available information from other IDNs, Highmark expects that the IDN will reduce inpatient volume by [redacted] by providing more appropriate levels of care, which will result in higher system-wide average length of stay (ALOS) because lower acuity admissions will decline.[287] It also projects that the population around the Pittsburgh area will decline at approximately 0.4% per year, which will result in fewer hospital admissions.

West Penn Reopening: As a result of WPAHS's declining financial situation, WPAHS closed down certain services, primarily ER and cardiology, at West Penn Hospital. WPAHS management, with assistance from Highmark, reopened its ER services to reinvigorate the WPAHS system. West Penn ER activity is doing better than expected. WPAHS expects West Penn's cardiology services to reopen in 2013. Highmark's stated objective is to restore West Penn's discharges to historical levels by FY16 (projected discharges are [redacted]), with the vast majority of these incremental admissions coming from UPMC hospitals. WPAHS would accomplish this through expanding other unidentified West Penn services and "increased awareness of the hospital's service offerings."[288] This results in an additional [redacted] discharges by FY17.

Expiration of the Existing UPMC Contract: Incorporated in UPE's IDN strategy, including the reinvigoration of WPAHS, is the assumption that UPMC will go out-of-network with Highmark when the current contract ends in December 2014. Highmark estimates that expiration of the UPMC contract will result in [redacted] more discharges at WPAHS by FY16 and FY17 than if the contract with UPMC continues.

Based on the 2011/2012 contract dispute between UPMC and Highmark, including intervention by the Commonwealth of Pennsylvania, it seems more reasonable to assume that similar pressures would exist to ensure that the UPMC and Highmark contract renews in January

[287] Highmark provided literature to support its [redacted] reduction in inpatient admissions due to implementing the IDN. I have reviewed this supporting literature. These articles provide statistics on cost savings achieved using PCMH or ACOs, such as readmissions and emergency care visits. These studies support the proposition that significant cost savings can be attained using patient-centered integrated care methods, such as PCMHs and ACOs, although none specifically show a [redacted] reduction. Dr. Harris does not provide any independent assessment of these assumptions, although Dr. Harris opines that the reduction in ALOS has a conservative effect on WPAHS's profitability.

[288] Amendment No. 2 to Confidential Supplement Submitted with Form A, Tab 8, Grant Thornton, "Updated West Penn Allegheny Health Systems (WPAHS)," January 2013.

2015.[289] Highmark estimates that the net effect on WPAHS discharges would be approximately [redacted] less each year for FY15 through FY17 if UPMC were in-network. Highmark, however, projects that WPAHS would still reach breakeven discharge volumes of 73,000 by FY15 (based on projected patient and payor mix and cost structure). Nonetheless, PID has asked Highmark and Grant Thornton to provide discharges and financial backup analysis based on extension of the UPMC contract.

Highmark Insured Discharges as Percent of Total WPAHS Discharges: Through its IDN strategy and the ability to attract patients using consumer choice initiatives (e.g., tiered products), Highmark projects that by FY17, it will be able to increase WPAHS discharges by about 32,000 inpatients. In FY12, Highmark's insured discharges at WPAHS facilities were [redacted] of WPAHS's total 57,455 discharges, or [redacted] of total WPAHS discharges. Assuming that Highmark will be responsible for the additional 31,599 discharges, Highmark's share of WPAHS discharges will increase to [redacted] by FY17. For West Penn Hospital, Highmark's insured discharges would represent [redacted] of total discharges. Table 22 shows the percent of total discharges at each WPAHS facility based on the assumption WPAHS's incremental discharges will originate from Highmark's ability to steer its members to WPAHS.

TABLE 22

Highmark's Share of WPAHS Discharges

	WPAHS ACTUALS FY12	HIGHMARK ACTUALS FY12	HIGHMARK DISCHARGES AS % of WPAHS Total FY12	PROJECTED WPAHS DISCHARGES FY17	INCREMENTAL WPAHS DISCHARGES FY17	HIGHMARK WPAHS PROJECTED DISCHARGES FY17	HIGHMARK % OF TOTAL WPAHS DISCHARGE FY17
ALLEGHENY GENERAL	23,589	[redacted]					
ALLE-KISKI	8,605						
CANONSBURG	3,283						
FRMC	15,221						
WEST PENN	6,757						
TOTAL	57,455						64.2%

It is possible that other rival insurers' members may choose to frequent WPAHS hospitals more in the future, as well as self-insured, Medicaid patients, and others. If this occurs, Highmark's share of total WPAHS's discharges may be somewhat less. With Highmark's insureds

[289] I note that the interim period provides an opportunity for Highmark more fully to utilize WPAHS as a competitive alternative, and to encourage other insurers, employers, and consumers do the same. In principle, success at this will provide an enhanced position from which to negotiate with UPMC at the later date.

accounting for [redacted] to [redacted] of WPAHS hospitals' discharges, WPAHS will be highly dependent on Highmark (and vice versa) and its continued and increasing ability to attract patients to its facilities.

Conclusion: In sum, estimated incremental inpatient volumes at WPAHS rely on assumptions about certain physician management and policyholder/subscriber IDN strategies that Highmark intends to deploy. These strategies include attracting patients to more cost-efficient, high-quality options for care through Highmark's Community Blue product and modifying physician practice and referrals through its Quality Blue ACA-based reimbursement arrangement. The latter centered on a patient-centered medical home and an accountable care organization concept, which compensates physicians for meeting quality, cost, and value metrics, e.g., reducing unnecessary utilization of medical resources, reducing variability in practice, managing length of stay more effectively, and selecting lower cost medical supplies. Highmark projects that the net result of its strategy will be lower costs of care for patients compared with the but-for world of no IDN.

As I discussed earlier, these Highmark and Grant Thornton projections rely on many assumptions dependent on modifying consumer and physician behavior. In my view, there exists a great deal of uncertainty surrounding these assumptions. In particular, there has been no effort to consider the response by UPMC and other WPA hospitals to a loss of inpatient admissions to WPAHS. The WPA population is not expanding, so a gain of discharges at one hospital almost certainly means a loss of discharges at another hospital. Indeed, Highmark acknowledges that the projected gain in discharges at WPAHS would come out of UPMC. It is not reasonable to assume that UPMC and other affected WPA hospitals will simply allow WPAHS, through Highmark's efforts, to shift volume away from UPMC (and other hospitals) to WPAHS without engaging in some type of counter strategy and competitive response to keep these inpatients at these competing hospitals.

For this reason, I must conclude that the Grant Thornton projections, based on assumptions provided by Highmark, are unsupported by the economic evidence. I am unable at this time to validate the economic reasonableness of these projections. This bears no ill reflection on the work performed by Grant Thornton and Highmark, but rather recognizes that without consideration of the reaction of competitors to the loss of significant discharges, these

projections must be viewed with a great deal of skepticism.

E. PID-REQUESTED SENSITIVITY ANALYSIS OF WPAHS'S FAILURE TO REACH BREAKEVEN DISCHARGE VOLUMES BY FY15

The PID requested that Highmark prepare a downside scenario that assumes WPAHS is able to attain only 50% of the incremental discharges projected by Grant Thornton. Although Highmark has stated that it believes such a scenario is highly unlikely, it is my view that such a scenario is equally plausible for two reasons. First, Highmark and its consultant, Grant Thornton, fail to incorporate in the WPAHS incremental discharge projections a competitive response by UPMC to Highmark attracting inpatients away from UPMC facilities to WPAHS. Second, Highmark and Grant Thornton's analysis retains the assumption made by McKinsey & Co. in its Source of Value IDN analysis that Highmark would shift its projected enrollees to WPAHS and other lower cost hospitals by modifying consumer and physician behavior.

McKinsey and Co. also assumed that Highmark would retain 100% of its discharges at other non-UPMC hospitals. Highmark has stated that the projected incremental discharges would not affect community hospitals, implying that whatever discharges are currently at these non-UPMC hospitals would likely remain. Therefore, the only contestable volume of discharges that would be subject to switching to make up these WPAHS incremental discharge volumes would be those that would have received treatment at UPMC. Highmark has confirmed in numerous discussions and filings that this is its intent—to attract UPMC inpatients to WPAHS. Based on my analysis, I find that there is a significant likelihood that Highmark would not be able to attract 31,599 additional discharges (based on FY12 actuals, 32,169 based on FY12E base line) to WPAHS above that which it currently services through WPAHS. For these reasons, I view the downside scenario as one that is plausible and merits full consideration in evaluating this Transaction.

In modeling the downside scenario, Highmark assumes that it is able to extend the UPMC contract.[290] This reduces incremental discharges by [redacted] in FY17. Highmark also assumes that it is unable to mitigate the effect of UPMC East's opening and Forbes loses [redacted] of the projected incremental discharges to UPMC East. Highmark reduces the remaining incremental discharges by [redacted] without designating any particular source of the reduction. Incremental

[290] Highmark submitted its analysis of the PID's requested downside scenario on March 8, 2013 to Blackstone by Buchanan Ingersoll & Rooney.

discharges by FY17 compared with FY12 actuals is [redacted] compared with the 32,169 incremental discharges in Highmark's Amendment 2 projections.

I replicate Highmark's share of FY17 WPAHS discharges based on this downside scenario. As shown in Table 23, Highmark's share by FY17 would be 53.9% compared with 64.2% in the base case.

