



**Economic Analysis
Of Highmark's Affiliation with WPAHS and Implementation of an
Integrated Healthcare Delivery System**

Submission to Pennsylvania Insurance Department

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DRAFT

Preliminary and Subject to Revision

As of April 8, 2013

PRELIMINARY--SUBJECT TO PUBLIC REVIEW

The draft report has been prepared and is being filed to assist the Pennsylvania Insurance Department (PID) in its ongoing consideration of UPE's Form A Application dated November 7, 2011, as amended. This report will not be complete until the public has had appropriate opportunity to review. I reserve the right as may be required in my judgment to amend and supplement this report based upon additional or new information that may be provided during the public comment period or thereafter or in response to comments by the Applicant, the public, or PID officials.

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I. INTRODUCTION

A. THE HIGHMARK AND WPAHS AFFILIATION AGREEMENT

UPE's November 2011 Form A filing to the Pennsylvania Insurance Department ("PID") requests the PID to approve a change in control of Highmark Inc. ("Highmark") whereby UPE would become Highmark's sole corporate member (hereafter the "Transaction"). As part of this Transaction, UPE will implement an integrated delivery network ("IDN"), a principal component of which is the proposed affiliation of Highmark with West Penn Allegheny Hospital System ("WPAHS"), combined with additional affiliations with Jefferson Regional Medical Center ("JRMC") and Saint Vincent Health System/Saint Vincent Health Center ("SVHS/SVHC"). The WPAHS Affiliation agreement (hereafter the "Agreement" or the "Affiliation") is a "vertical" combination and combines two participants in the healthcare industry that largely operate at two different levels of the healthcare industry. Highmark provides healthcare insurance products to individuals and employers, via networks of physicians, outpatient, and inpatient facilities with whom Highmark contracts for the delivery of healthcare services for its enrollees. WPAHS is a large health system with several general acute care hospitals and outpatient facilities providing a wide variety of inpatient and outpatient services; WPAHS also employs physicians. WPAHS contracts with Highmark (as well as other insurers) and negotiates reimbursements with them to provide inpatient and other healthcare services to their enrollees. An additional large proportion of patients served by WPAHS facilities are beneficiaries of government programs such as Medicare and Medicaid.

While the proposed Agreement between Highmark and WPAHS is a largely *vertical* combination with Highmark operating primarily as a provider of healthcare insurance and related services, and WPAHS functioning primarily as a provider of healthcare services, there are also *horizontal* aspects due to prior and more recently announced affiliations between Highmark and various healthcare service providers. Prior to the Agreement, Highmark operated at the provider level through its acquisition and employment of approximately [REDACTED] physicians in the Premier and Lake Erie Medical, and Arthritis Rheumatic Disease Associates.¹ Subsequent to the original

¹ I note that not all of the [REDACTED] physicians Highmark employs reside in the Pittsburgh area. "Highmark/WPAHS Affiliation Update for the Pennsylvania Insurance Department, January 9, 2013."

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filing of the Agreement in November 2011, Highmark announced on June 12, 2012 that it was pursuing an affiliation with Jefferson Regional Medical Center ("JRMC"), and Highmark and St. Vincent's Health System ("SVHS") announced a proposed affiliation in October 2012.² These latter two affiliations implicate additional vertical integration by Highmark into hospital services and represent potential horizontal overlap with WPAHS for hospital services. Furthermore, Highmark has announced that it intends to expand its existing employed physician network, potentially through further affiliation or new employment arrangements.³

The proposed Affiliation between Highmark and WPAHS is a significant part of a far broader organizational and structural change set out as the proposed transaction (hereafter cited as "Transaction") in Form A, Amendment No. 1 to the Form A, and in Amendment No. 2 to the Form A, before the Insurance Department of the Commonwealth of Pennsylvania ("PID").⁴

B. ASSIGNMENT AND SCOPE OF REVIEW

My name is Margaret Guerin-Calvert. I am Senior Consultant of Compass Lexecon, a consulting firm that specializes in antitrust economics and applied microeconomics, and a founding director of its predecessor, Compass (Competition Policy Associates).⁵ I am an industrial organization

² According to the press release announcing the investment and affiliation, "Jefferson Regional Medical Center will be an important part of Highmark's integrated delivery system in its southern service region." (<http://www.jeffersonregional.com/press-releases/jefferson-regional-announces-plans-strategic-partnership-highmark>). Amendment 2 to Form A at 11-14 provides additional information, including the monetary investments planned for JRMC. Response to Supplemental Request 2.1.1.1(A) from the Pennsylvania Insurance Department provides additional details of this transaction. On October 16, 2012, St. Vincent Health System announced that it would seek an affiliation with Highmark. Although not geographically proximate to the Pittsburgh area, the affiliation would add a hospital to Highmark's planned IDN. In the press release announcing the deal, Highmark's president and CEO William Winkenwerder said that "Saint Vincent will be an important part of Highmark's integrated delivery network in Erie and across northwest Pennsylvania." Amendment 2 to Form A at 14-16 provides additional information, including the dollar amount investment planned for SVHS.

³ Amendment 1 to Form A provides details. Additional expansion is identified in Response to Supplemental Request 4.6.15.1 from the Pennsylvania Insurance Department ("Highmark is in various stages of discussions regarding employment (with or without asset acquisitions) with over [REDACTED] primary care and specialist physicians primarily in Allegheny County and Erie, Pennsylvania. These discussions range from introductory meetings, to negotiating terms sheets, to finalizing definitive agreements.") Also, see Response to Supplemental Request 4.6.15.1 from the Pennsylvania Insurance Department, which lists [REDACTED] physician practices that JRMC is in discussions to acquire ([REDACTED]).

⁴ Most current details of the transaction are available in Amendment 2 to Form A.

⁵ As of October 1, 2012, I am also President of the Center for Healthcare Economics and Policy, a

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economist, which is the branch of economics that involves the study of firms, industries, consumer behavior, and pricing. I have worked as an economist in public and private sectors on issues related to competition and competition policy involving a variety of industries since 1979, including as an Assistant Chief in the Economic Regulatory Section, Antitrust Division of the Department of Justice, as an Economist at the Federal Reserve Board, and as an Adjunct Lecturer at the Duke University Institute of Policy Sciences. My credentials and experience, which encompass almost three decades of work in antitrust and regulatory policy, including qualification as an expert economist in the U.S., Canada, and New Zealand, and almost 20 years in healthcare antitrust and policy, are set out in my CV attached as Tab A in Appendix I.

Compass Lexecon staff and I have been retained by the PID through its counsel, Blank Rome LLP, to conduct an independent review of the competitive effects and public benefits of the proposed Affiliation between Highmark and WPAHS, and where appropriate and relevant, of the broader Transaction. We collaborated some of our analyses with The Blackstone Group LP, which is assessing among other issues the financial aspects of the Affiliation and the Transaction.

I have been advised that standards set forth in 40 P.S. § 991.1402, (the “Act” or “Section 991.1402”) are relevant to the PID’s determination with regard to this transaction.

Specifically, the PID asked me to provide economic analyses of the competitive effects and benefits to the public interest of the insurance buying public of the Transaction for use in the PID’s determination under Section 1402.⁶ As part of my assessment, the PID asked me to address three overarching topic areas in my examination of the competitive effects and public benefits of the Affiliation:

- *The evaluation of the competitive effects of the Affiliation involving the vertical relationship of Highmark as a purchaser of WPAHS’s healthcare services.* Vertical transactions, in this instance between an insurer and a hospital system, can yield important pro-competitive benefits and

separate business unit in the Economics Practice of FTI Consulting. The Center applies cutting-edge economics and quantitative methods in developing and implementing market-based solutions and empirically-based actionable metrics across the spectrum of healthcare activity.

⁶ As part of this evaluation, I have been asked to consider factors such as market shares, volatility of ranking of market leaders, number of competitors, concentration, trend of concentration in the industry and ease of entry and exit into the market.

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efficiencies, but may also have horizontal implications for competition at the insurer or the provider level. For example, the Agreement may affect how Highmark competes in the healthcare insurance marketplace and how WPAHS competes in the hospital marketplace. Broadly put, the relevant economic assessment involves evaluating the incentives and effects of a combined Highmark and WPAHS on competition and consumers of healthcare services.

