCU	Combined
Pascack Valley Hospital	Beds	51*	9*	9*	69*
	OccRt	75.34%*	45.36%*	57.93%*	69.16%*
	ADC	38.42	4.08	11.36	47.72
Bergen Regional	Beds	91	0	9	100
	OccRt	67.96%	0.00%	40.91%	65.53%
	ADC	61.85	0.00	3.68	65.53
Valley Hospital	Beds	314	37	48	399
	OccRt	93.33%	66.97%	71.44%	88.25%
	ADC	293.06	24.78	34.29	352.13
Englewood	Beds	196	30	26	252
	OccRt	84.00%	55.05%	68.95%	79.00%
	ADC	164.65	16.52	17.93	199.09
Holy Name Hospital	Beds	220	29	19	268
	OccRt	74.72%	37.11%	72.63%	70.51%
	ADC	164.39	10.76	13.80	188.96
Hackensack University MC	Beds	457	65	48	570
	OccRt	103.40%	88.75%	83.31%	100.04%
	ADC	472.52	57.69	39.99	570.20

*PVH reported for only the first two quarters of 2007. The B-2 calculated the average for those two quarters to reach an annual number.

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Maintained Beds

2008					
		Med/Surg	OB/GYN	ICU/CCU	Combined
Pascack Valley Hospital	Beds	0	0	0	0
	OccRt	0.00%	0.00%	0.00%	0.00%
	ADC	0.00	0.00	0.00	0.00
Bergen Regional	Beds	96	0	9	105
	OccRt	67.57%	0.00%	51.76%	66.21%
	ADC	64.87	0.00	4.66	69.52
Valley Hospital	Beds	327	37	48	412
	OccRt	98.43%	66.07%	80.20%	93.40%
	ADC	321.88	24.45	38.40	384.82
Englewood	Beds	225	30	24	279
	OccRt	79.08%	54.84%	70.57%	75.74%
	ADC	177.92	16.45	16.94	211.31
Holy Name Hospital	Beds	220	29	19	268
	OccRt	83.39%	40.57%	76.92%	78.30%
	ADC	183.46	11.77	14.62	209.84
Hackensack University MC	Beds	463	65	48	576
	OccRt	99.94%	90.61%	60.47%	95.60%
	ADC	482.74	58.90	29.03	550.67

2009					
		Med/Surg	OB/GYN	ICU/CCU	Combined
Pascack Valley Hospital	Beds	0	0	0	0
	OccRt	0.00%	0.00%	0.00%	0.00%
	ADC	0.00	0.00	0.00	0.00
Bergen Regional	Beds	96	0	9	105
	OccRt	67.83%	0.00%	55.59%	66.78%
	ADC	65.12	0.00	5.01	70.12
Valley Hospital	Beds	331	38	48	417
	OccRt	93.74%	78.63%	80.09%	90.79%
	ADC	310.27	29.88	38.44	378.59
Englewood	Beds	219	30	25	274
	OccRt	76.50%	55.83%	71.29%	73.76%
	ADC	167.54	16.75	17.82	202.11
Holy Name Hospital	Beds	220	29	19	268
	OccRt	83.62%	42.25%	65.28%	77.84%
	ADC	183.95	12.25	12.40	208.61
Hackensack University MC	Beds	474	65	48	587
	OccRt	93.50%	86.34%	86.59%	92.14%
	ADC	443.2	56.12	41.56	540.88

Beginning in 2009, Valley Hospital did not include Same Day Caths and Endoscopies in its B-2 reports. Those numbers have been added back to give a proper comparison of admissions and patient days with those of the other hospitals.

