PROPOSED FINDINGS OF FACT[1]

I. BACKGROUND

A. Nature of This Action

1. This is an action commenced by the Federal Trade Commission ("FTC") under Section 13(b) of the Federal Trade Commission Act, 15 U.S.C. § 53(b), seeking a preliminary injunction against the proposed acquisition by Swedish Match North America Inc. ("Swedish Match") of the loose leaf chewing tobacco business of National Tobacco Company, L.P. ("National"). Preliminary injunctive relief is necessary to maintain the status quo and to allow the Commission to determine, in administrative adjudication, whether this acquisition would violate Section 7 of the Clayton Act, 15 U.S.C. § 21, or Section 5 of the Federal Trade Commission Act, 15 U.S.C. § 45, by substantially reducing competition in the market for loose leaf chewing tobacco in the United States, or by constituting an unfair method of competition.

B. The Transaction

2. Pursuant to an Asset Purchase Agreement dated February 10, 2000, Swedish Match proposes to acquire the loose leaf chewing tobacco brands and certain other assets of National for approximately $165 million. Stipulation ¶ 15.

3. On June 22, 2000, the FTC authorized the commencement of an action under Section 13(b) of the FTC Act, which was filed on June 23, 2000, to seek a preliminary injunction

---

[1] Throughout this document, "PFF" refers to numbered paragraphs of Plaintiff's Proposed Findings of Fact and "PCL" refers to numbered paragraphs of Plaintiff's Conclusions of Law. Citations to "PX ____ " are to plaintiff's exhibits. Citations to "DX ____ " are to defendants' exhibits. Citations to the preliminary injunction hearing transcripts are by date, a.m. or p.m. session, and transcript cite with parenthetical witness identification, *e.g.,* "9/5 p.m. tr. 132:7-14, 133:2-4 (Ryan)."

barring consummation of the proposed acquisition during the pendency of administrative proceedings. Stipulation ¶ 17.

4. In 1997, Swedish Match and National engaged in negotiations in an attempt to reach an agreement (which did not come to fruition) whereby Swedish Match would manufacture National's brands in its Owensboro, Kentucky plant. Stipulation ¶ 15, *see also* PX ; PX .

.

5.

PX .

." PX at 2.

see PX at 49-50 ( ).

PX at 118 (Morris dep.).

6. PX at 49-50 ( ). at 51.

7.

:

PX at 1734 (emphasis added).

PX at 2.

C. The Parties

8. Plaintiff FTC is an administrative agency of the United States Government established, organized, and existing pursuant to the FTC Act, 15 U.S.C. § 41 *et seq.*, with its principal offices at 600 Pennsylvania Avenue, NW, Washington, DC 20580. The Commission is vested with authority and responsibility for enforcing, *inter alia*, Section 7 of the Clayton Act and Section 5 of the FTC Act. Stipulation ¶ 5.

9. Swedish Match is a corporation organized and existing under the laws of the State of Delaware, with its principal place of business at 6600 West Broad Street, Richmond, Virginia 23230-1558. Swedish Match North America Inc. is a wholly owned subsidiary of Swedish Match AB, a foreign corporation. Stipulations ¶¶ 6, 7.

DX , Exh. 8. In 1999, Swedish Match had 42% of loose leaf dollar sales. PX 305.

10. Swedish Match AB, headquartered in Stockholm, Sweden, produces a broad range of tobacco products (including loose leaf tobacco, moist snuff, cigars, and pipe tobacco), matches

and disposable lighters, which are sold in approximately 140 different countries. PX 50 at 1. In 1999 Swedish Match AB had total sales of about $1 billion. PX 50.

11. Swedish Match's leading loose leaf brand is Red Man, a premium loose leaf chewing tobacco sold in a variety of flavors. In 1999 the Red Man brands (Red Man, Red Man Golden Blend, Red Man Select) comprised 36% of all loose leaf sales (by revenue), and Red Man had a 22% market share. PX 305. Swedish Match's value brands include J.D.'s Blend and Southern Pride.

12. Swedish Match is the third largest producer of moist snuff in the U.S., with $54 million of sales in 1999 and 3% of moist snuff sales. PX 306. Swedish Match's leading moist snuff brand, Timber Wolf, is an "every day low price" or "price value" brand. PX 50 at 16.

13.

PX at 12.

14. National is a limited partnership organized and existing under the laws of the state of Delaware, with its principle place of business at 257 Park Avenue South, New York, N.Y. 10010-7304. Stipulation ¶ 11.

15. National is a wholly-owned subsidiary of North Atlantic Trading Company, Inc., which has headquarters in New York City. PX 145 at 3.

16.

. In 1999, National had an 18% market share of the loose leaf market. PX 305. National's leading loose leaf brand is Beech-Nut, a premium loose leaf chewing tobacco sold in Regular and Wintergreen flavors. PX 145 at 6. In 1999, the Beech-Nut family of brands comprised 13% of loose leaf sales. PX 305.

DX ,

PX at 86 ( ).

17.

PX at 5.

D. Interstate Commerce

18. Each defendant is engaged in commerce, as "commerce" is defined in Section 4 of the FTC Act, 15 U.S.C. § 44, and Section 1 of the Clayton Act, 15 U.S.C. § 12. Stipulation ¶ 3.

II. LOOSE LEAF CHEWING TOBACCO IS THE RELEVANT PRODUCT MARKET

A. Nature of the Product

19. Loose leaf tobacco is typically sold in three ounce pouches and is sometimes referred to as pouch or chewing tobacco. 9/5 p.m. tr. 90:10-12 (Rosson); PX 176 at 24, 27 (Ray dep.). Loose leaf tobacco is consumed by chewing. PX 254 at 88 (McClure dep.); 9/6 a.m. tr. 39:12-14 (Pittman); PX 176 at 27 (Ray dep.). Loose leaf is often chewed outdoors, because the chewer needs to spit frequently. PX 24 at 0076, 0083; PX 220 at 7450-7451; PX 175 at 78 (Price dep.); PX 204 ¶ 5 (Ryan dec.); PX 203 ¶ 5 (Rosson dec.).

20. Loose leaf and moist snuff have largely different customer bases. A 1999 McKinsey industry study commissioned by Swedish Match states: "The snuff and chewing tobacco products are strongly associated with relatively small but distinct consumer segments." PX 10 at 1078. Swedish Match North America's former president states: "We had some

consumers who would use both products, but for the most part they were separate consumer bases." PX 177 at 7-8; PX 254 at 95-98 (McClure dep.).

21. Loose leaf tobacco users are typically male, blue-collar individuals with an average age in excess of 45; moist snuff is used by younger consumers. 9/5 p.m. tr. 15:17-18, 16:4-5 (Ryan); PX 204 ¶¶ 7,10 (Ryan dec.); 9/5 p.m. tr. 88:18-25, 89:1 (Rosson); PX 203 ¶ 7 (Rosson dec.); PX 255 at 57 (Rosson dep.); PX 205 ¶ 4 (Martindale dec.); PX 259 at 41 (Bryant dep.); PX 266 at 17, 41 (Cross dep.); PX 233 at 0474. A Swedish Match marketing study finds that the average age of Beech-Nut users is 47, the average age of Red Man users is 46.5 years, and states that:

> The heavier loose leaf user is likely to be age 45-64 and have lower income and education levels. They also appear to be more loyal to the loose leaf form – a significantly lower percentage use alternatives. This contrasts with strong moist snuff usage among the younger set, under age 35.

PX 25 at 9422, 9425, 9429; *see also* PX at 2553; PX 22 at 1938. Another Swedish Match document states: "Of note, older respondents tend to be more likely to chew loose leaf tobacco most often, while conversely, younger respondents are more apt to be moist snuff users. DX 214 at 0873.

PX at 2316.