- *The assessment of the market conditions and effects should the Affiliation not proceed, and the impact on insurer and healthcare competitive dynamics in Western Pennsylvania (hereafter “WPA”).*
- *The examination of whether the Affiliation raises other competitive and public benefits issues that may not be captured in the assessment of the transaction as a vertical combination, for example, whether the affiliation would likely result in higher costs for healthcare, and ultimately, for healthcare insurance in WPA.*

The PID asked me to assist in its review by providing economic analyses, and where necessary, opinions on conditions proposed by interested parties, or that the PID may consider as a basis for approval of the Form A Application (hereafter the “Application”). While my evaluation in this Report primarily focuses on the Affiliation between Highmark and WPAHS, I also take into consideration the other aspects of the Transaction in reaching my opinions with regard to competitive effects and public benefits of the Transaction.

In conducting my review and economic assessment, my supporting team of economists and analysts and I made use of the types of data and information routinely considered by economists in the evaluation of the competitive effects and benefits of transactions, generally and in the healthcare sector. These include data, documents, and information provided to the PID by the Applicant and third parties (i.e., providers, insurers, consumers, and employers). I obtained additional background information from interviews of market participants and from testimony or submissions filed in April 2012 hearings and subsequent comments filed with the PID. I reviewed expert reports and analyses provided by Highmark’s economic experts and consultants, and their supporting materials.⁷ In addition, my independent analyses of the competitive effects

⁷ Throughout my review and analysis, I make use of a series of reports issued by Highmark’s expert economist, Dr. Barry C. Harris of Economists Incorporated. These reports are: Amended April Report of Barry C. Harris, Economists Incorporated, October 15 2012 at UPE-0015631-0015791 (hereafter cited as Harris Amended Report); Harris Supplement 1 to Report of Barry C. Harris, Economists Incorporated, May 31, 2012 (hereafter cited as Harris Supplement 1); Harris Supplement 2 to Report of Barry C. Harris, Economists Incorporated, May 31, 2012 (hereafter cited as Harris Supplement 2); Amended Supplement

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and benefits made use of relevant analyses and information from the Blackstone Group, public source data and information, academic and healthcare research, and relevant public policy statements or matters involving vertical integration and vertical transactions, generally and in the healthcare sector. A comprehensive list of the materials and information relied upon and interviews conducted are included in Appendix I, Tab B.

This preliminary report starts with an Executive Summary in Section II that summarizes my methodology, analyses, and conclusions to date, and then in subsequent sections provides the supporting analyses, including empirical analyses and other evidence.

3 to Amended April Report of Barry C. Harris, Economist Incorporated, October 15 2012 at UPE-0015792-0015810 (hereafter cited as Harris Amended Supplement 3); Amended Supplement 4 to Amended April Report of Barry C. Harris, Economist Incorporated, October 15 2012 at UPE-0015811-0015838 (hereafter cited as Harris Amended Supplement 4); Amended Supplement 5 to Amended April Report of Barry C. Harris, Economist Incorporated, October 15 2012 at UPE-0015839-0015855 (hereafter cited as Harris Amended Supplement 5); and Supplement 6 to Amended April Report of Barry C. Harris, Economist Incorporated, October 15 2012 at UPE-0015856-0015904 (herein cited as Harris Supplement 6).

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II. SUMMARY OF PRELIMINARY CONCLUSIONS AND RECOMMENDATIONS

This report provides my economic analysis and assessment of competitive effects and public benefits to assist the PID in its consideration and evaluation of Highmark's change in control and its affiliation with WPAHS and the establishment of an Integrated Delivery Network ("IDN") with WPAHS as the core in WPA.⁸ My economic analyses made use of data and information routinely considered by economists in the evaluation of the competitive effects and benefits of transactions, generally and in the healthcare sector.⁹ My analyses included evaluation of relevant markets and market conditions including assessment of factors such as market shares, volatility of shares, entry and expansion, and public interest benefits. I also conducted extensive analyses of the proposed IDN.

I present here a summary of my analyses, findings and opinions:

First, applying sound economic principles to information in the record, independent analyses, and relevant literature, it is my opinion that Highmark's affiliation with WPAHS (and the Transaction) does not raise direct horizontal competitive concerns in markets for healthcare insurance, hospital services, or physician services in WPA. In specific, there is no overlap in insurance, and limited competitive overlap in hospital and physician services created by the Transaction.

- Hospital level: *I conclude that the Affiliation does not result in a material change in concentration or share at the hospital level in defined product and geographic markets and does not raise direct horizontal competitive effects concerns with respect to hospital competition in WPA.*¹⁰ Highmark's economic expert, Dr. Harris, reached the same conclusion based on the assumption that Highmark does not currently compete at the hospital level.¹¹ This conclusion, however, does not materially change after taking into consideration the JRMC and the Saint Vincent's Health System affiliations with Highmark. These hospitals represent a small share of total discharges in WPA, and their

⁸ Throughout this Report, I use the terms Integrated Delivery Network ("IDN") and Integrated Delivery System ("IDS") interchangeably.

⁹ See Section I for a complete description of the data, information, materials, and expertise used in the development of this Report, and cited materials in this and subsequent sections.

¹⁰ For purposes of analyses, I evaluated competition in same 29-county area of Western Pennsylvania ("WPA") used by Dr. Harris and made use of the same area (the 90% service area of WPAHS) for use in evaluating the location of hospitals to include as suppliers in defining the relevant market. Dr. Harris and my analyses used the cluster of general acute care inpatient services as the relevant product market. My analyses and conclusions do not materially change if the region used is somewhat broader or narrower, or for sensitivity analyses using alternative characterizations of the product market.

¹¹ Harris Amended Report, Harris Amended Supplement 1, and Harris Amended Supplement 2.

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combination with WPAHS does not materially change the competitive horizontal implications of the WPAHS Affiliation at the hospital level.¹²

- Physician level: *I conclude that the relatively limited overlap currently between the employed physician networks of Highmark and WPAHS means the Affiliation does not raise substantial direct horizontal competitive concerns.*¹³ The Affiliation would not cause a material change in any specialty based on employed physicians. Dr. Harris reached a similar conclusion. In each specialty in which there is an overlap, some number of non-Highmark/WPAHS affiliated competing physicians exists, including many physicians employed by UPMC.
- Insurer level: *I conclude that the proposed Affiliation does not raise direct horizontal competitive concerns because WPAHS does not currently offer insurance products in competition with Highmark.* Dr. Harris reached the same conclusion about the lack of competitive overlap at the insurer level.

Second, based on my economic analysis of the health insurer and provider (hospital, physician) markets, I reached the following assessments and findings with regard to the relevant factors and market conditions, starting with insurance:

Market share:¹⁴ Highmark's share of relevant markets ranges from approximately 55-75%, depending on the specific insurance type. Defining the market as all commercial insurance products in the 29-county WPA, Dr. Harris estimates, and I concur, that Highmark's share is approximately 60%. Rival commercial insurers' shares estimated in the same geography are generally low (often less than 5%) with the larger ones, UPMC, HealthAmerica and Aetna, having shares of less than 10% each.

Volatility of shares over time: Highmark's share in an all commercial insurance product market has been relatively stable at about 60% over the last 5 years for the period ending 2011; this appears to be substantially unchanged based on data in 2012. Among rival commercial insurers,

¹² I note that Amendment 2 to Form A at 13 indicates that there may be some expansion or re-allocation of tertiary or quaternary services to JRMC, and that Highmark envisions some form of territory or geographic region to be served primarily by JRMC. I am aware that Highmark potentially has other acquisitions or affiliations with hospitals in various stages of planning. I have not assessed the competitive consequences of those possible transactions.

¹³ I base my conclusions using information on the current listing of employed physicians at Highmark, and evaluated competitive effects using plausible product and geographic markets, consistent with accepted practice and similar to those used by Dr. Harris.

¹⁴ A detailed assessment of markets, data and information sources, and findings with regard to share are in Sections III and IV below.

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only UPMC has grown substantially over the period, as reflected in the PID and win-loss data and documentary evidence.