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Maintained Beds

2010					
		Med/Surg	**OB/GYN**	**ICU/CCU**	**Combined**
Pascack Valley Hospital	Beds	0	0	0	0
	OccRt	0.00%	0.00%	0.00%	0.00%
	ADC	0.00	0.00	0.00	0.00
Bergen Regional	Beds	96	0	9	105
	OccRt	69.26%	0.00%	54.43%	67.99%
	ADC	66.49	0.00	4.90	71.39
Valley Hospital	Beds	331	38	48	417
	OccRt	93.69%	76.33%	78.77%	90.39%
	ADC	310.11	29.00	37.81	376.93
Englewood	Beds	220	30	23	273
	OccRt	76.24%	49.63%	75.01%	73.21%
	ADC	167.73	14.89	17.25	199.87
Holy Name Hospital	Beds	220	29	19	268
	OccRt	80.96%	39.85%	69.98%	75.73%
	ADC	178.10	11.56	13.30	202.95
Hackensack University MC	Beds	489	65	48	602
	OccRt	92.13%	91.86%	78.49%	91.01%
	ADC	450.52	59.71	37.67	547.90

2011 - 1st Quarter					
		Med/Surg	**OB/GYN**	**ICU/CCU**	**Combined**
Pascack Valley Hospital	Beds	0	0	0	0
	OccRt	0.00%	0.00%	0.00%	0.00%
	ADC	0.00	0.00	0.00	0.00
Bergen Regional	Beds	96	0	9	105
	OccRt	75.98%	0.00%	53.09%	74.02%
	ADC	72.94	0.00	4.78	77.72
Valley Hospital	Beds	331	38	48	417
	OccRt	90.83%	72.92%	81.50%	88.13%
	ADC	300.66	27.71	39.12	367.49
Englewood	Beds	230	30	27	287
	OccRt	72.35%	51.67%	67.04%	69.69%
	ADC	166.41	15.50	18.10	200.01
Holy Name Hospital	Beds	220	29	19	268
	OccRt	83.59%	37.20%	71.64%	77.72%
	ADC	183.89	10.79	13.61	208.29
Hackensack University MC	Beds	448	77	48	573
	OccRt	120.87%	77.10%	52.50%	109.26%
	ADC	541.49	59.37	25.20	626.06

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Maintained Beds

2011 – 2nd Quarter					
		Med/Surg	**OB/GYN**	**ICU/CCU**	**Combined**
Pascack Valley Hospital	Beds	0	0	0	0
	OccRt	0.00%	0.00%	0.00%	0.00%
	ADC	0.00	0.00	0.00	0.00
Bergen Regional	Beds	96	0	9	105
	OccRt	67.50%	0.00%	47.13%	65.76%
	ADC	64.80	0.00	4.24	69.04
Valley Hospital	Beds	331	38	48	417
	OccRt	90.79%	74.70%	75.27%	87.54%
	ADC	300.52	28.39	36.13	365.03
Englewood	Beds	227	30	26	283
	OccRt	74.49%	56.70%	61.37%	71.40%
	ADC	169.09	17.01	15.96	202.05
Holy Name Hospital	Beds	220	29	19	268
	OccRt	81.62%	38.88%	67.15%	75.97%
	ADC	179.57	11.28	12.76	203.60
Hackensack University MC	Beds	446	77	48	571
	OccRt	112.63%	78.31%	47.78%	102.55%
	ADC	502.32	60.30	22.93	585.55

Annualized 2010-Last 2 Quarters – 2011 – 1st 2 Quarters					
		Med/Surg	**OB/GYN**	**ICU/CCU**	**Combined**
Pascack Valley Hospital	Beds	0	0	0	0
	OccRt	0.00%	0.00%	0.00%	0.00%
	ADC	0.00	0.00	0.00	0.00
Bergen Regional	Beds	96	0	9	105
	OccRt	71.07%	0.00%	51.51%	69.39%
	ADC	68.23	0.00	4.64	72.86
Valley Hospital	Beds	331	38	48	417
	OccRt	92.66%	74.79%	76.11%	89.13%
	ADC	306.72	28.42	36.53	371.68
Englewood	Beds	224	30	23	277
	OccRt	73.89%	51.91%	69.94%	71.18%
	ADC	165.70	15.57	16.26	197.59
Holy Name Hospital	Beds	220	29	19	268
	OccRt	80.33%	38.51%	69.68%	75.04%
	ADC	176.72	11.17	13.24	201.12
Hackensack University MC	Beds	471	71	48	590
	OccRt	87.05%	85.08%	59.52%	97.05%
	ADC	483.13	60.41	28.57	572.10