22. Loose leaf users typically live in rural areas in the southeastern United States; many work outdoors in occupations such as farming and construction. PX 176 at 30 (Ray dep.). Moist snuff users are more broadly dispersed throughout the U.S. than are loose leaf users. PX at 2553; PX 204 ¶¶ 7, 10 (Ryan dec.); 9/5 p.m. tr. 89:2-8 (Rosson); PX 203 ¶¶ 5, 7 (Rosson dec.). While most snuff users tend to work in blue-collar professions, a significant number also work in

white collar occupations. PX 204 ¶ 10 (Ryan dec.); 9/5 p.m. tr. 89:9-15 (Rosson); PX 203 ¶ 7 (Rosson dec.); PX 11 at 3394-95.

23. Swedish Match surveys acknowledge that the distinct customer bases have different personalities and project different images:

> The perception/atmosphere of chewing tobacco is more social, simple and quiet, very laid back. It is about trying to fit into the group. It provides more passive and introverted strategies for dealing with tensions.
>
> The moist snuff or dipping perception/atmosphere is more about standing apart from the group. It is about being rugged and independent. It provides more active opportunities for ego-statement and expression.

PX 222 at 1250. Another Swedish Match document states:

> When comparing moist snuff and loose leaf personalities, significant differences exist in their perceptions. Those who use moist snuff, called "dippers", are thought of as being younger, less rugged, more active individuals who could either be cowboys or CEOs and are more aggressive, independent and respected in the community. On the other hand, the looseleaf users, known as "chewers", are older and more sedentary. They are also more likely to be a "redneck" or a farmer and are accordingly more passive in society, secluded from others and rugged.

DX at 0257.

24. Loose leaf tobacco differs in many significant respects from moist snuff, its purported alternative. Most moist snuff is a more expensive product than loose leaf. The mean price for premium moist snuff is around $3.50 per can at retail; the mean price for premium loose leaf is around $1.95 per pouch at retail. PX 322; 9/5 p.m. tr. 84:1-5, 88:5-12 (Rosson); PX at 2541. PX at 8361; DX Exh. 10B ( ). EDLP (every day low price) or "price value" moist snuff sells for about half the price of premium moist snuff at retail, or about $1.70. PX 322; 9/5 p.m. tr. 109:13-19 (Rosson).

25. There is no price overlap between any category of loose leaf and premium moist snuff. PX 303.

DX at ¶30 & Exh. 7 ( ); 9/7 p.m. tr. 57:12-25, 58:1-10 (Wu). Defendants make this claim by including U.S. Tobacco's Rooster brand as premium moist snuff. 9/8 a.m. tr. 43:3-12 (Wu). However, defendants' expert recognizes Rooster as a premium brand: "Not surprisingly, the prices of moist snuff brands, particularly those in the price-value segment, are in the same range as loose leaf, a fact that has become more important in recent years following UST's introduction of Red Seal and Rooster." DX at ¶ 7 (Wu supp. report). Swedish Match views Rooster as a price value moist snuff. DX 283 at 8350. Clifford Ray, National's senior vice president of marketing, also classifies Rooster as price value moist snuff. 9/8 p.m. tr. 36:18-22, 57:23-58:1 (Ray). The average price of Rooster in 1999 was $28.67 per pound, according to defendants' data. PX 306; *see* DX Exh. 10B. The average price for Skoal was $48.89 per pound; for Copenhagen, $44.61. By comparison, the average price for Timber Wolf, the largest selling price value snuff, was $22.59 per pound. *Id.* PX 322 properly places Rooster in the price value category, consistent with defendants' views, and shows that there is no price overlap between premium snuff (Skoal and Copenhagen) and premium loose leaf (Red Man, Red Man Golden Blend, Levi Garrett, and Beech-Nut).

26. Moist snuff is sold in small, round 1.2-ounce plastic containers, while loose leaf is sold in larger three-ounce pouches. 9/5 p.m. tr. 90:6-17 (Rosson); PX 176 at 49 (Ray dep.); PX at 4; PX 254 at 100 (McClure dep.). Average consumption of a pouch of chewing tobacco and a can of moist snuff takes place at about the same rate. 9/5 p.m. tr. 140:3-24 (Rosson).

27. Moist snuff is a more finely ground product than loose leaf and has a higher moisture content. *Compare* PX 158 *with* PX 159; *see* PX 176 at 47 (Ray dep.); PX 204 ¶ 8 (Ryan

dec.); PX 203 ¶ 6 (Rosson dec.); PX 254 at 87 (McClure Dep.). Moist snuff looks like ground coffee, whereas individual tobacco leaves are clearly visible in loose leaf. *Compare* PX 158 *with* PX 159; *see* PX 203 ¶¶ 6, 8 (Rosson dec.); PX 254 at 87 (McClure Dep.).

28. Chewing tobacco is made from Wisconsin and Pennsylvania tobaccos, which are air-cured and flavored with seasonings. PX 176 at 23 (Ray dep.); 9/5 p.m. tr. 14:25, 15:1-13 (Ryan); PX 204 ¶ 6 (Ryan dec.); 9/5 p.m. tr. 81:7-17, 82:7-14 (Rosson); PX 203 ¶ 6 (Rosson dec.); PX at 0997-0999. Moist snuff is made from Kentucky and Tennessee tobacco, which is cured with smoke, much as meats are cured in a smoke-house. 9/5 p.m. tr. 15:24-25, 16:1-2 (Ryan); PX 204 ¶ 9 (Ryan dec.); PX 203 ¶ 8 (Rosson dec.); 9/5 p.m. tr. 85:4-20 (Rosson); PX 176 at 47 (Ray dep.); PX at 0997-0999.[2]

29. Loose leaf is manufactured from tobacco leaf that has been treated with sweeteners and other flavorings. 9/5 p.m. tr. 82:7-11 (Rosson); PX 176 at 26 (Ray dep.); PX at 4. Consequently, loose leaf has a sweet flavor. PX 254 at 92 (McClure dep.); 9/5 p.m. tr. 16:22-23 (Ryan); PX 204 ¶ 6 (Ryan dec.); PX 203 ¶ 6 (Rosson dec.). Moist snuff has a salty, smoky flavor. PX 204 ¶ 9 (Ryan dec.). Swedish Match's own market research indicates that 86% of users of *both* loose leaf and moist snuff are not aware of any brand of snuff that tastes like loose leaf. PX 62 at 6356.

30. Swedish Match documents show that loose leaf has a distinct taste and feel that is very important to users. One consumer survey states: "[t]hey talk about delicious taste and truly

[2]A very small number of moist snuff brands, such as Conwood's Hawken and Swisher's Gold River, use less expensive Wisconsin and Pennsylvania tobaccos typically used in loose leaf in whole or in part as an ingredient. 9/5 p.m. tr. 60:19-25 (Ryan); PX at 86-87 ( ); 9/5 p.m. tr. 90:18-25; 91:1-12 (Rosson). These moist snuff brands are relatively insignificant brands with small market shares. 9/5 p.m. tr. 61:1-5 (Ryan); PX at 86-87 ( ); 9/5 p.m. tr. 91:1-12 (Rosson).

enjoyed the saliva and working the chew. They would caress the chew in their mouth - they were not aggressive - gently rolling the chew, not biting it, but rolling it around, more gentle sucking than chewing . . . For them, chewing was satisfying and an indulgence." PX 222 at 1256. Another consumer survey states:

> [o]n the physical side, these chewers relished (a) the taste of their brand, (b) the tangible feel of chewing/ "working" something in their mouth, and (c) being able to spit frequently and plentifully. Time and again, respondents in every group declared they chewed Loose Leaf simply because . . .
>
> . . . I like the taste . . . it has good flavor . . . it occupies your mouth . . . I get lots of rich, brown juice . . . it's just fun.

PX 24 at 0081.