TABLE 23

Highmark's Share of WPAHS Discharges--DOWNSIDE CASE

	WPAHS ACTUALS FY12	HIGHMARK ACTUALS FY12	HIGHMARK DISCHARGES AS % of WPAHS Total FY12	PROJECTED WPAHS DISCHARGES FY17	INCREMENTAL WPAHS DISCHARGES FY17	HIGHMARK WPAHS PROJECTED DISCHARGES FY17	HIGHMARK % OF TOTAL WPAHS DISCHARGE FY17
ALLEGHENY GENERAL	23,589	[redacted]					
ALLE-KISKI	8,605						
CANONSBURG	3,283						
FRMC	15,221						
WEST PENN	6,757						
TOTAL	57,455						53.9%

Note: Grant Thornton did not estimate discharges by WPAHS hospital in the downside scenario. Per hospital discharges are calculated by taking 50% of the incremental discharges in the base case, after adjusting for FRMC's full losses to UPMC East.

Under this scenario, WPAHS is unable to achieve breakeven income. Even without contingency measures, however, Highmark estimates WPAHS would have positive EBIDA by FY14 and positive cash flows from operations by FY15. By FY17, Highmark projects an $87.4 million net income loss but a positive EBIDA of $72.2 million. Cash balances decline from $193.8 million in FY12 to $114.6 million in FY17 resulting in a decline in days cash on hand from 80 in FY12 to 36 in FY17.

The PID requested that if WPAHS failed to reach breakeven income under the downside scenario, Highmark should identify contingency actions it would likely undertake. Highmark identified "a wide range of potential Contingency Actions" to reinforce WPAHS's financials:

- Efficiency improvements and revenue opportunities—although WPAHS has achieved over [redacted] million in annual cost savings, Highmark believes it can achieve significantly more cost savings and revenue enhancements. Additional annual cost savings would increase EBIDA by [redacted] million by FY16 and FY17, with a cumulative cash impact during the FY15 to FY17 period of [redacted] million.
- Right-size cost structure of physician organization—Highmark plans to improve the productivity of WPAHS's physician organization as part of its IDN strategy. Under the downside scenario, with fewer discharges, Highmark would [redacted]. Additional annual cost savings from this initiative would increase EBIDA by [redacted] million in FY16 and

FY17, and have a cumulative impact to cash for the period FY15 to FY 17 of [redacted] million.

- Reduce capital expenditures—with fewer incremental discharges, WPAHS would require fewer capital expenditures to support operations. Highmark would reduce capital expenditures in FY16 by [redacted] million and [redacted] million in FY17. The cumulative impact to cash for the period FY15 to FY17 would be [redacted] million.
- Reduce or eliminate unfunded research—Highmark estimates this cost saving measure would reduce annual costs by [redacted] million, with a cumulative impact to cash of [redacted] million for the period FY25 to FY17.
- Sale of non-core assets—WPAHS operates ancillary healthcare businesses, specifically home health, infusion centers, and hospice. Although these businesses generate a positive EBIDA, Highmark would consider selling off these assets in the event it needed to generate liquidity or retire debt. Selling these assets would decrease WPAHS's EBIDA by [redacted] million in FY17, but would have a cumulative impact to cash of [redacted] million over the FY16 to FY17 period, assuming that Highmark obtained its estimated sales price of between [redacted] million to [redacted] million.
- Reducing compensation and benefits—As with nearly all hospitals, staff compensation is the largest operating expense. In Highmark's view, reduced staffing often carries a stigma of lower quality of service and adversely affects employee morale. To avoid these negative effects, Highmark would prefer to [redacted] These steps would result in an increase in EBIDA of [redacted] million and would have a cumulative net impact on cash of [redacted] million over the FY15 to FY17 period.
- Outsourcing selected departments—WPAHS outsources its emergency departments at Forbes and Allegheny Valley hospitals, the only two emergency departments in the system that operate at or above breakeven. With the prospect of lower inpatient volumes, Highmark would consider outsourcing the other system emergency departments and other clinical services. This would improve EBIDA by [redacted] million by FY16 and FY17 and add [redacted] million to cash cumulatively over the FY15 to FY17 period.
- Providing additional rate reimbursement support to WPAHS—Highmark reports that as a last resort to prevent a formal restructuring of WPAHS, it could increase its reimbursement rates to WPAHS by up to [redacted] million annually. WPAHS would remain a lower cost alternative to UPMC. This endeavor would shore up the cash flows of WPAHS sufficient to meet projected liabilities and capital investments. Highmark projects [redacted] of this potential rate support would accomplish this goal. The cumulative impact to cash over the FY15 to FY17 period would be [redacted] million. Highmark estimates that passing on these rate increases to customers would result in less than a [redacted] rate increase, and would not affect Highmark's competitive position in the insurance market.

The net result of implementing all of these cost saving measures would be a $187.7 million improvement in EBIDA by FY17 and a cumulative impact to cash of $701.4 million.

The downside scenario indicates that if Highmark were unable to divert the magnitude of

projected incremental discharges at WPAHS in its "base case," it would need to make significant changes in the operations of WPAHS. Some of these contingency actions may enhance WPAHS's competitive position. Lowering operating costs through efficiency improvements, right-sizing the physician network, and outsourcing unprofitable operations could lead to lower reimbursements needed to cover costs, which would make WPAHS more competitively attractive to purchasers of hospital services, which ultimately benefits buyers of health insurance. Providing additional reimbursement support to WPAHS, however, has the opposite effect, which is to raise the costs of healthcare and insurance to WPA consumers as Highmark passes these costs on to its members. Highmark has termed this latter contingency action as a last resort. Reducing costs through right-sizing operations, improving efficiency, reducing unnecessary capital expenditures, and selling off non-core assets would likely improve WPAHS's cost position and improve its competitiveness. Because my evaluation of the downside projections relative to Highmark's "base case" projections leads me to conclude that the downside scenario is as plausible as the "base case" scenario, the contingency actions described by Highmark still could result in a significant competitive constraint on UPMC. Unless Highmark decides it must raise reimbursement rates to WPAHS, these contingency actions would tend to hold healthcare costs down rather than increase upward pressure on costs and buyers of hospital services.

F. POTENTIAL RISKS ASSOCIATED WITH UPE'S AFFILIATION AND RELIANCE ON WPAHS AS THE CORE COMPONENT OF ITS IDN STRATEGY

1. EFFECT ON COMMUNITY HOSPITALS AND UPMC

Highmark has affiliated with Jefferson Regional Medical Center as part of its IDN strategy. Highmark committed to invest as much as $120 million to support facility improvements and additions at JRMC, including renovating JRMC's emergency department, expanding the Bethel Park outpatient campus, and provide enhanced neurosurgery and gynecology at JRMC.[291] Additional enhanced services planned include health and wellness, oncology and women's services. Highmark expects these enhanced and additional services, along with insurance

[291] "Supplemented Overview of Highmark's Strategic Vision," Addendum No. 5 to Amendment No. 2 to Form A, Tab E at 10.

products that encourage inpatient utilization of JRMC, will improve JRMC's cash flow and enable JRMC to fund these investments in lieu of Highmark.[292] Highmark views its affiliation and investment in JRMC as a complement to its affiliation with WPAHS since the two systems are located in different geographic areas of WPA[293].

Highmark's strategic vision contemplates that the IDN will continue to develop and enhance relationships with community hospitals.[294] Highmark envisions its IDN will provide "a robust and vibrant network with meaningful choice in key service lines."[295] Although Highmark's Strategic Vision refers to "investments in community-based facilities and service in community hospitals," which will provide "improved access for certain policyholders and subscribers," it does not identify what those investments are and who will be the beneficiaries.[296] The detailed Provider Network Strategy Implementation lists under community hospitals, a $120 million investment in JRMC, a $35 million investment in Saint Vincent Health System in Erie, PA, a $5 million investment in Carnegie-Mellon University's Center of Innovation, and a $15 million GPO loan to Highmark Physician Group. Highmark does not identify any other community hospital as a direct beneficiary of IDN investment. Any investment for other community hospitals would be outside of the $1 billion identified in Highmark's Amendment No. 2 to the Form A.

Highmark's Strategic Vision indicates that it plans to work with community hospitals to identify opportunities to deliver more cost-effective healthcare by "building on existing resources in the community wherever possible."[297]

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[292] Highmark also will contribute $75 million to the JRMC Foundation to improve health and wellness of the JRMC surrounding community and will guarantee JRMC's 2012 liabilities, including debt and pension. See "Supplemented Overview of Highmark's Strategic Vision," Addendum No. 5 to Amendment No. 2 to Form A, Tab E at 10.

[293] Similarly, Highmark plans to affiliate with Saint Vincent Health System, another community-based hospital located in Erie, PA. Highmark identifies this affiliation as part of its IDN strategy. For purposes of my analysis, I do not consider SVHS in assessing the economic benefits and risks of this Transaction because of its geographic distance from the Pittsburgh area where WPAHS is primarily located.

[294] "Supplemented Overview of Highmark's Strategic Vision," Addendum No. 5 to Amendment No. 2 to Form A, Tab E at 2.

[295] "Supplemented Overview of Highmark's Strategic Vision," Addendum No. 5 to Amendment No. 2 to Form A, Tab E at 4.

[296] "Supplemented Overview of Highmark's Strategic Vision," Addendum No. 5 to Amendment No. 2 to Form A, Tab E at 4.

[297] "Supplemented Overview of Highmark's Strategic Vision," Addendum No. 5 to Amendment No. 2 to Form A, Tab E at 12.

