MERGER ANTITRUST LAW

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Georgetown University Law Center
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Tuesdays and Thursdays, 3:00-5:00 pm
Dale Collins
wdc30@georgetown.edu
www.appliedantitrust.com

GRADED WRITTEN ASSIGNMENT

Instructions

Submit by email by 8:00 pm on Monday, November 22
Send to wdc30@georgetown.edu
Subject line: Merger Antitrust Law: Graded Homework Assignment

Assignment

Calls for a memorandum.

You are an attorney in the Defense, Industrials, and Aerospace Section (DIA) of the Antitrust Division. DIA is reviewing Tornado Pens' pending acquisition of Conway Writing Corporation, two fountain pen manufacturers, for $95 million in cash.

The investigating staff recommends that the Division challenge the transaction under Section 7 in the nationwide sales of luxury fountain pens, which the investigating staff defines as fountain pens with a wholesale price of $130 or more. The staff argues that the transaction would produce a combined firm with a 50.6% market share in the staff's proposed market and easily predicate that *Philadelphia National Bank* presumption. The staff argues that the prima facie case is further strengthened by likely coordinated and unilateral anticompetitive effects resulting from the merger. The merging parties vigorously dispute the market definition and urge several alternatives in which they claim the *PNB* presumption is not triggered. The merging parties also dispute that the transaction would produce coordinated or unilateral effects and offer several additional defenses assuming arguendo that the staff can establish a prima facie case. The investigating staff does not credit those defenses.

Joyce Davenport, your section chief, has asked you to prepare a memorandum independently assessing whether DIA should recommend to the Assistant Attorney General that the Division challenge the transaction. In particular, Ms. Davenport is seeking your analysis of how strong the Division's prima facie case of a Section 7 violation is likely to be and whether the Division can defeat the defenses the merging parties advanced during the investigation. Market definition is a central issue in this matter, and, in addition to analyzing the merits of the staff's and merging parties' position, Ms. Davenport invites your thoughts on any alternative market definition and competitive analysis that you believe should be considered. Finally, if you recommend a challenge, Ms. Davenport would like you to address what consent decree relief, if any, the Division should be willing to accept.

The staff's investigation revealed the following facts:

A fountain pen is a writing instrument that uses a metal nib to apply a water-based ink to paper. The pen draws ink from an internal reservoir through a feed to the nib and deposits it on paper through a combination of gravity and capillary action. The fountain pen dates back to 973 when Ma'ad al-Mu'izz, the caliph of the Maghreb, requested a pen that would not stain and was given a pen with a built-in reservoir for the ink that could be held upside down without leaking.[1] Over the centuries, fountain pens improved due to an increased understanding of the role that air pressure plays in the operation of the pen and numerous innovations in more free-flowing inks, the iridium-tipped gold nib, and construction materials. By the 1880s, fountain pens were in mass production, with Waterman of New York City the leading manufacturer, and fountain pens soon became the nation's most popular writing instrument. By the 1960s, however, refinements in ballpoint pens and roller pens gradually ensured their dominance over fountain pens for most uses. That said, fountain pens continue to be the writing instrument of choice for calligraphers and others who view them as superior due to their relative smoothness and versatility. In addition, some fountain pens have become a status symbol as a luxury good, and manufacturers have produced models with status-conscious appeal. In recent years, the demand for fountain pens, especially more expensive pens that some consumers believe reflect prestige or status, has been growing.

Today, fountain pens are differentiated products manufactured and sold on a spectrum of quality and prices. All manufacturers sell and advertise their fountain pens nationwide and wholesale prices of under $35 to over $400 on a continuum with no clear breaking points.[2] Costs, and hence prices, increase as more expensive materials are used and as skilled artisans replace mass manufacturing techniques. Price also increases with consumer perceptions of the "status" or "prestige" associated with the pen. There are no clear "breaking points" in the spectrum of fountain pens and no broadly accepted industry or public segmentation of fountain pens. However, some third-party market research reports divide fountain pens into "writing instruments" where the prestige or status value of the pen is low (fountain pens with a wholesale price of less than $100) and "prestige pens" where purchasers seem to value the pen more for its status than as a writing instrument (fountain pens with a wholesale price of $100 or more).

Image advertising is essential to maintain the "prestige" status of the more expensive fountain pen. Over the last decade, firms with wholesale prices over $100 have consistently followed the industry standard of spending about 10% of their revenues in advertising. This advertising is designed to maintain the prestige image of the pen; very little advertising is on price and there is no comparative advertising against other brands of fountain pens. In addition, to maintain the prestige of their fountain pens, manufacturers with wholesale prices over $100 generally sell through jewelry stores and high-end specialty shops and avoid mass-market outlets such as Target and other department stores. By contrast, manufacturers of fountain pens with wholesale prices under $100 spend a significantly lower portion of their revenues on advertising, advertise

[1] See Clifford E. Bosworth, *A Mediaeval Islamic Prototype of the Fountain Pen?,* 26 J. Semitic Stud. 229 (1981).

[2] In this problem, we will ignore the more expensive fountain pens, including the superexpensive limited edition fountain pens, such as the Caran d'Ache Gothica ($487K), the La Modernista Diamond ($265K), the Prince Rainier III Limited Edition 81 ($256K), and the Montblanc Bohème Papillion Limited Edition ($230K).

more on price rather than image, and sell through mass outlets rather than jewelry stores and high-end specialty shops.

Tornado, the tenth largest fountain pen manufacturer by revenues, produces and sells 360,000 fountain pens in the United States at a wholesale price of $150 with a margin of 40%. Tornado's closest competitors are Conklin ($110) and Quality Writing ($180). Conway, the twelfth largest fountain pen manufacturer, produces and sells 100,000 pens at a wholesale price of $220 with a margin of 50%. Conway's closest competitors are Quality Writing ($180) and Nettuno ($250). The staff also determined that the minimum margin for fountain pens is at least 30% and often much larger, especially for the more expensive pens.

For each manufacturer, wholesale prices are uniform throughout the United States. Although there is some discounting among retailers for pens with a wholesale price of less than $100, all manufacturers that sell pens at $100 or more set suggested retail prices, and retailers consistently follow those suggested prices. Each manufacturer also supports cooperative advertising by its retailers with uniform advertisements throughout the United States. Prices are transparent since retailers readily share price lists they receive from a manufacturer with the manufacturer's competitors.

Ten years ago, the five most expensive fountain pen manufacturers—Tornado, Quality Writing, Conway, Nettuno, and Accutron—formed the Luxury Fountain Pen Association to cooperate in promoting higher-end, more expensive fountain pens. However, the association does not appear to do very much. The association rarely meets, does not have an executive director or staff, and does not collect or distribute any data from its members. Although some members have suggested from time to time that the association should lobby Congress for protective tariffs or collect and distribute market data, there has been insufficient support to move forward.

Relative market shares in fountain pens with wholesale prices over $100 have been stable for many years. Prices for these pens increased at about the same rate as the rate of inflation for jewelry products shown by the U.S. Bureau of Labor Statistics in its Producer Price Index for Jewelry.[3] Although there has been some entry and exit of firms with products with wholesale prices under $100, there has been no attempt at entry by new firms with wholesale prices over $100 for the last decade or more. Nor have incumbent manufacturers introduced new product lines of pens with wholesale prices above $100 in the last ten years. The staff found that it takes years of extensive advertising to establish the "prestige" necessary to sell fountain pens with wholesale prices over $100 in sufficient volume to be profitable. To date, firms have not been willing to make this investment. It also takes extensive additional advertising by an incumbent firm to increase its market share materially. Even with this additional advertising, there is significant risk that the product will not "catch on" with consumers and that other firms will increase their own advertising in response. Even so, demand for fountain pens with wholesale prices over $100 has been steadily increasing in recent years for a number of years. The staff reports that several reputable companies have floated the idea that they might enter with a pen at

[3] *See* U.S. Bureau of Labor Statistics, *Producer Price Index by Industry: Jewelry and Silverware Manufacturing: Jewelry, Gold and Platinum* [PCU3399103399101], *retrieved from* FRED, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org/series/PCU3399103399101.

or above the $100-price point or expand their existing product line to include a higher-priced pen in light of this increasing demand.

In the investigation, Tornado told the staff that the acquisition of Conway would enable Tornado to grow its business, lower its costs, and diversify its product line. Tornado can increase its revenues by about 40% by acquiring Conway. At the same time, Tornado can lower its costs by $2.0 million annually by closing down Conway's headquarters and only production facility; consolidating all back office, sales, and marketing operations into Tornado's existing infrastructure; and moving all production into Tornado's factory. Tornado has sufficient capacity in its single manufacturing facility to absorb all of Conway's production and still have the capacity to significantly expand its production if and when demand warrants, although it will have to transfer some of Conway's artisans to the Tornado facility or hire new artisans to produce the Conway product. Moreover, after the consolidation of Conway into Tornado is complete—Tornado believes it will take about one to two years after the closing—Tornado plans to use part of its profits to launch a new product to compete at the $180 price point with Quality Writing. Tornado believes that it can sell at least 75,000 pens at the $180 price point within two years of introduction and sell even more in the succeeding years. Tornado says it will not have the free cashflow to expand its product line without the Conway acquisition.

The staff has contacted numerous retailers of fountain pens across the spectrum about the transaction. All of the retailers contacted by the staff were indifferent to the transaction; none of them expressed a concern that prices would increase or quality would decrease in any product as a result of the merger. Retailers did agree that some customers will consider Tornado and Conway pens as substitutes for one another. But they also confirmed that customers buying Tornado pens at more likely to look most closely at Conklin and Quality Writing pens as alternatives, while customers buying Conway pens look most closely at Quality Writing and Nettuno pens as alternatives. The staff has also reviewed the documents of the merging parties. The merging parties do not prepare strategic plans or other market analyses, and their documents shed little light on the nature of competition in the fountain pen space.

The investigating staff wants to recommend that the Division challenge the merger. The staff proposes to define the United States as the relevant geographic market and to define a product market of "luxury pens" consisting of fountain pens with wholesale prices of $130 or more. Of the five firms in this market, Tornado is the largest with a 35.9% share and Conway is the third largest with a 14.6% share. The staff proposes to make out its prima facie case primarily on the *PNB* presumption supported by arguments of coordinated and unilateral price effects. The attached tables summarize the staff's findings on the staff's HHI analysis in its luxury fountain pens market (Table 1) and the diversion ratios for the Tornado and Conway products (Table 2).

The merging parties have agreed that the United States is the relevant geographic market. The parties, however, strongly disagree with the staff's proposed market definition and offer three alternatives:

1. *Conglomerate merger*. The products of the two merging companies are sufficiently separated in price and quality so that they do not compete. For the products of each merging firm, two third-party fountain pens are closer substitutes in price, quality,

and consumer preference than the merger partner's product. Since the parties do not compete significantly, the merger will not create any reasonable probability of anticompetitive harm and hence will not violate Section 7.

2. *All fountain pens*. If the products of the merging parties are deemed to be in the same relevant market, then other distant substitute products should also be included in the relevant market. Using this logic, the merging parties contend that a market for luxury fountain pens may not be segregated out from what is a continuum of prices and qualities. Each fountain pen competes closely with the fountain pens with adjacent prices and qualities throughout the overlapping spectrum of pens, so that the relevant market should be all fountain pens. In this all fountain pens market, Tornado and Conway have shares of 8.2% and 3.4%, respectively, for a combined share of only 11.6%, a delta of 55, and a postmerger HHI of 880 (Table 3). The parties claim that these statistics are much too low to create any competitive concerns.
3. *Premium + luxury pens*. If an "all fountain pen" market is too large, then the parties submit that the relevant product market should be no smaller than premium pens ($100 - $130) and luxury pens ($130+).[4] In this market, the Tornado and Conway have shares of 18.9% and 7.7%, respectively, for a combined share of 26.6%, a delta of 292, and a postmerger HHI of 2171 (Table 4), which, the parties again claim, is much too low to create any competitive concerns.

Regardless of the market definition, the merging parties argue that their deal is procompetitive because of the cost savings it generates and the platform it gives the combined company to launch a new product at the $180 price point given the increase in demand in recent years for higher-priced "prestige" pens. Moreover, they argue that the transaction could not be anticompetitive. They say that the companies do not compete significantly against one another, that each merging party has at least two competitors closest to it in price and consumer preference than the merging counterparty, and that the vigorous competition with these closest competitors will not diminish as a result of the merger.

In addition, the merging parties note that both Visconti and Conklin, two significant manufacturers of pens that wholesale at $100 and $110, respectively, have repeatedly expressed interest in adding a more "prestige" pen at a higher price point given the increased consumer demand. The mechanics of fountain pen design are readily available and there are no technological barriers to entry. Tornado believes, and its internal emails confirm this, that if either Visconti or Conklin expanded their product line, they would do so at around the $150 wholesale price point where Tornado is. Tornado submits that it is concerned that any significant increase in the wholesale price of its pen would increase the likelihood that one of these companies would enter the market and compete directly against it at Tornado's price point.

[4] The designation of fountain pens as standard (S), premium (P), or luxury (P) is common in the industry but without any standards pr consistency: what what manufactuer might call a "luxury" pen another manufacturer might consider only a "standard" pen. The particular designation of brands in the table is solely a creation of the staff and the parties in the investigation and do not reflect commonly accepted designations by the merging parties or other fountain pen manufacturers in the regular course of business.

Tornado submits that this concern further incentivizes it not to increase prices anticompetitively even if it had the ability to do so.

Tornado has repeatedly stressed that it has neither the ability nor incentive to raise prices for either product after the merger. In support of its contention, Tornado has offered to accept a consent decree that caps price increases in its existing products to no more than the rate of inflation for jewelry products shown by the U.S. Bureau of Labor Statistics' Producer Price Index for Jewelry. The staff recommends rejecting Tornado's consent decree offer.

The staff has contacted Visconti and Conklin and they each have confirmed their interest in expanding their product line into a more "prestige" pen around the $150 price point. While they each also said an increase in wholesale prices of pens between $130 and $180 would make entry more attractive, neither would say they would enter in that event. Also, both companies said they have not yet designed or test-marketed a new, more "prestige" product, prepared a financial analysis to test the profitability of such a product, or prepared a marketing plan of how they would roll out the product. Each company said that it would take at least a year or more after the product's introduction to conduct the extensive advertising necessary to gain customer acceptance and generate any meaningful sales.

Table 1

Luxury Fountain Pens

Firms	Price	Type	Revenues $	Share	HHI
Tornado (TP)	150	L	$54,000,000	35.93%	1291
QW	180	L	$45,000,000	29.94%	896
Conway	220	L	$22,000,000	14.64%	214
Nettuno	250	L	$17,500,000	11.64%	136
Accutron	295	L	$11,800,000	7.85%	62
			$150,300,000	100.00%	2599
Combined				50.57%	
Pre					2599
Delta					1052
Post					3650

* Type as defined by the investing staff: L (luxury), P (premium), and S (standard)

Table 2

Diversion Ratios

To:	Visconti	Conklin	Tornado	QW	Conway	Nettuno	Accutron
Tornado	0.2	0.3	–	0.4	0.1	0.0	0.0
Conway		0.1	0.2	0.3	–	0.3	0.1

Table 3

All Fountain Pens

Firms	Price	Type*	Revenues $	Revenues Share	Units	Units Share
Picasso	32	S	$48,000,000	7.31%	1,500,000	16.27%
Barker Brothers	50	S	$70,000,000	10.66%	1,400,000	15.18%
Oceanman	50	S	$60,000,000	9.14%	1,200,000	13.02%
Caran	55	S	$49,500,000	7.54%	900,000	9.76%
Pelikan	60	S	$48,000,000	7.31%	800,000	8.68%
Kingsman	70	S	$56,000,000	8.53%	800,000	8.68%
Opus	80	S	$40,000,000	6.09%	500,000	5.42%
Visconti	100	P	$80,000,000	12.18%	800,000	8.68%
Conklin	110	P	$55,000,000	8.37%	500,000	5.42%
Tornado (TP)	150	L	$54,000,000	8.22%	360,000	3.90%
QW	180	L	$45,000,000	6.85%	250,000	2.71%
Conway	220	L	$22,000,000	3.35%	100,000	1.08%
Nettuno	250	L	$17,500,000	2.66%	70,000	0.76%
Accutron	295	L	$11,800,000	1.80%	40,000	0.43%
			$656,800,000	100.00%	9,220,000	100.00%
Combined				11.57%		
Pre				825		
Delta				55		
Post				880		

* Type as defined by the investing staff: L (luxury), P (premium), and S (standard)

Table 4

Luxury + Premium

	Price	Type	Revenues $	Revenues Share	HHI
Visconti	100	P	$80,000,000	28.04%	786
Conklin	110	P	$55,000,000	19.28%	372
Tornado (TP)	150	L	$54,000,000	18.93%	358
QW	180	L	$45,000,000	15.77%	249
Conway	220	L	$22,000,000	7.71%	59
Nettuno	250	L	$17,500,000	6.13%	38
Accutron	295	L	$11,800,000	4.14%	17
			$285,300,000	100.00%	1879
Combined				26.64%	
Pre				1879	
Delta				292	
Post				2171	

MEMORANDUM OF LAW VERSION

Note: This answer is much longer and more detailed on the explanation than anything I would expect for a graded homework assignment or an exam answer. I prepared this to further explain the law and the reasoning. You should be thinking about what "boilerplate" descriptions of legal concepts and economic tools you should prepare in advance to cut and paste into the exam answer. You should also be thinking about strategies for writing a more compact memorandum that addresses each element of the prima facie case and each defense.