31. Moist snuff is consumed by putting "a pinch" between the gums and cheek, PX 176 at 47 (Ray dep.), and allowing the flavor to be absorbed into the user's mouth. PX 254 at 88 (McClure Dep.); 9/6 a.m. tr. 39:12-14 (Pittman). The user may move around the packet of moist snuff within his mouth but typically does not chew it. PX 254 at 88 (McClure Dep.); 9/6 a.m. tr. 39:12-14 (Pittman). Chewing tobacco, by contrast, is actively chewed by the user to release its flavor. PX 254 at 88 (McClure dep.); 9/6 a.m. tr. 39:12-14 (Pittman).

32. A portion of moist snuff is typically smaller than a typical portion of loose leaf. PX 204 ¶ 8 (Ryan dec.); PX 203 ¶ 7 (Rosson dec.). Because the portions are typically smaller, moist snuff results in significantly less waste tobacco than loose leaf. PX 203 ¶ 7 (Ryan dec.); PX 204 ¶ 8 (Rosson dec.). As a result, moist snuff usage requires less spitting than loose leaf. PX 175 at 78 (Price dep.); 9/5 p.m. tr. 87:4-10 (Rosson); 9/5 p.m. tr. 14:3-4 (Ryan); PX 206 ¶ 6 (Williams dec.); 9/6 a.m. tr. 9:13-14 (Williams); PX 254 at 90 (McClure dep.). Moist snuff is more amenable to indoor use than is loose leaf. PX 254 at 90-91 (McClure dep.); 9/5 p.m. tr. 13:24-25, 14:1-4 (Ryan); PX 204 ¶ 8 (Ryan dec.); 9/5 p.m. tr. 87:17-24 (Rosson); PX 203 ¶ 7

(Rosson dec.); PX 206 ¶ 6 (Williams dec.). Swedish Match's market research confirms that many users prefer to use loose leaf when outdoors, and moist snuff when indoors. PX 24 at 0076, 0083; PX 220 at 7450.

33. Defendants' expert acknowledges that reasonable interchangeability is not a sufficient basis on which to include a product in a product market. Only products that constrain the merging firms' products should be included in the product market. 6/8 a.m. tr. 43:18-44:13 (Wu); *id.* 47:10-48:13.

34. Loose leaf and moist snuff differ in many significant ways. The two products have largely different consumers bases. PFF ¶¶ 20-23. The two products also have different textures and tastes, PFF ¶¶ 27, 29-30, and tend to be used in different situations. PFF ¶ 32. There is no evidence that consumers are indifferent as to the choice of loose leaf versus moist snuff. On the contrary, there is substantial evidence that loose leaf chewers prefer the unique experience of using loose leaf. PFF ¶ 30.[3] Consequently, loose leaf and moist snuff are not reasonably interchangeable in the minds of most (if not all) consumers.

B. The Primary Focus of Price Competition is Between Loose Leaf Brands

1. The Defendants' Business Documents Recognize that Loose Leaf Chewing Tobacco Constitutes a Distinct Product Market

35. Defendants' business documents disclose their belief in a separate and distinct loose leaf market. A 1995 National Tobacco debt offering memorandum states: "The company does not view moist snuff as a direct competitor to its loose leaf chewing tobacco products because of product taste and use differences." PX 129 at 0632.

---

[3]The fact that a minority of loose leaf users also use moist snuff does not mean that these "dual users" regard loose leaf and moist snuff as interchangeable, any more than consumers who drink both Coca-Cola and water view these products as interchangeable. *See* PFF ¶ 105 below.

36.

DX at 16, ¶ 24; 9/8 a.m. tr. 58:24-25, 59:1-6 (Wu).

37.

PX at 2553.

PX at 2553.

38. Until it agreed to sell its loose leaf brands, National's parent's SEC filings plainly reflected its view that loose leaf chewing tobacco is a discrete market:

> National Tobacco is the third largest manufacturer and marketer of loose leaf chewing tobacco . . . . The other three principal competitors for loose leaf chewing tobacco sales, which, together with National Tobacco, generate more than 95% of such sales, are Pinkerton Tobacco Co. [now Swedish Match], Conwood Corporation and Swisher International Group Inc.

PX 144 at *6 (North Atlantic Trading Co. 1998 Form 10-K, filed March 31, 1999); *accord* PX 143 at *7 (1997 10-K, filed March 25, 1998); PX 126 at *61 (North Atlantic Trading Co.

S-4; filed Sept. 17, 1997) (National had 21% of the loose leaf market). Although National's 1998 10-K states that the company believes that many consumers of smokeless tobacco use products in different categories, PX 144 at *1, when discussing competition the document references National's "strong" position in the loose leaf market. PX 144 at *6.

DX Exh. 8 ( ); National is plainly urging investors that its strong position is in a meaningful market – loose leaf.[4]

39. Swedish Match's annual reports likewise recognize that loose leaf constitutes a distinct market. PX 50 at 17 (Swedish Match's 1999 Annual Report) ("four major producers dominate the market for chewing tobacco, which includes brands in several price segments"); PX 49 at 13 (Swedish Match's 1998 Annual Report) ("four manufacturers dominate the chewing tobacco industry in the US"); *accord* PX 47 at 23; PX 48 at 14; PX 51 at 3; PX 52 at 3.

40. Other documents show that the defendants recognize loose leaf as a separate market and attribute market shares to individual loose leaf competitors, separate and apart from moist snuff. PX at 4, 5 (

PX at 0633 (

); PX at 1787 (

[4]After National entered into the acquisition, it changed the language in its 10-K. Its 1999 10-K, filed March 31, 2000, states: "Due to increased competition with moist snuff, an alternative smokeless product that is used interchangeably by many loose leaf consumers, and in addition to the three previously named companies [Swedish Match, Conwood, and Swisher], the major competitor is UST, Inc., the largest moist snuff as well as the largest smokeless tobacco company in the United States." PX 145 at *5 (North Atlantic Trading Co. Form 1999 10-K, filed March 31, 2000); *see id.* at *1 (discussing sale of loose leaf brands to Swedish Match).

); PX at 1823-27 (

).

41. A wide variety of defendants' business documents, including documents relied upon by investors, reveal a belief in a separate loose leaf market. PFF ¶¶ 35, 37-40.

2. Testimony of Current and Former Swedish Match Officials Supports Finding Loose Leaf to Be a Separate Market

42. Swedish Match's former chief operating officer, and its current senior vice president for sales and marketing, both have given sworn testimony tending to show that loose

leaf and moist snuff are separate markets.[5] Harold Price, Swedish Match's senior vice president of sales and marketing with 18 years experience in the industry, stated in an affidavit executed in October, 1999: "In my experience, consumers of moist snuff do not switch to other forms of smokeless tobacco (for example, loose leaf) in response to price increases of moist snuff." PX 200 ¶ 3.[6] Mr. Price also testified that he could not recall any specific evidence, except an earlier version of the econometrics study commissioned by the parties in defense of the proposed acquisition, that would cause him to believe that consumers switch between loose leaf and moist snuff on the basis of small changes in price. PX 175 at 79 (Price dep.).

43. Mr. Price testified in connection with this acquisition that he does not know whether consumers switch between loose leaf and moist snuff based on small changes in the relative price of those two product categories: "I will say that we know there is interaction

---

[5]Defendants' experts both believe that consumers would switch from loose leaf to moist snuff in response to a 5% increase in the price of loose leaf. However, there is an apparent conflict between defendants' experts as to whether consumers would switch in the other direction -- from moist snuff to loose leaf in response to a 5% increase in the price of moist snuff. Dr. Wu believes that few moist snuff users would switch to loose leaf in response to a moist snuff price increase. PX 270 at 229 (Wu dep.). Thus, Dr. Wu appears to believe that switching only goes one way -- from loose leaf to moist snuff -- and that a separate moist snuff market could exist. Dr. Train, however, states that elasticities are valid in both directions, for both price cuts and price increases. PX 271 at 163:19-25 (Train). This suggests that loose leaf producers could profitably cut prices and increase volume, presumably by shifting demand from moist snuff consumption. Dr. Train apparently believes switching goes both ways and a separate moist snuff market could not exist.