In its initial Form A filing, Highmark's Strategic Vision stated that "community hospitals play a central role in Highmark's envisioned network as they both (a) provide a lower-cost and more convenient site of care for many policyholders and subscribers who have secondary and tertiary healthcare needs and (b) serve as a focal point for investing in education and training programs."[298] Highmark stated, "a key part of the strategy will be to keep services that can and should be delivered in the community within the community hospitals."[299] To this end, Highmark reported that it has identified a set of community hospitals that will participate in "alternative reimbursement contracts and clinical care models" as part of its IDN. Highmark expects to enter into relationships with these community hospitals which will include: (1) shared vision for aligning care providers in a market, (2) shared investment in new care protocols and operating models, (3) joint investment in outpatient assets, (4) more incentive based reimbursement contracts, and (5) integration into a single HIE platform.[300] Highmark did not identify which community hospitals will be part of this strategy in its Strategic Plan.

In its Response to PID Request 2.1.3, however, Highmark submitted [redacted]

[298] Highmark's Strategic Plan, Amendment No. 1 to Confidential Supplement (Volume II) Submitted with Form A, Tab 2 at 14.
[299] Highmark's Strategic Plan, Amendment No. 1 to Confidential Supplement (Volume II) Submitted with Form A at Tab 2 at 15.
[300] Highmark's Strategic Plan, Amendment No. 1 to Confidential Supplement (Volume II) Submitted with Form A at Tab 2 at 15.
[301] Highmark Response to PID Information Request 2.1.3 from the Pennsylvania Insurance Department, "Crystallizing Highmark's Network Strategy," SLC Discussion Document, May 10, 2011, at 13 (UPE-0010328).
[302] Highmark Response to PID Information Request 2.1.3 from the Pennsylvania Insurance Department, "Crystallizing Highmark's Network Strategy," SLC Discussion Document, May 10, 2011, at 14 (UPE-0010329).

[redacted] Highmark has engaged these hospitals to be part of its Community Blue health plan and its ACA quality-reimbursement system, which links payments with quality of care delivered.[304] It appears that Highmark expects these community hospitals to achieve increased inpatient admissions through their in-network Community Blue participation and ACA involvement. Highmark has not provided projections on the magnitude of these improved discharges, although its projections of increased inpatient admissions at WPAHS contemplates at least some, if not a significant loss, of admissions at these hospitals. Whether there will be a net gain for these community hospitals is unknown.

Many community hospitals have expressed concern that Highmark's alignment with WPAHS, and Highmark's efforts to align with other hospitals, would adversely affect their operations. Specifically, in testimony before the Pennsylvania Senate Majority Policy Committee, Excela reported on Highmark's efforts to align with it, which Excela viewed as predatory in nature.[305] The Hospital Council of Western Pennsylvania also testified that hospitals which have elected to stay independent expressed concern that "both the large Integrated Delivery Network model and the Payer-Provider model do not allow for a level playing field."[306] Community-based hospitals

[303] Saint Vincent is located in Erie, PA, which is outside of the Southwestern PA area served by WPAHS. This affiliation would not raise any competitive or consumer welfare concerns relating to Highmark's affiliation with WPAHS.

[304] "Supplemented Overview of Highmark's Strategic Vision," Addendum No. 5 to Amendment No. 2 to Form A, Tab E at 7 and 22.

[305] "Impact of Changes in the Health Care Marketplace on Community Health Systems, Public Hearing, August 1, 2012. Testimony of James R. Breisinger, Chairman, Board of Trustees, Excela Health System. According to Excela, Highmark controls 69% of Excela's commercial reimbursements. Excela Hospital's CEO noted that inpatient hospital services in WPA have declined over the last ten years and will continue to decline. Yet, Highmark needs more than 20,000 new inpatients at WPAHS to make it financially viable, thus indicating that these inpatients will have to come from competing hospitals both in Allegheny County and neighboring counties. According to Excela, Highmark sought to acquire Excela and requested a joint venture with Excela's medical complex in Irwin. It also requested a majority ownership interest in Excela's entire employed physician network of 150 physicians. Without this affiliation, Excela reported that Highmark stated it would buy or affiliate with all independent practices on Excela's medical staff and build ambulatory centers. Excela viewed this as a threat made possible by Highmark's control over 69% of the commercial insurance market at Excela Health. Excela reported a number of our Highmark practices that it viewed as predatory actions.

[306] "Impact of Changes in the Health Care Marketplace on Community Health Systems, Public Hearing, August 1, 2012. Testimony of Alvin J. Harper, President, Hospital Council of Western Pennsylvania.

voiced concerns that Highmark will be able to attract significant commercial inpatient volumes from community-based hospitals to WPAHS, leaving community-based hospitals to rely on underfunded Medicare and Medicaid reimbursements. In their view, this could jeopardize hospital capital and service lines.

These community hospitals raise legitimate economic concerns on the potential implications of patient volume flow and location of care re-alignment in the Pittsburgh area, whether through this affiliation or some other vehicle. Potentially significant adverse effects on capacity utilization at other area hospitals stem from two market conditions in WPA--substantial excess capacity in the marketplace and declining or stable inpatient demand. These exist with and without the transaction. Hospital admissions are a zero-sum game in that inpatients can only consume inpatient hospital services at one location per admission.

To the extent that Highmark is successful in shifting inpatient volume away from UPMC to WPAHS, UPMC is likely to suffer a decline in its utilization rate unless it can attract these patients back and mitigate further inpatient volume losses to WPAHS. As discussed earlier, excess capacity is costly to hospitals and especially to communities. If there is a substantial decline in UPMC's utilization rate, it could lead to higher delivered costs at UPMC absent remedial actions by UPMC. Similarly, it is likely that Highmark's success in shifting inpatients to WPAHS will also result in a loss of inpatient volume at community hospitals. Most of these community hospitals already have low utilization rates. Any further loss would exacerbate these low utilization levels and could result in significant financial issues for these hospitals. These economic impacts may or may not have competitive implications depending on whether these economic effects ultimately and materially change the competitive landscape, and most importantly, what the marketplace results are of the shifts in volume to WPAHS.

In its July 2012 projections for FY17, Grant Thornton estimated that 41,135 inpatient admissions would shift to WPAHS. Approximately [redacted] [vast majority] would come from UPMC and the

These hospitals are concerned about the effect on their operations of opening hospital beds, outpatient centers or medical malls and urgent care centers in close proximity to existing community hospital facilities. In addition, these hospitals are concerned with downtown-based facilities, which open such sites in more economically affluent areas with the intent to direct inpatients to downtown facilities in lieu of locally-based community hospitals. The Council is also concerned with Highmark using its resources to purchase community-based physician groups or building outpatient centers combined with its purchasing clout to attract patients to WPAHS facilities.

remainder from other hospitals.[307] Dr. Harris used an alternative methodology for determining the likely but-for hospital source of WPAHS's new admissions. These two methodologies yielded materially different discharges at some WPA community hospitals. I summarize these results below in Table 24.

Table 24

Projected Source of WPAHS Incremental FY17 Admissions

Hospital	Grant Thornton Estimate Admissions	% of Total	Harris Alternative Estimate Admissions	% of Total
Total	*41,135*		*41,135*	
UPMC				
Butler				
St. Clair				
Excela Westmoreland				
HV Sewickley				
Excela Latrobe				
Uniontown				
Washington				
Other				
Undetermined				

Based on an analysis and methodology presented by Dr. Harris in his Amended Supplement 2 and Supplement 5, I have re-calculated and examined the effect on inpatient discharges at UPMC and other area hospitals assuming that Grant Thornton's revised projected increase in WPAHS inpatient volumes come to fruition. I estimate the effect on community hospitals and UPMC of switching an additional 32,169 inpatients to reach Grant Thornton's projected 89,624 inpatient discharges at WPAHS by FY17 using the Grant Thornton and Harris methodologies (Table 25).

[307] Confidential Supplement Amendment Form A, Tab 8, Grant Thornton, "West Penn Allegheny Health Systems (WPAHS)," July 2012. Grant Thornton also projected that admissions at WPAHS would also decrease by [redacted] admissions due to other factors, such as the opening of UPMC East and declining population. These decreases were not included in calculating source of WPAHS admissions.

Table 25

Projected Source of WPAHS Incremental FY17 Admissions

Hospital	Grant Thornton Methodology Admissions	Grant Thornton Methodology % of Total	Harris Methodology Admissions	Harris Methodology % of Total
Total				
UPMC				
Butler				
St. Clair				
Excela Westmoreland				
HV Sewickley				
Excela Latrobe				
Uniontown				
Washington				
Other				
Undetermined				

I also calculate the effect of switching an additional [redacted] inpatients to reach Grant Thornton's projected 73,000 breakeven volumes (based on projected patient and payor mix and cost structure) for WPAHS using the two methodologies. I summarize these estimates using the Grant Thornton and Harris methodologies in Table 26.