To: Joyce Davenport

From: Dale Collins

Tornado/Conway Fountain Pen Merger[1,2,3]

You have asked me to assess whether DIA should recommend that to the Assistant Attorney General that the Division challenge Tornado Pens' pending acquisition of Conway Writing Corporation, two fountain pen manufacturers, for $95 million in cash. In particular, you asked that I assess how strong the Division's prima facie case of a Section 7 violation is likely to be and whether the Division can defeat the defenses the merging parties advanced during the investigation. If I recommend a challenge, you have also asked me to address consent decree relief, if any, the Division should be willing to accept.

Application of the *Brown Shoe* "outer boundary" and "practical indicia" factors, as well as the hypothetical monopolist test, show that the only two credible markets are either a seven-firm premium plus luxury pen market or a five-firm "symmetric market" that eliminates the firms on the inside edge of the seven-firm market on both sides of the price continuum. Between the two, the *Brown Shoe* indicia somewhat favor the seven-product market. Moreover, a court is very likely to find that the merger in the seven-firm market fails to trigger the *PNB* presumption under

[1] **Note to students:** A few of you wrote in a more colloquial conversational style, using words and phrases such as "lukewarm" competition, "the big knock against this theory," and "fervently believe." The work product here is a formal memorandum of law. While some readers find a colloquial style fine if not refreshing, others find it to be seriously deficient and indicating a lack of seriousness. Because you do not get much credit and can be severely criticized for writing conversationally, the better course of action is to stay formal and avoid colloquialisms. This does *not* mean you have to write in a stilted style—just keep the writing clear, grammatically correct, and without colloquialisms.

[2] **Note to students:** Some of you waffled on whether the DIA should recommend that the transaction be challenged. In assignments of this type, make a clear recommendation one way or the other. You can qualify your recommendation as weak if you like and lay out the negatives, but when asked a question be sure to answer it straightforwardly.

[3] **Note to students:** Be sure that your conclusions at the beginning of the memorandum are consistent with the conclusions you drew when doing the analysis. Some of you, for example, said in the conclusion at the beginning of the memorandum that the Division should allege in the alternative a premium + luxury market and a luxury only market, but in the analysis drew the conclusion that luxury only was not a relevant market. Inconsistencies of this type undermine confidence in your memorandum. In an untimed exercise, you need to make sure that you are being consistent throughout the memorandum. I appreciate that this is more difficult in a timed exam, but that is why you need to at least tentatively specify your conclusions before you start writing and then modify them as necessary as you write.

either judicial precedent or the merger guidelines, and the argument for triggering the *PNB* presumption is only slightly better in the five-firm market.

Given the weakness of the HHI statistics, the court almost surely will look to whether there is any substantial additional evidence supporting a finding of likely anticompetitive effect. The unilateral price effects argument is very weak because of the very small magnitude of the simulated profit-maximizing unilateral price increases. The unilateral profit-maximizing price increases would be about 4.0% for Tornado and 2.5% for Conway, the price increases would generate minimal profit gains pf $180,000 and $32,500, respectively, and would only increase the combined firm's profit over premerger prices by 0.55% and 0.10%, respectively. A court could easily be persuaded that no firm would increase its prices and risk its customer goodwill for so little profit gain. There is no evidentiary support for likely anticompetitive harm based on coordinated effects or the elimination of a maverick.

Notably, in an extensive field investigation, the staff could find no retail customers who had competitive concerns about the transaction. All of the retailers contacted by the staff were indifferent to the transaction; none of them expressed a concern that prices would increase or quality would decrease in any product as a result of the merger. The Division would no customers testifying at trial to support a finding of anticompetitive effect. If the Division proceeds to litigate, this case will be almost unique for the absence of supporting customer witnesses.

The parties offer two procompetitive benefits of the transaction—cost-savings a new product introduction at the $180 price point against Quality Writing—and a "limit pricing" entry defense against any anticompetitive price increase in Tornado pens. While the procompetitive benefits arguments almost surely fail as technical legal defenses, a court nonetheless could find as a matter of discretion that these factors weigh in favor of finding for the merging parties. On the other hand, the "limit pricing" entry defense may be a meritorious defense against a price increase in Tornado pens.

Finally, but very importantly, if convinced that the transaction is not likely to be anticompetitive, the court can avoid any careful parsing of the evidence or the judicial precedent by simply finding that the relevant market is the seven-firm market.

On the investigation record, the case is too weak to warrant the expenditure of the Division's resources. We should recommend that the Assistant Attorney General close the investigation without taking enforcement act.

Introduction

Section 7 of the Clayton Act prohibits mergers and acquisitions "where in any line of commerce or in any activity affecting commerce in any section of the country, the effect of such acquisition may be substantially to lessen competition, or to tend to create a monopoly." 15 U.S.C. § 18. By its terms, a Section 7 violation contains three essential elements: (1) a relevant product market ("line of commerce"), (2) a relevant geographic market ("section of the country"), and (3) a reasonably probable anticompetitive effect in the relevant market (that is, the combination of the relevant product market and the relevant geographic market).

Tornado's acquisition of Conway is a horizontal acquisition because, as discussed below, the transaction combines two competitors in the production and sale of fountain pens. In horizontal cases, courts have adopted a three-step burden-shifting procedure:

1. The plaintiff bears the burden of proof in market definition and in market shares and market concentration within the relevant market sufficient to trigger the *PNB* presumption (explained below) or otherwise make out a prima facie case of anticompetitive effect.
2. Once the plaintiff has made a prima facie showing of a Section 7 violation, the burden of production then shifts to the defendant to adduce evidence sufficient to create a genuine issue of fact on at least one element of the prima facie for the trier of fact to decide.
3. If the defendant discharges its burden of production, the burden of persuasion returns to the plaintiff to prove in light of all of the evidence in the record that the merger is reasonably probable to have an anticompetitive effect in a relevant market.

See United States v. Baker Hughes, Inc., 908 F.2d 981, 982-83 (D.C. Cir. 1990). Although not required, the plaintiff may strengthen its prima facie case by presenting additional evidence supporting a finding that the transaction is anticompetitive. Courts apply a "sliding scale" approach to the defendant's burden in Step 2 above so that the stronger the plaintiff's prima facie case, the higher the defendant's quantum of proof to discharge its burden of production for putting the plaintiff's prima facie case in issue. *Id*. at 983.

The DOJ/FTC 2010 Horizontal Merger Guidelines focus more on competitive effects and do not strictly require a showing of a relevant market. However, if the parties put the Division to its proof in court, the Division will have to prove a relevant market under prevailing case law precedent. As to the showing of anticompetitive effects, the courts continue to employ the *Philadelphia National Bank* presumption in assessing a prima facie case. They also have largely accepted the theories of anticompetitive harm in the Merger Guidelines to further strengthen the prima facie case. Accordingly, I will analyze the merits of a challenge under the usual judicial framework:

1. The prima facie Section 7 case
    a. The relevant product market
    b. The relevant geographic market
    c. Market shares, concentration, and the *PNB* presumption
    d. Additional evidence supporting the prima facie case
2. The defendants' arguments of procompetitive benefits
3. Conclusion on Section 7 legality

At the end of the memorandum, I will address possible consent decree relief.

1. The prima facie Section 7 case

The plaintiff must present evidence that permits the trier of fact to find the existence of each of the three essential elements of a Section 7 violation: (1) the relevant product market ("line of

commerce"), (2) the relevant geographic market ("section of the country"), and (3) a reasonably probable anticompetitive effect in the relevant market.

a. The relevant product market

The staff proposes a "luxury fountain pen" product market comprised of fountain pens with wholesale prices from $100 to $400. The merging parties disagree, and offer three alternative product market definitions: (1) separate markets for Tornado and Conway, making the acquisition conglomerate; (2) if instead Tornado and Conway are deemed to compete, an "all fountain pens" market; or (3) if rejected as too large, then a "luxury + premium fountain pens" market consisting of pens with wholesale prices of $100 or more.

There are two complementary approaches to product market definition: the *Brown Shoe* "outer boundaries" and "practical indicia" criteria and the hypothetical monopolist test.

First, under *Brown Shoe*, the "outer boundaries" of the relevant product market "are determined by the reasonable interchangeability of use or the cross-elasticity of demand between the product itself and substitutes for it." *Brown Shoe Co. v. United States*, 370 U.S. 294, 325 (1962). The idea is that relevant markets should contain products that have high substitutability with one another (cross-elasticity or diversion ratios) and therefore materials constrain each other's prices and exclude products that have low substitutability with other products in the market.[4] Moreover, "within this broad market, well-defined submarkets may exist which, in themselves, constitute product markets for antitrust purposes. The boundaries of such a submarket may be determined by examining such practical indicia as industry or public recognition of the submarket as a separate economic entity, the product's peculiar characteristics and uses, unique production facilities, distinct customers, distinct prices, sensitivity to price changes, and specialized vendors." *Id*. (internal citations and footnotes omitted). The original purpose of the *Brown Shoe* "practical indicia" was to enable the finding of relevant "submarkets" within larger markets defined by the "outer boundaries" test. Modern courts, however, do not view submarkets as any different from markets and regard the *Brown Shoe* "practical indicia" as factors qualitatively probative of reasonable interchangeability of use and high cross-elasticity of demand.

Second, the "hypothetical monopolist test," which was introduced by the Merger Guidelines in 1982 and now adopted in one form or another by the courts, deems a product grouping ("candidate market") as a relevant market if a hypothetical monopolist of all products in the product group could profitably raise the prices in the product grouping by a small but significant nontransitory price (SSNIP), usually taken to be 5% for a period of one year. The hypothetical monopolist test is a quantitative test. The current 2010 Merger Guidelines have modified the hypothetical monopolist test in two significant ways:

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[4] **Note to students**. I added this sentence because some of you thought that "all fountain pens" satisfied the *Brown Shoe* "outer boundaries" test because of high cross-elasticities among some of the products but ignored the fact that pens with wholesale prices of less than $100 had low substitutability with pens with wholesale prices of $100 or more. This lack of substitutability between the two groups of pens precluded their inclusion in the same market. Most of you who made this mistake also said that the "all fountain pens" failed the *Brown Shoe* practical indicia but failed to recognize that in the modern case law the *Brown Shoe* practical indicia are simply qualitative evidence probative one way or the other of substitutability. In modern antitrust, there is really only one *Brown Shoe* test.

1. Originally, the hypothetical monopolist test only deemed the smallest product grouping that satisfied the test to be a relevant market (the "smallest market principle"). However, under the 2010 Merger Guidelines, while the smallest market principle remains the preferred approach, a larger market can be used where appropriate to reflect the economic realities.[5,6]

2. Originally, the hypothetical monopolist test required the hypothetical monopolist to increase the prices uniformly of all of the products in the candidate market. The 2010 Merger Guidelines, however, permit the hypothetical monopolist to raise the prices of one or more products selectively while leaving the prices of the other products constant, provided that at least one of the products subject to the price increase is a product of a merging firm. The hypothetical monopolist test requires only that the hypothetical monopolist be able to profitably raise the price of a *single* product in the product group for the product grouping to be a relevant market.[7]

The courts are increasingly adopting these modifications. In particular, the modern courts are using the one-product SSNIP test to define markets. *See, e.g.*, *FTC v. RAG-Stiftung*, 436 F. Supp. 3d 278, 293 (D.D.C. 2020); *FTC v. Wilh. Wilhelmsen Holding ASA*, 341 F. Supp. 3d 27, 47 (D.D.C. 2018); *United States v. Anthem, Inc.*, 236 F. Supp. 3d 171, 198 (D.D.C. 2017); *United States v. Aetna Inc.*, 240 F. Supp. 3d 1, 20 (D.D.C. 2017); *FTC v. Staples, Inc.*, 190 F. Supp. 3d 100, 121 (D.D.C. 2016); *FTC v. Sysco Corp.*, 113 F. Supp. 3d 1, 33 (D.D.C. 2015); *United States v. H & R Block, Inc.*, 833 F. Supp. 2d 36, 51-52 (D.D.C. 2011).

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[5] The 2010 Horizontal Merger Guidelines provide:

> The hypothetical monopolist test ensures that markets are not defined too narrowly, but it does not lead to a single relevant market. The Agencies may evaluate a merger in any relevant market satisfying the test, guided by the overarching principle that the purpose of defining the market and measuring market shares is to illuminate the evaluation of competitive effects. Because the relative competitive significance of more distant substitutes is apt to be overstated by their share of sales, when the Agencies rely on market shares and concentration, they usually do so in the smallest relevant market satisfying the hypothetical monopolist test.

U.S. Dep't of Justice & Fed. Trade Comm'n, Horizontal Merger Guidelines § 4.4.1 (rev. 2010). The subsection ends with an example stating that in a merger of two leading motorcycle brands, cars should not be included in the relevant market if motorcycles by themselves satisfy the hypothetical monopolist test. *Id*. (Example 4).

[6] **Note to students**: As we have discussed, prior to 2010 the agencies on occasion had alleged relevant markets that satisfied the smallest market principle but did not look like any market or product grouping the industry or its customers had ever recognized. Courts tended to hold this departure from the "business realities" against the agency in rejecting the agency's market definition. The 2010 Horizontal Merger Guidelines rectified this problem by recognizing broader markets that reflect the business realities. The FTC did this, for example, in alleging its market for DDIY tax preparation software in *H&R Block*. The FTC defined the market to include all DDIY tax products, although any two of the three major products satisfied the hypothetical monopolist test and hence the all DDIY tax products market did not satisfy the smallest market principle.

[7] **Note to students:** I could have added a third change—the arguable shift from a profitability interpretation of the HMT to a profit-maximization interpretation. As we discussed in class, however, the agencies in practice continue to use a profitability test in their investigations and, in court, the majority of courts have continued to use the profitability test, and the instances in which the two tests diverge will be rare. Accordingly, there is no need to discuss the profit-maximization test, although there would be no harm in dropping a footnote to it.

Do Tornado and Conway compete? Given the merging parties' arguments, we first should assess the evidence on whether the merging parties compete. Both companies are on the higher end of fountain pens as reflected in their respective wholesale prices ($150 and $220, respectively). While there is a significant price difference between the two products, the staff's investigation shows that they do compete with one another in the sense that they have positive diversion ratios. If Tornado was to increase its price and all other pen manufacturers held their prices constant, 10% of Tornado's lost marginal sales would divert to Conway. Conversely, if Conway was to increase its price and all other pen manufacturers held their prices constant, 20% of Tornado's lost marginal sales would divert to Conway. While other pen brands may have higher diversion ratios, these diversion ratios are not insignificant and indicate meaningful competition between the two merging companies.

Moreover, if we posit a two-product candidate market consisting of only Tornado and Conway pens, a hypothetical monopolist (i.e., the combined firm) could profitably increase prices by a 5% SSNIP. We can show this using a one-product 5% SSNIP recapture test, where:

$$R^{1}_{Critical} = \frac{\$\text{SSNIP}_1}{\$m_{RAve}}.$$

For 5% SSNIP, the $SSNIP for Tornado is $7.50 (= 5% × $150) and the dollar margin of the other product (Conway) is $110 (= 50% × $220). For 5% SSNIP, the $SSNIP for Conway is $11.00 (= 5% × $220) and the dollar margin of the other product (Tornado) is $60 (= 40% × $150). The critical recapture ratios are then:

$$R^{Tornado}_{Critical} = \frac{\$\text{SSNIP}_{Tornado}}{\$m_{Conway}} = \frac{7.5}{110} = 6.8\%$$

$$R^{Conway}_{Critical} = \frac{\$\text{SSNIP}_{Conway}}{\$m_{Tornado}} = \frac{11}{60} = 18.3\%.$$

.

From Table 2, the actual diversion ratio from Tornado to Conway is 10%, while the actual diversion ratio from Conway to Tornado is 20%. A Tornado-Conway product grouping is then a relevant market under the hypothetical monopolist test. This further confirms that Tornado and Conway compete and that the parties' argument that the transaction is a conglomerate merger should be rejected.

Note to students: You could have implemented the one-product SSNIP recapture test using brute force accounting:

Brute force accounting: Tornado + Conway Market

	SSNIP imposed on:	
	Tornado	Conway
Gain on inframarginal sales		
Price	150	220
δ =	5.00%	5.00%
$SSNIP = δp =	7.50	11.00
q =	360,000	100,000
$\varepsilon = 1/m$ =	2.5	2
$\%\Delta q = \delta\varepsilon$ =	0.125	0.1
$\Delta q = \%\Delta q \times q$ =	45,000	10,000
$q2 = q - \Delta q$ =	315,000	90,000
Gain =	2,362,500	990,000
Loss on marginal sales		
\$m = %m × p =	60	110
Δq =	45,000	10,000
Loss = \$m × Δq =	2,700,000	1,100,000
NET firm 1 =	-337,500	-110,000
Gain on recapture		
Δq =	45,000	10,000.00
D	0.1	0.2
Rec. units = $D\Delta q$ =	4,500	2000
$\$m_{Recapture}$	110	60
Gain	495,000	120,000
NET GAIN HM	157,500	10,000

Since the net gain to the hypothetical monopolist after recapture is positive, Tornado and Conway are a relevant product market under the hypothetical monopolist test.

End of note

While a two-product market of Tornado and Conway pens would make the proposed transaction a merger to monopoly, the courts will not accept this product grouping as the relevant market in which to analyze the transaction. Most importantly, this product grouping excludes the first (QW) and second (Conklin) most competitive products with Tornado pens as shown by their diversion ratios. Conversely, it excludes the two most competitive products with Conway pens (QW and Nettuno). In light of these exclusions, it is unlikely that a court would accept a Tornado-Conway product grouping as a relevant market. Almost surely, the court would insist that the relevant market include at least the products more competitive with a merging product than the other merging product. Accordingly, the court is likely to require that the relevant market include Conklin, QW, and Nettuno together with Tornado and Conway. Curiously, this is not a relevant market that neither the staff nor the parties have suggested. The question is whether the court is likely to require more products to be included.