[6]*Conwood v. U.S. Tobacco Co.*, 2000 U.S. Dist LEXIS 12797 (W.D. Ky. Aug. 10, 2000). In that case, Conwood sought and obtained a jury verdict that moist snuff constitutes a distinct product market from loose leaf tobacco, and that U.S. Tobacco had monopolized that product market by engaging in exclusionary or restrictive conduct. The judge in this case has recently denied UST's post-trial motions for judgement as a matter of law and a new trial. Memorandum Opinion (August 10, 2000).

between the two product categories. I really can't say whether it's strictly a price issue or whether there are other factors, such as, you know, where they consume, who they're consuming it with, those other factors, that go into, you know, the experience." PX 175 at 77-78 (Price dep.).

44. William G. McClure III, President of Pinkerton Tobacco Company from 1992 to 1997 and chief operating officer of Swedish Match from 1997 to 1999, testified during the *Conwood* trial on March 13, 2000 (after he had left Swedish Match) that moist snuff and loose leaf are in different markets: "The products are very different. They're used in a different way from chewing tobacco. The consumer taste preferences are different. The demographics of the consumer base are different. You'll find them in a smokeless tobacco section, but they're very distinct product markets. There was some overlap. We had some consumers who would use both products, but for the most part they were separate consumer bases." PX 177 at 7-8. He reaffirmed that testimony in this case. PX 254 at 82-105 (McClure dep.).

45. No Swedish Match business person testified at the hearing that customers switch from loose leaf to moist snuff in response to price changes; that Swedish Match sets loose leaf prices based on moist snuff prices; that U.S. Tobacco's moist snuff prices affect loose leaf prices; or that loose leaf does not constitute a distinct market.

3. Other Industry Participants Recognize Loose Leaf as a Separate Market

46. All industry participants (other than defendants) recognize that loose leaf and moist snuff are in different product markets. William Rosson, chairman of Conwood, the second largest loose leaf chewing tobacco competitor, states:

> There are two different markets. You have a group of people – basically there are a few that will change – you have the loose-leaf group that likes loose-leaf chewing tobacco. You have the moist snuff user who likes moist snuff. And there are two

> pretty distinct groups. These products are not similar. They don't taste similar, don't look similar, don't feel similar when you use them. Two different groups. We don't think there is a potential to switch them over from one to the other. Of course, we are happy to tell [sic] one or both of them, but we don't try to switch them.

9/5 p.m. tr. 104:19-25, 105:1-4 (Rosson); PX 203 ¶ 4 (Rosson dec.); PX 255 at 31, 40-41 (Rosson dep.).

47. Thomas Ryan, executive vice president of sales and marketing for Swisher International, the fourth largest loose leaf tobacco firm (with about 8% of the market), states:

> "Every smokeless tobacco company that I have worked for has considered loose leaf chewing tobacco and moist snuff to be distinct products, requiring separate marketing efforts and strategies."

PX 204 ¶ 4 (Ryan dec.); PX at 190 ( ) ("We view these categories as separate and distinct markets."); 9/5 p.m. tr. 27:20-21 (Ryan) ("We look at the loose-leaf category and the moist-snuff category as two separate categories.").

48. Convenience store distributors, who buy loose leaf chewing tobacco from the manufacturers and distribute it to convenience stores and who are the loose leaf companies' largest distribution channel, also attest that loose leaf chewing tobacco is a separate product market. PX 202 ¶ 4 (Ray dec.); PX 201 ¶ 4 (O'Rourke dec.); PX 205 ¶ 4 (Martindale dec.); PX 206 ¶¶ 6-9 (Williams dec.). One compares the relationship between loose leaf chewing tobacco and moist snuff to the relationship between cigars and cigarettes, noting that while both cigars and cigarettes are tobacco products and some people use both, the products are very different and few people switch between them on the basis of small changes in price. PX 205 ¶ 4 (Martindale dec.). Another distributor compares the relationship between loose leaf chewing tobacco and moist snuff to the relationship between beer and soda pop, citing similar factors. PX 201¶ 5 (O'Rourke dec.). Myron Williams, a loose leaf distributor, testified: "I don't consider

them [loose leaf and moist snuff] interchangeable. I consider them two separate and distinct products. Now there will be some crossover usage, but to me you are either a chewing tobacco user or you are a moist snuff user." 9/6 a.m. tr. 8:4-9 (Williams); *accord* 9/6 a.m. tr. 44:15-16 (Pittman).

49. Many of defendants' former declarants also believe loose leaf tobacco and moist snuff are in different markets. Defendants submitted nine declarations to the FTC in support of the acquisition. PX at 7; DX 157 at 10 (Cross dep.); DX 160 at 47 (Pittman dep). Seven of those declarants executed supplemental declarations clarifying their testimony, making it clear that they do not believe snuff to be a price-constraining competitor of loose leaf. PX 207 ¶ 5 (Cross dec.); PX 208 ¶¶ 6, 9 (Bryant dec.); PX 209 ¶ 11 (Robinette dec.); PX 210 ¶ 9 ( ); PX 211 ¶¶ 8, 9 (Kallman dec.); PX 212 ¶ 4 (Pittman dec.); PX 289 ¶¶ 4, 5 (Stewart dec). Two, Ronald Cross and Daryl Pittman, testified at trial. 9/6 a.m. tr. 36:1- 63:19 (Pittman); 9/6 a.m. tr. 64:3- 80:20 (Cross).

50. In a counter-affidavit obtained by FTC staff in response to a prior affidavit submitted on behalf of defendants, Leonard Robinette states:

> If the price of scrap tobacco were to increase five to 10 percent and the price of moist snuff did not increase, I would not expect to see a significant number of scrap tobacco users switch to moist snuff. As I stated above, my personal observation leads me to believe that scrap tobacco users prefer that form of oral tobacco. I think it is more likely that they would pay the increased price for scrap tobacco rather than switch to moist snuff because of a small increase in the price of chewing tobacco. Also, value conscious scrap tobacco users might switch to a cheaper brand of scrap tobacco.

PX 209 ¶ 11 (Robinette dec.). Ralph Kallman states in his counter-affidavit:

> If the price of all chewing tobacco were to increase by five to 10%, I would not expect to see any significant consumer reaction. Chewing tobacco consumers have grown accustomed to seeing price increases on a regular basis. I would expect to

> see most consumers just pay the price increase and keep chewing loose leaf tobacco. I would not expect to see any meaningful migration to moist snuff.

PX 211 ¶ 9 (Kallman dec.). Dean Bryant states in his counter-affidavit:

> In paragraph 4 of my first declaration, I stated that when consumers are "faced with increasing prices in premium brands they often switch to price-value brands." To clarify, this means that when consumers face increasing prices in premium loose leaf chewing tobacco, they often switch to price-value loose leaf chewing tobacco. However, in my experience when consumers face increasing prices in premium loose leaf chewing tobacco brands, they do not switch to moist snuff products. It does not matter whether the moist snuff product is a premium brand or a price-value brand; loose leaf chewing tobacco consumers simply do not switch to moist snuff products on the basis of price. When consumers face increasing prices in moist snuff brands, they do not switch to loose leaf chewing tobacco even though the latter is significantly cheaper.

PX 208 ¶ 6 (Bryant dec.).

51. Defendants presented no third party testimony at the hearing, or by declaration, that moist snuff is a significant price constraint on loose leaf, or that consumers would switch from loose leaf to moist snuff in response to a 5% increase in the price of loose leaf.

52. The unanimous testimony of disinterested witnesses is that consumers would not switch in significant numbers from loose leaf to moist snuff in response to a 5% increase in the price of loose leaf.