Table 26

Projected Source of WPAHS Incremental Breakeven Admissions

Hospital	Grant Thornton Methodology Admissions	Grant Thornton Methodology % of Total	Harris Methodology Admissions	Harris Methodology % of Total
Total	15,545	100.02%	15,545	99.77%
UPMC				
Butler				
St. Clair				
Excela Westmoreland				
HV Sewickley				
Excela Latrobe				
Uniontown				
Washington				
Other				
Undetermined				

The above estimates examine the impact of attracting large volumes of discharges to WPAHS. However, it is not clear how Highmark would be positioned with its IDN to attract all types of

patients, including self-pays, uninsured, Medicare, and Medicaid patients, in addition to patients insured by Highmark. Grant Thornton estimated the total number of discharges that WPAHS would gain with the Highmark affiliation and IDN strategy, but did not distinguish between types of inpatients, such as commercially insured, Medicare, Medicaid, and others. One could assume that the diversion would have to come solely from commercially insured patients, including Medicare Advantage. While this likely overstates the volume shifts, I discuss it here to estimate the impact. I examine the impact of attracting incremental commercially insured and Medicare Advantage inpatients from other hospitals to WPAHS. These loss admissions are significant in terms of a hospital's commercial and Medicare Advantage admissions. Table 27 summarizes the admissions loss at particular hospitals using the Harris methodology for FY17 projected admissions at WPAHS.

Table 27

Projected Source of WPAHS Incremental Breakeven Admissions

Hospital	Harris Methodology Admission Losses	2011 Commercial and Medicare Advantage Admissons	Losses as % of Admissions
UPMC			
Butler			
St. Clair			
Excela Westmoreland			
HV Sewickley			
Excela Latrobe			
Uniontown			
Washington			

Note: Admissions data for period April 2010 through March 2011.

These data and the estimation methodology developed by Dr. Harris make use of proportional shifts from existing facilities. For example, these data indicate that UPMC could lose approximately [redacted] of its commercial and Medicare Advantage inpatients to WPAHS. Excela Westmoreland would lose approximately [redacted] of its inpatient volume and Heritage Valley would lose approximately [redacted]. For these community-based hospitals, the estimated impact (which may differ from what actually might occur) is significant since these hospitals are well below 80% occupancy rate even with the current level of discharges.

2. RISKS ASSOCIATED WITH HIGHMARK'S AFFILIATION WITH JEFFERSON REGIONAL MEDICAL CENTER

Jefferson Regional Medical Center ("JRMC") entered into an affiliation with Highmark of the type described in Highmark's Strategy Plan in March 2013.[308] JRMC becomes a subsidiary of UPE Provider Sub. UPE acquired the right to appoint directors who have 75% of the total votes, Highmark will provide JRMC $75 million in funding for JRMC Foundation and will provide an escrow of $100 million to fund future JRMC capital projects to be used if JRMC cannot fund its capital needs out of its additional cash flow. UPE will appoint 25% of the JRMC Foundation Board. UPE also guarantees payment of all JRMC debt, pension, and other liabilities.

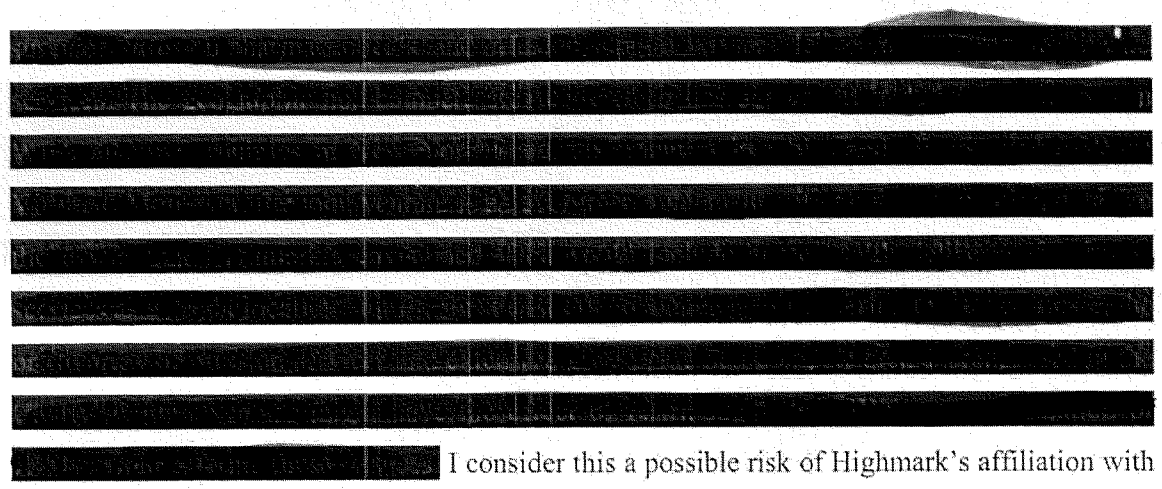
Highmark considers JRMC a core component of its IDN and a geographic complement to WPAHS.[309] In its most recent Form A filing, Highmark indicated that the affiliation "will seek to stem the unnecessary migration of certain health services out of the southern region of Greater Pittsburgh..."[310] As part of the affiliation, JRMC will obtain a renovated emergency department and enhanced neurosurgery and gynecology services. Service expansions will also include health and wellness programs, oncology, and women's services.[311]

JRMC is fairly distant from competing hospitals. To the extent that JRMC and its physicians are able to refer tertiary services not available at JRMC to Allegheny General instead of UPMC, this affiliation will benefit WPAHS.

JRMC has several joint ventures with UPMC. I reviewed these joint venture agreements in the context of whether these agreements restrict or constrain UPE's IDN implementation. [redacted]

[redacted]

[308] "Supplemented Overview of Highmark's Strategic Vision," Addendum No. 5 to Amendment No. 2 to Form A, Tab E at 10-11. See also Supplemental Response to PID Information Request 2.4.1 from the Pennsylvania Insurance Department.
[309] "Supplemented Overview of Highmark's Strategic Vision," Addendum No. 5 to Amendment No. 2 to Form A, Tab E at 11.
[310] "Supplemented Overview of Highmark's Strategic Vision," Addendum No. 5 to Amendment No. 2 to Form A, Tab E at 10.
[311] "Supplemented Overview of Highmark's Strategic Vision," Addendum No. 5 to Amendment No. 2 to Form A, Tab E at 10.



I consider this a possible risk of Highmark's affiliation with JRMC that might limit the implementation of the IDN.[312]

3. LIKELIHOOD OF SUCCESSFUL TURNAROUND INVESTMENT IN WPAHS

WPAHS has faced challenging financial and operating conditions for many years. The current WPAHS formed in 1999 when the Western Pennsylvania Hospital System acquired Allegheny General Hospital, Allegheny Valley Hospital, Forbes Health System, Canonsburg General Hospital and affiliated physician practices from AHERF.[313] WPAHS's financial woes materialized in 2007 when WPAHS issued more than $750 million in high-yield debt. By 2009, WPAHS began to incur significant operating losses and went through a series of employee layoffs. WPAHS again terminated more than 1,000 employees and eliminated 300 beds as part of a restructuring plan, which included relocating the emergency department and cardiovascular services from West Penn Hospital to Allegheny General Hospital. WPAHS's financial status continued to deteriorate.

Highmark stated in its Initial Form A filing that it believes WPAHS's financial deterioration results from three factors: "the vision for an urban consolidation of acute services on the campus of AGH; failure to reduce overall operating costs rapidly enough to overcome volume losses; and a loss of confidence among referring and employed physicians, which further contributed to

[312] In my competitive assessment, I do not consider or offer any legal interpretation of the restrictive clauses in the [redacted] joint venture agreement or any other JRMC agreement. My analysis only examines the competitive implications of the product and geographic scope of the agreements.
[313] "General Description of WPAHS," Form A at Tab C at 1.

volume reductions as doctors shifted referrals or aligned [sic] with other hospitals."[314] Highmark more recently concluded that restructuring WPAHS's debt was necessary to avoid further financial deterioration, particularly further losses of WPAHS physicians and staff, and reached an agreement with WPAHS's bondholders to do so.[315]

Highmark considers WPAHS to be a highly valuable asset to the community. Indeed, West Penn Hospital was the first in WPA to sponsor a medical college, which is now the University of Pittsburgh School of Medicine. It was the first hospital in Pittsburgh to open an intensive care unit, the first to perform a bone marrow transplant, the first to build a heliport, the first to open a center dedicated exclusively to breast diagnostic imaging, and the first to achieve Magnet Recognition from the American Nurses Credentialing Center (ANCC) for excellence in nursing services.[316] Highmark considers WPAHS to be the primary hospital constraint on UPMC. As I described earlier, in particular service lines, WPAHS and UPMC are next best substitutes and likely act as a competitive constraint on each other. Highmark views its alignment with WPAHS as a viable provider alternative to UPMC and a constraint on UPMC's provider market power.[317]

To restore WPAHS's financial viability, Highmark claims to need $1 billion to set up an IDN and place WPAHS at its core. Direct investment in WPAHS will be $475 million plus additional funds necessary to restructure WPAHS's significant debt. However, Highmark bases the inpatient volume diversions expected to restore WPAHS to sustained financial viability on Allegheny General becoming the quaternary hub of UPE's IDN and WPAHS hospitals' becoming major secondary and tertiary referral providers. To accomplish this, Highmark plans to invest approximately [redacted] million to align physician practices and establish a management services organization ("MSO"), and invest [redacted] million to develop medical malls (via external sources). It is also investing [redacted] million affiliating with two additional community hospitals/outpatient facilities, including its $75 million investment in JRMC that will be tertiary

[314] "Highmark's Strategic Plan," Confidential Supplement (Volume II) Submitted with Form A, Tab 2 at 29.
[315] "Supplemented Overview of Highmark's Strategic Vision," Addendum No. 5 to Amendment No. 2 to Form A, Tab E at 9.
[316] http://www.wpahs.org/locations/western-pennsylvania-hospital/history.
[317] "Supplemented Overview of Highmark's Strategic Vision," Addendum No. 5 to Amendment No. 2 to Form A, Tab E at 6 and 14.