Source: DHSS Health Care Financing Systems Summary of Inpatient Utilization (B-2)

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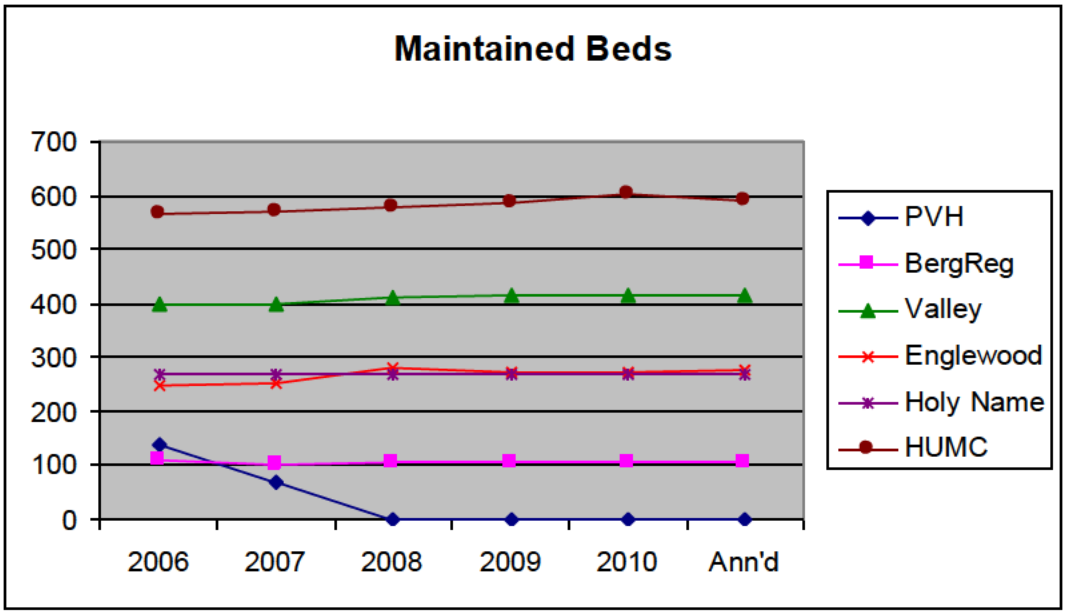
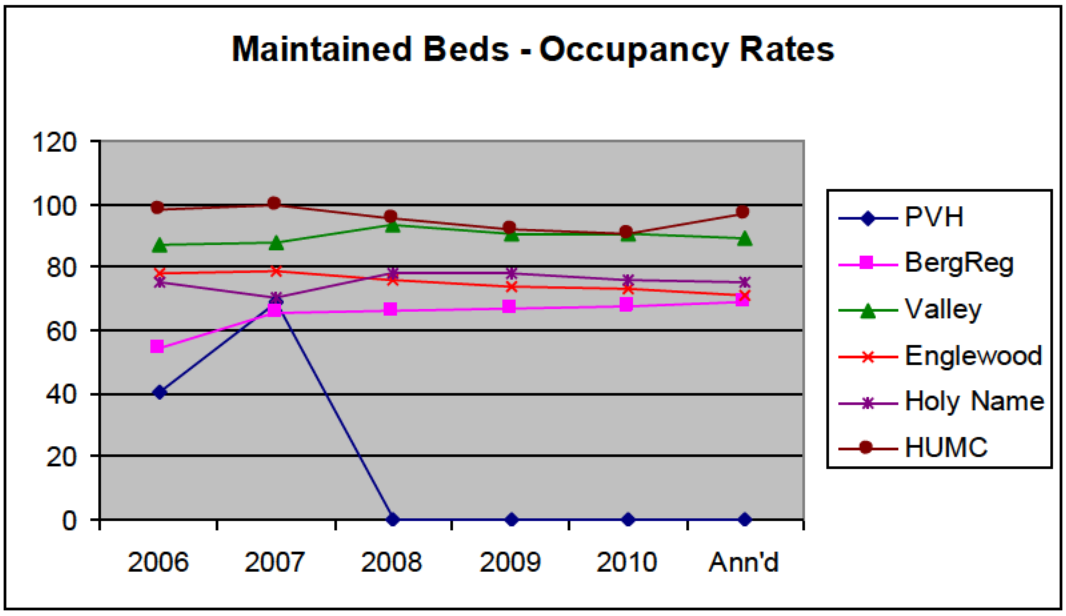
Maintained Beds