Concentration: Using a market definition of all commercial insurance in the 29-county WPA, the HHI measure of concentration exceeds 3,700 based on Highmark's share alone and is highly concentrated.¹⁵ Moreover, the concentration level has been in the "highly concentrated" range during at least the past five years because Highmark's share of commercial healthcare insurance in WPA has hovered around 60%.

Ease of entry and expansion: Information on entry and expansion, such as win-loss data, offering of new products, and actual expansion, augments market share and concentration statistics and trends, and can reveal whether current shares understate the competitive significance of an insurer, including insurers' ability to offer competitively priced products, and whether market conditions support robust insurer competition post-transaction that can discipline pricing.¹⁶

- The evidence does not support a history of proven capability of existing competitors other than UPMC to attract large magnitudes or proportion of enrollees away from Highmark. While there is some recent growth of rivals at Highmark's expense, I am not able to conclude that Highmark losses over the last five years are primarily from national insurers; rather, I find some basis using win-loss and other data to conclude that the historical losses have primarily come from UPMC.
- Highmark is differentiated from other rivals in its size, scope of offerings, and long history of contracting with both UPMC and WPAHS as well as other hospitals as in-network offerings; UPMC Health Plan is differentiated because of vertical integration into hospital and physicians, and as one of two major plans that have until recently been the major insurers with UPMC as in-network hospitals.
- Insurer competitors have recently been able to offer broader in-network offerings with the more recent inclusion of UPMC hospitals as in-network hospitals, which previously these rivals had not been able to secure, thereby improving the attractiveness of their products

¹⁵ The HHI exceeds 3,700 because the sum of Highmark's squared share (61%) equals 3,721, and I have not added in the sum of the shares of the other commercial insurers operating in WPA. The abbreviation "HHI" refers to the Herfindahl-Hirschman Index, a commonly used measure of market concentration. The HHI is calculated by squaring the market share of each firm and summing the squared numbers. An HHI exceeding 2,500 reflects a "highly concentrated" market (See DOJ/FTC 2010 Horizontal Merger Guidelines at §5 (Market Participants, Market Shares, and Market Concentration)).

¹⁶ Dr. Harris and I agree that entry and expansion represent important market conditions in the competitive effects analysis. Dr. Harris identifies a number of common principles and attributes of health insurance competition. See Harris Amended Report at footnote 36 and ¶¶ 30-31.

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relative to the earlier period. The impact of these broader network offerings with UPMC has not yet been reflected as material changes in rivals' shares or in win-loss data.¹⁷

Market conditions: Several relevant factors substantially distinguish competitive conditions in the WPA marketplace in the insurance and hospital sectors and materially affect the competitive effects and public benefits analyses:¹⁸

- UPMC is the predominant hospital system with over 45% share of inpatient discharges, and is vertically integrated into insurance and with physicians. Financial difficulties have weakened WPAHS as a competitor, affecting its investments in facilities and resources, and its perceived quality of service. Insurers, including Highmark and other commenters view a stronger WPAHS as the primary future constraint on UPMC and competitiveness of contracting and performance in WPA.¹⁹
- Contracting between Highmark and UPMC and between UPMC and rival insurers has substantially affected the insurance product offerings in the WPA area – including the inclusion of UPMC in rival insurer networks, the duration and pricing of contracts, and the ability of insurers to offer consumer choice and other member cost-sharing initiative products, such as narrower or tiered products, in WPA. Unlike changes underway now in many markets in the U.S., there appears to be no deployment of tiered products. Rival insurers other than UPMC Health Plan tend now to compete against Highmark and UPMC with open networks. Expansion of these rivals appears dependent on ability to price these open network products competitively and to develop new designs or competitive pricing approaches to attract consumers and employers seeking lower cost plans.

¹⁷ I recognize that the marketplace may be in a state of transition, after a long period in which Highmark had a long-term contract with UPMC that provided it substantially better terms than those provided to other insurers. I have been informed by Highmark that it has experienced a [REDACTED] decline in share recently as rivals have become more competitive with UPMC as an in-network option, but I have been unable to verify that with win-loss data, documents or information, or from other sources. I note that the major source of premiums written and member data that I have is state-level data.

¹⁸ My analysis leads me to characterize the healthcare market in WPA as consisting of a predominant healthcare insurer, Highmark, which competes against a competitive fringe set of national and regional healthcare insurers, and a vertically integrated UPMC healthcare insurance provider; a predominant healthcare provider, UPMC that competes against a diverse set of community hospitals and a highly fragile WPAHS, which has a number of hospitals, including a major tertiary/quaternary facility at Allegheny General.

¹⁹ See, e.g., “Statement of the Department of Justice’s Antitrust Division on Its Decision to Close Its Investigation of Highmark’s Affiliation Agreement with West Penn Allegheny Health System,” U.S. Department of Justice, Antitrust Division, Press Release, April 10, 2012. I evaluated whether the community hospitals other than WPAHS have provided, or are likely to provide for Highmark or for other insurers a sufficiently complete and robust competitive alternative to UPMC to serve as an important competitive constraint. I conducted interviews with market participants and evaluated data and information in my assessment. While in the aggregate these hospitals have a substantial volume of beds and services across the WPA, these interviews and analyses lead me to the assessment that only WPAHS has the core capabilities of full scope of services including tertiary and quaternary that would enable competitive insurance products to be developed around hospitals to the exclusion of UPMC hospitals.

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- UPMC has demonstrated the ability to execute contracts with provisions that limit or inhibit the ability of commercial insurers, including Highmark, to develop competitive insurance products using narrower or tiered networks that exclude UPMC or that offer tiered products that include UPMC. Highmark is the only insurer that has been able to extract a concession that permits it to offer a narrow network product (Community Blue).²⁰ Even so, the contracts limit the concession only to Community Blue and does not apply to any of Highmark's other products, which account for substantially all of Highmark's enrollees.
- Highmark has been able to negotiate substantially different terms with UPMC and with other providers than its rivals implying that Highmark's current size, reputation, and/or other qualities are important competitive dimensions in contracting and that other insurers are weaker on these dimensions. For example, it has been able to negotiate substantially better reimbursement rates with UPMC and enter into substantially longer-term contracts than its rivals; and is the only insurer to include UPMC in an open network and offer a narrow network simultaneously.
- These conditions have resulted in rival insurers acting to date as more of a competitive fringe, now poised to be more competitive with Highmark with UPMC in-network, but apparently constrained from offering networks that would compete directly against Highmark's Community Blue narrow network.
- There is substantial excess inpatient bed capacity in WPA. With or without the Affiliation, there will likely be substantial change and re-alignment of capacity, including downsizing, mergers, or closing of facilities. Increasing shifts toward outpatient care, improved population health management, and planned or recent expansion of local systems such as UPMC with new facilities exacerbate these trends.

Third, my independent evaluation of entry and expansion along with these WPA market conditions cause me to be significantly less sanguine than Dr. Harris about the robustness of competition at the insurer level and the ability of competing insurers to provide needed competitive discipline were there to be a concern about Highmark's ability to exercise market power post-transaction. Moreover, the competitiveness of the insurance marketplace and the ability of competing insurers to expand significantly and to serve as a reliable competitive constraint are not separable from the competitiveness and conditions in the hospital marketplace, which is fragile due to the current health of WPAHS and the predominance of UPMC and its contracting practices. These factors collectively mean that I am not able to reject the conclusion that Highmark has market power in the insurance sector.

Fourth, I considered the impact on competition and public benefits from the vertical integration aspects of the proposed Affiliation – that is the integration by Highmark into healthcare delivery

²⁰ Such UPMC contract provisions are an existing market condition, which I must assume do not change for purposes of my analysis.