and quaternary referral sources for WPAHS hospitals.[318]

One concern that requires addressing is whether Highmark's $475 million investment in WPAHS is sufficient to reinvigorate WPAHS to make it the core provider on which Highmark bases its IDN strategy. According to analysis provided by Grant Thornton, WPAHS will continue to experience significant operating losses in FY13 and FY14, even with advanced funding by Highmark, namely: $50 million funded on June 28, 2011 for capital improvements and to fund WPAHS operations; (2) $100 million funded at the time of the Affiliation signing; and (3) $58 million funding on April 27, 2012. Highmark has also committed $50 million to secure Highmark's performance to the tender offer, which remits to WPAHS with an additional $50 million at the loan's closing by April 30, 2013 or some agreed extension to that date. If the tender offer does not occur by April 30, 2013 or some agreed extension date, Highmark will pay $50 million to WPAHS. Highmark will also advance another $100 million at the latter of the closing date or April 1, 2014. Highmark will also fund $75 million at closing, less any advances, and will provide $10 million of additional payments to WPAHS in each of the next five years as part of its provider reimbursements. [319]

Grant Thornton projects that WPAHS will produce net income and positive operating cash flow in FY15. This projected positive operating income by FY15 is under the highly favorable conditions of having successfully attracted an additional 1,473 discharges to WPAHS in FY13 compared with FY12, another 9,346 discharges in FY14 compared with FY13, and another 12,023 discharges in FY15 above that achieved in FY14.[320] All total, Grant Thornton projects that WPAHS will increase its inpatient discharges by 22,842 by FY15, i.e., approximately 40% more discharges in FY15 than in FY12. This projection assumes that Highmark's contract with UPMC will terminate on December 31, 2014. If that contract is renewed, then Highmark estimates that WPAHS's discharges will be [redacted] lower per year.[321] Under this scenario,

[318] Amendment No. 2 to Confidential Supplement Submitted with the Form A, Tab 8 at 2.
[319] Amended No. 2 to Confidential Supplement Submitted with the Form A, Tab 8, Grant Thornton, "Updated West Penn Allegheny Health Systems (WPAHS)," January 2013 and Amendment 2 to Form A at 8. The $100 million commitment at closing or on April 1, 2014 would be reduced by any positive cash flow by WPAHS.
[320] Amendment No. 2 to Confidential Supplement Submitted with Form A, Tab 8, Grant Thornton, "Updated West Penn Allegheny Health Systems (WPAHS)," January 2013.
[321] Amendment No. 2 to Confidential Supplement Submitted with Form A, Tab 8 at 6. Highmark has the incentive to use the period before another possible UPMC contract agreement effective January 2015

Highmark acknowledges that WPAHS's financial performance will be less favorable, but still projects that WPAHS will reach breakeven discharges of 73,000 by FY15 (at projected patient and payor mix and cost structure), an increase of 15,545 additional discharges above the FY12 level.[322] Although increasing discharges at WPAHS is a necessary condition for achieving financial stability, it is not sufficient. WPAHS had over 73,000 inpatient discharges as recent as FY09, yet still did not achieve breakeven net income.

Because Grant Thornton bases the projected breakeven operating income in FY15 on achieving at least 73,000 inpatient discharges at WPAHS (based on projected patient and payor mix and cost structure), which is approximately 15,545 discharges above FY12 results, the PID requested that Highmark provide a contingency plan on the steps that it would undertake to ensure WPAHS's financial viability if WPAHS were unable to achieve an additional 15,545 discharges by FY15. Highmark indicated that if WPAHS were not financially viable by FY15, it would adjust the WPAHS turnaround plan. The contingency plan identifies several possible options that Highmark would undertake, including:

- Further reductions in expenditures, including capital expenditures to defer cash flow deficiencies.
- Actions to keep physicians within the Physician Organization treating patients within WPAHS while maintaining compliance with certain legal restrictions.
- Leveraging the value of UPE Provider Sub Assets, including spinning off non-performing assets or selling interests in successful assets. These assets may include infusion center at WPH, home health services at Allegheny General, hospice services at Forbes Regional, physician practices, or WPAHS hospitals. Alternatively, UPE could repurpose or shut down an underutilized WPAHS hospital.
- Restructure IDN liabilities of the WPAHS bonds by deferring interest and principal payments from WPAHS to Highmark in the event the turnaround plan is viable but delayed. Alternatively, if WPAHS turnaround is not viable, UPE could restructure WPAHS through bankruptcy.

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substantially to reinvigorate WPAHS, to attract and align consumers and employers to its Community Blue products, and to encourage increased utilization by Highmark enrollees of WPAHS facilities to enhance its ability to make effective use of WPAHS (and other hospitals) in its network and operations and its negotiations with UPMC for contracts after 2015. A health plan's negotiating position is enhanced by the availability of credible alternatives, as is that of providers with regard to insurer alternatives. See, for example, Sorensen, Alan T., "Insurer-Hospital Bargaining: Negotiated Discounts in Post-Deregulation Connecticut," The Journal of Industrial Economics, Volume LI, No. 4, December 2003.

[322] Amendment No. 2 to Confidential Supplement Submitted with Form A, Tab 8, Grant Thornton, "Updated West Penn Allegheny Health Systems (WPAHS)," January 2013 and Tab 8 at 6.

- Increasing reimbursements to WPAHS by increasing rates.
- Pursue expansion of Medicaid business at WPAHS and the physician organization through urgent care centers.

Upon review, these steps seem to identify general steps, rather than specific steps that would be undertaken only in the event that the WPAHS turnaround plan is failing. Many of the identified items appear to be those that Highmark would otherwise undertake in the normal course of turning around WPAHS, such as eliminating unproductive and unnecessary expenditures. To achieve IDN savings and maximize potential discharges at WPAHS, I would expect Highmark to implement fully its productivity plan for physicians rather than intensifying it in the event WPAHS's turnaround plan is failing. Similarly, I would expect Highmark to reimburse WPAHS at competitive rates. Increasing WPAHS's reimbursement rate beyond competitive levels runs the risk of rewarding inefficiencies or poor management of resources. Reimbursing WPAHS below competitive levels contributes to WPAHS's adverse financial situation. I would also expect Highmark and WPAHS to pursue all potentially lucrative business opportunities, such as Medicaid, as part of the turnaround plan. If the Medicaid business opportunity makes economic sense to pursue as a contingency, it also likely makes economic sense to pursue in the normal course of operations. As part of any turnaround plan, I would expect Highmark and WPAHS, for example, to evaluate the efficiency of WPAHS's assets and structure a plan to re-align unproductive assets to productive use. Maintaining unproductive or underutilized assets may drain investment funds away from more productive uses.

Highmark's contingency plan is somewhat weak on specificity, although the level of specificity may depend on tailoring contingency strategies after a thorough assessment of the driving factors behind a possible lack of successful turnaround. In my view, Highmark's contingency plan, although lacking in specificity, nonetheless assures me that Highmark has an array of strategies that it can implement to restore WPAHS to a competitively viable hospital system were the projected volume shifts not to materialize. Given Highmark's IDN strategy, its available resources, and alignment with consumers to reduce unnecessary healthcare costs while maintaining quality, it may be in the best position to restore WPAHS as a competitively viable hospital alternative for consumers in WPA.

4. RISK OF PROMOTING A MEDICAL ARMS RACE

I have been asked expressly to consider whether the Affiliation has risks of increasing costs and capacity (a medical arm's race) as compared with moving the market to a more efficient and effective delivery system. Given previous investments in the area, notably the opening of UPMC East in a location proximate to the WPAHS Forbes Regional Hospital, there is concern that Highmark's investment in shoring up WPAHS may be the beginnings of an escalating medical arms race between UPMC and Highmark. For example, to counter expected loss of discharges by Forbes Regional to UPMC East, WPAHS invested additional resources to improve services at Forbes to mitigate these losses. Such investments could well be economically inefficient and raise healthcare costs in the area more than they would benefit patients.

Dr. Harris contends that there is no incentive from the creation of an IDN that will include Highmark and WPAHS to expand capacity inefficiently.[323] He opines that the IDN created by the affiliation incentivizes the parties to invest efficiently and to do so in a manner that reduces costs.[324] Dr. Harris cites the number of competing hospitals and health care systems in the area as a factor that will discipline UPE's investment strategy. With numerous other options for care, he contends increases in the WPAHS cost structure cannot be passed along to insurers or healthcare consumers. In addition, Dr. Harris cites to Highmark's additional incentive, through WPAHS, to participate in CMS's Medicare Shared Savings Program, which rewards facilities for improving quality and reducing unnecessary costs.[325] According to Dr. Harris, these incentives will temper any economic incentive to over-invest in new capacity. In his report, Dr. Harris does not address how this view comports with expansions recently observed in the marketplace, especially by UPMC, and the view by several industry participants that the Pittsburgh area already has more capacity than necessary. Capacity analysis reveals that this is indeed the case and there is substantial excess capacity in many hospitals currently.