Appendix D

Admissions from 2006 – 2010 and 1st Two Quarters 2011 B-2 Data Representing Admissions to the Six Area Hospitals for those Service Categories HUMC North will provide

2006

	Med/Surg	OB/GYN	ICU/CCU	Combined
Pascack Valley	5,778	1,393	624	7,795
Valley	32,430	3,143	1,655	37,228
Englewood	12,671	2,188	118	14,977
HUMC	47,030	5,146	73	52,249
Holy Name	14,093	1,514	647	16,254
Bergen Regional	5,508	0	221	5,729
Total	117,716	13,240	2,867	133,823

2007

	Med/Surg	OB/GYN	ICU/CCU	Combined
Pascack Valley	3,035	567	130	3,732
Valley	32,780	3,262	1,711	37,753
Englewood	13,062	2,147	132	15,341
HUMC	44,863	6,026	78	50,967
Holy Name	14,117	1,463	655	16,235
Bergen Regional	5,851	0	311	6,162
Total	113,708	13,465	3,017	130,190

2008

	Med/Surg	OB/GYN	ICU/CCU	Combined
Pascack Valley	0	0	0	0
Valley	35,976	3,599	1,963	41,538
Englewood	14,554	2,189	112	16,855
HUMC	44,240	6,451	86	50,777
Holy Name	15,426	1,547	673	17,646
Bergen Regional	6,105	0	408	6,513
Total	116,301	13,786	3,242	133,329

Beginning in 2009, Valley Hospital did not include Same Day Caths and Endoscopies in its B-2 reports. Those numbers have been added back to give a proper comparison of admissions and patient days with those of the other hospitals.

Admissions

Beginning in 2009, Valley Hospital did not include Same Day Caths and Endoscopies in its B-2 reports. Those numbers have been added back to give a proper comparison of admissions and patient days with those of the other hospitals.

2009

	Med/Surg	OB/GYN	ICU/CCU	Combined
Pascack Valley	0	0	0	0
Valley	36,094	3,391	2,153	41,638
Englewood	13,828	2,201	135	16,164
HUMC	42,923	6,209	46	49,178
Holy Name	16,152	1,581	682	18,415
Bergen Regional	6,026	0	413	6,439
Total	115,023	13,382	3,429	131,834

2010

	Med/Surg	OB/GYN	ICU/CCU	Combined
Pascack Valley	0	0	0	0
Valley	35,756	3,202	2,282	41,240
Englewood	13,901	1,966	63	15.930
HUMC	40,435	6,519	69	47,023
Holy Name	16,403	1,545	669	18,617
Bergen Regional	6,049	0	464	6,513
Total	112,544	13,232	3,547	129,323

2011 – 1st Quarter

	Med/Surg	OB/GYN	ICU/CCU	Combined
Pascack Valley	0	0	0	0
Valley	9,008	780	588	10,376
Englewood	3,349	501	15	3,865
HUMC	11,050	1,599	14	12,663
Holy Name	4,308	363	160	4,831
Bergen Regional	1,520	0	109	1,629
Total	29,235	3,243	886	33,364

2011 – 2nd Quarter

	Med/Surg	OB/GYN	ICU/CCU	Combined
Pascack Valley	0	0	0	0
Valley	8,837	842	584	10,263
Englewood	3,349	501	15	3,865
HUMC	11,050	1,599	14	12,663
Holy Name	4,308	363	160	4,831
Bergen Regional	1,520	0	109	1,629
Total	30,871	3,436	900	35,207