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and a change in ownership of an otherwise independent hospital system, WPAHS and its employed physicians (along with JRMC and SVMC). Vertical transactions have the potential for substantial pro-competitive and public interest benefits as well as competitive risks, both of which arise from combining otherwise independent firms into a single entity that internalizes the profits from each level of the industry in its operations, where there may be competition with rivals at one or both levels of the industry.²¹ The Affiliation has the potential for Highmark and WPAHS to change the terms of contracting with rivals and the opportunity through common ownership to obtain and make use of competitively sensitive information from rivals to the potential detriment of competition and consumers. Both WPAHS and Highmark currently engage in highly confidential and competitively sensitive contract negotiations involving price and non-price terms (e.g., reimbursement rates) and product design and characteristics with insurer and hospital rivals, respectively. The outcomes of those negotiations and contracts affect the profitability of WPAHS, Highmark, and rivals, and among other factors, determine price and output effects on healthcare consumers. The ability of rival insurers in WPA, especially those other than UPMC, to develop and obtain the benefits of innovative products and pricing in the form of increased enrollment and reduced costs, depends on their ability to contract and negotiate with WPAHS (and others) without risk of disclosure to their major rival, Highmark. Competitive risks therefore depend on whether Highmark can deter innovation or limit gains to innovation by obtaining and acting on rivals' competitively sensitive information or impose contractual terms on WPAHS and other hospitals that limit anti-competitively the terms and conditions on which they can negotiate with rival insurers. This is especially important given current market conditions and factors external to this Transaction that appear to limit the options available to rivals, and because the ability of rival insurers to provide effective competitive discipline is an important constraint for keeping Highmark's incentives and actions aligned with the public interest. Dr. Harris does not address the competitive effects of disclosing competitively sensitive information.

²¹ Highmark's rivals purchase healthcare services from WPAHS and from physicians, including those employed by WPAHS. WPAHS is an important input into the formation of healthcare networks located in WPA, as reflected in the fact that all but one (UPMC health plan) of Highmark's rivals currently include WPAHS in their networks. Similarly, WPAHS's rivals currently contract with Highmark, which accounts for a substantial share of revenues for most of these rivals.

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Dr. Harris concludes that WPAHS reimbursement incentives remain unchanged after the transaction, i.e., that UPE would not have the financial incentive to seek increased rates from rivals at WPAHS (estimating that the overall entity would risk net losses) and that rivals readily could shift sufficient and large volumes of patients to UPMC to make any price increases unprofitable. I conducted extensive assessment of Dr. Harris's profitability and incentive analysis, and find that it is sensitive to key assumptions; and that under a range of plausible assumptions estimated price increases yield net gains to the combined entity.²²

Fifth, based on my independent review of supporting information provided, the economic and healthcare literature, and application of appropriate criteria to the Highmark IDN, I conclude that the IDN contemplated by Highmark, with WPAHS as its core, has the characteristics of a successful IDN, thereby making it more likely to achieve improved clinical and fiscal outcomes for some defined population in WPA.²³ (Highmark anticipates the IDN will lead to an overall cost savings of more than 10% by FY15.²⁴) The capital costs of implementing UPE's IDN and reinvigorating WPAHS as its core are significant and amount to at least approximately \$1 billion, and almost \$1.6 billion when the costs of fixing WPAHS's debt issue are also factored in.

I have determined that Highmark has put forth a reasonable economic basis to support the conclusion that the Affiliation will benefit its policyholders and is in the public interest, although there is significant uncertainty associated with achieving the projected results. Specifically, there is substantial uncertainty about (1) Highmark and its supporting consultants' economic projections of shifting large volumes of inpatients to WPAHS from existing providers and the many factors that must align for this to occur, (2) some of the economic assumptions underlying Highmark's projected IDN cost savings, and (3) significantly, the assumed termination of Highmark's managed care provider contract with UPMC as of December 31, 2014. I conclude

²² Section IV presents this analysis.

²³ I augmented the work done by Dr. Harris and conducted an independent review of the Highmark IDN using a more extensive literature review, data and information provided by Highmark in its Form A and its two amended Form A filings, its responses to specific information requests, and testimony and interviews with interested parties. I analyzed the economic impact of Highmark's acquisition of WPAHS on the delivery of healthcare in southwestern Pennsylvania.

²⁴ A family of four is projected to face a 10% higher (about \$3,000 for a family of four) health plan premium if the affiliation does not occur. "Supplemented Overview of Highmark's Strategic Vision," Addendum No. 5 to Amendment No. 2 to Confidential Supplement Submitted with Form A, Tab 2 at 4.

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that these three elements reveal significant economic risks that require consideration in evaluating the merits of this Affiliation, and the importance of any supplemental or contingency plans to achieve the expected results.²⁵

With regard to volume projections and cost savings, the success of Highmark's affiliation with WPAHS depends critically on the ability of the IDN to attract large numbers of inpatients away from UPMC to WPAHS.²⁶ I have reviewed the foundation and bases for the shifting of inpatient volume to WPAHS projected by Grant Thornton, with key inputs provided by Highmark. I find there is a great deal of uncertainty underlying many of the key assumptions supporting these projections and some appear to be unreasonable or lacking in credibility given market conditions. I point these out here because they materially affect the overall assessment:

- A critical factor in the IDN's success is the ability to develop incentive-based mechanisms that align physicians, hospitals, and the insurer to provide more efficient care locations for treating patients, and to guide patients to make better healthcare choices. Highmark has provided details of its Community Blue product (a limited network) that it markets as a lower cost plan to consumers.²⁷ In my view, Highmark's Community Blue and ACA products have characteristics necessary to appeal to consumers. Whether consumers will switch in large numbers to adopt these more attractively priced, but narrower-choice products remains to be seen, and therefore, remain a source of great uncertainty in Highmark achieving its IDN savings.
- Highmark and its consultant, Grant Thornton, do not incorporate any dynamic response by competing hospitals to the projected loss of volume likely at their respective hospitals from UPE's IDN/WPAHS strategy.²⁸ This materially affects the robustness and credibility of the WPAHS volume and financial projections. The projections also assume that any Highmark contract with UPMC would not include any prohibitions or limitations

²⁵ In particular, if WPAHS is unable to reach breakeven volumes of inpatient discharges by FY15, then alternative contingency strategies may be required to achieve sustainable financial viability for WPAHS.

²⁶ Highmark needs to (1) incentivize patients to select WPAHS and other aligned hospitals rather than UPMC for inpatient services by adopting Community Blue and by increasing transparency of cost information relevant for consumer decisions, and (2) incentivize physicians to use and refer patients to WPAHS and other aligned hospitals rather than UPMC. Without achieving these two goals, it is unlikely that Highmark can attract sufficient numbers of patients to WPAHS to make this Affiliation successful in terms of (1) stabilizing WPAHS financially, (2) lowering the cost of care to Highmark members, (3) lowering Highmark's risk exposure to possible WPAHS financial failure, and (4) providing improved competitive healthcare delivery to the WPA community.

²⁷ By narrower network, I mean that the provider network – e.g., the hospitals – includes fewer than the total set of hospitals in an area as in-network providers that consumers could obtain care at (for a presumably lower co-pay and/or deductible and/or premium than an all-inclusive network).

²⁸ I note that were the dynamic response to include improved services, access, quality, or reduced rate of increase in costs of care to attract patients, those responses – and further response by WPAHS and Highmark could potentially reduce costs relative to the no-Affiliation scenario.

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on consumer choice initiatives, such as anti-tiering and anti-steering provisions. This assumption is the driving force behind attaining incremental discharges as in the Without UPMC Affiliation scenario.

- If UPMC is out-of-network, Highmark assumes that 90% of utilization of UPMC by Highmark's remaining enrollees will shift to WPAHS or other hospitals in certain of its IDN initiatives, and on the whole, about █████ across all initiatives. Should Highmark fall short in achieving these projections, this would represent an overstatement of cost savings such as Highmark's oncology shift and utilization shift IDN savings from UPMC out-of-network.

Sixth, I have also reviewed the downside scenario that the PID requested of Highmark, which assumes WPAHS is able to attain only 50% of the incremental discharges projected by Grant Thornton. I consider this to be a plausible scenario given the dynamics of the marketplace and the likely response of competitors, and believe it merits full consideration in evaluating this Transaction. I have also evaluated Highmark's proposed contingency plan and was not able to discern sufficient detail at this point to assure that absent the projected volume shifts that Highmark would likely restore WPAHS to a competitively viable hospital system.