The opening of UPMC and commensurate loss of discharges at Forbes Regional illustrate that efforts to increase hospital discharges at one location likely result in commensurate losses at another proximate hospital. The IDN could well exacerbate overcapacity at other hospitals,

[323] Harris Amended Supplement 4 at ¶ 29.
[324] Dr. Harris also reports under indemnity insurance reimbursements, hospitals historically may have had an incentive to increase or maintain excess capacity inefficiently because hospital were able to pass on increased costs to insurers. Harris Amended Supplement 4 at ¶ 29.
[325] Harris Amended Supplement 4 at ¶¶ 24 and 32.

particularly UPMC, which would likely respond, as Forbes responded to UPMC East. Likely competitive responses may be in the form of increased capital expenditures, for example, new equipment, facilities, service lines, employed physicians, and outreach facilities, although there may be some effort to respond with lower cost network products with other insurers. In my view, it is unreasonable to presume, as Highmark has done, that competing community hospitals and particularly UPMC, with its substantial financial resources, will not engage in strategies that aim to keep patients choosing their hospitals rather than WPAHS.

5. RISK OF JOB LOSSES AT WPAHS WITH POTENTIAL REALIGNMENT OF CAPACITY

As I discussed earlier, WPA has a declining and aging population and industry participants consider the Pittsburgh area to be over-bedded relative to other areas of the United States. As I showed earlier, any additional discharges needed to make WPAHS financially viable would need to divert from other area hospitals, including UPMC and community hospitals. These diversions will adversely affect the operating financials of the hospitals losing this volume. This strongly suggests, along with low utilization rates discussed herein, that too much hospital bed capacity exists in WPA and this capacity will likely need to adjust through competitive means, i.e., financially weakened hospitals will leave the marketplace, capacity reduced, or there will be additional consolidation. As a general matter, this re-alignment should occur to some extent without the Affiliation.

If Highmark is unable to attract discharges as projected by Grant Thornton, it may need to reconsider the efficacy of maintaining WPAHS staffed bed capacity and services at current levels. This will likely result in a loss of jobs at WPAHS hospitals. However, as part of UPE's IDN strategy, it will be investing significant resources in developing medical malls, community hospital affiliations/outpatient services, and building a physician referral network that may result in greater medical service employment outside of hospitals. It is possible that the net loss in jobs after considering these additional investments may be less than would otherwise occur but for Highmark's overall IDN strategy.

6. EFFECT ON THE AFFILIATION AND IDN OF EXTENDING THE HIGHMARK UPMC PROVIDER CONTRACT BEYOND DECEMBER 31, 2014

The PID requested that Highmark submit projections and analyses of the effect of the Transaction under the assumption that Highmark and UPMC would reach agreement on a new provider contract extending the term beyond 2014. Highmark states in its submission that a long-term provider agreement with UPMC is one of its primary goals and it has never wavered from that position.[326] It is Highmark's firm belief, however, that UPMC would not agree to extend its provider contract with Highmark if this Transaction occurs. On this belief, Highmark bases its projections on the termination, without further extension, of its UPMC provider contract as of December 31, 2014.

Highmark's consultant, Grant Thornton, modeled the alternative assumption that the UPMC provider contract would continue beyond 2014.[327] It examined the effect of this assumption on WPAHS's discharges and financial condition. Using these estimates, Highmark incorporated these effects into the financials of Highmark, UPE, and UPE Provider Sub.

According to Grant Thornton's analysis, a continuing Highmark/UPMC contract would not materially affect WPAHS's FY13 through FY17 incremental discharge projections. WPAHS's discharges in FY17 would be 83,227 compared with 89,624. The 6,800 difference in discharges derives from eliminating one source of discharges—discharges from enrollees that decide to stay with Highmark who otherwise would have switched to UPMC. Incremental discharges through all other sources remain the same as in the case where UPMC is out-of-network with Highmark.

Under both the With UPMC and Without UPMC projections, Highmark assumes that it has the means to attract patients to lower costs facilities through its IDN. It assumes that "UPMC will not be permitted to continue to prevent Highmark from offering products [healthcare insurance plans] that allow consumers to lower their health care costs by choosing providers based on cost and quality."[328] In other words, unlike its current contract with UPMC, Highmark would be able to set up an unrestricted tiered network, which would provide financial incentives to patients to select a lower-cost WPAHS rather than the higher-cost UPMC. As long as Highmark is not

[326] Addendum No. 4 to Amendment No. 2 to Confidential Supplement Submitted with Form A at 1.
[327] Addendum No. 4 to Amendment No. 2 to Confidential Supplement Submitted with Form A at Exhibit G.
[328] Addendum No. 4 to Amendment No. 2 to Confidential Supplement Submitted with Form A at 3.

restricted from offering consumer choice initiative products as part of its networks, which would be the case under both the With UPMC and Without UPMC Affiliation scenarios, Highmark will be able to attract inpatient admissions through its IDN to WPAHS and other lower-cost community hospitals.

It is my understanding that UPMC has anti-tiering and anti-steering provisions in nearly all, if not all, of its provider contracts, including its 2012 contract extension with Highmark. It seems unreasonable in modeling these projections to assume that any new provider contract with UPMC would not include anti-tiering and anti-steering provisions. Since this assumption is the driving force behind attaining all the same incremental discharges as in the Without UPMC Affiliation scenario, I do not find these projections to be credible.

Highmark provided estimates of the incremental IDN savings relative to Business As Usual ("BAU") under the revised assumption that UPMC would be an in-network participant. I provide these estimates in Table 28, along with the incremental effects of UPMC in-network.

TABLE 28

HIGHMARK'S PROJECTED TIMING OF IDN SAVINGS WITH WPAHS AFFILIATION

($MILLIONS)

	AFFILIATION PLUS UPMC IN-NETWORK					INCREMENTAL EFFECT OF UPMC IN-NETWORK				
SAVINGS CATEGORY	CY2012	CY2013	CY2014	CY2015	CY2016	CY2012	CY2013	CY2014	CY2015	CY2016
UPMC Out-of-Network										
Oncology shift										
Utilization shift										
Reimbursement										
Subtotal	$31	$64	$80	$4	$14	$0	$0	$47	$19	$29
IDN Implementation										
Healthier Population**										
Right Setting**										
Right Treatment**										
Lower Factor Cost/Improved Quality										
Other										
Subtotal	($5)	($35)	($68)	($238)	($275)	$0	$0	$57	$45	$156
*TOTAL**	$26	$28	$12	$233	($261)	$0	$0	$104	$64	$186

* Total does not sum due to rounding

Source: Highmark Supplemental Response to PID Information Request 4.2.3; Highmark Discussion, September 14, 2012

These savings assume that Highmark is able to negotiate only a [redacted] increase in reimbursements with UPMC and it is able to tier UPMC in its insurance products to attract patients away from UPMC to WPAHS. I find this set of assumptions to be unreasonable. As I have described earlier, UPMC has prohibited Highmark from including UPMC in any tiered network product, except Highmark's Community Blue. If Highmark is able to negotiate a provider contract with UPMC

that allows Highmark to include UPMC in a tiered product, it is probable that UPMC would demand a higher reimbursement rate to reflect the likelihood that it would attract less volume from Highmark's insured members. Throughout the healthcare industry, the ability of an insurer to deliver greater volumes of discharges to a provider generally results in the provider agreeing to lower reimbursement rates or lower increases in existing reimbursement rates. Highmark's assumed [redacted] increase in reimbursement rates is inconsistent with this general principle. For this reason, I do not find Highmark's projected IDN savings with UPMC in-network to be credible.

G. FINDINGS AND OPINION ON THE ECONOMIC IMPACT OF HIGHMARK'S ACQUISITION OF WPAHS ON THE DELIVERY OF HEALTHCARE IN WESTERN PENNSYLVANIA

1. HIGHMARK'S MOTIVATIONS FOR AFFILIATING WITH WPAHS

Highmark lays out many of its motivations for affiliating with WPAHS in its supplemental strategic plan overview. Its strategy is "the creation of an integrated health system with West Penn Allegheny Health System, Inc. ("WPAHS") as its cornerstone."[329] It views this Affiliation as a means to achieve "more affordable, more efficient, more satisfying and higher quality" healthcare experience for its policyholders and subscribers.[330] Specifically, Highmark envisions that the affiliation will:

- Provide more choice and access to providers,
- Reduce rates of increase of healthcare costs and premiums,
- Improve quality of care,
- Improve subscriber experience, and
- Preserve a community asset (WPAHS).[331]

Highmark anticipates that its IDN strategy and alignment with WPAHS would solve a potential healthcare delivery access issue for its policyholders and subscribers should UPMC and

[329] "Supplemented Overview of Highmark's Strategic Vision," Addendum No. 5 to Amendment No. 2 to Form A, Tab E at 1

[330] "Supplemented Overview of Highmark's Strategic Vision," Addendum No. 5 to Amendment No. 2 to Form A, Tab E at 2.

[331] Response to PID Information Request 2.1.1 from the Pennsylvania Insurance Department at 2-4, UPE-0012001-03.

Highmark fail to reach agreement on a network contract after 2014. As a financially strengthened and more desirable referral healthcare center, WPAHS becomes a stronger competitive alternative to UPMC and strengthens Highmark's negotiating position with UPMC.