All fountain pens. The parties observe that there are no recognized breaking points in the continuum of fountain pens, so if Tornado and Conway compete, then all fountain pens should be in the relevant market. Under the Merger Guidelines, all fountain pens satisfy the hypothetical monopolist test. Since a hypothetical monopolist can selectively choose on which products in the candidate market the SSNIP is imposed, any superset of a relevant market will satisfy the HMT: the monopolist simply chooses to impose the SSNIP on the same products as in the smaller relevant market, and the recapture within the other products that comprised the smaller relevant market will make the SSNIP profitable regardless of any recapture by other products in the broader candidate market.

Note to students: Many of you performed a one-product SSNIP recapture sufficiency test here. If you did not already show that a smaller product grouping satisfied the HMT, you needed to perform some HMT test.

Impose the SSNIP on one of the products of the merging firms, say, Tornado. We know the minimum price ($32) and minimum percentage margin (30%) for the "other" products, so:

$$\overline{R}^{1}_{Critical} = \frac{\$SSNIP_1}{p_{R\min} m_{R\min}} = \frac{(0.05)(150)}{(32)(0.30)} = \frac{7.5}{9.6} = 78.125\%.$$

This is an upper bound of the critical recapture rate, so if the actual recapture rate is greater than this upper bound, it is necessarily greater than the critical recapture rate and so satisfies the HMT.

Here, the actual recapture rate of Tornado in the candidate all fountain pen market is 1. Therefore, all fountain pens satisfy the HMT.[8]

End of note

But under both judicial precedent and the Merger Guidelines, even if the broader market satisfies the HMT, it should not be treated as a relevant market if it contains products that are at best distant substitutes to the products of the merging firms, especially when the distant products have high volumes. As the 2010 Merger Guidelines state:

> Although excluding more distant substitutes from the market inevitably understates their competitive significance to some degree, doing so often provides a more accurate indicator of the competitive effects of the merger than would the alternative of including them and overstating their competitive significance as proportional to their shares in an expanded market.

2010 Horizontal Merger Guidelines § 4.1.1. The all fountain pen market presents an extreme case for a smaller market. Here, the diversion ratios in Table 2 show that neither Tornado nor Conway would lose any sales to fountain pens with wholesale prices of less than $100. Moreover, the data in Table 1 shows that pens earned almost 63% of all revenues in fountain pens with a wholesale price of $60—only 40% of the price of a Tornado pen and just 27% of the

8 **Note to students:** Some of you used the recapture share-weighted version of a one-product SSNIP test. Although this is the more accurate test since it provides the correct critical recapture ratio rather than an upper bound, the problem is that you have to guess at the Quality Writing margin. Rather than guess, you should first have used the data that you were provided to do a sufficiently test. Only if that test and the corresponding sufficiency test for the other merging product had failed, should you have proceeded to the recapture share-share weighted version of the test. Do *not* guess at the value of variables unless absolutely necessary.

price of a Conway pen. The large sales volumes of the lower-priced pens that do not compete with either of the merging products—and no court could reasonably think they do—reduces the market shares of the merging parties and other higher-priced pens. This obscures the competitive interaction among the higher-priced pens and the likely competitive effect of the merger. Indeed, Table 3 shows that in the all fountain pen market, the transaction results in a combined firm of 11.57%, a delta of 55, and a postmerger HHI of 880, well below both the Merger Guidelines thresholds and judicial precedent for finding a likely anticompetitive effect. While the transaction may or may not be problematic, the competitive effects analysis should not be preempted by low market share and concentration statistics resulting from including noncompetitive products in the market definition.

Since there are other, smaller product groupings that better comport with the "commercial realities," it is unlikely that a court would agree that the all fountain pen market is the proper relevant product market in which to evaluate the Tornado Pens/Conway transaction.

Premium + luxury fountain pens. The merging parties, presumably recognizing the weakness in their proposed all fountain pen market, argue in the alternative for a relevant market consisting of premium plus luxury fountains pens (that is, all fountain pens with wholesale prices of $100 or more). This market consists of seven firms and total revenues of $285.3K. See Table 4.

Here, the parties have a stronger argument. First, premium plus luxury pens are a superset of the smaller relevant market of Tornado-Conway pens, so premium plus luxury pens satisfy the HMT. Second, this product grouping recaptures 100% of both Tornado's and Conway's lost marginal sales. Table 2. Third, premium and luxury pens, although differentiated, share certain "practical indicia" of cross-elasticity of demand: they are all pens designed and advertised to appeal to consumers seeking a "status" product and not simply a good writing instrument, their manufacturers typically spend 10% of their revenues on image advertising, and the products are sold through jewelry stores and high-end specialty shops. By contrast, lower-priced pens are not regarded as a "status" symbol, their manufacturers spend significantly less than 10% of their revenues on advertising and advertise more on price rather than image, and these pens are sold in mass outlets rather than jewelry stores and high-end-specialty shops. Fourth, the staff found that it takes years of extensive advertising to establish the "prestige" necessary to sell fountain pens with wholesale prices over $100 in sufficient volume to be profitable, while presumably such advertising is not necessary for pens that sell at wholesale prices below $100. Fifth, although there is some discounting among retailers for pens with a wholesale price of less than $100, all manufacturers that sell pens at $100 or more set suggested retail prices, and retailers consistently follow those suggested prices. Finally, although there is no accepted industry or public segmentation of fountain pens, some third-party market research reports divide fountain pens into "writing instruments" where the prestige or status value of the pen is low (fountain pens with a wholesale price of less than $100) and "prestige pens" where purchasers seem to value the pen more for its status than as a writing instrument (fountain pens with a wholesale price of $100 or more)

Luxury pens. The investigating staff proposes a relevant product market consisting of pens with wholesale prices of $130 or more. This eliminates Visconti and Conklin from the market, reduces total market revenues from $285.3K to $150.3K, and corresponding increases the market shares of the remaining five firms. Since luxury pens are a superset of the Tornado-Conway product grouping, we know that a hypothetical monopolist could selectively impose profitable SSNIPs on products within luxury pens.

From Table 2, this market recaptures 50% of Tornado's lost marginal sales and 90% of Conway's lost marginal sales, so most of the competition for the products of the merging firms are captured in this market while eliminating two firms that compete with Tornado and no firms that compete with Conway. Moreover, the five firms in this market comprise the Luxury Fountain Pen trade association to cooperate in promoting higher-end, more expensive fountain pens.

On the other hand, a court very well could be concerned that the market was gerrymandered to remove Conklin and Visconti, two high-volume manufacturers, from the market to increase the shares of the merging parties and so failed to comport with the commercial realities of the marketplace. The diversion ratio from Tornado to Conklin is 0.3, making Conklin the second closest competitor to Tornado after QW (diversion ratio 0.4) and a much closest competitor than Conway (diversion ratio 0.1). But even Visconti has a diversion ratio from Tornado of 0.2, making it a closer competitor to Tornado than Conway. The argument for excluding Conklin and Visconti becomes even weaker when we observe that the staff's proposed market contains Accutron and Nettuno, neither of which competes with Tornado at all. Finally, Accuton competes only weaker with Conway, with a diversion ratio from Conway of 0.1, while the excluded Conklin and Visconti pens have diversion ratios at least as great or greater from Tornado (0.3 and 0.1, respectively).

Given these internal inconsistencies and tension with the "commercial realities," I do not believe that we can rely on this market definition as the prevailing one in litigation.

Another possibility—a five-product symmetrical market. I suspect that, we were to litigate, the best market advance would be a symmetric one: the merging parties (Tornado and Conway) and for each the merging products, the two products that are their closest competitors as shown by their diversion ratios (QW and Conklin for Tornado; QW and Nettuno for Conway). In this market, the recapture ratios are 0.8 for Tornado and 0.9 for Conway, so the market accounts for the vast bulk of the competitive forces on the combined firm.

Note to students: Some of you performed a one-product SSNIP recapture sufficiency test here.

Impose the SSNIP on one of the products of the merging firms, say, Tornado. We know the minimum price for the five-product market for the "other" products is \$110 and the minimum percentage margin is 30% for the "other" products, so:

$$\overline{R}^{1}_{Critical} = \frac{\$SSNIP_1}{p_{R\min} m_{R\min}} = \frac{(0.05)(150)}{(110)(0.30)} = \frac{7.5}{33} = 22.73\%.$$

This is an upper bound of the critical recapture rate, so if the actual recapture rate is greater than this upper bound, it is necessarily greater than the critical recapture rate and so satisfies the HMT.

Here, the actual recapture rate of Tornado in the candidate five-product pen market is 0.8 (from Table 2). Therefore, five-product pen market satisfy the HMT.

End of note

Conclusions on the relevant product market. For the reasons described above, we should have reasonably high confidence that a court would reject the parties' contention that Tornado and Conway do not compete and find instead that their merger is horizontal. We also should have

reasonably high confidence that the court will reject an "all fountain pens" market as too broad under *Brown Shoe* and the Merger Guidelines. On the other hand, it is likely that the court would reject the staff's proposed luxury fountain pen market as gerrymandered because it fails to include high volume two fountain pen brands more competitive with Tornado than is Conway (Conklin and Visconti, as shown by the diversion ratios).[9]

On the weight of the available evidence in the investigation, the premium plus luxury pen market proposed by the merging parties appears to be the court's most likely choice of relevant product market. This alternative includes the two Tornado competitors missing in the staff's luxury fountain pen market. It is also symmetrical in the sense that it includes two brands that a lower-priced than Tornado and two brands that are higher-priced than Tornado. Finally, although particularly strong, the *Brown Shoe* qualitative evidence supports this market more than the alternatives.

Another possibility, not offered by the staff or the merging parties is a five-product "symmetrical" market that includes only one brand that is lower-priced than Tornado (Conklin) and one brand that is higher-priced than Tornado (Nettuno). Like the seven-product market, the five-product market is symmetrical on the fountain pen price spectrum and avoids any appearance of gerrymandering. The seven-product market has the advantage of including a closer competitor to Tornado than Conway (Visconti), but the five-product market has the advantage of a smaller market (if the court gives any weight in the direction of the smallest market principle).

In reality, the court's choice could depend on whether one market or the other better supports a finding consistent with the court's belief about the competitive effect of the transaction. We will turn to competitive effects after first considering the relevant geographic market.

b. The relevant geographic market

The second essential element of a prima facie Section 7 case is the relevant geographic market. In *Philadelphia National Bank*, the Supreme Court has defined the relevant geographic market to be "the area of effective competition . . . in which the seller operates, and to which the purchaser can practically turn for supplies." *United States v. Philadelphia Nat'l Bank*, 374 U.S. 321, 359 (1963) (emphasis removed). The relevant geographic market also may be assessed using the hypothetical monopolist test.

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[9] **Note to students:** Some of you thought that if the merger triggered the *PNB* presumption in any product grouping that satisfied the HMT (here, luxury pens), then the Division could establish a prima face case of anticompetitive effect. relevant market. As I said in my note of November 17, a product grouping that satisfies the HMT may still not be a relevant market. That is what the merging parties are arguing here: luxury pens are too gerrymandered and inconsistent with the "commercial realities" to be a relevant market. They argue that proper relevant market in which to assess this transaction is either all fountain pens or premium plus luxury fountain pens, and in either of these product groupings there is not a likely anticompetitive effect resulting from the merger. Unless you are going to concede the case, you need to confront their argument somewhere in the memorandum and argue that your market better reflects the commercial realties and gives a more realistic assessment of the likely competitive effects of the transaction than their alternative markets. (Think *H&R Block/TaxACT*, where the court was confronted with two opposing market definitions: it chose one and rejected the other).

The merging parties agree,[10] and a court should be readily convinced, that the relevant geographic market is the United States. Manufacturers advertise and sell their fountain pens nationwide. Each manufacturer of fountain pens sells its product at a uniform price throughout the country. Courts have held that where the companies in the relevant product market sell their products nationwide at uniform prices, the United States is a relevant geographic market. The Merger Guidelines recognize this principle as well. Each manufacturer also supports cooperative advertising by its retailers with uniform advertisements throughout the United States. Moreover, we know that the hypothetical monopolist test is satisfied in a national market. (The math is the same here as in the relevant product market analysis above.) These facts confirm that the relevant geographic market is the United States.

c. Market shares, concentration, and the *PNB* presumption

In *Philadelphia National Bank*, the Supreme Court held that "a merger which produces a firm controlling an undue percentage of the relevant market, and results in a significant increase in the concentration of firms in that market, is so inherently likely to lessen competition substantially that it is must be enjoined in the absence of evidence clearly showing that the merger is not likely to have such anticompetitive effects." *United States v. Philadelphia National Bank*, 374 U.S. 321, 363 (1963). Specifically, the court held that a combined firm with at least 30% share and an increase in the 2-firm concentration ratio from 44% to 59% was sufficient to constitute "undue market share" and cause a "significant increase in concentration" to predicate the *PNB* presumption. The 2010 Guidelines provide that mergers in markets with a postmerger HHI above 2500 and a delta of 200 or more "will be presumed to be likely to enhance market power" and be sufficient to predicate the *PNB* presumption. Although the Guidelines are not binding on courts, modern courts frequently cite the Guidelines as supporting authority when finding mergers that increase the HHI by 200 or more points and result in a postmerger HHI of 2500 satisfy the predicates for the *PNB* presumption. *See, e.g.*, *United States v. Anthem, Inc.*, 855 F.3d 345, 349 (D.C. Cir. 2017); *FTC v. Penn State Hershey Med. Ctr.*, 838 F.3d 327, 347 (3d Cir. 2016); *Saint Alphonsus Med. Ctr.-Nampa Inc. v. St. Luke's Health Sys., Ltd.*, 778 F.3d 775, 786 (9th Cir. 2015); *ProMedica Health Sys., Inc. v. FTC*, 749 F.3d 559, 568 (6th Cir. 2014); *FTC v. Staples, Inc.*, 190 F. Supp. 3d 100, 128 (D.D.C. 2016) ("Staples' proposed acquisition of Office Depot is therefore presumptively illegal because the HHI increases more than 200 points and the postmerger HHI is greater than 2,500."). The Guidelines also provide that in moderately concentrated markets (that is, markets with an HHI between 1500 and 2500), transactions that increase the HHI by more than 100 points "potentially raise significant competitive concerns and often warrant scrutiny."

For the reasons discussed in the product market definition section above, in litigation the court is most likely to reject all market definitions except for two "symmetrical" ones: the seven-product premium plus luxury fountain pen market proposed by the merging parties and a five-product market that eliminates the outlying product on both sides of the price spectrum.

[10] **Note to students**: Many of you failed to note that the merging parties agreed that the relevant geographic market is the United States. This is as important as anything you can cite, since it means that the relevant geographic market will not be an issue in litigation. Those of you who missed it just followed the form of prior answers too closely.

Tables 1 and 4 give the combined market share and HHI statistics for the staff's luxury pen market and the parties' proposed seven-product premium + luxury fountain pen market. The table below calculates the same statistics in the five-product market:

Five-Product "Symmetrical" Market

	Price	Revenues $	Share	HHI
Conklin	110	$55,000,000	28.42%	808
Tornado	150	$54,000,000	27.91%	779
QW	180	$45,000,000	23.26%	541
Conway	220	$22,000,000	11.37%	129
Nettuno	250	$17,500,000	9.04%	82
		$193,500,000	100.00%	2339
Combined			39.28%	
Pre				2339
Delta				635
Post				2973

The table below summarizes these statistics for the three candidate markets:

HHI Statistics: Summary

Candidate market	Combined share	Delta	Postmerger HHI
Seven-product market	26.6%	292	2171
Five-product market	39.3%	635	2973
Staff's luxury market	50.6%	1052	3650

This summary table shows that the HHI analysis is very sensitive to the choice of market definition.

The staff's proposed luxury fountain pen market presents HHI statistics that are well within the range where the agencies have prevailed in court. The combined firm's share of 50.6% significantly exceeds the 30% threshold set in *Philadelphia National Bank*, and the transaction would result in a significant increase in concentration by eliminating one of the five top firms and increasing the 2-firm concentration ratio from 65.9% to 80.5%. Measured by the 2-firm concentration ratio, in *Philadelphia National Bank* the market concentration increased 15 percentage points while in the staff's market the increase is almost the same at 14.6%. Moreover, the *PNB* market was much less concentrated both premerger (44%) and postmerger (59%), while here, the market premerger much more concentrated premerger (65.9%) and postmerger (80.5%). Under the *PNB* precedent itself, the PNB presumption should be triggered.

The transaction also violates the Merger Guidelines, which the courts regard as informative although not binding. The market postmerger is "highly concentrated" with a postmerger HHI of 3650 (above the 2500-point threshold) and the transaction increases the HHI by 1052 points (above the 200-point threshold), making the merger presumptively anticompetitive. Courts have found mergers with lower deltas and lower postmerger HHI statistics sufficient to predicate the PNB presumption. *See, e.g.*, *United States v. Anthem, Inc.,* 855 F.3d 345, 351 (D.C. Cir. 2017) (combined market share of 47%, delta of 537, and postmerger HHI of 3000); *FTC v. H.J. Heinz Co.*, 246 F.3d 708 (D.C. Cir. 2001) (combined market share of 33%, delta of 510, and postmerger HHI of 5285); *United States v. H&R Block, Inc.,* 833 F. Supp. 2d 36, 72 (D.D.C. 2011) (combined market share of 28.4%, delta of 400, and postmerger HHI of 4691); *United*

States v. UPM-Kymmene OYJ, No. 03 C 2528, 2003 WL 21781902 (N.D. Ill. July 25, 2003) (complaint alleging combined market share of 20%, delta of 190, and postmerger HHI of 2990).[11]

The problem is that a court is likely to reject the staff's proposed market as gerrymandered and the strength of the HHI statistics under the PNB presumption is much weaker in the other two markets.