4. Loose Leaf Pricing is Determined by Competition with Other Loose Leaf Brands

53. Swedish Match documents show that the company considers other loose leaf brands, and not moist snuff, to be the competition for its loose leaf brands. In pricing and making other business decisions relating to loose leaf, Swedish Match looks to other loose leaf brands.

PX at 0860. The document makes no reference to loose leaf pricing in any way being influenced by moist snuff.

54. Swedish Match documents closely track the price gap between Red Man and price-value loose leaf brands and embrace a policy of not allowing that price gap to exceed %. PX at 0867 (

); PX 6 at 0514 ("Strategy -- Close the price gap between the Premium and Every Day Low Price (EDLP) segment to a 30% level"); PX at 0671 ( ); PX at 0706 (

). These Swedish Match documents also track the price gap between Red Man and Levi Garrett. PX at 0867; PX 6 at 0507; PX at 0671; PX at 0709. The paper trail shows that the company is very concerned about the competition within the loose leaf category, and that loose leaf prices - not moist snuff prices - drive Swedish Match's loose leaf prices.

55. Swedish Match documents also show that the company believes other moist snuff brands, and not loose leaf, to be the competition for its moist snuff brands. In pricing and making other business decisions relating to moist snuff, Swedish Match looks to other moist snuff brands.

PX 36 at 1579.05-06; PX 45 at 0746; PX 22 at 1938, 1953; ; PX at 0794; PX 46 at 0615.

56.

PX at 0609; *accord*, PX 175 at 35 (Price dep.) ("we're somewhat fixated on Levi Garrett"). Other regional plans show that the focus of competition is between specific loose leaf brands. PX 282 at 76 ("Compete with Trophy, Morgan's and Durango with J.D.'s Blend"); 9/7 a.m. tr. 21:9-25, 22:1-2 (Simpson).

57. When Swedish Match introduced Southern Pride, a new price value brand of loose leaf chewing tobacco, it specifically targeted users of Levi Garrett, a Conwood loose leaf brand. PX 19 at 1602. Swedish Match introduced Southern Pride in selected markets that "represent 88% of Levi Garrett volume and 84% of category volume." PX 19 at 1603. A follow-up memo tracks whether Southern Pride is actually taking sales from Levi Garrett, or cannibalizing Swedish Match's premium loose leaf brands, Red Man and Red Man Golden Blend. PX 15 at 0520. There is no concern or mention in either of these documents as to whether Southern Pride is taking sales from Swedish Match's moist snuff brand, Timber Wolf. PX 175 at 125-27 (Price dep.). Similarly, when Swedish Match first introduced Timber Wolf, there was no concern that the brand would cannibalize sales of its loose leaf brands. PFF ¶ 62.

58. When Conwood introduced a new member of the Levi Garrett loose leaf family, Levi Garrett Extra, it specifically targeted loose leaf users: "The introductory market area will encompass the heavy volume loose leaf markets that represent over 85% of Conwood loose leaf sales. This area also represents approximately 80% of total loose leaf sales according to A.C. Nielsen . . . ." PX 42 at 0814.

59. A 1998 study commissioned by Swedish Match examined the reasons for Red Man's loss of market share. The study concludes that Red Man's loss of market share was caused by consumers using more competitively priced, better tasting brands, including Beech-Nut and Levi Garrett, as secondary brands. PX 26 at 0987, 0996, 0997. The study does not mention switching to moist snuff as a cause for Red Man's loss of market share.

60. When the loose leaf companies introduce new brands, their competitive focus is within the loose leaf category.

PX at 2378; PX at 2866-2867.

61. Business decisions relating to loose leaf brands are shaped by events within the loose leaf category. For example, National moved up the introduction of a new price value brand, Durango, by a month to take advantage of Swedish Match's decision to increase the price of its popular price value loose leaf brand J.D.'s Blend. PX 131 at 1189; PX 244 at 1622; 9/7 a.m. tr. 20:10-18 (Simpson).

62. In calculating the effects on sales and profitability of increased discounting of Red Man, Swedish Match did not take into account any possible loss of sales of its own Timber Wolf moist snuff, even though Timber Wolf is the company's second highest selling product, earning about $50 million in annual revenue. PX 175 at 112-13 (Price dep.); PX at 4327. When Swedish Match first introduced its Timber Wolf moist snuff, the company was not concerned that the introduction of this every day low price moist snuff would cannibalize sales of its loose leaf chewing tobacco brands. PX 254 at 112 (McClure dep.). Nor has Swedish Match attempted to

arrest the declining use of loose leaf by targeting moist snuff users (including the users of both products). PX 175 at 175-76 (Price dep.).

63. Swedish Match's documents do not track the price gap between loose leaf and moist snuff. PX 175 at 44 (Price dep.) ("really there are no documents" comparing snuff and loose leaf prices). Defendants follow prices of competing loose leaf brands closely. PFF ¶ 322.

64.

DX at 1691.[7] This statement, or any related statement, is not repeated in any other document produced by Swedish Match.

DX at 1054.

65. Defendants have pointed to two National documents listing snuff and loose leaf prices. DX 106. The documents make no observations and draw no conclusions. One document ends in 1995. Clifford Ray of National testified (on direct examination) that the other document was created in November 1999. 9/8 p.m. tr. 9:8-20 (Ray). National did not produce either document in response to the FTC's request for additional information, which required production

[7]Since October 1998, Swedish Match has not followed any strategy of maintaining Red Man prices at 30% below Skoal of Copenhagen. PX 301, 302. Instead, Swedish Match has pegged Red Man prices 30% above price value loose leaf. PFF ¶ 54.

of all documents relating to the pricing of any relevant product created after January 1, 1997. National only produced DX 106 during the litigation, claiming that the more recent page was created after March 31, 2000. PX 415.

66. The defendants' documents clearly show that in making pricing and other business decisions relating to loose leaf brands, loose leaf competitors look to other loose leaf brands. PFF ¶ 53-54, 56-62.

C. Significant Consumer Substitution in Response to Small Price Changes is Unlikely

1. There is No Evidence of Switching Between Loose Leaf and Moist Snuff on the Basis of Price

67. For any given price-cost margin, the critical loss is the largest amount of sales that a hypothetical monopolist could afford to lose before a price increase becomes unprofitable. 9/6 p.m. tr. 21:5-10 (Simpson).

68. Loose leaf chewing tobacco manufacturers have margins of about PX ; PX . Using those margins, a 5% price increase would be profitable as long as a hypothetical monopolist lost less than 7 to 8% or more of its sales. 9/6 p.m. tr. 21:15-17 (Simpson). It would be insufficient to defeat a price increase if 7 to 8% of *users* reduced their loose leaf purchases somewhat, unless the reduced sales amounted to 7 to 8% of *volume*. 9/8 a.m. tr. 51:5-52:18 (Wu).

69. Swedish Match's competitors, Conwood and Swisher, believe that customers would not meaningfully increase their purchases of moist snuff -- the purported alternative claimed by defendants -- in response to a small increase in the price of loose leaf. 9/5 p.m. tr. 103:9-12, 134:20-25; 135:1-5 (Rosson); PX 255 at 40-41, 84-85, 117 (Rosson dep.); PX

at 126-129 ( ). Mr. Rosson, chairman of Conwood, testified that: "Basically, people don't switch between loose leaf and moist snuff in our opinion. And we don't advertise to try to cause it to happen, because we think it's a waste of money, either direction." PX 255 at 117 (Rosson dep.). Mr. Ryan, senior vice president of Swisher, testified that: "No, I still have no indication that loose-leaf users would switch to moist snuff because of price. They use moist snuff for particular reasons, and they use loose leaf for particular reasons." 9/5 p.m. tr. 43:20-23 (Ryan); 9/5 p.m. tr. 19:3-14 (Ryan); PX at 129 ( ).