Highmark is not altogether altruistic in its desire to implement an IDN and affiliate with WPAHS and other community hospitals. It views the Affiliation and the IDN as a means to preserve its significant share in healthcare insurance. Highmark projects its WPA share will decrease substantially from 60% to [redacted] by 2015 without the affiliation and a UPMC contract.[332] Without a viable WPAHS, Highmark fears that UPMC will "further consolidate monopolistic power with unchecked ability to pass on unacceptable rate increases and extract value from the community."[333]

Highmark also recognizes that its affiliation is not without risks. Specifically, Highmark recognizes that there may be additional unforeseen costs to turn around WPAHS. It may be unable to attract sufficient volume to WPAHS to make it financially viable. Highmark also may not be able to align the broader physician provider community, which would affect Highmark's ability to achieve referrals for WPAHS and a more efficient overall delivery system. Highmark also recognizes that there may be temporary member disruption if providers other than UPMC choose to pull out of Highmark's networks, leaving policyholders and subscribers without their preferred providers. This could accelerate a loss of policyholders and subscribers for Highmark. In addition, these risks could create additional reputational risks for Highmark.[334] In my view, based on the information provided and analysis that I have performed, I concur that these are significant economic risks that the PID must consider in evaluating the merits of this Affiliation.

2. WPAHS OBTAINS SIGNIFICANT BENEFITS FROM AN AFFILIATION WITH HIGHMARK

As I have discussed earlier, UPE's IDN strategy includes considerable investments in WPAHS and other providers in the Pittsburgh area. This includes [redacted] million in WPAHS, [redacted] million

[332] "Crystallizing Highmark's Network Strategy, Board of Directors Presentation, May 25, 2011 [redacted] See "Crystallizing Highmark's Network Strategy, Board of Directors Presentation, June 5, 2011"at 15.

[333] "Crystallizing Highmark's Network Strategy, Board of Directors Presentation, May 25, 2011."

[334] Response to PID Information Request 2.1.1 from the Pennsylvania Insurance Department at 4-6, UPE-0012003-05.

in other community hospitals/outpatient facilities, [redacted] million in a physician network, and [redacted] million in medical malls.[335] WPAHS would be the direct beneficiary of all of these investments since it will serve as a major referral center for tertiary and quaternary services. Highmark believes WPAHS will benefit through:

- Critical financial support,
- Increased patient volume,
- Participation in innovative models of healthcare delivery and financing,
- Enhanced clinical protocols,
- Capital improvements, and
- Innovative technology.[336]

The affiliation enables WPAHS, particularly West Penn Hospital, to continue to operate and maintain service lines. Specifically, WPAHS identified a number of strategic goals associated with its Highmark affiliation:

- Continue to advance the level of care at Allegheny General Hospital,
- Establish a trauma program and grow specialty services at Forbes Regional Hospital,
- Partner with local employers to improve the health of their workers at Allegheny Valley Hospital,
- Increase [redacted] capabilities at Canonsburg General Hospital, and
- Reinstate a number of services, including the Emergency Department, at West Penn Hospital.[337]

The ability of UPE's IDN to steer Highmark's significant insured population to WPAHS would enable WPAHS to spread its fixed costs over a larger volume base and fill significantly underutilized capacity.[338]

As of January 2013, Highmark has contributed $200 million to WPAHS. With these funds,

[335] Amendment No. 2 to Confidential Supplement Submitted with Form A, Tab 8 at 2.
[336] "Supplemented Overview of Highmark's Strategic Vision," Addendum No. 5 to Amendment No. 2 to Form A, Tab E at 21.
[337] "West Penn Allegheny Health System, Rating Agency Presentation," November 2011, WPAHS-006221.
[338] WPAHS Response to Request No. 3.5 from the Pennsylvania Insurance Department, "Collaborative Design Session Introduction, Highmark/WPAHS Strategic Advance," August 17-18, 2011, WPAHS-005748, 53, 55-59.

WPAHS has re-opened West Penn Hospital's emergency department and completed improvements to Forbes Regional Medical Center in order to compete more effectively with the opening of UPMC East. According to Highmark, West Penn Hospital is now the most profitable hospital in the WPAHS system, with a net margin of [redacted] [339]

From my review of materials submitted to the PID, I conclude that if Highmark were able to deliver the incremental volumes of inpatient discharges at WPAHS, which is far from certain, WPAHS would benefit significantly from its affiliation with Highmark. If WPAHS is unable to reach breakeven volumes of inpatient discharges by FY15, then WPAHS and Highmark will need to implement additional contingency strategies to achieve sustainable financial viability for WPAHS.

[339] "Highmark/WPAHS Affiliation Update for the Pennsylvania Insurance Department, January 9, 2013."

VI. THE ECONOMIC AND COMPETITIVE EFFECTS OF THE AFFILIATION NOT OCCURRING

A. UPE'S IDN STRATEGY WITHOUT THE WPAHS AFFILIATION

Highmark projects that failure to consummate the WPAHS affiliation will have significant financial implications, which will affect the success of its IDN strategy, and ultimately, its insured members. Without the affiliation, however, Highmark still plans to expend approximately $1 billion on its IDN strategy. Table 29 presents Highmark's planned IDN investments without the Affiliation compared with its Affiliation investment plan. Highmark would limit its investment in WPAHS to its current investment of $200 million and shift the $275 million it would have invested in WPAHS to augment its investments in medical malls and community hospitals as substitutes for care that Highmark would have directed to WPAHS under the Affiliation. Nevertheless, Highmark expects these alternative investments will not deliver the same level of cost savings as would be achieved with the Affiliation. Below, I review Highmark's estimated IDN sources of value and underlying basis for the assumptions used in its financial modeling of the cost savings.

Table 29

Provider Network Stategy Implementation:
Without WPAHS Affiliation
($ millions)

IDN Component	Without WPAHS Affiliation	Incremental Effect of No WPAHS
TOTAL	*$1,000*	*$0*
WPAHS	[redacted]	
Physican Network		
Medical Malls		
Community Hospitals/ Outpatient Services		

1. IDN COST SAVINGS WITHOUT THE WPAHS AFFILIATION

Table 30 summarizes the cost savings under the No Affiliation scenario and the incremental difference in cost savings of the No Affiliation scenario compared with Highmark having an

affiliated WPAHS at the core of its IDN. I also present the incremental effect of No Affiliation on estimated savings compared with estimated savings with the WPAHS affiliation, by source of value. Highmark estimates savings will be $161 million lower by CY16 without the WPAHS affiliation because fewer patients will shift to WPAHS for oncology and other services. With expected higher reimbursement rates at UPMC and WPAHS, Highmark's reimbursements will increase, thus offsetting expected gains from the IDN.[340] By CY2016, the net opportunity of No Affiliation would be $161 million in potential savings related to volume shifting away from UPMC and higher UPMC and WPAHS reimbursements. In addition, Highmark estimates $341 million fewer cost savings from the IDN implementation by CY2016. According to Highmark's estimates, total cost savings will be approximately $503 million less if the Affiliation does not occur.

Table 30

HIGHMARK'S PROJECTED TIMING OF IDN SAVINGS

($MILLIONS)

	NO AFFILIATION WITH WPAHS					INCREMENTAL EFFECT OF NO WPAHS AFFILIATION				
SAVINGS CATEGORY	CY2012	CY2013	CY2014	CY2015	CY2016	CY2012	CY2013	CY2014	CY2015	CY2016
UPMC Out-of-Network										
Oncology shift	[redacted]									
Utilization shift										
Reimbursement										
Subtotal	$35	$114	$138	$200	$146	$4	$50	$105	$215	$161
IDN Implementation										
Healthier Population**										
Right Setting**	[redacted]									
Right Treatment**										
Lower Factor Cost**										
Improved Quality										
Other										
Subtotal	($3)	($17)	($57)	($92)	($90)	$4	$18	$67	$191	$341
*Total**	$32	$96	$81	$107	$56	$6	$69	$171	$405	$503

* Total does not sum due to rounding

Source: Highmark Supplemental Response to PID Information Request 4.2.3; Highmark Discussion, September 14, 2012

A) MITIGATING RELIANCE ON UPMC

As I explained earlier, the first three categories of cost savings in Table 26 reflect planned efforts by Highmark to mitigate its reliance on UPMC. With the IDN and WPAHS affiliation, Highmark expects to shift oncology treatment back to non-outpatient facilities, such as physician offices,

[340] Highmark estimates that without the Affiliation, UPMC will demand higher reimbursement rates, approximately [redacted] higher each year, and WPAHS's likely new owners would demand approximately [redacted] higher reimbursements per year. See Harris Amended Supplement 5 at ¶ 4.

medical malls, or freestanding clinics where reimbursement rates are lower. Many of these opportunities remain since these are not specific to WPAHS and Highmark could shift these opportunities to other outpatient care facilities in the IDN. Nonetheless, Highmark estimates that [redacted] million of the cost savings would disappear in CY2016 if the Affiliation does not occur. This assumes that Highmark would only achieve [redacted] of the originally estimated Affiliation cost savings available through its broad network, which includes UPMC hospitals, and [redacted] of the originally estimated cost savings available through its tiered network. The particulars on how Highmark arrived at these downward adjustments are not clear. As I described earlier, it is my view that shifting a large portion of oncology outpatient volume away from UPMC appears optimistic given UPMC's reputation in delivering oncology services. Volume shifted through Highmark's tiered product seems reasonable given that the intent of joining the narrower network is take advantage of lower premiums by giving up some consumer choice.