Indeed, it is very likely that a court would conclude that the *PNB* presumption is not triggered in the seven-product market. The market, with a postmerger HHI of only 2171, is only "moderately concentrated." 2010 Horizontal Merger Guidelines § 5.3. The HHI statistics do not put the transaction in the Merger Guidelines' "red zone" but say only that the transaction could "potentially raise significant competitive concerns and often warrant scrutiny." *Id*. These statistics are lower than the bulk of successfully litigated DOJ/FTC cases in recent years, where all but a few cases had combined shares of above 35%, deltas above 1000 and postmerger HHIs in excess of 3500. I can find only one case where the agency prevailed in court with market shares and HHIs anywhere close to those in a premium plus luxury fountain pen market, and that case was decided almost twenty years ago. *See UPM-Kymmene*, 2003 WL 21781902 (complaint alleging combined market share of 20%, a delta of 190, and postmerger HHI of 2990). With low market shares, if the court finds the seven premium and luxury fountain pen firms to be the relevant market, we are unlikely to prevail on the merits in the absence of strong additional evidence of anticompetitive effects.[12]

The five-product market is somewhat better from a prosecutor's perspective but still below the bulk of the cases in recent years in which the agencies have prevailed on the Section 7 merits. The postmerger HHI of 2973 does place the merger in a "highly concentrated" market, 2010 Horizontal Merger Guidelines § 5.3, and with a delta of 635, the merger guidelines say that the merger "will be presumed to be likely to enhance market power." *Id*. As noted at the opening of this section, a number of cases recite a rule that a merger with a postmerger HHI of over 2500 and results in a delta over 200 is sufficient to trigger the *PNB* presumption, but none of these cases involve a merger even close to these thresholds so the "rule" is at best dictum. I very much doubt that a court would find a merger unlawful based on these HHI statistics alone and would require compelling additional evidence of likely anticompetitive effect to find for the Division. Moreover, the court could easily avoid dealing with whether the *PNB* presumption should apply

[11] **Note to students**: Some of you who analyzed the *PNB* presumption in a luxury pen market cited as support *PNB* itself and the Merger Guidelines. You could—and should—have made your argument stronger by also citing more recent cases where the government prevailed with HHI statistics similar to or lowered than those in the luxury pen market.

[12] **Note to students:** Some of you recommend that the Division challenge the merger in a luxury pen market and, in the alternative, in a premium + luxury pen market even while expressly recognizing the weakness in the luxury market definition, the weakness in the *PNB* presumption in a premium + luxury pen market, and the lack of strong supporting additional evidence of anticompetitive effect in both markets. This type of recommendation has the flavor of "throw everything against the wall and hope something sticks." While this approach might work in private litigations where litigating every issue can impose significant costs on a resource-constrained opposing party and so incentivize them to settle, I find that the approach is counterproductive with the government. For all practical purposes, the federal antitrust enforcement agencies are not resource-constrained in any given investigation or litigation and they will interpret—and argue to the court—that the "throw everything against the wall" approach signals the weakness of a strong defense. David Boies, representing the DOJ in the *Microsoft* case, made this argument very effectively.

in the five-product case by simply finding the relevant market to be the seven-product market urged by the merging parties, where there is little argument that the presumption applies.

I should note that the difference in the HHI statistics between the seven-product and five-products markets results almost exclusively from the exclusion of Visconti and not from the exclusion of Accutron. Visconti has sales of $80 million, or over 40% of the total revenues of $193.5 million in the five-product market. Adding Visconti to the five-product market dilutes the shares of the merging parties by almost 30%, cuts the delta in half, and decreases the postmerger HHI by over 21%:

Five-Product "Symmetrical" Market + Visconti

	Price	Revenues $	Share	HHI	Difference %Points	Difference %
Visconti	100	$80,000,000	29.25%	856		
Conklin	110	$55,000,000	20.11%	404		
Tornado	150	$54,000,000	19.74%	390	8.16%	29.25%
QW	180	$45,000,000	16.45%	271		
Conway	220	$22,000,000	8.04%	65	3.33%	29.25%
Nettuno	250	$17,500,000	6.40%	41		
		$273,500,000	100.00%	2026		
Combined			27.79%		11.49%	29.25%
Pre				2026	312	13.36%
Delta				318	317	49.95%
Post				2344	629	21.17%

By contrast, adding Accutron to the five-product market would only add $11 million to aggregate market revenues and result in relatively minor dilutions to the HHI statistics. Hence, the critical question in product market definition is whether to include Visconti in the relevant market. Recall that Visconiti is a closer competitor to Tornado than is Conway, which lends considerable weight to including it in the market.

In sum, I believe that the court will find for the defendants on a seven-product relevant market until there is compelling additional evidence of the merger's likely anticompetitive effect.

d. Additional evidence supporting the prima facie case

Modern courts and the Merger Guidelines recognize that mergers are anticompetitive under Section 7 when they have a reasonable probability of increasing prices, reducing market output, reducing product or service quality, or reducing rate of technological innovation or product improvement in the market compared to what would have happened in the market on a going-forward basis in the absence of the transaction.

Here, the Division lacks substantial additional evidence to support the prima facie case. The unilateral effects evidence is weak, indicating a unilateral price increase at best of only 4.0% in Tornado pens or alternatively a unilateral price increase of only 2.5% in Conway pens. There is no material evidence supporting a finding of coordinated evidence and no suggestion in the investigation record that the acquisition involves a maverick. Finally, there is no customer opposition to this transaction, so the Division will not have customers to put on the stand at trial to testify that they expect to be harmed by the transaction.

Unilateral effects. Both the courts and the Merger Guidelines recognize the theory of a unilateral effect. This theory of unilateral effects goes to the elimination of significant "local" competition

between the merging firms, so that the merged firm can raise prices independently of how other incumbent firms react. The 2010 Merger Guidelines explain:

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

2010 DOJ/FTC Horizontal Merger Guidelines § 6.1. Under the 1992 Merger Guidelines, the unilateral effects theory applied whenever: (1) the two merging firms were each other's closest competitors, and (2) their combined market share was greater than 35%. The 2010 Merger Guidelines relaxed these requirements so that the firms only need to be close competitors to each other (although not necessarily the closest) and eliminated the 35% combined share requirement.

Here, the Tornado/Conway merger would not satisfy the 1992 Merger Guidelines requirements because Quality Writing is a closer competitor to each than the other merging party. Moreover, in the five-product market, the combined share is only 26.6%, less than the 1992 35% guidelines requirement. While the 2010 revisions eliminated these requirements, courts created most of the relevant judicial precedent under the 1992 guidelines when the requirements were in effect. *See FTC v. CCC Holdings Inc.*, 605 F. Supp. 2d 26, 71 (D.D.C. 2009). Indeed, at least two courts have rejected a combined share of 35% as sufficient to trigger a presumption of anticompetitive effect. *See United States v. Oracle Corp.*, 331 F. Supp. 2d 1098, 1123 (N.D. Cal. 2004) (explaining that explained, "[a] presumption of anticompetitive effects from a combined share of 35% in a differentiated products market is unwarranted" and "essentially a monopoly or dominant position" is required "[t]o prevail on a differentiated products unilateral effects claim"); *accord FTC v. Laboratory Corp. of Am.*, No. SACV 10-1873 AG MLGX, 2011 WL 3100372, at *19 (C.D. Cal. Feb. 22, 2011). However, in *H&R Block*, the court rejected the Oracle court's view and expressly declined to impose a combined market share threshold for a unilateral effects theory to apply:

> The *Oracle* court stated that "[t]o prevail on a differentiated products unilateral effects claim, a plaintiff must prove a relevant market in which the merging parties would have essentially a monopoly or dominant position." Some commentators have criticized this standard, however, because "impermissible price increases . . . can be achieved on far lower market shares" than *Oracle's* standard evidently requires. Indeed, Judge Brown's subsequent opinion from this Circuit in *Whole Foods* implied that a market definition itself may not even be required for proving a Section 7 violation based on unilateral effects. *See Whole Foods*, 548 F.3d [1028] at 1036 [(D.C. Cir. 2007)]. In a footnote, Judge Brown explained that "a merger between two close competitors can sometimes raise antitrust concerns due to unilateral effects in highly differentiated markets. In such a situation, it might not be necessary to understand the market definition to conclude a preliminary injunction should issue." The Court therefore declines the defendants' invitation, in reliance on Oracle, to impose a market share threshold for proving a unilateral effects claim.

United States v. H & R Block, Inc., 833 F. Supp. 2d 36, 84-85 (D.D.C. 2011) (footnotes and internal citations omitted). The *H&R Block* court, however, went on to observe in a footnote that "[a]s an empirical matter, the unilateral effects challenges made by the Agencies nearly always have involved combined shares greater than 35%," but that "[c]ombined shares less than 35% may be sufficiently high to produce a substantial unilateral anticompetitive effect if the products are differentiated and *the merging products are especially close substitutes*." *Id.* at 85 n.36 (quoting U.S. Dep't of Justice & Fed. Trade Comm'n, Commentary on the Horizontal Merger Guidelines 26 (2006)) (emphasis added).

Moreover, neither Tornado nor Conway is a close substitute for the other. The diversion ratio from Tornado to Conway is only 0.1, while the diversion ratio from Conway to Tornado is only 0.2. (Table 2) Three other brands are closer competitors to Tornado than Conway (QW, Conklin, and Visconti), and two other brands are closer competitors to Conway than Tornado (QW and Nettuno). This indicates that Tornado and Conway are not "especially close substitutes."

Nor is there evidence in the investigation record that Tornado and Conway are close substitutes to one another. Nothing in the merging companies' ordinary course of business documents or the staff interviews of industry participants indicates unusually close head-to-head competition between the two merging parties.

Finally, we can perform a brute force merger simulation on the unilateral price increases the combined firm would find in its profit-maximizing interest to implement (holding the price of the other product constant).

Brute force accounting: Tornado + Conway

	SSNIP imposed on:	
	Tornado	Conway
Gain on inframarginal sales		
Price	150	220
δ =	**4.00%**	**2.50%**
\$SSNIP = δp =	6.00	5.50
q =	360,000	100,000
ε = 1/m =	2.5	2
%Δq = δε =	0.1	0.05
Δq = %Δq × q =	36,000	5,000
q2 = q - Δq =	324,000	95,000
Gain =	1,944,000.00	522,500
Loss on marginal sales		
\$m = %m × p =	60	110
Δq =	36,000	5,000
Loss = \$m × Δq =	2,160,000	550,000
NET for firm 1 =	-216,000	-27,500
Gain on recapture		
Δq =	36,000	5,000.00
Diverion/recapture	0.1	0.2
Rec. units = DΔq =	3,600	1000
$\$m_{Recapture}$	110	60
Recapture gain	396,000	60,000
NET GAIN	180,000	32,500

By varying the δ, it appears that the profit-maximizing unilateral price increase on Tornado and on Conway (holding the price of the other constant) is around 4.0% and 2.5%, respectively. These are small price increases, and given the inevitable errors in the data and assumptions of the model may not be significantly different than zero. In addition, note the net profit gain to the combined firm would only be $180,000 on a price increase on Tornado pens and $32,500 on a price increase on Conway pens. The total profit on Tornado and Conway pens premerger is $21.6 million (= $60 margin × 360,000 units) and $11 million (= $110 margin × 100,000) for a combined total profit of $32.6 million. Compared to revenues at premerger prices, a $180,000 gain from a Tornado price increase would increase the combined firm's profits by only 0.55%, while a $32,500 gain from a Conway price increase would increase the combined firm's profits by only 0.10%. The defendants almost surely would argue, and the court is likely to accept, that the combined firm would not risk the goodwill of its merchants and customers by making a price increase for so small a profit gain.

Note to students: Some you used a formula to calculate the profit-maximizing unilateral price increase. Recall the way to do this is to equate the actual recapture ratio with the critical recapture ratio in a "market" consisting only of the merging firms and solve for δ. The profit-maximizing price is then $\delta/2$.

From Table 2, the actual recapture ratio from Tornado to Conway is 0.1.

The critical recapture ratio is:

$$R^1_{Critical} = \frac{\delta p_1}{\$m_{RAve}},$$

where the price of a Tornado pen is $150 and dollar margin of the "other" product (Conway) is $110 (50% of $220 wholesale price).

Equating the actual recapture ratio with the critical recapture ratio:

$$0.10 = \frac{\delta(150)}{\$110}.$$

Solving, δ = 7.33% (use Mathpapa). So the profit-maximizing price increase for Tornado is $\delta/2$ or 3.67% (or about 4%).

Now impose the SSNIP on Conway.

From Table 2, the actual recapture ratio from Conway to Tornado is 0.2.

Equating the actual recapture ratio with the critical recapture ratio:

$$0.20 = \frac{\delta(220)}{\$60},$$

where the price of a Conway pen is $220 and the dollar margin of the "other" product (Tornado) is $60 (50% of $150 wholesale price).

Solving, δ = 5.456% (use Mathpapa). So the profit-maximizing price increase for Conway is $\delta/2$ or 2.73% (or about 2.5%).

End of note

Tornado has a second argument why it will not raise the price of Tornado pens. Tornado notes that both Visconti and Conklin, two significant manufacturers of pens that wholesale at $100 and $110, respectively, have repeatedly expressed interest in adding a more "prestige" pen at a higher price point given the increased consumer demand. The mechanics of fountain pen design are readily available and there are no technological barriers to entry. Tornado believes, and its internal emails confirm this, that if either Visconti or Conklin expanded their product line, they would do so at around the $150 wholesale price point where Tornado is.

The staff has contacted Visconti and Conklin and each has confirmed its interest in expanding its product line into a more "prestige" pen around the $150 price point. While they each also said an increase in wholesale prices of pens between $130 and $180 would make entry more attractive, neither would say they would enter in that event. Also, both companies said they have not yet designed or test-marketed a new, more "prestige" product, prepared a financial analysis to test the profitability of such a product, or prepared a marketing plan of how they would roll out the product. Each company said that it would take at least a year or more after the product's introduction to conduct the extensive advertising necessary to gain customer acceptance and generate any meaningful sales.

The courts and the Merger Guidelines recognize that entry by a new firm, or expansion or repositioning by incumbent firms, may negate the anticompetitive effects that otherwise would likely occur from the merger. For entry to be a defense to a *prima facie* case, the entry must be timely, likely, and of a magnitude sufficient to deter or counteract any likely anticompetitive effects of concern so the merger will not substantially harm customers.

Here, Visconti's and Conklin's statements to the staff strongly indicate that their entry into a more "prestige" fountain pen is unlikely and in any event would not be timely. A court should reject any defense advanced by the merging parties based on *actual* entry.

But this is not the defense Tornado appears to be making. Instead, it is arguing that it is aware of Visconti's and Conklin's undisputed interest in introducing a pen at the $150 wholesale price point that would compete directly with Tornado's pen, that the entry by either of them would significantly hurt Tornado's profitability, and that any price increase in the price of Tornado's pen could tip either Visconti or Conklin into entering with a new $150 pen. Tornado submits that this concern further incentivizes it not to increase prices anticompetitively even if it had the ability to do so.

The argument has some weight. As shown above in the unilateral effects analysis, Tornado's profit-maximizing unilateral price increase of about 4% earns it very little in additional profits—about $180,000 per year. But this small gain is due to the large profit loss Tornado would sustain as a result of the loss of its marginal sales—about $2.2 million dollars. On the other hand, a 4% price increase would increase Tornado's percentage profit margin from 40% to 44%, a 10% increase that would earn about $1.9 million on its inframarginal sales. It is this margin increase and accompanying profit increase that Visconti and Conklin see—they have no marginal sales to lose from the price increase—and Tornado's fear that a 10% increase in the profit margin could tip one or both of them into entering with a new $150 pen is not unreasonable. Since Tornado

has so little to gain at best from a price increase and so much to lose if precipitates entry by either Visconti or Conklin, a court could well credit this defense.[13]

In sum, there is no credible unilateral effects theory of anticompetitive harm for the Division to advance against the merge.

Coordinated effects theory. The coordinated effects theory asks whether the merger is likely to increase the ability and incentives of a sufficient number of firms in the market to engage in successful tacit collusion. There are two conditions for the coordinated effects theory to apply: (1) the market must be susceptible to tacit coordination, and (2) the merger must make tacit collusion either more likely or more successful.

Regardless of whether the market consists of five firms or seven firms, the market does not appear susceptible to tacit collusion. Historically, the Division has found five or more firms in a market insufficient by self to be indicative of susceptibility to tacit coordination in the absence of other substantial evidence. Here, however, although wholesale prices are transparent, the investigation record reveals no attempts at price leadership.[14] Instead, fountain pen prices have increased at about the same rate as the inflation rate for jewelry products shown by the U.S. Bureau of Labor Statistics in its Producer Price Index for Jewelry. This suggests that price increases in fountain pens are driven by broad market forces in input costs and consumer demand and not the result of tacit collusion. In addition, the only attempt at some cooperative efforts—the formation of the Luxury Fountain Pen Association by Tornado, Quality Writing, Conway, Nettuno, and Accutron—appears to have completely failed. The investigation record shows that the association has done little, if anything. The association rarely meets, does not have an executive director or staff, and does not collect or distribute any data from its members. Most notably, even on the most basic trade association activities, such as lobbying of Congress or the collection and distribution of market data, there has been insufficient support by members to move forward. The trade association experience is strong evidence that the LFPA have little or no interest in coordinating on even self-interested lawful activities, much less tacitly coordinating on anticompetitive outcomes. [15,16]

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[13] **Note to students:** Some of you assumed that the merged firm would consolidate under the more expensive Conway brand and charge Conway pries for Tornado pens. There is nothing in the investigation record to suggest that this is what the merged firm will do. Moreover, unless consumers are completely ignorant, the merged firm could not pass off a Tornado pen that wholesaled at $150 premerger for a Conway pen postmerger that wholesales at $220.