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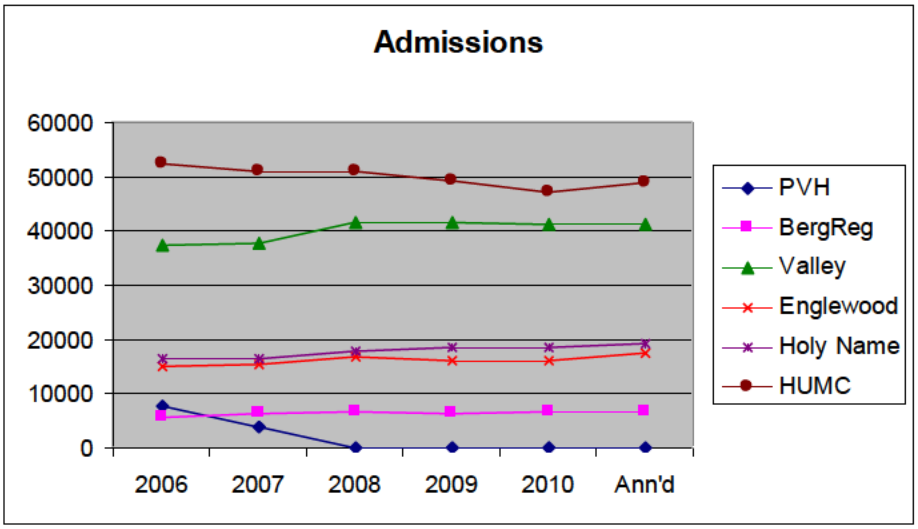
Admissions
Annualized (3rd, 4th Quarters 2010, 1st, 2nd Quarters 2011)

	Med/Surg	OB/GYN	ICU/CCU	Combined
Pascack Valley	0	0	0	0
Valley	35,585	3,259	2,327	41,171
Englewood	15,415	2,015	62	17,492
HUMC	42,215	6,627	76	48,918
Holy Name	16,831	1,504	681	19,016
Bergen Regional	6,109	0	462	6, 571
Total	116,155	13,405	3,608	133,168

Source: DHSS Health Care Financing Systems Summary of Inpatient Utilization (B-2)



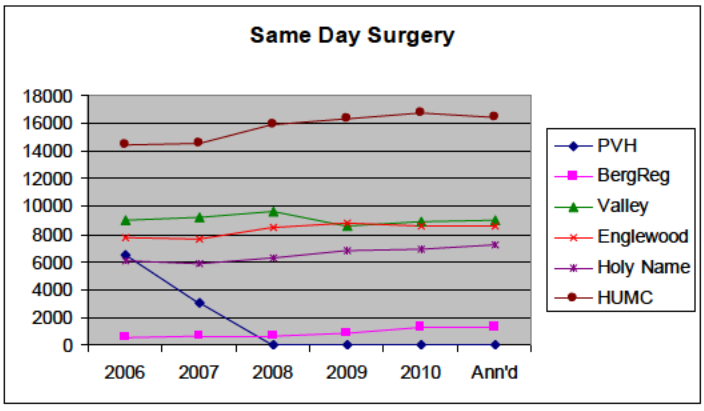
Appendix E
Same Day and Outpatient Surgery