Seventh, I evaluated the impact on competition and the public interest from the "No-Affiliation Scenario" which is the likely further decline of WPAHS and further weakening of it as a competitive constraint to the UPMC system. While I believe that another purchaser would have the incentive to work with Highmark on favorable terms to attract volumes from UPMC, I find that Highmark makes a well-reasoned economic case as to why aligning the quality and efficiency of healthcare incentives through tight affiliation with WPAHS may better and more immediately ensure WPAHS's ability to achieve the inpatient volumes, financial changes, and cost reductions necessary for a more efficient healthcare delivery system. Any third-party acquirer of WPAHS would need to deal with WPAHS's debt issues, invest additional resources to improve operating performance and increase the attractiveness of the WPAHS hospitals, and at the same time, negotiate new reimbursement contracts with Highmark and other insurers. In addition, a new third-party owner would need to deal effectively with aggressive competition from UPMC as it fights to prevent inpatients switching to WPAHS. Another market condition for any potential alternative purchaser of WPAHS's assets is the highly intense, historically litigious environment between Highmark, UPMC, and WPAHS.

In summary, my assessment of and conclusions about the competitive risks of the Affiliation differ from those of Dr. Harris especially with regard to importance of WPA market conditions,

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the significance of competitive constraint posed by competing insurers, and the risks from common ownership and access to competitively sensitive information. These form a reasonable economic basis for concluding that there is a likelihood of significant anticompetitive effects from Highmark's affiliation with WPAHS. It is my conclusion, however, that the adoption of certain conditions, such as firewall protections, would mitigate the likelihood of anticompetitive effects. My conclusion with regard to the IDN and the public benefits from the Affiliation and the Transaction is that there is a reasonable economic basis for substantial benefits to the public in the form of improved delivery of care, reduced rate of increase in healthcare costs, and enhanced competition particularly in the hospital sector with an invigorated WPAHS. There is however, significant uncertainty surrounding the timing, magnitude, and likelihood of these benefits, and potential need for significant alternative approaches to assure a financially viable WPAHS and achievement of public benefits, including benefits to the insurance buying public and policyholders of Highmark. Finally, I conclude that a successful IDN and Affiliation would dominate the No-Affiliation Scenario.

I have also responded to the PID request to evaluate potential conditions including those proposed by commenters on the proposed Transaction. I undertook analyses to evaluate the conditions that would effectively address specific concerns, were the PID to conclude that such conditions were prerequisites for approval. In specific, the PID asked me to evaluate four categories of conditions:

- Effective firewalls on competitively sensitive information and independence/separation of key decision-makers at hospital(s) and insurer
- Prohibitions on Highmark's inclusion of certain contract provisions in any new contracts with hospitals or other providers and WPAHS with any insurer, including terms longer than reasonable and customary, consumer choice initiatives (e.g., anti-steering or anti-tiering), exclusivity, and Most Favored Nation ("MFNs") clauses.
- Monitoring and reporting requirements that provide transparency and accountability with regard to the success of the IDN, the specific cost savings achieved, or information for threshold levels for further plans.
- Development of alternative contingency strategies that may be required if WPAHS is unable to reach breakeven volumes of inpatient discharges by FY15.²⁹

Appropriate conditions would permit the substantive benefits from this Transaction to occur while limiting the risks of adverse competitive effects.

²⁹ I present my analyses of these conditions in Section VII.

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III. EVALUATION OF THE WESTERN PENNSYLVANIA HEALTHCARE MARKETPLACE—MARKET CONDITIONS AND COMPETITION

Overview: This report provides an assessment of the competitive effects and benefits of the proposed Affiliation on healthcare delivery and insurance competition and its impacts on consumers, particularly insurance policyholders. Competitive effects theories of vertical transactions consider many facets of competition, including (1) assessment of the firms involved, (2) market conditions at each relevant level of the industry, (3) measures of share or capacity that reveal information on the strength and competitive discipline of rivals, (4) dynamic market factors including ease, likelihood and impact of entry and expansion, and particularly, (5) the changes brought about by the transaction, especially those that might implicate changes in incentives, quality, cost, price or innovation. Central to these competitive effects analyses is whether significant market power is present at one or more levels of the industry prior to the transaction, or created or enhanced by it, and whether countervailing forces serve to protect consumers. The competitive effects analysis I employ in this Report follows standard economic principles, tests empirically plausible theories of competitive harm, and considers benefits from the transaction.

In this Section, I start the competitive effects analyses with a detailed assessment of the structure and competitive conditions. As I discuss below, this competitive effects and structural analysis uses a geographic area of 29 counties identified as WPA as a relevant geographic area.³⁰ I examine information on healthcare insurance firms, hospital service providers and physicians, and assess each in the context of relevant markets. In preparing this section, I reviewed each of the relevant reports provided by Highmark's economic expert, and augmented them with independent analyses of data and information collected from public sources, such as filings made with the PID on an annual basis by insurers, documents and materials submitted to the PID by Highmark, WPAHS, and other healthcare industry participants, patient discharge data, and capacity information. Section IV, which follows, makes use of this Section to test plausible competitive effects theories to the facts and analyses.

³⁰ Many of the market participants in the hospital and insurance sector, as well as employers, operate in geographies more extensive than WPA. For analytical convenience and for comparison of my analysis with those of Highmark's expert, Dr. Harris, I use a geographic area of Western Pennsylvania ("WPA"), which is defined as a 29-county area (see, e.g., Harris Amended Report at ¶ 10 and footnote 3). I note expressly in my analysis where I use a different area.

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A. ASSESSMENT OF COMMERCIAL HEALTH INSURERS OPERATING IN WPA

There are several ways to evaluate the size, scope, and competitiveness of commercial health insurers to inform a competitive effects analysis. A traditional approach in the context of health insurance mergers is to start by defining relevant markets (product and geographic) and estimating shares of market participants based on available metrics (such as enrollment or premiums written).³¹ This is the approach taken by Dr. Harris as set forth in the Harris Amended Report, which uses information from Highmark and estimated populations of commercial insured to estimate Highmark's share of commercially insured populations and to evaluate overlaps.³² Definition of relevant markets and derivation of structural measures, such as share and concentration, can provide some immediate insights into a transaction's possible competitive effect, for example, whether one or both of the merging parties are significant, or alternatively, small participants.

While a structural approach informs the competitive analysis, and in this case, provides specific measures of Highmark's share and rules out direct overlaps between Highmark and WPAHS, these are not sufficient to reach conclusions about factors relevant to the assessment of market power and competitive effects. For example, structural measures of Highmark (and competitors) shares may not be sufficiently revealing about the practical capacity of competitors to expand and discipline pricing in the future or their relative competitive strengths in this particular market, which are factors that I have been asked to consider. To provide the PID with comprehensive information and analyses from which to assess competitive conditions and the impact of the transaction on the insurance marketplace in WPA, I conducted a more detailed examination of each of the competing insurers, reviewed and assessed Dr. Harris's market

³¹ The standards relevant to assessment of competitive effects by the PID reference these factors as relevant information and evidence for the PID to consider as factors in making its determination with regard to competitive effects: market definition, shares, and concentration. See US Department of Justice and Federal Trade Commission, *Horizontal Merger Guidelines*, August 2010 at Section 4 and footnote 24 of the Harris Amended Report. For examples of how these principles have been applied, see United States of America and State of Michigan, Plaintiffs, v. Blue Cross and Blue Shield of Michigan, Defendants. Case No. 2:10-cv-14155-DPH –MKM; United States of America and State of Montana, Plaintiffs, v. Blue Cross and Blue Shield of Montana, Inc., et al., Defendants. Case No. 1:11-cv-00123-RFC; United States of America and State of Texas, Plaintiffs, v. United Regional Health Care System, Defendants. Case No. 7:11-cv-00030-O. This approach can be data intensive, and difficult to implement where there is insufficient data.

³² Harris Amended Report beginning at ¶ 19.

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definition, share, competitive conditions, and market power analyses, and conducted my own independent examination of the same. Specifically, I performed the following analyses:

- An overall assessment of insurers offering commercial health insurance in WPA using state data and public sources, including presentation and evaluation of information on the premiums written, members, shares, networks and product offerings;³³
- A review of Dr. Harris's relevant market definition, shares (e.g., for commercial insurance and Medicare Advantage), and my independent analysis of the same; and
- A dynamic analysis, including, for example, win-loss analysis and review of normal course business documents on rivals and the commercial health insurance marketplace.