[14] **Note to students:** Some of you concluded that price transparency minimized the selection problem. This is not quite right, because significant price differentiation remains a major impediment to tacitly coordinating the multiple price points.

[15] **Note to students:** Some of you concluded that the formation of the Luxury Fountain Pen Association was significant evidence of prior efforts of coordination. But the facts in the hypothetical indicate that the efforts completely failed for lack of interest in coordinating on even lawful activity. To me, the weight of this evidence is that premerger tacit coordination is unlikely.

[16] **Note to students:** Some of you cited the absence of entry into premium and luxury fountain pens as evidence of premerger tacit coordination. This requires an argument and not just an assertion. Tacit collusion to suppress entry suggests collective efforts to restrain price increases, just the opposite of the goal of most tacit collusion. The more natural explanation for the absence of entry is the high barrier to entry posed by the need to establish a "prestige" image and the accompanying need for a significant investment in advertising without any guarantee that the advertising will in fact create the required image.

Nor is there anything in the investigation record to suggest that the merger will make tacit coordination more likely or successful. At best, the Division could cite the reduction of firms by one resulting from the merger. In a seven-firm market, a reduction to six firms is not competitively significant, and even in a narrower five-firm market, the Division regularly approves 5-to-4 mergers without even second request investigations.

Elimination of a maverick. Antitrust law regards a maverick as a firm that disrupts coordination to a significant degree that would exist in the absence of the maverick. In addition to the market not likely to be susceptible to coordination, there is nothing in the investigation record that indicates that either Tornado or Conway is a maverick.

Customer testimony. The staff has contacted numerous retailers of fountain pens across the spectrum about the transaction. All of the retailers contacted by the staff were indifferent to the transaction; none of them expressed a concern that prices would increase or quality would decrease in any product due to the merger. So the Division will not have any customers to testify at trial that the transaction will harm them, and the merging parties should be able to call multiple witnesses to testify to the contrary. It would also be unique in Division history over the last forty years to litigate a case without substantial supporting customer testimony of anticompetitive harm.

2. The defendant's arguments on procompetitive benefits

We have already addressed the main argument of the merging parties, which is a challenge to the staff's definition of the relevant market. The merging parties argue the transaction has procompetitive benefits from cost-saving efficiencies and product introduction efficiencies.

Cost-saving efficiencies. Tornado told the staff during the investigation that it can lower its costs by $2.0 million annually by closing down Conway's headquarters and only production facility; consolidating all back office, sales, and marketing operations into Tornado's existing infrastructure; and moving all production into Tornado's factory. Tornado says it has sufficient capacity in its single manufacturing facility to absorb all of Conway's production and still have the capacity to significantly expand its production if and when demand warrants, although Tornado will have to transfer some of Conway's artisans to the Tornado facility or hire new artisans to produce the Conway product.

As a technical matter, all of these claimed cost savings are fixed cost savings and hence not cognizable as downward-pricing pressure efficiencies under the 2010 Merger Guidelines. Nonetheless, the court may credit these cost savings as a procompetitive benefit of the transaction. Although the court may never say so in an opinion, these cost savings may encourage the court to decide on a premium plus luxury fountain pen market (where the *PNB* presumption is not triggered) and hence avoid any need to make findings on efficiencies.

Product introduction efficiencies. Tornado claims that after the consolidation of Conway into Tornado is complete—Tornado believes it will take about one to two years after the closing—it will use part of its profits from the acquisition to launch a new product to compete at the $180 price point in competition with Quality Writing. Tornado believes that it can sell at least 75,000 pens at the $180 price point within two years of introduction and sell even more in the

succeeding years. Tornado says it will not have the free cashflow to expand its product line without the Conway acquisition.

Apart from the problem of whether Tornado will act as it says it will, the product expansion is several years off in the future and would not offset any immediate anticompetitive effect from the transaction, so it should not account technically as a cognizable efficiency. However, depending on how credible and supportable the court finds Tornado on this issue, the court could credit a product introduction as a procompetitive benefit of the transaction and cause it to lean in the direction of finding a premium plus luxury pen relevant market.

3. Conclusion on Section 7 legality

Application of the *Brown Shoe* "outer boundary" and "practical indicia" factors, as well as the hypothetical monopolist test, show that the only two credible markets are either a seven-firm premium plus luxury pen market or a five-firm "symmetric market" that eliminates the firms on the inside edge of the seven-firm market on both sides of the price continuum. Between the two, the *Brown Shoe* indicia somewhat favor the seven-product market. Moreover, a court is very likely to find that the merger in the seven-firm market fails to trigger the *PNB* presumption under either judicial precedent or the merger guidelines, and the argument for triggering the *PNB* presumption is only slightly better in the five-firm market.

Given the weakness of the HHI statistics, the court almost surely will look to whether there is any substantial additional evidence supporting a finding of likely anticompetitive effect. The unilateral price effects argument is very weak because of the very small magnitude of the simulated profit-maximizing unilateral price increases. The unilateral profit-maximizing price increases would be about 4.0% for Tornado and 2.5% for Conway, the price increases would generate minimal profit gains pf $180,000 and $32,500, respectively, and would only increase the combined firm's profit over premerger prices by 0.55% and 0.10%, respectively. A court could easily be persuaded that no firm would increase its prices and risk its customer goodwill for so little profit gain. There is no evidentiary support for likely anticompetitive harm based on coordinated effects or the elimination of a maverick.

Notably, in an extensive field investigation, the staff could find no retail customers who had competitive concerns about the transaction. All of the retailers contacted by the staff were indifferent to the transaction; none of them expressed a concern that prices would increase or quality would decrease in any product as a result of the merger. The Division would no customers testifying at trial to support a finding of anticompetitive effect. If the Division proceeds to litigate, this case will be almost unique for the absence of supporting customer witnesses.

The parties offer two procompetitive benefits of the transaction—cost-savings a new product introduction at the $180 price point against Quality Writing—and a "limit pricing" entry defense against any anticompetitive price increase in Tornado pens. While the procompetitive benefits arguments almost surely fail as technical legal defenses, a court nonetheless could find as a matter of discretion that these factors weigh in favor of finding for the merging parties. On the other hand, the "limit pricing" entry defense may be a meritorious defense against a price increase in Tornado pens.

Finally, but very importantly, if convinced that the transaction is not likely to be anticompetitive, the court can avoid any careful parsing of the evidence or the judicial precedent by simply finding that the relevant market is the seven-firm market.

On the investigation record, the case is too weak to warrant the expenditure of the Division's resources. We should recommend that the Assistant Attorney General close the investigation without taking enforcement act.

4. Consent decree relief

If the Division does decide to challenge the Tornado/Conway transaction, I can see no consent decree relief that would negate whatever anticompetitive harm the deal is likely to create.

First, this is a "pure play" transaction: each party has only one product. This makes divestiture of an overlapping product financially unrealistic to the buyer. Divesting Conway's product leaves nothing for Tornado to acquire. On the other hand, Tornado's product earns more profit ($21.6 million) than does Conway's product ($11.0 million), so divesting Tornado's product in a "trade up" deal makes no financial sense.

Tornado has offered to accept a consent decree that caps price increases in its existing products to no more than the rate of inflation for jewelry products shown by the U.S. Bureau of Labor Statistics' Producer Price Index for Jewelry. The staff recommends rejecting Tornado's consent decree offer.

I agree. Historically, the Division has required divestitures to cure horizontal merger problems. More specifically, the Division has rejected price caps as a solution to a threaned price increase resulting from the merger. First, imposing and monitoring price caps puts the Division in the position of an economic regulatory agency rather than a law enforcement agency, a position the Division has always resisted. Second, there could be shocks in demand that would require a free market equilibrium price to increase above the price cap, making the price cap anticompetitive.

INSTRUCTOR'S ANSWER AND FEEDBACK MEMORANDUM

This answer is much longer and more detailed than I would expect for a graded homework assignment or an exam answer. I prepared this to explain the law and the reasoning further and to discuss some of the common issues that arose in the answers. You should be thinking about what "boilerplate" descriptions of legal concepts and economic tools you should prepare in advance to copy and paste into the exam answer. You should also be thinking about strategies for writing a more compact memorandum that addresses each element of the prima facie case and each defense.

To: Joyce Davenport

From: Dale Collins

Tornado/Conway Fountain Pen Merger[1,2,3]

You have asked me to assess whether DIA should recommend to the Assistant Attorney General that the Division challenge Tornado Pens' pending acquisition of Conway Writing Corporation, two fountain pen manufacturers, for $95 million in cash. In particular, you asked that I assess how strong the Division's prima facie case of a Section 7 violation is likely to be and whether the Division can defeat the defenses the merging parties advanced during the investigation. If I recommend a challenge, you have also asked me to address consent decree relief, if any, the Division should be willing to accept.

[1] **Note to students:** A few of you wrote in a more colloquial conversational style, using words and phrases such as "lukewarm" competition, "the big knock against this theory," and "fervently believe." The work product here is a formal memorandum of law. While some readers find a colloquial style fine if not refreshing, others find it to be seriously deficient and indicating a lack of seriousness. Because you do not get much credit and can be severely criticized for writing conversationally, the better course of action is to stay formal and avoid colloquialisms. This does *not* mean you have to write in a stilted style—just keep the writing clear, grammatically correct, and without colloquialisms.

[2] **Note to students:** Some of you waffled on whether the DIA should recommend that the transaction be challenged. In assignments of this type, make a clear recommendation one way or the other. You can qualify your recommendation as weak if you like and lay out the negatives, but when asked a question be sure to answer it straightforwardly.

[3] **Note to students:** Be sure that your conclusions at the beginning of the memorandum are consistent with the conclusions you drew when doing the analysis. Some of you, for example, said in the conclusion at the beginning of the memorandum that the Division should allege in the alternative a premium + luxury market and a luxury only market, but in the analysis drew the conclusion that luxury only was not a relevant market. Inconsistencies of this type undermine confidence in your memorandum. In an untimed exercise, you need to make sure that you are being consistent throughout the memorandum. I appreciate that this is more difficult in a timed exam, but that is why you need to specify your conclusions at least tentatively before you start writing and then modify them as necessary as you write.

Application of the *Brown Shoe* "outer boundary" and "practical indicia" factors, as well as the hypothetical monopolist test, show that the only two credible markets are either a seven-firm premium plus luxury pen market or a five-firm "symmetric market" that eliminates the firms on the inside edge of the seven-firm market on both sides of the price continuum. Between the two, the *Brown Shoe* indicia somewhat favor the seven-product market. However, a court is likely to find that the merger in the seven-firm market fails to trigger the *PNB* presumption under either judicial precedent or the merger guidelines. The argument for triggering the *PNB* presumption is only slightly better in the five-firm market.

Given the weakness of the HHI statistics, the court most likely will be skeptical that the transaction violates Section 7 and will demand substantial additional evidence supporting a finding of a likely anticompetitive effect to rule against the transaction. However, the best argument available—unilateral price effects—is weak because of the small magnitude of the simulated profit-maximizing unilateral price increases. The unilateral profit-maximizing price increases would be about 4.0% for Tornado and 2.5% for Conway. These price increases would generate minimal profit gains of $180,000 and $32,500, respectively, and would only increase the combined firm's profit over premerger prices by 0.55% and 0.10%, respectively. A court could easily be persuaded that the merged firm would not increase its prices and risk its customer goodwill for so little profit gain. There is no evidentiary support for likely anticompetitive harm based on coordinated effects or the elimination of a maverick.

Notably, in an extensive field investigation, the staff could find no retail customers with competitive concerns about the transaction. All the retailers contacted by the staff were indifferent to the transaction; none of them expressed a concern that prices would increase or quality would decrease in any product due to the merger. The Division could find no customers willing to testify at trial that the transaction would increase prices or otherwise be anticompetitive. If the Division proceeds to prosecute, this case will be almost unique for the absence of supporting customer witnesses.[4]

The parties argue that the transaction will produce two procompetitive benefits: (1) cost savings of $2.0 million annually by closing down Conway's headquarters and only production facility; consolidating all back office, sales, and marketing operations into Tornado's existing infrastructure; and moving all production into Tornado's factory, and (2) enabling the combined firm to introduce within two years a new product at the $180 price point to compete against Quality Writing. Tornado also asserts a "limit pricing" entry defense against any anticompetitive price increase in Tornado pens. While the procompetitive benefits arguments almost surely fail as technical legal defenses, a court nonetheless could find as a matter of discretion that

[4] **Note to students:** I know of one modern contrary example where the government prevailed with complaining industry witnesses: United States v. Bazaarvoice, Inc., No. 13–cv–00133–WHO, 2014 WL 203966 (N.D. Cal. Jan. 8, 2014).

these factors weigh in favor of finding for the merging parties. On the other hand, the "limit pricing" entry defense may be a meritorious defense against a price increase in Tornado pens.

Finally, but very importantly, if convinced that the transaction is not likely to be anticompetitive, the court can avoid any careful parsing of the evidence or judicial precedent by simply finding that the relevant market is the seven-firm market.

On the investigation record, the case is too weak to warrant the expenditure of the Division's resources. We should recommend that the Assistant Attorney General close the investigation without taking enforcement action.

Introduction

Section 7 of the Clayton Act prohibits mergers and acquisitions "where in any line of commerce or in any activity affecting commerce in any section of the country, the effect of such acquisition may be substantially to lessen competition, or to tend to create a monopoly." 15 U.S.C. § 18. By its terms, a Section 7 violation contains three essential elements: (1) a relevant product market ("line of commerce"), (2) a relevant geographic market ("section of the country"), and (3) a reasonably probable anticompetitive effect in the relevant market (that is, the combination of the relevant product market and the relevant geographic market).

Tornado's acquisition of Conway is a horizontal acquisition because, as discussed below, the transaction combines two competitors in the production and sale of fountain pens. In horizontal cases, courts have adopted a three-step burden-shifting procedure:

1. The plaintiff bears the burden of proof in market definition and in market shares and market concentration within the relevant market sufficient to trigger the *PNB* presumption (explained below) or otherwise make out a prima facie case of anticompetitive effect.
2. Once the plaintiff has made a prima facie showing of a Section 7 violation, the burden of production then shifts to the defendant to adduce evidence sufficient to create a genuine issue of fact on at least one element of the prima facie for the trier of fact to decide.
3. If the defendant discharges its burden of production, the burden of persuasion returns to the plaintiff to prove in light of all of the evidence in the record that the merger is reasonably probable to have an anticompetitive effect in a relevant market.

See United States v. Baker Hughes, Inc., 908 F.2d 981, 982-83 (D.C. Cir. 1990). Although not required, the plaintiff may strengthen its prima facie case by presenting additional evidence supporting a finding that the transaction is anticompetitive. Courts apply a "sliding scale" approach to the defendant's burden in Step 2 above so that the

stronger the plaintiff's prima facie case, the higher the defendant's quantum of proof to discharge its burden of production for putting the plaintiff's prima facie case in issue. *Id*. at 983.

The DOJ/FTC 2010 Horizontal Merger Guidelines focus more on competitive effects and do not strictly require a showing of a relevant market. However, if the parties put the Division to its proof in court, the Division will have to prove a relevant market under prevailing case law precedent. As to the showing of anticompetitive effects, the courts continue to employ the *Philadelphia National Bank* presumption in assessing a prima facie case. They also have largely accepted the theories of anticompetitive harm in the Merger Guidelines to further strengthen the prima facie case. Accordingly, I will analyze the merits of a challenge under the usual judicial framework:

1. The prima facie Section 7 case
    a. The relevant product market
    b. The relevant geographic market
    c. Market shares, concentration, and the *PNB* presumption
    d. Additional evidence supporting the prima facie case
2. The defendants' arguments of procompetitive benefits
3. Conclusion on Section 7 legality

At the end of the memorandum, I will address possible consent decree relief.

1. The prima facie Section 7 case

The plaintiff must present evidence that permits the trier of fact to find the existence of each of the three essential elements of a Section 7 violation: (1) the relevant product market ("line of commerce"), (2) the relevant geographic market ("section of the country"), and (3) a reasonably probable anticompetitive effect in the relevant market.

a. The relevant product market

The staff proposes a "luxury fountain pen" product market comprised of fountain pens with wholesale prices from $100 to $400. The merging parties disagree and offer three alternative product market definitions: (1) separate markets for Tornado and Conway, making the acquisition conglomerate; (2) if instead Tornado and Conway are deemed to compete, an "all fountain pens" market; or (3) if the all-fountain pens market is rejected as too large, then a "luxury + premium fountain pens" market consisting of pens with wholesale prices of $100 or more.

There are two complementary approaches to product market definition: the *Brown Shoe* "outer boundaries" and "practical indicia" criteria and the hypothetical monopolist test.

First, under *Brown Shoe*, the "outer boundaries" of the relevant product market "are determined by the reasonable interchangeability of use or the cross-elasticity of

demand between the product itself and substitutes for it." *Brown Shoe Co. v. United States*, 370 U.S. 294, 325 (1962). The idea is that relevant markets should include products that have high substitutability with one another (cross-elasticity or diversion ratios) and, therefore materially constrain each other's prices, while excluding products that have low substitutability with products in the market and therefore have little price-constraining effect.[5] Moreover, "within this broad market, well-defined submarkets may exist which, in themselves, constitute product markets for antitrust purposes. The boundaries of such a submarket may be determined by examining such practical indicia as industry or public recognition of the submarket as a separate economic entity, the product's peculiar characteristics and uses, unique production facilities, distinct customers, distinct prices, sensitivity to price changes, and specialized vendors." *Id*. (internal citations and footnotes omitted). The original purpose of the *Brown Shoe* "practical indicia" was to enable the finding of relevant "submarkets" within larger markets defined by the "outer boundaries" test. Modern courts, however, do not view submarkets as any different from markets and regard the *Brown Shoe* "practical indicia" as factors qualitatively probative of reasonable interchangeability of use and high cross-elasticity of demand. The *Brown Shoe* test is qualitative in nature.