70. Similarly, based on their many of years of working with loose leaf chewing tobacco, Swedish Match's distributors do not believe that customers would meaningfully increase their purchases of moist snuff in response to a 5-10% increase in the price of loose leaf. PX 201 ¶ 4 (O'Rourke dec.); PX 202 ¶ 4 (Ray dec.); PX 205 ¶ 4 (Martindale dec.); PX 264 at 75-77 (Martindale dep.); PX 206 ¶ 8 (Williams dec.); PX 203 ¶ 14 (Rosson dec.); PX 204 ¶ 14 (Ryan dec.); PX 207 ¶ 5 (Cross dec.); PX 266 at 51, 53-55, 72-73, 75-77, 83-84 (Cross dep.); PX 208 ¶ 6 (Bryant dec.); PX 259 at 57-59, 63, 74 (Bryant dep.); PX 209 ¶ 11 (Robinette dec); PX 211 ¶ 9 (Kallman dec.); PX 265 at 56, 68-70 (Kallman dep.); PX 212 ¶ 4 (Pittman dec.); PX 269 at 81-86 (Pittman dep.); PX at 43, 50, 54-55 ( ).

71. Loose leaf distributors testified that when loose leaf prices increase relative to moist snuff prices, they do not alter the amounts of loose leaf they purchase and witness no volume swings from loose leaf to moist snuff. 9/6 a.m. tr. 23:19-25, 24:1-4, 24:21-24 (Williams); 9/6 a.m. tr. 44:1-13, 45:3-8, 53:5-20 (Pittman). Mr. Pittman, who works as merchandising manager for a convenience store distributor, had a report prepared by his information department in response to defendants' subpoena requesting documents pertaining to his affidavit statement that consumers would not switch from loose leaf to moist snuff in

response to a 5-10% increase in the price of loose leaf. 9/6 a.m. tr. 46:23-25, 47:1-12 (Pittman); PX 269 at 81-86 and Exh. 3 (Pittman dep.); PX 212 ¶ 4 (Pittman dec.). The report compares loose leaf consumption during two periods: one prior to a loose leaf price increase of December 1, 1999 (September 1 through the end of November 1999), and one after the 5% loose leaf price increase (December 1, 1999 through May 12, 2000). 9/6 a.m. tr. 48:1-4, 48:21-25, 49:24-25, 50:13-19 (Pittman); PX 269 at 81-86 and Exh. 3 (Pittman dep.). The company's percentage of total smokeless tobacco sales represented by the loose leaf and moist snuff categories respectively remained constant during these two periods. 9/6 a.m. tr. 53:5-12 (Pittman). Mr. Pittman's study shows that consumers do not switch from loose leaf to moist snuff in response to a 5% increase in the price of loose leaf.

72. Defendants presented no evidence, other than their flawed econometrics, PFF ¶¶ 126-306, that consumers would switch from loose leaf to moist snuff in response to a 5% increase in the price of loose leaf. Defendants' only fact witness, Mr. Ray, testified that he believed that there was switching from loose leaf to moist snuff, but did not specifically state that he believed that there would be substantial switching away from loose leaf in response to a 5%

price increase. 9/8 p.m. tr. 24:2-5 (Ray). He also testified that he did not believe that Swedish Match could *unilaterally* increase prices 5-10%, which is different question than whether a loose leaf price increase of 5% would cause significant numbers of consumers to switch away from loose leaf. 9/8 p.m. tr. 52:21-25, 53:1-12 (Ray); see 9/8 a.m. tr. 46:9-22 (Wu) (distinguishing "hypothetical monopolist" from "competition within loose leaf"). Mr. Ray's answer to the question of whether Swedish Match could unilaterally increase loose leaf prices was that National was unable to raise loose leaf prices unilaterally. 9/8 p.m. tr. 53:2-12 (Ray). Although he claimed "that competition is not only from loose leaf manufacturers," *Id.*, he testified that it was loose leaf manufacturers that failed to follow National's lead. 9/8 p.m. tr. 29:7-30:25 (Ray).

73. Although Dr. Wu maintains that "for many consumers" UST's moist snuff products are as close a substitute for Swedish Match's loose leaf as is National's loose leaf, 9/8 a.m. tr. 50:8-11 (Wu), he has not attempted to measure the relative closeness of UST and National products as constraints on Swedish Match, or of UST and Swedish Match as constraints on National. 9/8 a.m. tr. 52:23-53:8 (Wu).

74. Some of the loose leaf consumers that defendants' expert believes would substitute moist snuff for loose leaf in the event of a 5% price increase on loose leaf (relative to snuff) would purchase price value moist snuff made by Swedish Match (Timber Wolf) and other loose leaf makers (Conwood and Swisher). 6/8 a.m. tr. 91:16-92:5 (Wu). As a result, some of the sales he believes a hypothetical loose leaf monopolist would "lose" would in fact not be lost to the loose leaf firms. Dr. Wu has not attempted the "complicated calculation" he believes is necessary to determine whether the fact that some sales would be "lost" to other products of

loose leaf makers might make a 5% price increase on loose leaf by those firms profitable. 6/8 a.m. tr. 92:6-93:2 (Wu).[8]

75. Swedish Match's loose leaf competitors, Conwood and Swisher, do not specifically take into account the pricing of moist snuff in pricing their loose leaf brands. 9/5 p.m. tr. 26:2-25, 26:1 (Ryan); PX at 102, 108 ( ); 9/5 p.m. tr. 93:3-22 (Rosson); PX 255 at 65 (Rosson dep.). Swedish Match's loose leaf competitors, Conwood and Swisher, do not alter their loose leaf pricing in reaction to specific changes in moist snuff pricing, such as promotions and discounting. 9/5 p.m. tr. 94:2-13 (Rosson); 9/5 p.m. tr. 28:14-16 (Ryan); PX at 178 ( ). Swedish Match's loose leaf competitors do not take U.S. Tobacco into account in setting their loose leaf pricing. 9/5 p.m. tr. 27:15-18, 31:21-24 (Ryan). Swisher's Executive Vice President of Sales & Marketing is aware of no documents that discuss price competition between loose leaf and moist snuff. 9/5 p.m. tr. 13:7-11 (Ryan).

76. Customers would not defeat a price increase by a hypothetical monopolist in loose leaf tobacco by substituting away from loose leaf tobacco in the event of a 5% price increase. Swedish Match's loose leaf competitors, and many of their distributors, believe that consumers do not switch between loose leaf and moist snuff on the basis of small changes in pricing.

---

[8]Swedish Match, Conwood, and Swisher sell 78% of EDLP snuff. PX 304. As a simplification of this "complicated calculation," it can be assumed that -- if any loose leaf sales are lost to EDLP moist snuff -- 78% of those lost sales would go to loose leaf makers' brands. (There is no particular reason to assume that sales that are lost to EDLP snuff would go disproportionately to UST's Red Seal and Rooster brands.) For example, assume loose leaf users reduced their consumption of loose leaf by 12% in response to a 5% loose leaf price increase (the implication of Dr. Train's loose leaf demand elasticity estimate of 2.17), and all of those lost sales went to EDLP snuff. On those assumptions, only 3% of total loose leaf sales would actually be lost to the hypothetical loose leaf monopolist (Swedish Match, Conwood, and Swisher) because 78% of the lost sales (78% x 12% = 9% of total sales) would be recaptured by those firms' EDLP snuff products.

Swedish Match's loose leaf competitors do not take moist snuff pricing into account in pricing their loose leaf brands, and do not specifically respond to moist snuff promotions.

2. The Parties' Documents Show Pricing Has Little Effect on Loose Leaf Demand

77.