1. ANALYSIS OF RELEVANT MARKET AND MARKET SHARES FOR COMMERCIAL INSURANCE

An evaluation of the existing competition between the affiliating parties informs an assessment of the competitive effects of a transaction, including the competitive alternatives to which purchasers of their goods and services can currently turn were the parties to attempt post-transaction to exercise market power, and additional constraints imposed by entry, expansion, or re-positioning of competitors. A well-established economic framework for evaluating competitive effects exists that applies in both horizontal and vertical mergers, and its principles are embodied, for example, in the 2010 Horizontal Merger Guidelines.³⁴ In a vertical transaction, such as here, this framework includes evaluation of market competition at two levels – insurance and healthcare delivery (provider) – and the implication of changes due to the transaction at one or both levels on pricing, quality or innovation for healthcare.

Commercial insurance: Dr. Harris's Amended Report presents his assessment of the structural implications of the transaction at the insurance level by defining relevant markets, developing share measures, and presenting opinions about the direct horizontal competitive effect of the transaction.³⁵ The Harris Amended Report defines a relevant product market for commercial insurance that includes all forms of commercial plans (HMO, PPO, POS, traditional) and uses a 29-county geographic area as a relevant geographic area for evaluation. After defining this

³³ I present this analysis in Appendix II.

³⁴ DOJ/FTC 2010 Horizontal Merger Guidelines at §4 (market definition) and § 6 (unilateral effects).

³⁵ Section III B. and III.C of this report presents market definition and structural analyses at the hospital and physician level, respectively, and Section IV presents my evaluation of his analysis of the vertical effects of the transaction.

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relevant market for commercial insurance, the Harris Amended Report computes Highmark's market share using Highmark's enrollment data for each year by county of the enrollee's residence, as the numerator in the share calculation.³⁶ The tables below are from the Harris Amended Report and summarize Dr. Harris's market size and share analyses. Dr. Harris concludes that Highmark's commercial enrollment as of December 2011 accounts for roughly 59.6% of the commercially insured population residing in the 29-county WPA, and that its share has remained relatively constant since 2007.³⁷ The Harris Amended Report summarized these shares in the following table.

Exhibit 2: Table 1
Highmark's Share of the Commercially Insured Population
2007-2011

Highmark's Share of Commercially Insured Population in its WPA Service Area					
	2007	2008	2009	2010	2011
Highmark Commercial Enrollment	1,413,220	1,394,270	1,386,357	1,347,655	1,387,951
Commercially Insured Population	2,369,390	2,382,485	2,332,835	2,329,243	2,327,459
Highmark Share	59.6%	58.5%	59.4%	57.9%	59.6%

Sources: Highmark Enrollment Data (2007-2011); Insured Estimates: Exhibit 2 Tables 2.1-2.31; Insured Estimates Source Notes: Exhibit 2 Table 3

I reviewed Dr. Harris's market definition methodology and his data analyses. He examines markets for commercial insurance, which I discuss here, as well as Medicare, Medicare Advantage, and Medicaid. I replicated Dr. Harris's analyses and confirmed the share estimates that he derives for commercial insurance (and shares for other definitions). Dr. Harris notes that he also considered narrower product markets for commercial insurance based on categories of

³⁶ The Harris Amended Report estimates the total commercially insured population per county by subtracting the number of uninsured lives and government insured lives from a total population estimate for each county in Highmark's WPA service area (this estimate is the denominator in the share calculation). These enrollment estimates include all health plan enrollees residing in Pennsylvania for Highmark and its wholly-owned subsidiaries under Highmark's Blue Cross/Blue Shield license in Pennsylvania, Blue Shield license in Pennsylvania, and Blue Cross/Blue Shield license in West Virginia. Additionally, the Highmark enrollment data include health plan enrollees from its joint operating agreements with NEPA and IBC, in which Highmark provides Highmark Blue Shield coverage. Harris Amended Report at ¶ 29 (footnote 37). The Harris Amended Report also analyzes shares of Medicare beneficiaries in WPA. Section 3 in Appendix II provides an independent analysis of plans offered by various insurers, and the total number of enrollees or other metrics for Medicare

³⁷ See Harris Amended Report at ¶ 29.

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customers (e.g., small group or large group), but that he did not have sufficient data to analyze shares and relative size for these candidate markets.³⁸

In evaluating Dr. Harris's methodology for market definition, I have determined that it generally follows a reasonable economic approach to both the scope of products to include and scope of geography. It is, for example, similar to the approach taken in the review of insurance transactions by the U.S. Department of Justice's Antitrust Division (DOJ) with regard to inclusion of commercial insurance products and scope of geographic areas. It is the case, however, that the DOJ in some matters (and others) has defined narrower product markets than those defined by Dr. Harris for both commercial and Medicare products.³⁹ I conclude that commercial insurance as defined by Dr. Harris is a plausible relevant product market in which to assess the Transaction, and that WPA is an appropriate geographic area that includes relevant

³⁸ As I discuss below, Highmark documents provide some share estimates based on surveys or other methodologies for these narrower candidate markets; I note that Dr. Harris also references these documents in reports (see, e.g., footnote 38 of Harris Amended Report).

³⁹ The Department of Justice has reviewed a number of insurance mergers and matters involving business practices and alleged anticompetitive effects in a variety of geographic areas in the past two decades, and has set out market definitions in press releases and complaints. See, e.g., Competitive Impact Statement, *United States v. Blue Cross and Blue Shield of Montana, Inc., Billings Clinic, Bozeman Deaconess Health Services, Inc., Community Medical Center, Inc., New West Health Services, Inc., Northern Montana Health Care, Inc., and St. Peter's Hospital* (noting two relevant product markets: the "sale of commercial group health insurance" and the "sale of commercial individual health insurance" and four relevant geographic markets: "Billings MSA (Yellowstone and Carbon Counties);" "Bozeman MSA (Gallatin County);" Helena MSA (Lewis and Clark County and Jefferson County); and "Missoula MSA (Missoula County)"); Competitive Impact Statement, *United States v. UnitedHealth Group, Inc. and Sierra Health Services, Inc.*, filed February 25, 2008 (noting a relevant antitrust market "no broader than the sale of Medicare Advantage health insurance plans to senior citizens ("seniors") and other Medicare-eligible individuals in the Las Vegas area" and including market share estimates for relevant product markets defined as "all Medicare Advantage plans" and "Medicare Advantage coordinated-care plans (MA-HMO and MA-PPO plans);" and Competitive Impact Statement, *United States v. UnitedHealth Group, Inc. and PacifiCare Health Systems, Inc.*, filed March 3, 2006 (indicating that the "sale of commercial health insurance to small-group employers in Tucson, Arizona" is a relevant antitrust market), No. 1:05 CV 2436 (D.D.C. filed Dec. 20, 2005). I refer also to a comprehensive set of principles on market definition that are set out in ABA Section of Antitrust Law, *Market Definition in Antitrust: Theory and Case Studies*, 2012. See also Marius Schwartz, Economics Director of Enforcement, Antitrust Division, U.S. Department of Justice, "Buyer Power Concerns and the Aetna-Prudential Merger," October 20, 1999, Text Released November 30, 1999 and *The Competitive Impact Statement, United States of America and State of Texas v. United Regional Health Care System*, filed February 25, 2011 for review of markets in context of a vertical contracting case. A review of the methodologies employed by the DOJ is provided "The Case for Reinvigorating Antitrust Enforcement for Health Plan Mergers and Anticompetitive Conduct to Protect Consumers and Providers and Support Meaningful Reform," *American Hospital Association* (May 2009), <http://www.aha.org/aha/content/2009/pdf/09-05-11-antitrust-rep.pdf>; and Capps, Cory S., "Federal Health Plan Merger Enforcement Is Consistent and Robust," *Bates White*, November 2009.

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suppliers of insurance to which consumers could turn. I further conclude that it is appropriate to consider narrower product markets as plausible candidate markets for the purposes of assessing competitive effects (and do so below) or for assessing competitive effects among somewhat differentiated competitors.