Second, the "hypothetical monopolist test," which was introduced by the Merger Guidelines in 1982 and now adopted in one form or another by the courts, deems a product grouping ("candidate market") as a relevant market if a hypothetical monopolist of all products in the product group could profitably raise the prices in the product grouping by a "small but significant nontransitory" amount (SSNIP), usually taken to be 5% for one year. The hypothetical monopolist test is a quantitative test. The current 2010 Merger Guidelines have modified the hypothetical monopolist test in two significant ways:

1. Originally, the hypothetical monopolist test only deemed the smallest product grouping that satisfied the test to be a relevant market (the "smallest market principle"). However, under the 2010 Merger Guidelines, while the smallest market principle remains the preferred

[5] **Note to students**. I added this sentence because some of you thought that "all fountain pens" satisfied the *Brown Shoe* "outer boundaries" test given the high cross-elasticities among some of the products. But this conclusion ignores the fact that pens with wholesale prices of less than $100 have low substitutability with pens with wholesale prices of $100 or more. This lack of substitutability between the two groups of pens precludes their inclusion in the same market. Most of you who made this mistake also said that the "all fountain pens" failed the *Brown Shoe* practical indicia but failed to recognize that in the modern case law the *Brown Shoe* practical indicia are simply qualitative evidence probative one way or the other of substitutability. In modern antitrust, there is really only one *Brown Shoe* test.

approach, a larger market can be used where appropriate to reflect the economic realities.[6,7]

2. Originally, the hypothetical monopolist test required the hypothetical monopolist to increase the prices uniformly of all of the products in the candidate market. The 2010 Merger Guidelines, however, permit the hypothetical monopolist to raise the prices of one or more products selectively while leaving the prices of the other products constant, provided that at least one of the products subject to the price increase is a product of a merging firm. The hypothetical monopolist test requires only that the hypothetical monopolist be able to profitably raise the price of a *single* product in the product group for the product grouping to be a relevant market.[8]

The courts are increasingly adopting these modifications. In particular, modern courts use the one-product SSNIP test to define relevant markets when products are differentiated. *See, e.g.*, *FTC v. RAG-Stiftung*, 436 F. Supp. 3d 278, 293 (D.D.C. 2020); *FTC v. Wilh. Wilhelmsen Holding ASA*, 341 F. Supp. 3d 27, 47 (D.D.C. 2018);

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[6] The 2010 Horizontal Merger Guidelines provide:

> The hypothetical monopolist test ensures that markets are not defined too narrowly, but it does not lead to a single relevant market. The Agencies may evaluate a merger in any relevant market satisfying the test, guided by the overarching principle that the purpose of defining the market and measuring market shares is to illuminate the evaluation of competitive effects. Because the relative competitive significance of more distant substitutes is apt to be overstated by their share of sales, when the Agencies rely on market shares and concentration, they usually do so in the smallest relevant market satisfying the hypothetical monopolist test.

U.S. Dep't of Justice & Fed. Trade Comm'n, Horizontal Merger Guidelines § 4.4.1 (rev. 2010). The subsection ends with an example stating that in a merger of two leading motorcycle brands, cars should not be included in the relevant market if motorcycles by themselves satisfy the hypothetical monopolist test. *Id*. (Example 4).

[7] **Note to students**: As we have discussed, prior to 2010 the agencies on occasion had alleged relevant markets that satisfied the smallest market principle but did not look like any market or product grouping the industry or its customers had ever recognized. Courts tended to hold this departure from the "business realities" against the agency in rejecting the agency's market definition. The 2010 Horizontal Merger Guidelines rectified this problem by recognizing broader markets that reflect the business realities. The FTC did this, for example, in alleging its market for DDIY tax preparation software in *H&R Block*. The FTC defined the market to include all DDIY tax products, although any two of the three major products satisfied the hypothetical monopolist test and hence the all DDIY tax products market did not satisfy the smallest market principle.

[8] **Note to students:** I could have added a third change—the arguable shift from a profitability interpretation of the HMT to a profit-maximization interpretation. As we discussed in class, however, the agencies in practice continue to use a profitability test in their investigations and, in court, the majority of courts have continued to use the profitability test, and the instances in which the two tests diverge will be rare. Accordingly, there is no need to discuss the profit-maximization test, although there would be no harm in dropping a footnote to it.

United States v. Anthem, Inc., 236 F. Supp. 3d 171, 198 (D.D.C. 2017); *United States v. Aetna Inc.*, 240 F. Supp. 3d 1, 20 (D.D.C. 2017); *FTC v. Staples, Inc.*, 190 F. Supp. 3d 100, 121 (D.D.C. 2016); *FTC v. Sysco Corp.*, 113 F. Supp. 3d 1, 33 (D.D.C. 2015); *United States v. H & R Block, Inc.*, 833 F. Supp. 2d 36, 51-52 (D.D.C. 2011).

Is the transaction horizontal? Given the merging parties' arguments, we first should assess the evidence on whether the merging parties compete. Both companies are on the higher end of fountain pens as reflected in their wholesale prices—$150 and $220, respectively. While there is a significant price difference between the two products, the staff's investigation shows that they compete with one another because they have positive diversion ratios. If Tornado was to increase its price and all other pen manufacturers held their prices constant, 10% of Tornado's lost marginal sales would divert to Conway. Conversely, if Conway was to increase its price and all other pen manufacturers held their prices constant, 20% of Tornado's lost marginal sales would divert to Conway. While other pen brands may have higher diversion ratios, these diversion ratios are not insignificant and indicate meaningful competition between the two merging companies. This makes the transaction horizontal, not conglomerate as the parties argue.

Moreover, if we posit a two-product candidate market consisting of only Tornado and Conway pens, a hypothetical monopolist (i.e., the combined firm) could profitably increase prices by a 5% SSNIP. We can show this using a one-product 5% SSNIP recapture test, where:

$$R^{1}_{Critical} = \frac{\$\text{SSNIP}_1}{\$m_{RAve}}.$$

In a two-product candidate market, $\$m_{RAve}$ is simply the dollar margin of the other product, that is:

$$R^{1}_{Critical} = \frac{\$\text{SSNIP}_1}{\$m_2}.$$

For 5% SSNIP, the $SSNIP for Tornado is $7.50 (= 5% × $150), and the dollar margin of the other product (Conway) is $110 (= 50% × $220). For 5% SSNIP, the $SSNIP for Conway is $11.00 (= 5% × $220), and the dollar margin of the other product (Tornado) is $60 (= 40% × $150). The critical recapture ratios are then:

$$R_{Critical}^{Tornado} = \frac{\$SSNIP_{Tornado}}{\$m_{Conway}} = \frac{7.5}{110} = 6.8\%$$

$$R_{Critical}^{Conway} = \frac{\$SSNIP_{Conway}}{\$m_{Tornado}} = \frac{11}{60} = 18.3\%.$$

.

From Table 2,[9] the actual diversion ratio from Tornado to Conway is 10%, while the actual diversion ratio from Conway to Tornado is 20%. Since the actual recapture ratios are greater than the critical recapture ratios, a Tornado-Conway product grouping is then a relevant market under the hypothetical monopolist test.[10] This further confirms that Tornado and Conway compete and that the parties' argument that the transaction is a conglomerate merger should be rejected.

Note to students: You could have implemented the one-product SSNIP recapture test using brute force accounting:

Brute force accounting: Tornado + Conway Market

	SSNIP imposed on:	
	Tornado	Conway
Gain on inframarginal sales		
Price	150	220
δ =	5.00%	5.00%
\$SSNIP = δp =	7.50	11.00
q =	360,000	100,000
ε = 1/m =	2.5	2
%Δq = δε =	0.125	0.1
Δq = %Δq × q =	45,000	10,000
q2 = q - Δq =	315,000	90,000
Gain =	2,362,500	990,000

[9] **Note to students:** All references to "Tables" are to the tables at the end of the hypothetical.

[10] **Note to students**: This is more than we need. All that is necessary is for one of the products of the merging firms to satisfy the one-product SSNIP test. It is not necessary that both products satisfy the test.

Loss on marginal sales		
\$m = %m × p =	60	110
Δq =	45,000	10,000
Loss = \$m × Δq =	2,700,000	1,100,000
NET firm 1 =	-337,500	-110,000
Gain on recapture		
Δq =	45,000	10,000.00
D	0.1	0.2
Rec. units = DΔq =	4,500	2000
$\$m_{Recapture}$	110	60
Gain	495,000	120,000
NET GAIN HM	157,500	10,000

Since the net gain to the hypothetical monopolist after recapture is positive, Tornado and Conway satisfy the hypothetical monopolist test.

End of note

A five-product symmetrical market. While a two-product market of Tornado and Conway pens would make the proposed transaction a merger to monopoly, the courts are unlikely to accept this product grouping as a relevant market in which to analyze the transaction. Most importantly, this product grouping excludes the two most competitive products with Tornado pens (QW and Conklin) and the two most competitive products to Conway (QW and Nettuno), as shown by the diversion ratios. In light of these exclusions, we should not expect a court would accept a Tornado-Conway product grouping as a relevant market. Almost surely, the court would insist as a matter of "commercial realities" that the relevant market includes at least the products more competitive with a merging product than the other merging product. Accordingly, the court is likely to require that the relevant market include, at a minium, Conklin, QW, and Nettuno along with Tornado and Conway.

These five products also satisfy the hypothetical monopolist test under the Merger Guidelines because it is a superset of a candidate market (Tornado and Conway) that satisfies the one-product SSNIP test. Since a hypothetical monopolist can selectively choose on which products in a differentiated candidate market the SSNIP is imposed, if a candidate market satisfies the one-product SSNIP test, then any superset of that candidate also will satisfy the one-product SSNIP test: the monopolist simply chooses to impose the SSNIP on the same products as in the smaller candidate market, and the recapture within the other products that comprise the smaller candidate market will

make the SSNIP profitable regardless of any recapture by other products in the broader candidate market.

Moreover, in this five-firm "symmetrical market" the recapture ratios are 0.8 for Tornado and 0.9 for Conway, so the market accounts for the vast bulk of the competitive forces on the combined firm.

Curiously, this five-product market is not a relevant market that neither the staff nor the parties have suggested. Although we know that this five-product market satisfies the hypothetical monopolist test, there remains the question of whether a court is likely to require the addition of more products to conform with the "commercial realities"?

All fountain pens. The parties observe that there are no recognized breaking points in the continuum of fountain pens and so argue the relevant market should include all fountain pens. Under the Merger Guidelines, all fountain pens satisfy the hypothetical monopolist test because it is a superset of a differentiated candidate market (Tornado and Conway) that satisfies the one-product SSNIP test.

But under both judicial precedent and the Merger Guidelines, even if the broader market satisfies the HMT, it should not be treated as a relevant market if it contains products that are, at best, distant substitutes to the products of the merging firms, especially when the distant products have high volumes. As the 2010 Merger Guidelines state:

> Although excluding more distant substitutes from the market inevitably understates their competitive significance to some degree, doing so often provides a more accurate indicator of the competitive effects of the merger than would the alternative of including them and overstating their competitive significance as proportional to their shares in an expanded market.

2010 Horizontal Merger Guidelines § 4.1.1. Applied here, the diversion ratios in Table 2 show that neither Tornado nor Conway would lose any sales to fountain pens with wholesale prices of less than $100. Moreover, the data in Table 1 shows that pens earned almost 63% of all revenues in fountain pens with a wholesale price at or below $60—only 40% of the price of a Tornado pen and just 27% of the price of a Conway pen. The large sales volumes of the lower-priced pens that do not compete with either of the merging products—and no court could reasonably think they do—reduce the market shares of the merging parties and other higher-priced pens. This obscures the competitive interaction among the higher-priced pens and the likely competitive effect of the merger. Indeed, Table 3 shows that in the all-fountain pen market, the transaction results in a combined firm of 11.57%, a delta of 55, and a postmerger HHI of 880, well below both the Merger Guidelines thresholds and judicial precedent for finding a likely anticompetitive effect. While the transaction may or may not be problematic, the competitive effects analysis should not be preempted by low market share and

concentration statistics resulting from including products that do not compete with the products of the merging firm in the market definition.

Since there are other, smaller product groupings that better comport with the "commercial realities," it is unlikely that a court would find that the all-fountain pen market is the proper relevant product market in which to evaluate the Tornado Pens/Conway transaction.

Premium + luxury fountain pens. The merging parties, presumably recognizing the weakness in their proposed all-fountain pen market, argue in the alternative for a relevant market consisting of premium plus luxury fountain pens (that is, all fountain pens with wholesale prices of $100 or more). This market consists of seven firms and total revenues of $285.3K. See Table 4.

Here, the parties have a stronger argument. First, premium plus luxury pens are a superset of the smaller relevant market of Tornado-Conway pens, so premium plus luxury pens satisfy the HMT. Second, this product grouping recaptures 100% of both Tornado's and Conway's lost marginal sales. See Table 2. Third, premium and luxury pens, although differentiated, share certain "practical indicia" of cross-elasticity of demand: they are all pens designed and advertised to appeal to consumers seeking a "status" product and not simply a good writing instrument, their manufacturers typically spend 10% of their revenues on image advertising, and the products are sold through jewelry stores and high-end specialty shops. By contrast, lower-priced pens are not regarded as a "status" symbol, their manufacturers spend significantly less than 10% of their revenues on advertising and advertise more on price rather than image, and these pens are sold in mass outlets rather than jewelry stores and high-end-specialty shops. Fourth, the staff found that it takes years of extensive advertising to establish the "prestige" necessary to sell fountain pens with wholesale prices over $100 in sufficient volume to be profitable, while presumably such advertising is not necessary for pens that sell at wholesale prices below $100. Fifth, although there is some discounting among retailers for pens with a wholesale price of less than $100, all manufacturers that sell pens at $100 or more set suggested retail prices, and retailers consistently follow those suggested prices. Finally, although there is no accepted industry or public segmentation of fountain pens, some third-party market research reports divide fountain pens into "writing instruments" where the prestige or status value of the pen is low (fountain pens with a wholesale price of less than $100) and "prestige pens" where purchasers seem to value the pen more for its status than as a writing instrument (fountain pens with a wholesale price of $100 or more)

Luxury pens. The investigating staff proposes a relevant product market consisting of pens with wholesale prices of $130 or more. Compared to the merging parties' proposed market of premium plus luxury foundation pens, the staff's proposed market eliminates Visconti and Conklin, reduces total market revenues from $285.3K to

$150.3K, and correspondingly increases the market shares of the remaining five firms. Since luxury pens are a superset of the Tornado-Conway product grouping, we know that a hypothetical monopolist could selectively impose profitable SSNIPs on products within luxury pens.

From Table 2, this market recaptures 50% of Tornado's lost marginal sales and 90% of Conway's lost marginal sales, so most of the competition for the products of the merging firms is captured in this market while eliminating two firms that compete with Tornado and no firms that compete with Conway. Moreover, the five firms in this market comprise the Luxury Fountain Pen trade association to cooperate in promoting higher-end, more expensive fountain pens.

On the other hand, a court very well could be concerned that the market was gerrymandered to remove Conklin and Visconti, two significant competitors to Tornado, from the market to increase the shares of the merging parties. The diversion ratio from Tornado to Conklin is 0.3, making Conklin the second closest competitor to Tornado after QW (diversion ratio 0.4) and a much closest competitor than Conway (diversion ratio 0.1). But even Visconti has a diversion ratio from Tornado of 0.2, making it a closer competitor to Tornado than Conway. The argument for excluding Conklin and Visconti becomes even weaker when we observe that the staff's proposed market contains Accutron and Nettuno, neither of which competes with Tornado at all. Accuton competes only weaker with Conway, with a diversion ratio from Conway of 0.1, while the excluded Conklin and Visconti pens have diversion ratios at least as great or greater than Tornado (0.3 and 0.1, respectively). Finally, although the five firms in this candidate market formed the Luxury Fountain Pen trade association, the trade association never became a meaningful operating entity.

Given these internal inconsistencies and tension with the "commercial realities," I do not believe it is likely that a court would accept luxury fountain pens as a relevant market in which to analyze this transaction.

Conclusions on the relevant product market. For the reasons described above, we should have reasonably high confidence that a court would reject the parties' contention that Tornado and Conway do not compete and find instead that their merger is horizontal. We also should have reasonably high confidence that the court will reject an "all fountain pens" market as too broad under *Brown Shoe* and the Merger Guidelines. On the other hand, the court would likely reject the staff's proposed luxury fountain pen market as gerrymandered because it fails to include high volume two fountain pen brands more competitive with Tornado than Conway while including other firms that do not compete with Tornado at all.[11]

[11] **Note to students:** Some of you thought that if the merger triggered the *PNB* presumption in any product grouping that satisfied the HMT, then the Division could establish a prima face case of anticompetitive effect in any superset of that product grouping. But a product grouping that satisfies

On the weight of the available evidence in the investigation, I see only two possible relevant markets: (1) the seven-firm premium plus luxury pen market proposed by the merging parties, and (2) the five-firm "symmetrical" market.

The seven-firm premium-plus-luxury pen market includes the two significant Tornado competitors missing in the staff's luxury fountain pen market. It is also symmetrical in that it includes two brands that are lower-priced than Tornado and two that are higher-priced than Tornado. Finally, although not particularly strong, the *Brown Shoe* qualitative evidence supports this market more than the alternatives proposed by either the staff or the merging parties.