The second category of savings captures inpatient shifts out of UPMC into WPAHS and other aligned UPE facilities. In the Affiliation scenario, Highmark projects that 90% of Highmark's reimbursements at UPMC facilities will shift to WPAHS or other aligned Highmark facilities, for its remaining projected enrollees. In the No Affiliation scenario, Highmark assumes that another entity acquires WPAHS and eliminates [redacted] of its assets, either by closing West Penn Hospital or by eliminating unprofitable service lines. This results in a [redacted] volume shift to UPMC for volume originating through Highmark's broad network product. With volume originating through Highmark's tiered product, Highmark assumes that [redacted] of inpatient volume and [redacted] of outpatient volume shifts out of WPAHS with a [redacted] cost savings. Once these savings are weighted by enrollment in the broad and tiered networks, the net effect on cost savings of these volume shifts is only about [redacted] million by CY2015 and CY2016. Lower cost shifting is weighted more than higher cost savings shifts. There is a somewhat larger cost savings in CY2014 since UPMC is still in network.

The cost saving differences between the Affiliation and No Affiliation scenarios incorporate the assumption that a new buyer for WPAHS will shutter West Penn Hospital, or an equivalent amount of service lines within WPAHS. Whether that actually happens with a new buyer seems highly speculative. Excess capacity exists in the WPA service area, particularly in the southwestern PA area surrounding Pittsburgh. Because of the excess capacity in WPA, the assumption is not unreasonable as a downside scenario of what may happen.

Alternatively, however, a new buyer may decide to engage in an investment strategy to attract patients away from UPMC into West Penn Hospital and other WPAHS hospitals, similar to the strategy contemplated by Highmark. Any new buyer of WPAHS should have the same financial incentives to attract as many patients to WPAHS facilities as Highmark would have. Attracting additional volume requires, among others: (1) incentivizing WPAHS physicians to refer patients to WPAHS, (2) engaging in investment strategies to convince patients to choose WPAHS rather than another community hospital or UPMC, (3) improving WPAHS's cost and quality performance to create downward pressure on reimbursement rates, and (4) incentivizing insurers, such as Highmark, through attractive reimbursement rates to make WPAHS an attractive option in health plans. Since this scenario also seems reasonable, it suggests that the increase in reimbursements and lower IDN cost savings projected by Highmark may be a downside scenario.[341]

The last category of IDN value captures the incrementally higher cost of reimbursements for the Highmark members choosing to continue using UPMC after 2014 when UPMC is out-of-network. Highmark assumes 10% of UPMC volume related to emergent care does not shift and that this volume generates higher reimbursement costs, which must be paid at out-of-network rates assumed to be [redacted] of billed charges. In the No Affiliation scenario, Highmark assumes that the new buyer of WPAHS is able to negotiate a [redacted] reimbursement rate increase with Highmark. Because there is no affiliation with WPAHS, Highmark assumes it has less negotiating leverage with UPMC, therefore UPMC remains in-network, and is able to negotiate a [redacted] rate increase with Highmark effective January 2015. Highmark provided Compass Lexecon with information on recent negotiated rates with providers as the foundational basis for its assumptions that reimbursement rates would be higher. I reviewed these highly confidential data and find that these rate increase assumptions are not unreasonable. However, these data appear to be considerably higher than reported norm in most other areas.

By CY2016, the net effect of these higher reimbursements under the No Affiliation scenario is [redacted] million in additional costs, approximately $161 million above the Affiliation scenario, which projected [redacted] million in cost savings. As I indicated earlier, Highmark may be overly

[341] Another potential scenario is the possibility that WPAHS has no alternative buyer and declares bankruptcy. This could lead to an asset sale of individual WPAHS facilities to multiple buyers. Highmark did not model this alternative No Affiliation scenario.

optimistic in its ability to shift patients away from UPMC to other care facilities. In addition, Highmark may not be fully considering the eagerness of a new WPAHS buyer to generate volume for these underutilized assets, which may translate into a willingness to negotiate lower reimbursements rates to drive volume. It is difficult to predict behavior in the abstract. With the great deal of uncertainty surrounding this transaction, Highmark's assumptions are not without foundation and appear to be reasonable given the significant uncertainty surrounding events that would transpire without a Highmark/WPAHS affiliation.

B) IDN IMPLEMENTATION WITHOUT WPAHS AT THE CORE

The IDN's value to Highmark and its insured members derives from six key components: (1) healthier population, (2) right setting of care, (3) right treatment, (4) lower factor costs, (5) improved quality of care, and (6) other, which is primarily therapeutic substitution of treatment. Without the affiliation with WPAHS, Highmark projects that these sources of value will generate $341 million less in cost savings in CY2016 than with the Affiliation (see Table 30 above).

Highmark's "Healthier Population" integrated care strategy, which lowers costs by reducing inpatient hospital volume through improved primary care physician activity, generates [redacted] million in cost savings by CY2016, which is [redacted] million less without the WPAHS affiliation.

Highmark continues to assume a gradual phase in of savings as the integrated patient-centered care strategy is implemented, but without the Affiliation, Highmark projects the savings will be 25% of the Affiliated scenario for savings originating through Highmark's broad network and 50% of the savings in the Affiliated scenario for those savings originating from the Highmark tiered network. Extending the UPMC contract beyond 2014 has negative savings consequences for the broad network since fewer savings are associated with this product and more members chose to remain with the product without the Affiliation.

The Right Setting of Care cost savings derive from shifting certain higher-cost patient care to lower cost facilities capable of providing a more appropriate level of care. Without the WPAHS Affiliation, Highmark projects costs savings in CY2016 would be [redacted] million, [redacted] million less than with the Affiliation. These savings arise from shifting patients to more cost effective care facilities. The ability to do so depends on the relative number of enrollees in the broad and tiered

Highmark products. Without the Affiliation, more enrollees chose to remain in the broad network with access to UPMC facilities, which affects the ability to shift patients to more appropriate, less expensive care settings.

Highmark's Right Treatment strategy generates cost savings by reducing duplicative and unnecessary use of laboratory and imaging services. As with savings from the Right Setting of Care, lower cost savings in the No Affiliation scenario result from the projected higher proportion of Highmark enrollees that chose to remain in the broader network with less opportunity to modify the behavior of physicians and patients. Under the No Affiliation scenario, cost savings are [redacted] million in CY2016, which is [redacted] million less than with the WPAHS affiliation.

Similarly, Highmark projects Factor Costs savings, which includes savings from reducing inpatient length of stay and managing the appropriate selection of joint replacements, will be [redacted] million less without the Affiliation, generating only [redacted] million in savings by CY2016. Cost savings from Improved Quality, which consists of reducing inpatient readmissions and reducing HAI, generates [redacted] million in cost savings by CY2016, [redacted] million less than under the Affiliation scenario. As above, the reduction in savings derives from fewer enrollees in the tiered Highmark product without the Affiliation.

The last category of estimated IDN cost savings derives from Highmark's ability to convince physicians to employ therapeutic substitutions in their practice. Without the Affiliation, the tiered network has fewer enrollees and fewer physicians, which reduces the prospects of modifying physician behavior to adopt therapeutic substitution. This lowers expected cost savings to [redacted] million, which is [redacted] million less than with the WPAHS affiliation.

Overall, without the WPAHS affiliation, Highmark projects net IDN savings of $90 million by CY2016 if there is no WPAHS Affiliation. This is $341 million more in IDN costs than would occur if WPAHS affiliates with Highmark. Together, the UPMC out-of-network costs and the IDN implementation costs results in a net cost increase of $56 million for the IDN by CY2016. Compared with the Affiliation scenario, Highmark's costs are approximately $503 million higher by CY2016 under the No Affiliation scenario. The anemic cost savings from the IDN implementation directly relate to having fewer enrollees in the tiered product, more enrollees choosing to remain in the broader product to access UPMC facilities, and fewer physicians and

providers with the incentive to direct patients to more cost effective healthcare.

The projected lower cost savings without the WPAHS affiliation flow directly from Highmark's ability to project plan enrollment. If fewer enrollees chose the tiered Highmark product because there is no WPAHS affiliation, then reimbursements will be higher and there will be fewer opportunities, according to Highmark, to modify consumer and physician behavior in selecting more cost effective healthcare.

Based on my review of the methodology and assumptions used to estimate these IDN cost savings, with and without the WPAHS affiliation, I conclude that Highmark's estimates have a reasonable economic foundation. There is, however, significant uncertainty underpinning each category of estimated cost savings.

2. IMPACT ON HIGHMARK PREMIUMS OF THE IDN WITHOUT WPAHS AFFILIATION

As Dr. Harris states in his Report, "[i]t is impossible to predict what will happen to all factors that could affect health care premiums if the proposed change of control does not occur."[342] I concur with Dr. Harris's conclusion. In my view, Dr. Harris's statement applies equally in predicting what will happen to all factors affecting health care premiums if the proposed Affiliation occurs. One can never fully eliminate uncertainty; rather, as an economist in my analysis, I acknowledge the presence of uncertainty and ascertain the effect of that uncertainty on any predicted outcome.

Without the WPAHS Affiliation, Highmark will still invest approximately $1 billion to implement its IDN strategy, which Highmark projects will generate approximately $90 million per year in healthcare cost savings by CY2016. Using the cost savings phase-in projections, as shown in Table 28 above, differences in savings relating to Highmark's tiered and broad networks, and enrollees within the service area affected by the IDN, Highmark factors these into a savings of approximately 5.2% from its Business As Usual ("BAU") forecast.[343] From this, Highmark projects a PMPM of [redacted] compared with [redacted] PMPM in the Affiliation scenario. The

[342] Harris Amended Supplement 5 at ¶ 2.

[343] The 5.2% in additional costs results from a weighting of commercial senior broad tiered product, weighted in an average of 5% higher costs, and then weighted that by the discharges affected by the higher costs. Highmark then applies updated enrollment numbers to derive a revised PMPM.