[9] PX 125 at 0631. A National Tobacco debt offering prospectus states:

> The demand for chewing tobacco has proven to be *relatively inelastic* and historically has not been affected by economic cycles. In fact, the total market for chewing tobacco, measured in wholesale dollars, has grown at an average annual rate of 3.0% since 1989. The dollar value of the loose leaf chewing tobacco market has increased from $318 million in 1989 to $373 million in 1994, an increase of 17.2%. *This growth is primarily a function of price increases that manufacturers have been able to pass on to wholesalers. Management expects that modest price increases in the loose leaf chewing tobacco category will continue in the future.*

PX 129 at 0625 (emphasis supplied).

78. An analyst's report on National analyzed National's behavior and concluded that price increases by loose leaf manufacturers, here led by National, would be profitable:

> Price increase in chewing tobacco led by National Tobacco. Historically, Pinkerton was the price leader and National Tobacco was a price follower. However, in January of 1998, National Tobacco instituted a 5.6% price increase. Subsequently, during February 1998, the rest of the industry followed suit and

[9]While defendants may question how businessmen use the term "inelastic", it is unlikely that businessmen would use "inelastic" to mean "highly responsive to prices changes." PX 271 at 90 (Train dep.).

> raised prices. *Based on our projections, assuming a normalized downtick in volume, a 5% price increase adds approximately $1.3 million in EBITDA on an annualized basis.*

PX 128 at 2642 (emphasis added).

79. Similarly, a 1998 Swedish Match market survey found:

> Increasing prices of loose leaf tobacco is an issue with the respondents, but it doesn't appear to have reached a critical point.
>
> They [consumers] are aware of increasing prices, but their stated sensitivity is, "I don't want to pay that much, but I will to get my preferred brand."
>
> The attitude expressed by most is that they will continue to pay increasing prices for their favorite brand rather than switching to a lower price, lesser known brand or a brand that they have tried and rejected.
>
> *Cessation of usage or reduction of consumption do not appear to be a consideration at this point.*
>
> Indications are that some now sacrifice convenience to purchase at retailers with lowest prices and, if the price is low enough, they purchase cartons instead of pouches to compensate for the inconvenience.

PX 220 at 7449 (emphasis added).

80. Another 1998 Swedish Match survey states "[p]urchase behavior is impacted by price, but price has no impact on brand choice. They will buy a box or a case when they get a good price on their favorite brand but will not switch brand based on price." PX 222 at 1257. The same survey states that for the loose leaf category as a whole and Red Man in particular, "The product and price considerations are important, but are not the major source of problems, or the most likely primary solutions for the current situation." PX 222 at 1315.

81. Other documents and testimony show that defendants believe that price has little effect on loose leaf demand.

. PX ; PX at 78, 102-03 ( ).

PX at 78 ( ).

PX at 2682.

PX at 46 ( ); PX at 2682.

PX at 91 ( ).

82.

PX at 87-88 ( ).

Id. at 91,

.

83.

PX at 14 (

). William McClure, Swedish Match North America Inc.'s former president, also states that Swedish Match could not materially affect loose leaf demand by cutting loose leaf prices:

> You have only so many consumers. There are fewer than a million consumers of chewing tobacco in the country. And there's not a lot you're going to do. If you gave it away, if you made it ten cents, you're probably not going to get a whole lot more people coming into the chewing tobacco business.

PX 254 at 130 (McClure dep.); *accord* PX 254 at 120 (McClure dep.) ("Pricing is probably a nonissue in the decline . . .").

84. Numerous documents state that demand for loose leaf is inelastic, or that price has little effect on purchasing behavior of loose leaf consumers. While businessmen might not use the term "inelastic" with as much rigor as economists would, the use of the term and the context of the documents shows that the perception of defendants and of securities analysts is that loose leaf manufacturers can profitably increase prices. 9/6 p.m. tr. 24:6-11 (Simpson); *see* PX 271 at 90 (Train dep.).

3. High Brand Loyalty in Loose Leaf Shows that Consumers Are Not Responsive to Small Changes in Loose Leaf Pricing

85. Brand loyalty is an important factor in the loose leaf market. Despite the presence of cheaper, every day low price brands, four higher priced premium brands (including Red Man and Beech-Nut) still constitute about 70% of loose leaf sales. PX 313; 9/5 p.m. tr. 127:3-12 (Rosson).

86. Swedish Match documents repeatedly speak of the importance of brand loyalty in the loose leaf market. DX 214, the September 22, 1999 Rose Research study that defendants cite for the proposition that 44% of loose leaf users also use moist snuff, finds brand loyalty increasing over time:

> Mirroring moist snuff behavioral patterns, chewers are also very brand loyal. Importantly, this is somewhat of a shift from findings recorded in previous A&U [attitude and usage] studies, where 30% indicated using another brand regularly in 1996, 23% in 1993 – compared to only 10% in 1999.

DX 214 at 0868, *see also* 0891. The document also states: "Similar to moist snuff findings, brand loyalty is also strong in the chew category, as over two-thirds indicated that they would go to another store if their regular brand was not available. (67%)." DX 214 at 0878. This represents an increase from 1996, when only 40% of respondents reported that they would go to another store if their regular brand was not available. DX 214 at 0878. The document also states that only 20% of loose leaf users who switched brands did so because of "good price/less expensive." DX 214 at 0891.

87. The Rose Research report further states "Product loyalty is evident among all of the tobacco products." DX 214 at 0904. 71% of loose leaf users would go to another store to buy their favorite type of tobacco (if the store was out of their favorite brand), and 18% would buy another brand of loose leaf. *Id.* That does not mean that 11% of loose leaf users would buy another type of tobacco: Although Swedish Match's market research asked whether *moist snuff* users would substitute another type of tobacco in the event that the store was out of their favorite type (*i.e.*, moist snuff), Rose did not ask the same question of loose leaf users. *Id.* Only 3% of moist snuff users would buy loose leaf, even though 16% did not say that they would either go to another store or buy another brand of their favorite type. *Id.* Since *fewer* moist snuff users than loose leaf users would either go to another store or buy another brand of their favorite type of tobacco (84% vs. 89%), it stands to reason that *fewer than 3%* of loose leaf users would buy

moist snuff if the store were out of their brand of loose leaf, and that *fewer still* would buy moist snuff (particularly premium moist snuff) if the price of loose leaf went up by 10 cents per pouch.

88. Other Swedish Match documents emphasize the importance of brand loyalty. PX at 2316 states

PX at 1716. *See also* PX 143 at 4; PX 144 at 4; PX 145 at 4; PX at 177 ( ) (consumers would go to another store if their favorite loose leaf brand was out of stock rather than buy moist snuff).

89. Because of brand loyalty, loose leaf purchasers are said to have "point-of-purchase myopia":

> The brand decision appears to be made prior to entry at point-of-purchase. If their preferred brand for a given purchase is in-stock, the consumers appear to be totally blinded to the existence of other brands.
>
> If the brand is out-of-stock, the consumer's action is to either go to another retail outlet [not an option in this study] or to purchase another brand. With rapid eye movement, the consumer scans the shelf for another brand or brands in his choice set. This scanning appears to register nothing other than the brand(s) he is searching for. Again, he appears blinded to all other brands.
>
> Once the brand he will purchase is found, he moves on, often not bothering to check the price.

PX 30 at 0440. However, when "[t]wo acceptable products are perceived to be comparable, but one is priced 40 cents lower," a loose leaf purchaser might buy the less expensive loose leaf product. *Id.* The behavior described in Swedish Match's own market research is that consumers

would substitute less expensive loose leaf, but not more expensive moist snuff, if loose leaf prices increased slightly.