Another possibility, not offered by the staff or the merging parties, is a five-product "symmetrical" market that includes only one brand that is lower-priced than Tornado (Conklin) and one brand that is higher-priced than Tornado (Nettuno). Like the seven-product market, the five-product market is symmetrical on the fountain pen price spectrum and avoids any appearance of gerrymandering. The seven-product market has the advantage of including a closer competitor to Tornado than Conway (Visconti), but the five-product market has the advantage of a smaller market (if the court gives any weight in the direction of the smallest market principle).

In reality, the court's choice could depend on whether one market or the other better supports a finding consistent with the court's belief about the competitive effect of the transaction. I will turn to competitive effects after first considering the relevant geographic market.

b. The relevant geographic market

The second essential element of a prima facie Section 7 case is the relevant geographic market. In *Philadelphia National Bank*, the Supreme Court has defined the relevant geographic market to be "the area of effective competition . . . in which the seller operates, and to which the purchaser can practically turn for supplies." *United States v. Philadelphia Nat'l Bank*, 374 U.S. 321, 359 (1963) (emphasis removed). The relevant geographic market also should be assessed using the hypothetical monopolist test.

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the HMT may still not be a relevant market. That is what the merging parties are arguing here: luxury pens are too gerrymandered and inconsistent with the "commercial realities" to be a relevant market. They argue that proper relevant market in which to assess this transaction is either all fountain pens or premium plus luxury fountain pens, and in either of these product groupings there is not a likely anticompetitive effect resulting from the merger. Unless you are going to concede the case, you need to confront their argument somewhere in the memorandum and argue that your market better reflects the commercial realties and gives a more realistic assessment of the likely competitive effects of the transaction than their alternative markets. (Think *H&R Block/TaxACT*, where the court was confronted with two opposing market definitions: it chose one and rejected the other).

The merging parties agree,[12] and a court should be readily convinced, that the relevant geographic market is the United States. Manufacturers advertise and sell their fountain pens nationwide. Each manufacturer of fountain pens sells its product at a uniform price throughout the country. Courts have held that where the companies in the relevant product market sell their products nationwide at uniform prices, the United States is a relevant geographic market. The Merger Guidelines recognize this principle as well. Each manufacturer also supports cooperative advertising by its retailers with uniform advertisements throughout the United States. Moreover, we know that the hypothetical monopolist test is satisfied in a national market. (The math is the same here as in the relevant product market analysis above.) These facts confirm that the relevant geographic market is the United States.

c. Market shares, concentration, and the *PNB* presumption

In *Philadelphia National Bank*, the Supreme Court held that "a merger which produces a firm controlling an undue percentage of the relevant market, and results in a significant increase in the concentration of firms in that market, is so inherently likely to lessen competition substantially that it is must be enjoined in the absence of evidence clearly showing that the merger is not likely to have such anticompetitive effects." *United States v. Philadelphia National Bank*, 374 U.S. 321, 363 (1963). Specifically, the court held that a combined firm with at least 30% share and an increase in the 2-firm concentration ratio from 44% to 59% was sufficient to constitute "undue market share" and cause a "significant increase in concentration" to predicate the *PNB* presumption. The 2010 Guidelines provide that mergers in markets with a postmerger HHI above 2500 and a delta of 200 or more "will be presumed to be likely to enhance market power" and be sufficient to predicate the *PNB* presumption. Although the Guidelines are not binding on courts, modern courts frequently cite the Guidelines as supporting authority when finding mergers that increase the HHI by 200 or more points and result in a postmerger HHI of 2500 satisfy the predicates for the *PNB* presumption. *See, e.g.*, *FTC v. Hackensack Meridian Health, Inc.*, 30 F.4th 160, 172 (3d Cir. 2022); *Steves & Sons, Inc. v. JELD-WEN, Inc.*, 988 F.3d 690, 704 (4th Cir. 2021); *United States v. Anthem, Inc*., 855 F.3d 345, 349 (D.C. Cir. 2017); *FTC v. Penn State Hershey Med. Ctr.*, 838 F.3d 327, 347 (3d Cir. 2016); *Saint Alphonsus Med. Ctr.-Nampa Inc. v. St. Luke's Health Sys., Ltd*., 778 F.3d 775, 786 (9th Cir. 2015); *ProMedica Health Sys., Inc. v. FTC*, 749 F.3d 559, 568 (6th Cir. 2014); *FTC v. Staples, Inc.*, 190 F. Supp. 3d 100, 128 (D.D.C. 2016) ("Staples' proposed acquisition of Office Depot is therefore presumptively illegal because the HHI increases more than 200 points and the postmerger HHI is greater than 2,500."). The Guidelines also provide that in

[12] **Note to students**: If you simply answered that the parties agree that the relevant geographic market is the United States and hence this would not be an issue in the ligtitation, you would have received full credit. Many of you failed to note that the merging parties agree that the relevant geographic market is the United States. This is as important as anything you can cite. Those of you who missed it just followed the form of prior answers too closely.

moderately concentrated markets (that is, markets with an HHI between 1500 and 2500), transactions that increase the HHI by more than 100 points "potentially raise significant competitive concerns and often warrant scrutiny."

For the reasons discussed in the product market definition section above, the court is most likely to reject all market definitions except for two "symmetrical" ones: the seven-product premium plus luxury fountain pen market proposed by the merging parties and the five-product market that eliminates the outlying product on both sides of the price spectrum.

Tables 1 and 4 give the combined market share and HHI statistics for the staff's luxury pen market and the parties' proposed seven-product premium + luxury fountain pen market. The table below calculates the same statistics in the five-product market:

Five-Product "Symmetrical" Market

	Price	Revenues $	Share	HHI
Conklin	110	$55,000,000	28.42%	808
Tornado	150	$54,000,000	27.91%	779
QW	180	$45,000,000	23.26%	541
Conway	220	$22,000,000	11.37%	129
Nettuno	250	$17,500,000	9.04%	82
		$193,500,000	100.00%	2339
Combined			39.28%	
Pre				2339
Delta				635
Post				2973

The table below summarizes these statistics for the three candidate markets:

HHI Statistics: Summary

Candidate market	Combined share	Delta	Postmerger HHI
Seven-product market	26.6%	292	2171
Five-product market	39.3%	635	2973
Staff's luxury market	50.6%	1052	3650

This summary table shows that the HHI analysis is very sensitive to the choice of market definition.

The staff's proposed five-firm luxury fountain pen market presents HHI statistics that are well within the range where the agencies have prevailed in court.[13] The combined

[13] **Note to students:** If you rejected the staff's proposed luxury fountain pen market as gerrymanded and contrary to the commercial realities, it is not strictly necessary that you perform the *PNB* presumption analysis on this market. However, since the staff proposed this market, the section chief probably would find you views on the application of the *PNB* presumption useful. That said, for

firm's share of 50.6% significantly exceeds the 30% threshold set in *Philadelphia National Bank*, and the transaction would result in a significant increase in concentration by eliminating one of the five top firms and increasing the 2-firm concentration ratio from 65.9% to 80.5%. Measured by the 2-firm concentration ratio, in *Philadelphia National Bank* the market concentration increased by 15 percentage points, while in the staff's market the increase is almost the same at 14.6%. Moreover, the *PNB* market was much less concentrated both premerger (44%) and postmerger (59%), while here, the market premerger much more concentrated premerger (65.9%) and postmerger (80.5%). Under the *PNB* precedent itself, the *PNB* presumption should be triggered in the staff's proposed five-firm luxury pen market.

The transaction also violates the Merger Guidelines in the staff's proposed five-firm luxury pen market, which the courts regard as informative, although not binding. The market postmerger is "highly concentrated" with a postmerger HHI of 3650 (above the 2500-point threshold), and the transaction increases the HHI by 1052 points (above the 200-point threshold), making the merger presumptively anticompetitive. Courts have found mergers with lower deltas and lower postmerger HHI statistics sufficient to predicate the PNB presumption. *See, e.g.*, *United States v. Anthem, Inc.,* 855 F.3d 345, 351 (D.C. Cir. 2017) (combined market share of 47%, delta of 537, and postmerger HHI of 3000); *FTC v. H.J. Heinz Co.*, 246 F.3d 708 (D.C. Cir. 2001) (combined market share of 33%, delta of 510, and postmerger HHI of 5285); *United States v. H&R Block, Inc.,* 833 F. Supp. 2d 36, 72 (D.D.C. 2011) (combined market share of 28.4%, delta of 400, and postmerger HHI of 4691); *United States v. UPM-Kymmene OYJ*, No. 03 C 2528, 2003 WL 21781902 (N.D. Ill. July 25, 2003) (complaint alleging combined market share of 20%, a delta of 190, and a postmerger HHI of 2990).[14]

The problem is that a court is likely to reject the staff's proposed market as gerrymandered and the strength of the HHI statistics under the *PNB* presumption is much weaker in the other two markets.

In the other two markets, a court would likely conclude that the *PNB* presumption is not triggered.

The seven-product premium plus luxury fountain pen market, with a postmerger HHI of 2171, is only "moderately concentrated." 2010 Horizontal Merger Guidelines § 5.3. The HHI statistics do not put the transaction in the Merger Guidelines' "red zone" but say only that the transaction could "potentially raise significant competitive concerns and often warrant scrutiny." *Id*. These statistics are lower than the bulk of successfully

grading purposes, I did not count the omission of a *PNB* presumption analysis of this market a deficiency in the answer.

[14] **Note to students**: Some of you who analyzed the *PNB* presumption in a luxury pen market cited as support *PNB* itself and the Merger Guidelines. You could—and should—have made your argument stronger by also citing more recent cases where the government prevailed with HHI statistics similar to or lowered than those in the luxury pen market.

litigated DOJ/FTC cases in recent years, where all but a few cases had combined shares of above 35%, deltas above 1000 and postmerger HHIs in excess of 3500. I can find only one case where the agency prevailed in court with market shares and HHIs anywhere close to those in a premium plus luxury fountain pen market, and that case was decided almost twenty years ago. *See UPM-Kymmene*, 2003 WL 21781902 (complaint alleging combined market share of 20%, a delta of 190, and postmerger HHI of 2990). With low market shares, if the court finds the seven premium and luxury fountain pen firms to be the relevant market, we are unlikely to prevail on the merits without strong additional evidence of anticompetitive effects.[15]

The five-product market is somewhat better from a prosecutor's perspective but still below the bulk of the cases in recent years in which the agencies have prevailed on the Section 7 merits. The postmerger HHI of 2973 does place the merger in a "highly concentrated" market, 2010 Horizontal Merger Guidelines § 5.3, and with a delta of 635, the merger guidelines say that the merger "will be presumed to be likely to enhance market power." *Id*. As noted at the opening of this section, a number of cases recite a rule that a merger with a postmerger HHI of over 2500 and results in a delta over 200 is sufficient to trigger the *PNB* presumption. Still, none of these cases involve a merger even close to these thresholds, so the "rule" is dictum at best. I very much doubt that a court would find a merger unlawful based on these HHI statistics alone and would require compelling additional evidence of likely anticompetitive effect to find for the Division. Moreover, the court could easily avoid dealing with whether the *PNB* presumption should apply in the five-product case by simply finding the relevant market to be the seven-product market urged by the merging parties, where there is little argument that the presumption applies.

I should note that the difference in the HHI statistics between the seven-product and five-products markets results almost exclusively from the exclusion of Visconti and not from the exclusion of Accutron. Visconti has sales of $80 million, or over 40% of the total revenues of $193.5 million in the five-product market. Adding Visconti to the

[15] **Note to students:** Some of you recommend that the Division challenge the merger in a luxury pen market and, in the alternative, in a premium + luxury pen market even while expressly recognizing the weakness in the luxury market definition, the weakness in the *PNB* presumption in a premium + luxury pen market, and the lack of strong supporting additional evidence of anticompetitive effect in both markets. This type of recommendation has the flavor of "throw everything against the wall and hope something sticks." While this approach might work in private litigations where litigating every issue can impose significant costs on a resource-constrained opposing party and so incentivize them to settle, I find that the approach is counterproductive with the government. For all practical purposes, the federal antitrust enforcement agencies are not resource-constrained in any given investigation or litigation and the merging parties will interpret—and argue to the court—that the "throw everything against the wall" approach signals the weakness of a strong case. David Boies, representing the DOJ in the *Microsoft* case, made this argument very effectively.

five-product market dilutes the shares of the merging parties by almost 30%, cuts the delta in half, and decreases the postmerger HHI by over 21%:

Five-Product "Symmetrical" Market + Visconti

	Price	Revenues $	Share	HHI	Difference %Points	Difference %
Visconti	100	$80,000,000	29.25%	856		
Conklin	110	$55,000,000	20.11%	404		
Tornado	150	$54,000,000	19.74%	390	8.16%	29.25%
QW	180	$45,000,000	16.45%	271		
Conway	220	$22,000,000	8.04%	65	3.33%	29.25%
Nettuno	250	$17,500,000	6.40%	41		
		$273,500,000	100.00%	2026		
Combined			27.79%		11.49%	29.25%
Pre				2026	312	13.36%
Delta				318	317	49.95%
Post				2344	629	21.17%

By contrast, adding Accutron to the five-product market would only add $11 million to aggregate market revenues and result in relatively minor dilutions to the HHI statistics. Hence, the critical question in product market definition is whether to include Visconti in the relevant market. Recall that Visconti is a closer competitor to Tornado than Conway, which lends considerable weight to including it in the market. In light of the relatively low HHI statistics and the sensitivity of the HHI results to the exclusion of Visconti, I strongly suspect that the court will either reject the five-product symmetrical market as a relevant market or alternatively find that the *PNB* presumption is not triggered in this market.

In sum, I believe that the court will find for the defendants on either the seven-product or the five-product candidate market unless there is compelling additional evidence of the merger's likely anticompetitive effect.

d. Additional evidence supporting the prima facie case

Modern courts and the Merger Guidelines recognize that mergers are anticompetitive under Section 7 when they have a reasonable probability of increasing prices, reducing market output, reducing product or service quality, or reducing the rate of technological innovation or product improvement in the market compared to what would have happened in the market on a going-forward basis in the absence of the transaction.

Here, the Division lacks substantial additional evidence to support the prima facie case. The unilateral effects evidence is weak, indicating a unilateral price increase at best of only 4.0% in Tornado pens or alternatively a unilateral price increase of only 2.5% in Conway pens. There is no material evidence supporting a finding of coordinated evidence and no suggestion in the investigation record that the acquisition involves a

maverick. Finally, there is no customer opposition to this transaction, so the Division will not have customers to testify at trial that they expect to be harmed by the transaction.

Unilateral effects. Both the courts and the Merger Guidelines recognize the theory of a unilateral effect. This theory of unilateral effects addresses the elimination of significant "local" competition between the merging firms, so that the merged firm can raise prices independently of how other incumbent firms react. The 2010 Merger Guidelines explain:

A merger between firms selling differentiated products may diminish competition by enabling the merged firm to profit by unilaterally raising the price of one or both products above the premerger level. Some of the sales lost due to the price rise will be diverted to the product of the merger partner and, depending on the extent of the diversion and the relative margins, capturing such sales loss through the merger may make the price increase profitable even though it would not have been profitable without the merger. 2010 DOJ/FTC Horizontal Merger Guidelines § 6.1. Under the 1992 Merger Guidelines, the unilateral effects theory applied whenever: (1) the two merging firms were each other's closest competitors, and (2) their combined market share was greater than 35%. The 2010 Merger Guidelines relaxed these requirements so that the firms only need to be close competitors to each other (although not necessarily the closest) and eliminated the 35% combined share requirement.

Here, the Tornado/Conway merger would not satisfy the 1992 Merger Guidelines requirements because Quality Writing is a closer competitor to each merging party than the other merging party. Moreover, in the five-product market, the combined share is only 26.6%, less than the 35% 1992 guidelines requirement. While the 2010 revisions eliminated these requirements, courts created most of the relevant judicial precedent under the 1992 guidelines when the requirements were in effect. *See FTC v. CCC Holdings Inc.*, 605 F. Supp. 2d 26, 71 (D.D.C. 2009). Indeed, at least two courts have rejected a combined share of 35% as sufficient to trigger a presumption of anticompetitive effect. *See United States v. Oracle Corp.*, 331 F. Supp. 2d 1098, 1123 (N.D. Cal. 2004) (explaining that explained, "[a] presumption of anticompetitive effects from a combined share of 35% in a differentiated products market is unwarranted" and "essentially a monopoly or dominant position" is required "[t]o prevail on a differentiated products unilateral effects claim"); *accord FTC v. Laboratory Corp. of Am*., No. SACV 10-1873 AG MLGX, 2011 WL 3100372, at *19 (C.D. Cal. Feb. 22, 2011). However, in *H&R Block*, the court rejected the Oracle court's view and expressly declined to impose a combined market share threshold for a unilateral effects theory to apply:

> The *Oracle* court stated that "[t]o prevail on a differentiated products unilateral effects claim, a plaintiff must prove a relevant market in

> which the merging parties would have essentially a monopoly or dominant position." Some commentators have criticized this standard, however, because "impermissible price increases . . . can be achieved on far lower market shares" than *Oracle's* standard evidently requires. Indeed, Judge Brown's subsequent opinion from this Circuit in *Whole Foods* implied that a market definition itself may not even be required for proving a Section 7 violation based on unilateral effects. *See Whole Foods*, 548 F.3d [1028] at 1036 [(D.C. Cir. 2007)]. In a footnote, Judge Brown explained that "a merger between two close competitors can sometimes raise antitrust concerns due to unilateral effects in highly differentiated markets. In such a situation, it might not be necessary to understand the market definition to conclude a preliminary injunction should issue." The Court therefore declines the defendants' invitation, in reliance on *Oracle*, to impose a market share threshold for proving a unilateral effects claim.