Medicare Analyses: Dr. Harris evaluates a separate product market for Medicare enrollees.⁴⁰ He estimates Highmark's share of Medicare beneficiaries for each of the several counties in WPA.⁴¹ In defining the relevant product market for Medicare, Dr. Harris included traditional Medicare plans (with or without the purchase of Medicare Supplemental plans) and Medicare Advantage plans, and calculated shares based on this universe for Highmark.⁴² Dr. Harris concludes that Highmark's Medicare enrollment as of December 2011 accounts for between [REDACTED] and [REDACTED] of Medicare eligibles residing in the 29-county WPA, depending on the specific area, and that there have been small increases and decreases in these shares in specific counties since 2007.⁴³

⁴⁰ Section 3 in Appendix II provides an independent analysis of plans offered by various insurers, and the total number of enrollees or other metrics for Medicare. The Harris Amended Report estimates the total commercially insured population per county by subtracting the number of uninsured lives and government insured lives from a total population estimate for each county in Highmark's WPA service area (this estimate is the denominator in the share calculation). These enrollment estimates include all health plan enrollees residing in Pennsylvania for Highmark and its wholly-owned subsidiaries under Highmark's Blue Cross/Blue Shield license in Pennsylvania, Blue Shield license in Pennsylvania, and Blue Cross/Blue Shield license in West Virginia. Additionally, the Highmark enrollment data include health plan enrollees from its joint operating agreements with NEPA and IBC, in which Highmark provides Highmark Blue Shield coverage. Harris Amended Report at ¶ 29 (footnote 37).

⁴¹ Appendix II at "Exhibit 6: Highmark Share of Medicare Eligibles by County, 2007-2011." Dr. Harris also evaluates the Medicaid marketplace. He defines product markets including one for the HealthChoices program and another for the Voluntary Managed Care Program. In terms of the geographic markets, he asserts that each zone defined by the Pennsylvania Department of Public Welfare for the HealthChoices Program is a relevant market, and each county for the Voluntary Managed Care Program is a relevant market. See Harris Amended Report at ¶¶ 49-57 for additional details, including share calculations.

⁴² See Harris Amended Report at ¶¶ 39-41. It appears that Dr. Harris's estimate for Highmark Medicare eligibles includes Highmark's Medicare Advantage and Medigap enrollees. To test that understanding, I used Highmark's aggregate 2010 Medigap enrollment and its 2010 Medicare Advantage enrollment information for the 29-county WPA service area. I added the enrollment figures together and calculated Highmark's share of total beneficiaries for 2010, using the same total beneficiaries figure used by Dr. Harris to compute share. My calculated share for Highmark was 32.4%, and the share using the data that Dr. Harris used was 34.5%. My review reasonably assures me that Dr. Harris includes Medigap enrollment in his definition of Highmark's Medicare market. I received Highmark's aggregate 2010 Medigap data from Highmark (Exhibit D Senior Market Enrollment Request Summary.xls), and I received the 2010 Medicare enrollment figures from Economists Incorporated in Highmark Membership Files 2007-2011.xlsx. I report our calculations in "Harris Exhibit 6 Calculation Analysis 120812.xlsx".

⁴³ See Harris Amended Report at ¶ 46.

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In addition to Dr. Harris's Medicare market definition, as described, for sensitivity purposes, I also considered a narrower candidate market defined as Medicare Advantage plans. I calculated Highmark's share and those of other insurers offering Medicare Advantage plans. To estimate the universe of Medicare Advantage beneficiaries in each individual county and for the 29-county WPA area, I used county-level Medicare Advantage enrollment as of September 2012.⁴⁴ Table 1 shows that Highmark's share of Medicare Advantage beneficiaries for the 29-county WPA area equals 56%, which is more than two times the share of the next largest healthcare insurer (UPMC). Out of the 29 counties in WPA, Highmark had more than 50% share of Medicare Advantage enrollment in 13 counties and a greater than 40% share in 21 counties.⁴⁵ Tables [3a] and [3b] in Appendix II provide more detail and show the number of beneficiaries and shares by county for each insurer, including Highmark.⁴⁶

⁴⁴ See <https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/MCRAAdvPartDENrolData/Monthly-MA-Enrollment-by-State-County-Contract-Items/MA-Enrollment-by-SCC-2012-09.html>, "MA Enrollment by State/County/Contract - September 2012 – Full version [ZIP, 1MB]." At the time of my analysis, this was the most current data available to me.

⁴⁵ See Table 3e in Appendix II.

⁴⁶ As an alternative approach to identifying competitors offering Medicare Advantage plans, I examined insurers' Medicare Advantage plan offerings by county using Dr. Harris's methodology outlined in Exhibit 5, "Exhibit 5: Number of Medicare Advantage Plans Offered by Health Insurers by County, WPA Service Area." Exhibit 3 to Harris Amended Report. I expanded Dr. Harris's analysis and identified plans offered by each of the insurers for each county. Highmark had the most offerings, with 15 plans provided. My findings, including an explanation of the methodology, are included in Table 3c in Appendix II.

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Table 1
Insurer-Level Medicare Advantage Enrollment*
as of September 2012
Region: 29-County Western PA (WPA) Area

	All Counties	Share
Total	445,971	100%
Highmark	247,371	55.5%
UPMC	110,485	24.8%
HealthAmerica	38,905	8.7%
United	14,783	3.3%
Aetna	13,211	3.0%
Geisinger	6,393	1.4%
UMWA Health & Retirement	5,504	1.2%
Humana	5,136	1.2%
HealthSpring	1,211	0.3%
PACE	796	0.2%
Universal American	559	0.1%
Pittsburgh Care Partnership	396	0.1%
Senior Life	321	0.1%
Capital BlueCross	271	0.1%
Community Insurance Company	265	0.1%
HealthNow New York Inc.	158	0.0%
Universal Healthcare	127	0.0%
BCBS	36	0.0%
MVP Health Care	25	0.0%
AultCare	18	0.0%

Notes:

*Enrollment figures report the number of beneficiaries enrolled by contract in the county. To comply with HIPAA privacy rules, CMS set enrollment numbers to zero for plans with 10 or less enrollees.

Source: Centers for Medicare and Medicaid Services.

Summary: Based on my review, I determine that the relevant product markets for evaluation of the transaction include at least commercial insurance and Medicare products, although product markets could be narrower, consisting of separate markets for Medicare Advantage plans or for types of groups of commercially insured customers. The specific market definition, however, does not affect the high and persistent market share held by Highmark and the very low shares held by individual national insurers, which I address below.

2. ANALYSIS OF HIGHMARK'S COMMERCIAL COMPETITORS

The Harris Amended Report focuses on the relative importance of Highmark as an individual insurer. Dr. Harris identifies other competitors providing healthcare insurance in this area, including UPMC, Aetna, HealthAmerica, UnitedHealthcare, Cigna, and in some areas Geisinger,

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and notes that these insurers account *collectively* for approximately 40% of the commercially insured population.⁴⁷ Dr. Harris's methodology, however, does not reveal the allocation of this 40% across insurers, nor does it provide specific analyses of their respective shares/size or changes over time.⁴⁸ As a result, one cannot infer from the Harris analyses whether any specific insurer represents an especially important or differentiated competitor for Highmark, an important issue for assessing the competitive constraint presented by rivals. Nor does it address sufficiently the factors identified for consideration by the PID, which include, among other factors, volatility of shares.

Relative size and importance of rival insurers: I examined data on insurers to assess, among other factors, the relative size and importance of Highmark and each of its health insurance rivals and to assess the stability (volatility) of shares over time.⁴⁹ Shares and share changes are a useful starting point to assess the current or recent past success of insurers in "winning" customers to their products. Win-loss data may provide more specific information on the magnitude of "churn" and on the specific losses and gains by individual insurer. In turn, this provides insight into retention by Highmark and the history and likely future growth of specific rivals. Information on rivals' products and benefit designs also may provide insights into the capability of competitors to respond to competitive initiatives and to gain share relative to Highmark. These data and information are also relevant as factors that inform the PID determination of substantial evidence on competitive effects, namely volatility of share, trends toward concentration, and ease of entry and expansion. I attempted to review these more dynamic factors in my assessment

⁴⁷ Harris Amended Report at ¶ 29.