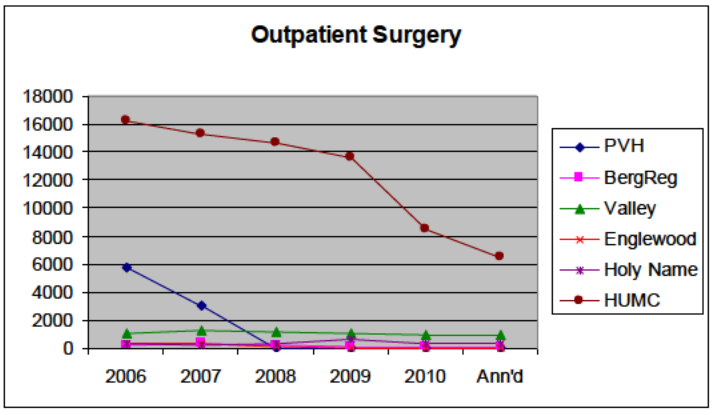
SameDay Surgery

Hospital	2006	2007	2008	2009	2010	2011Q1	2011Q2	Ann'd
PVH	6464	3049	0	0	0	0	0	0
Bergen Regional	549	628	619	880	1213	291	289	1228
Valley	8963	9174	9580	8546	8853	2264	2310	9052
Englewood	7713	7645	8521	8800	8562	2091	2186	8559
Holy Name	6090	5854	6254	6781	6865	1808	1937	7241
HUMC	14390	14540	15897	16360	16704	4157	4188	16421
All	44169	40890	40871	41367	42197	10611	10910	42501

Outpatient Surgery

Hospital	2006	2007	2008	2009	2010	2011Q1	2011Q2	Ann'd
PVH	5731	3023	0	0	0	0	0	0
Bergen Regional	206	273	245	130	117	24	34	102
Valley	1020	1247	1183	998	981	229	230	917
Englewood	344	267	53	51	44	13	9	44
Holy Name	358	253	318	632	357	89	94	352
HUMC	16223	15301	14623	13590	8452	1623	1478	6497
All	23882	20364	16422	15401	9951	1978	1845	7912





Appendix F
Population Projections

Projections based on ratio of Patient Days at HUMC to Total Population of Bergen County; Ratio of Patient Days to Population Projections taken for 2008-2010 and averaged; this average multiplied by Population Projections for 2011-2020 to reach Patient Day Projections for those years.

	Patient Days for Combined Med/Surg, OB, ICU/CCU beds	Maintained Beds	Occupancy Rate	Population projections	Beds needed to be added to bring 83% occupancy rate target
2008	201544	576	95.60%	889,900	87
2009	197423	587	92.14%	890,360	65
2010	199982	602	91.01%	890,820	58
2011 projected	199856	580 *	94.41%	891,280	80
2012 projected	199959	580 *	94.45%	891,740	80
2013 projected	200063	580 *	94.50%	892,200	80
2014 projected	200202	580 *	94.57%	892,820	81
2015 projected	200341	580 *	94.63%	893,440	81
2016 projected	200480	580 *	94.70%	894,060	82
2017 projected	200619	580 *	94.77%	894,680	82
2018 projected	200758	580 *	94.83%	895,300	83
2019 projected	200883	580 *	94.89%	895,860	83
2020 projected	201009	580 *	94.95%	896,420	84

Projections based on ratio of Patient Days calculated by most recent LOS (4.32) multiplied by Admissions projected on basis of ratio of Admissions to Bergen County Total Population Projections for 2008-2010; average of that ratio multiplied by Population Projections for 2011-2020

	Patient Days for Combined Med/Surg, OB, ICU/CCU beds	Admissions	Maintained Beds	Occupancy Rate	Population projections	Beds needed to be added to bring 83% occupancy rate target
2008	201,544	50777	576	95.60%	889,900	87
2009	197,423	49178	587	92.14%	890,360	65
2010	199,982	47023	602	91.01%	890,820	58
2011 projected	211,870	49044	580 *	100.08%	891,280	119
2012 projected	211,979	49069	580 *	100.13%	891,740	120
2013 projected	212,089	49095	580 *	100.18%	892,200	120
2014 projected	212,236	49129	580 *	100.25%	892,820	121
2015 projected	212,383	49163	580 *	100.32%	893,440	121
2016 projected	212,531	49197	580 *	100.39%	894,060	122
2017 projected	212,678	49231	580 *	100.46%	894,680	122
2018 projected	212,826	49265	580 *	100.53%	895,300	123
2019 projected	212,959	49296	580 *	100.59%	895,860	123
2020 projected	213,092	49327	580 *	100.66%	896,420	123

* Average of maintained beds for reported years 2006-2010 was used.