United States v. H & R Block, Inc., 833 F. Supp. 2d 36, 84-85 (D.D.C. 2011) (footnotes and internal citations omitted). The *H&R Block* court, however, went on to observe in a footnote that "[a]s an empirical matter, the unilateral effects challenges made by the Agencies nearly always have involved combined shares greater than 35%," but that "[c]ombined shares less than 35% may be sufficiently high to produce a substantial unilateral anticompetitive effect if the products are differentiated and *the merging products are especially close substitutes*." *Id*. at 85 n.36 (quoting U.S. Dep't of Justice & Fed. Trade Comm'n, Commentary on the Horizontal Merger Guidelines 26 (2006)) (emphasis added).

Neither Tornado nor Conway is an "especially" close substitute for the other. The diversion ratio from Tornado to Conway is only 0.1, while the diversion ratio from Conway to Tornado is only 0.2. (Table 2) Three other brands are closer competitors to Tornado than Conway (QW, Conklin, and Visconti), and two other brands are closer competitors to Conway than Tornado (QW and Nettuno). This indicates that Tornado and Conway are not "especially close substitutes."

Nor is there other evidence in the investigation record that Tornado and Conway are close substitutes for one another. Nothing in the merging companies' ordinary course of business documents or the staff interviews of industry participants indicates unusually close head-to-head competition between the two merging parties.

Finally, we can perform a unilateral effects merger simulation for Tornado and Conway by equating the actual recapture ratio with the critical recapture ratio in a "market" consisting only of the merging firms and then solving for δ. The profit-maximizing price is then $\delta/2$.

From Table 2, the actual recapture ratio from Tornado to Conway is 0.1. The critical recapture ratio for a two-product candidate market is:

$$R^1_{Critical} = \frac{\delta p_1}{\$m_2},$$

where the price of a Tornado pen is \$150, and dollar margin of Conway is \$110 (50% of the \$220 wholesale price).

Equating the actual recapture ratio with the critical recapture ratio:

$$0.10 = \frac{\delta(150)}{\$110}.$$

Solving, δ = 7.33%.[16] So the profit-maximizing price increase for Tornado is $\delta/2$ or 3.67% (or about 4%), assuming that the merged firm holds the price of Conway at the premerger level.

Alternatively, we could impose the SSNIP on Conway. From Table 2, the actual recapture ratio from Conway to Tornado is 0.2. Equating the actual recapture ratio with the critical recapture ratio gives:

$$0.20 = \frac{\delta(220)}{\$60},$$

where the price of a Conway pen is \$220, and the dollar margin of Tornado is \$60 (50% of the \$150 wholesale price). Solving, $\delta = 5.456\%$ (use Mathpapa). So the profit-maximizing price increase for Conway is $\delta/2$ or 2.73% (or about 2.5%).

Note to students: Although much mote time-consuming, you could also use a brute force merger simulation on the unilateral price increases the combined firm would find in its profit-maximizing interest to implement (holding the price of the other product constant).

16 **Note to students:** You can solve for δ manually or, better yet, use Mathpapa.

Brute force accounting: Tornado + Conway

	SSNIP imposed on:	
	Tornado	Conway
Gain on inframarginal sales		
Price	150	220
δ =	**4.00%**	**2.50%**
$SSNIP = δp =	6.00	5.50
q =	360,000	100,000
ε = 1/m =	2.5	2
%Δq = δε =	0.1	0.05
Δq = %Δq × q =	36,000	5,000
q2 = q - Δq =	324,000	95,000
Gain =	1,944,000.00	522,500
Loss on marginal sales		
$m = %m × p =	60	110
Δq =	36,000	5,000
Loss = $m × Δq =	2,160,000	550,000
NET for firm 1 =	-216,000	-27,500
Gain on recapture		
Δq =	36,000	5,000.00
Diversion/recapture	0.1	0.2
Rec. units = DΔq =	3,600	1000
$m_Recapture	110	60
Recapture gain	396,000	60,000
NET GAIN	180,000	32,500

By varying the *δ*, it appears that the profit-maximizing unilateral price increase on Tornado and on Conway (holding the price of the other constant) is around 4.0% and 2.5%, respectively.

End of note

These are small price increases and, given the inevitable errors in the data and assumptions of the model, may not be reliably different than zero. In addition, note the net profit gain to the combined firm from a 5% price increase would only be $180,000 on a price increase in Tornado pens and $32,500 on a price increase in Conway pens.[17] The total profit on Tornado and Conway pens premerger is $21.6 million (= $60 margin × 360,000 units) and $11 million (= $110 margin × 100,000) for a combined total profit of $32.6 million. Compared to revenues at premerger prices, a $180,000 gain from a 5% Tornado price increase would increase the combined firm's

[17] **Note to students:** You would need to calculate this if you used the formula and not brute force simulation. Brute force may be the best way, since there is not an easy formula for this.

profits by only 0.55%, while a $32,500 gain from a 5% Conway price increase would increase the combined firm's profits by only 0.10%. The defendants almost surely would argue, and the court is likely to accept, that the combined firm would not risk the goodwill of its merchants and customers by making a price increase for so small a profit gain.

Entry. Tornado has a second argument for why it will not raise the price of Tornado pens. Tornado notes that both Visconti and Conklin, two significant manufacturers of pens that wholesale at $100 and $110, respectively, have repeatedly expressed interest in adding a more "prestige" pen at a higher price point given the increased consumer demand. The mechanics of fountain pen design are widely known and there are no technological barriers to entry. Tornado believes that if either Visconti or Conklin expanded their product line, they would do so at around the $150 wholesale price point where Tornado is.

Visconti and Conklin each confirmed to the staff its interest in expanding its product line into a more "prestige" pen around the $150 price point. While each also said an increase in wholesale prices of pens between $130 and $180 would make entry more attractive, neither would say they would introduce a $150 pen in that event. Also, both companies said they have not yet designed or test-marketed a new, more "prestige" product, prepared a financial analysis to test the profitability of such a product, or prepared a marketing plan of how they would roll out the product. Each company said it would take at least a year or more after the product's introduction to conduct the extensive advertising necessary to gain customer acceptance and generate meaningful sales.

The courts and the Merger Guidelines recognize that entry by a new firm, or expansion or repositioning by incumbent firms, may negate the anticompetitive effects that otherwise would likely occur from the merger. For entry to be a defense to a *prima facie* case, the entry must be timely, likely, and of a magnitude sufficient to deter or counteract any likely anticompetitive effects of concern so the merger will not substantially harm customers.

Here, Visconti's and Conklin's statements to the staff strongly indicate that their entry into a more "prestige" fountain pen is unlikely and, in any event, would not be timely. A court should reject any defense advanced by the merging parties based on *actual* entry.

But this is not the defense Tornado appears to be making. Instead, it is arguing that it is aware of Visconti's and Conklin's undisputed interest in introducing a pen at the $150 wholesale price point that would compete directly with Tornado's pen, the entry by either of them would significantly hurt Tornado's profitability, and any price increase in the price of Tornado's pen could tip either Visconti or Conklin into entering

with a new $150 pen. Tornado submits that this concern further incentivizes it not to increase prices anticompetitively, even if it had the ability to do so.

The argument has some weight. As shown above in the unilateral effects analysis, Tornado's profit-maximizing unilateral price increase of about 4% earns it very little in additional profits—about $180,000 per year. If a price increase would precipitate entry by either Visconti or Conklin, even if the entry took several years, Tornado could lose even more sales and wipe out the small profit Tornado otherwise would make on the price increase. Since Tornado has so little to gain at best from a price increase and so much to lose if it precipitates entry by either Visconti or Conklin, a court could well credit this defense.[18]

Coordinated effects theory. The coordinated effects theory asks whether the merger is likely to increase the ability and incentives of a sufficient number of firms in the market to engage in successful tacit collusion. There are two conditions for the coordinated effects theory to apply: (1) the market must be susceptible to tacit coordination, and (2) the merger must make tacit collusion either more likely or more successful.

Regardless of whether the market consists of five firms or seven firms, the market does not appear susceptible to tacit collusion. Historically, the Division has found five or more firms in a market insufficient by itself to be indicative of susceptibility to tacit coordination in the absence of other substantial evidence. Here, however, although wholesale prices are transparent, the investigation record reveals no attempts at price leadership.[19] Instead, fountain pen prices have increased at about the same rate as the inflation rate for jewelry products shown by the U.S. Bureau of Labor Statistics in its Producer Price Index for Jewelry. This suggests that broad market forces in input costs and consumer demand drive price increases in fountain pens, not tacit collusion. In addition, the only attempt at some cooperative efforts—the formation of the Luxury Fountain Pen Association by Tornado, Quality Writing, Conway, Nettuno, and Accutron—appears to have completely failed. The investigation record shows that the association has done little, if anything. The association rarely meets, has no executive director or staff, and does not collect or distribute any data from its members. Most notably, even on the most basic trade association activities, such as lobbying of Congress or the collection and distribution of market data, there has been insufficient support by members to move forward. The trade association experience is strong evidence that the LFPA members have little or no interest in coordinating on even self-

[18] **Note to students:** Some of you assumed that the merged firm would consolidate under the more expensive Conway brand and charge Conway pries for Tornado pens. There is nothing in the investigation record to suggest that this is what the merged firm will do. Moreover, unless consumers are completely ignorant, the merged firm could not pass off a Tornado pen that wholesaled at $150 premerger for a Conway pen postmerger that wholesaled at $220.

[19] **Note to students:** Some of you concluded that price transparency minimized the selection problem. This is not quite right, because significant price differentiation remains a major impediment to tacitly coordinating the multiple price points.

interested lawful activities, much less tacitly coordinating on anticompetitive outcomes. [20,21]

Nor is there anything in the investigation record to suggest that the merger will make tacit coordination more likely or successful. At best, the Division could cite the reduction of firms by one resulting from the merger. In a seven-firm market, a reduction to six firms is not competitively significant. Even in a narrower five-firm market, the Division regularly approves 5-to-4 mergers without even second request investigations.

Elimination of a maverick. Antitrust law regards a maverick as a firm that disrupts coordination to a significant degree that would exist in the absence of the maverick. In addition to the market not likely to be susceptible to coordination, nothing in the investigation record indicates that either Tornado or Conway is a maverick.

Customer testimony. The staff has contacted numerous retailers of fountain pens across the spectrum about the transaction. All the retailers contacted by the staff were indifferent to the transaction; none of them expressed a concern that prices would increase or quality would decrease in any product due to the merger. So the Division will not have any customers to testify at trial that the transaction will harm them, and the merging parties should be able to call multiple witnesses to testify to the contrary. To my knowledge, if the Division files a complaint against the Tornado/Conway merger, this would be only the second time in the last forty years that the Division litigated a case without substantial supporting customer testimony of likely anticompetitive harm. *See United States v. Bazaarvoice, Inc.*, No. 13-cv-00133-WHO, 2014 WL 203966 (N.D. Cal. Jan. 8, 2014) (no supporting customer testimony, but finding for the DOJ). In any event, given the weakness of the explicit theories of anticompetitive effect, it would be especially risky for the Division to litigate here without substantial supporting customer testimony.

2. The defendant's arguments on procompetitive benefits

I have already addressed the main argument of the merging parties, which is a challenge to the staff's definition of the relevant market. The merging parties also

[20] **Note to students:** Some of you concluded that the formation of the Luxury Fountain Pen Association was significant evidence of prior efforts of coordination. But the facts in the hypothetical indicate that the efforts completely failed for lack of interest in coordinating on even lawful activity. To me, the weight of this evidence is that premerger tacit coordination is unlikely.

[21] **Note to students:** Some of you cited the absence of entry into premium and luxury fountain pens as evidence of premerger tacit coordination. This requires an argument and not just an assertion. Tacit collusion to suppress entry suggests collective efforts to restrain price increases, just the opposite of the goal of most tacit collusion. The more natural explanation for the absence of entry is the high barrier to entry posed by the need to establish a "prestige" image and the accompanying need for a significant investment in advertising without any guarantee that the advertising will in fact create the required image.

argue that the transaction has procompetitive benefits from cost-saving and product introduction efficiencies.

Cost-saving efficiencies. Tornado told the staff during the investigation that it could lower its costs by $2.0 million annually by closing down Conway's headquarters and only production facility; consolidating all back office, sales, and marketing operations into Tornado's existing infrastructure; and moving all production into Tornado's factory. Tornado says it has sufficient capacity in its single manufacturing facility to absorb all of Conway's production and still have the capacity to significantly expand its production if and when demand warrants, although Tornado will have to transfer some of Conway's artisans to the Tornado facility or hire new artisans to produce the Conway product.

As a technical matter, all of these claimed cost reductions are fixed cost savings and hence not cognizable as downward-pricing pressure efficiencies under the 2010 Merger Guidelines. Nonetheless, the court may credit these cost savings as a procompetitive benefit of the transaction. Even if the court does not recognize these cost savings as part of a legal defense, however, the cost savings may convince a court that the transaction has some social benefit in reducing production costs. If the court wants to decide for the defendants, an easy way to do so is to find the relevant product market to be premium plus luxury fountain pens where the *PNB* presumption is not triggered and hence avoid any need to make findings on efficiencies.

Product introduction efficiencies. Tornado believes that it will take about one to two years after the closing to complete the consolidation of Conway into Tornado. After the consolidation is complete, Tornado claims it will use part of its profits from the acquisition to launch a new product to compete at the $180-price point in competition with Quality Writing. Tornado believes it can sell at least 75,000 pens at the $180-price point within two years of introduction and sell even more in the succeeding years. Tornado says it will not have the free cash flow to expand its product line without the Conway acquisition.

Apart from the problem of whether Tornado will act as it says it will, the product expansion is several years off in the future and would not offset any immediate anticompetitive effect from the transaction, so it should not account technically as a cognizable efficiency. However, depending on how credible and supportable the court finds Tornado on this issue, the court could credit a product introduction as a procompetitive benefit of the transaction and cause it to lean in the direction of finding a premium plus luxury pen relevant market.

3. Conclusion on Section 7 legality

Application of the *Brown Shoe* "outer boundary" and "practical indicia" factors, as well as the hypothetical monopolist test, show that the only two credible markets are either a seven-firm premium plus luxury pen market or a five-firm "symmetric market" that eliminates the firms on the inside edge of the seven-firm market on both sides of the price continuum. Between the two, the *Brown Shoe* indicia somewhat favor the seven-product market. A court is likely to find that the merger in the seven-firm market fails to trigger the *PNB* presumption under either judicial precedent or the merger guidelines. The argument for triggering the *PNB* presumption is only slightly better in the five-firm market.

Given the weakness of the HHI statistics, the court almost surely will look to whether there is any substantial additional evidence supporting a finding of likely anticompetitive effect. The unilateral price effects argument is weak because of the small magnitude of the simulated profit-maximizing unilateral price increases. The unilateral profit-maximizing price increases would be about 4.0% for Tornado and 2.5% for Conway, the price increases would generate minimal profit gains of either $180,000 and $32,500, respectively, and would only increase the combined firm's profit over premerger prices by 0.55% and 0.10%, respectively. A court could easily be persuaded that no firm would increase its prices and risk its customer goodwill for so little profit gain. Moreover, the merging parties make a "limit pricing" entry defense against a price increase in Tornado pens that a court could find meritorious, eliminating the more profitable unilateral price increase for the merged firm and further limiting the merged firm's ability to act anticompetitively postmerger.

There is no evidentiary support for likely anticompetitive harm based on coordinated effects or the elimination of a maverick.

Notably, in an extensive field investigation, the staff could find no retail customers with competitive concerns about the transaction. All the retailers contacted by the staff were indifferent to the transaction; none of them expressed a concern that prices would increase or quality would decrease in any product due to the merger. The Division would have no customers testifying at trial to support a finding of anticompetitive effect. If the Division proceeds to litigate, this case will be almost unique for the absence of supporting customer witnesses.

The parties offer two procompetitive transaction benefits—cost-savings and a new product introduction at the $180 price point against Quality Writing. While the procompetitive benefits arguments should fail as technical legal efficiency defenses, a court nonetheless could find as a matter of discretion that these factors weigh in favor of finding for the merging parties.

Finally, but very important as a practical litigation matter, if convinced that the transaction is not likely to be anticompetitive, the court can avoid any careful parsing

of the evidence or the judicial precedent by simply finding that the relevant market is the seven-firm market and rejecting the application of the PNB presumption in that market.

On the investigation record, the case is too weak to warrant the expenditure of the Division's resources. We should recommend that the Assistant Attorney General close the investigation without taking enforcement action.

4. Consent decree relief

If the Division does decide to challenge the Tornado/Conway transaction, I can see no consent decree relief that would negate whatever anticompetitive harm the deal is likely to create.

First, this is a "pure play" transaction: each party has only one product. This makes divestiture of an overlapping product financially unrealistic to the buyer. Divesting Conway's product leaves nothing for Tornado to acquire. On the other hand, Tornado's product earns more profit ($21.6 million) than Conway's product ($11.0 million), so divesting Tornado's product in a "trade up" deal makes no financial sense.

Tornado has offered to accept a consent decree that caps price increases in its existing products to no more than the inflation rate for jewelry products shown by the U.S. Bureau of Labor Statistics' Producer Price Index for Jewelry. The staff recommends rejecting Tornado's consent decree offer.

I agree. Historically, the Division has required divestitures to cure horizontal merger problems. More specifically, the Division has rejected price caps as a solution to a threatened price increase resulting from the merger. First, imposing and monitoring price caps puts the Division in the position of an economic regulatory agency rather than a law enforcement agency, a position the Division has always resisted. Second, there could be shocks in demand that would require a free market equilibrium price to increase above the price cap, making the price cap anticompetitive.