⁴⁸ Harris Amended Report at ¶ 28 footnote 36. The Harris Report states, "it also may be appropriate for the competitive analysis to consider a bidding model . . . Additionally, suppliers of health insurance products often have little or no effective capacity constraints . . . In such a market it may be appropriate to assign each producer capable of competing for new sales an equal market share."

Another source for relative size of the WPA insurers is from the Pittsburgh Business Times. This lists the top insurers as Highmark Inc., with \$5,043,024,293 admitted assets; Independence Blue Cross, with \$3,775,769,988 admitted assets; Capital Blue Cross, with \$1,432,825,816 admitted assets; Aetna Health Inc., with \$911,372,330 admitted assets; and UPMC Health Plan, with \$858,210,992 admitted assets (all numbers as of Dec. 31, 2011). (Pravlik, Melissa, "Top 5: Major health insurers operating in Pennsylvania," *Pittsburgh Business Times*, August 31, 2012, available at <http://www.bizjournals.com/pittsburgh/news/2012/08/31/major-health-insurers-operating-in-pa.html>).

⁴⁹ Additional information on estimated shares by insurer for metropolitan areas in the US is provided in a recent report by the American Medical Association entitled *Competition in Health Insurance: A Comprehensive Study of U.S. Markets (2011 Update)*. This study reports shares for the Pittsburgh and Erie MSAs in WPA of 71% and 83%, respectively, for the top two insurers in the combined HMO and PPO product segments. I present additional information on Highmark's operations in Appendix IV.

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of market power and competition because static shares may understate or overstate the competitive significance of firms.

In making this assessment, I reviewed a number of different sources of information:

[REDACTED]

Table 2

**Estimated Admissions to WPAHS in January - June 2012 by Commercial Insurer
Region: 29-County Western PA (WPA) Area**

		Total	Highmark	HealthAmerica	Aetna	United	Cigna	All Other
<i>Total</i>	<i>Admissions Share</i>							
Allegheny General	Admissions Share							
Forbes Regional	Admissions Share							
Alle-Kiski	Admissions Share							
Canonsburg	Admissions Share							
West Penn	Admissions Share							

Note: All Other includes Community Care BHO, Forbes Hospice, Commercial Other, Value Behavioral, Choice Care PPO, Value Behavioral Health, Prison Health System, Commercial Other 1, Family Hospice, Devon (Americare), United Behavioral Health, V.A. Medical Center, Aetna Affordable Hlth Src, Golden Rule Insurance, Institutional Other, Living Donor, Private Healthcare System, First Health (PPO)

Source: Data provided by WPAHS (PID Economist Request 4.2.17.xlsx).

[REDACTED]

[REDACTED]

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[REDACTED]

Table 3

**Estimated Revenue to WPAHS in January - June 2012 by Commercial Insurer
Region: 29-County Western PA (WPA) Area**

		Total	Highmark	HealthAmerica	Aetna	United	Cigna	All Other
Total	Revenue Share							
Allegheny Gene	Revenue Share							
Forbes Regional	Revenue Share							
Alle-Kiski	Admissions Share							
Canonsburg	Revenue Share							
West Penn	Revenue Share							

Note: All Other includes Community Care BHO, Forbes Hospice, Commercial Other, Value Behavioral, Choice Care PPO, Value Behavioral Health, Prison Health System, Commercial Other 1, Family Hospice, Devon (Amedicare), United Behavioral Health, V.A. Medical Center, Aetna Affordable Hlth Src, Golden Rule Insurance, Institutional Other, Living Donor, Private Healthcare System, First Health (PPO).

Source: Data provided by WPAHS (PID Economist Request 4.2.17.xlsx).

[REDACTED]

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[REDACTED]

[REDACTED]

Highmark Documents: Highmark's documents include surveys of the insurance marketplace in WPA and estimates of shares for individual insurers in various customer segments or employer size categories. A market research study conducted for Highmark included a survey of respondents residing in WPA and other nearby regions that asked for the name of their primary health insurance plan. Based on these survey results, the study calculated "market shares" by insurer in WPA for enrollees aged 18-64 annually for the period 2005 to 2011.⁵⁴ The results, summarized in Table 4, indicate that Highmark's share increased from 60% to 65% over the period. Of the other insurers, UPMC's share was 8% as of 2011, and HealthAmerica's share was essentially flat in the 6-7% range over the period. Aetna, United Healthcare (UHC), and Geisinger have reported lower shares in the 1-4% range.⁵⁵

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[REDACTED]

⁵⁴ Highmark Supplemental Response to PID Information Request 3.5 from the Pennsylvania Insurance Department, Market Study Wave XVI: Western PA, Wave X: Central PA, Wave VI: West Virginia, May 2011, UPE-0006784-862 at UPE-0006817 (sample size is 3,346 respondents). According to the document, the study marked the 16th year that a study was conducted in WPA. The survey used telephone and internet survey methodologies and the data collection took place between January and March, 2011. (UPE-0006787). The document summarizes results for the uninsured segment first and then the majority of the document (UPE-0006808-862) describes survey results regarding "market share" by geographic area, age range of respondents, product segment, and employer size.

⁵⁵ Highmark's share in 2011 appears to be substantially lower than 65% in central Pennsylvania and West Virginia where the same market survey reports market shares of 28% and 27%, respectively, for Highmark (see Highmark Supplemental Response to PID Information Request 3.5 from the Pennsylvania Insurance Department, Market Study Wave XVI: Western PA, Wave X: Central PA, Wave VI: West Virginia, May 2011, UPE-0006784-862 at UPE-0006815). Also see Highmark Supplemental Response to PID Information Request 3.5 from the Pennsylvania Insurance Department, Market Study Wave XV: Western PA, Wave IX: Central PA, Wave V: West Virginia, May 2010, UPE-0006596-783, which provides similar survey data and results.

Table 4
Estimated Share in WPA by Insurance Company*
Time Period: 2005 - 2011

	2005	2006	2007	2008	2009	2010	2011
Highmark	60%	60%	60%	62%	62%	62%	65%
Aetna	2%	3%	3%	3%	3%	3%	2%
HealthAmerica	9%	7%	7%	6%	6%	7%	6%
UPMC	13%	8%	9%	8%	6%	7%	8%
UHC	2%	3%	4%	3%	3%	3%	4%
Geisinger	1%	2%	1%	1%	3%	2%	2%
Other	13%	17%	16%	17%	17%	16%	13%

Note:

*Survey respondents aged 18 to 64 were asked for the name of their primary health insurance plan. Based on these survey results, the study calculated “market shares” over time in WPA. Sample size is 3,346 respondents.

Source: Market Study Wave XVI: Western PA, Wave X: Central PA, Wave VI: West Virginia, May 2011. UPE-0006784-862, UPE-0006817.

Rivals’ shares for the narrower WPA geography from these Highmark documents differ considerably from those estimated from state-wide data for each of the insurers, and generally are higher for Highmark and lower for rivals. Aetna’s (~3% vs. 14%) and Geisinger’s (2% vs. 6%) shares of survey mentions compared are considerably lower and Highmark’s (63% vs. 47%) are much higher than those from the state-wide data, and are generally more consistent with the shares based on WPAHS admissions and revenue estimates. State-wide data include estimates of premiums written and members through 2012. Appendix II A sets out a systematic review of data reported to the PID by insurers at the state level from 2008 to 2012 for annual premiums written and for members by insurer.⁵⁶ With regard to volatility of share, the state-wide data show that UPMC has grown while other rivals have largely stayed flat or slightly declined.

⁵⁶ I note that the state-wide data are consistent with the data and information identified as relevant for evaluating shares in Section 1403: “In determining the relevant product and geographical markets, the department shall give due consideration to, among other things, the definitions or guidelines, if any, promulgated by the NAIC and to information, if any, submitted by parties to the acquisition. In the absence of sufficient information to the contrary, the relevant product market is assumed to be the direct written insurance premium for a line of business, such line being that used in the annual statement required to be filed by insurers doing business in this Commonwealth and the relevant geographical market is assumed to be this Commonwealth.” 40 PS §991.1403. However, I note that state-level data