90. With few exceptions, manufacturers have not been able to transfer brand equity successfully from one product category to another. For example, Red Man, the most popular loose leaf brand, has strong brand equity. When Swedish Match first attempted to introduce a moist snuff product in 1990, an explicit part of Swedish Match's marketing strategy was the use of the Red Man name to capture sales from consumers who purchase both loose leaf and moist snuff. PX 254 at 36-37 (McClure dep.). Despite spending millions of dollars, the Red Man moist snuff was a failure and was withdrawn from the market. One of the reasons for the failure was Swedish Match's inability to replicate the Red Man loose leaf taste in the moist snuff product. PX 254 at 38 (McClure dep.). If moist snuff were a substitute for loose leaf, one would expect the companies to successfully capitalize on pre-existing loose leaf brand equity.[10]

91. Similarly, when Conwood first attempted to introduce a moist snuff product in the 1980's, it tried to capitalize on Levi Garrett's strong brand equity among loose leaf users. Levi Garrett moist snuff, like Red Man moist snuff, was unsuccessful. PX 234 at 0414; PX 203 ¶ 13 (Rosson dec.); 9/5 p.m. tr. 110:15-24 (Rosson). Conwood's principal success in the moist snuff market has been with its Kodiak brand, which has no association with the loose leaf market.

92. Swisher uses two brand names, Bowie and Staff, on both loose leaf and moist snuff products. 9/5 p.m. tr. 61:6-15 (Ryan). These brands, however, have insignificant market

[10]On its second attempt at introducing a moist snuff product, Swedish Match used an entirely new name, Timber Wolf, which has no association with the loose leaf market. PX 254 at 107-08 (McClure dep.). Timber Wolf moist snuff, in contrast to Red Man moist snuff, targeted users of Skoal moist snuff. PX 254 at 108 (McClure dep.). Timber Wolf has been successful and now is the leading brand of price-value moist snuff. PX 254 at 108, 111 (McClure dep.), PX at 8350.

shares. 9/5 p.m. tr. 62:7-9 (Ryan).

93. Consumers of loose leaf show high brand loyalty for their favorite brands. Swedish Match market research shows that most loose leaf users will travel to another store if their brand is out-of-stock and that few switch to alternative brands in response to lower prices. This behavior is not consistent with defendants' contention that loose leaf consumers are responsive to small changes in the price of loose leaf.

4. Economic Analysis Confirms that a 5% Increase in the Price of Loose Leaf Would Be Profitable

94. High brand loyalty generally suggests that a manufacturer would lose few sales if it alone increased price. 9/6 p.m. tr. 28:1-6 (Simpson). The Lerner Index, a common economic formula relates the margins at a firm to the elasticity of demand that it faces. 9/6 p.m. tr. 28:7-19 (Simpson); PX 353; Carlton and Perloff, Modern Industrial Organization 101-2 (1990); Gregory Werden, "Demand Elasticities in Antitrust Analysis," 66 Antitrust Law Journal 372 (1998). A margin of about 65% implies that a firm faces an elasticity of about 1.67.[11] 9/6 p.m. tr. 28:7-19 (Simpson). This elasticity suggests that a 5% price increase by Swedish Match on its loose leaf brands would lead to about an 8% decline in its loose leaf sales. 9/6 p.m. tr. 28:20-25, 29:1 (Simpson).

95. A Swedish Match document that analyzes sales for its Red Man and Red Man Golden Blend brands (PX) indicates that Swedish Match believes that it would lose about %

[11]Although most elasticities are negative, they are typically referenced in absolute values, or as positive numbers.

of its sales for these two brands if it increased the price for these two brands by about 8%. 9/6 p.m. tr. 29:2-25, 30:18 (Simpson). This suggests that a 5% price increase for Red Man and Red Man Golden Blend would lead to an 8% loss of sales. 9/6 p.m. tr. 30:16-18 (Simpson).

96. If Swedish Match would lose 8% of its sales if it alone increased price by 5%, the percentage sales loss at all loose leaf sellers if they all increased price by 5% would be significantly less than 8%. 9/6 p.m. tr. 30:20-25, 1-12 (Simpson). "It's a lot easier for consumers to switch from a particular brand in a category to another brand in that category than it is for consumers to switch entirely out of a category." 9/6 p.m. tr. 31:1-4 (Simpson); *see* PFF ¶ 94.

97. The elasticity of demand facing an individual firm in an industry will be greater in absolute value than the elasticity of demand facing an industry. 9/6 p.m. tr. 31:20-25 (Simpson); Carl Shapiro, "Mergers with Differentiated Products," 10 Antitrust 28 (1996). Thus, if the elasticity of demand for Swedish Match's brands is 1.67, the elasticity of demand facing all loose leaf sellers would be less than 1.67. 9/6 p.m. tr. 32:1-11 (Simpson).

98. The industry elasticity of demand would be substantially less than a single firm's elasticity of demand if consumers cannot go outside of an industry and easily find a replacement good for a good inside the industry. 9/7 a.m. tr. 8:25, 9:1-25, 10:1-18 (Simpson); *see also* PX 353 (economics article estimating elasticity of demand facing AT&T).

99. The elasticity of demand facing the loose leaf industry is substantially less than 1.67. 9/7 a.m. tr. 11:6- 8 (Simpson). Industry documents show that customers have a strong preference for the unique attributes of loose leaf, PFF ¶ 30, and do not substitute moist snuff for loose leaf for price reasons. PFF ¶¶ 86-89. Market participants state that loose leaf customers do

not substitute to products other than loose leaf in response to small increases in the price of loose leaf. PFF ¶¶ 69-71. An industry elasticity of demand for loose leaf that is substantially less than 1.67 indicates that a 5 percent price increase would be profitable.

5. UST Does Not Constrain the Price of Loose Leaf

100. U.S. Tobacco, the largest moist snuff producer, has run promotional campaigns and print advertisements aimed at converting loose leaf users to using moist snuff for several years. The promotional campaigns include direct mail campaigns in which UST sends to loose leaf users samples of, or coupons for, new moist snuff brands. DX 704; 714; 717-719; 723. The print advertisements identified by defendants are old; the U.S. Tobacco print advertisements that defendants have produced date from 1990-1992. DX 713; DX 819; DX 820. Swedish Match's competitors, Conwood and Swisher, do not recall seeing any print advertisements by U.S. Tobacco specifically targeting loose leaf consumers for several years. 9/5 p.m. tr. 107:9-22 (Rosson); 9/5 p.m. tr. 58:1-15 (Ryan).

101. UST distributes Catalina coupons to loose leaf purchasers, but few are redeemed. DX 714, see PFF ¶ 107.

102. Conwood, the second largest loose leaf seller, was not concerned about losing loose leaf sales to U.S. Tobacco as a result of UST's advertisements and promotions. 9/5 p.m. tr. 107:23-25, 108:1 (Rosson). Swisher does not believe that U.S. Tobacco has succeeded in switching consumers who traditionally used loose leaf to the use of moist snuff. 9/5 p.m. tr. 71:8-21 (Ryan).

103. The price gap at retail between loose leaf and premium moist snuff is at least $1.50. PX 322, 9/5 p.m. tr. 103:14-15 (Rosson). A 5% increase in the retail price of premium

loose leaf would amount to about ten cents per pouch. Industry participants agree it is simply not plausible to believe that consumers would switch away from loose leaf in significant numbers if the price gap narrowed from $1.50 to only $1.40 in response to a 5% price increase in the price of loose leaf. 9/6 a.m. tr. 23:24-25; 24:1-4 (Williams); 9/6 a.m. tr. 44:17-19 (Pittman); 9/5 p.m. tr. 103:9-23 (Rosson); PCL ¶ 27. Defendants have presented no fact witness testimony or documentary evidence to the contrary.

PX at 2316, strongly suggests that consumers would not switch to premium moist snuff in response to a 5% price increase, as the act of driving may entail costs outweighing the price increase.[12] 9/8 a.m. tr. 70:6-25, 71:1-7 (Wu).

104. UST does not constrain the price of loose leaf. UST apparently no longer runs media advertising campaigns aimed at switching over loose leaf users; its coupons targeted at loose leaf users have low redemption levels; and Swedish Match's major loose leaf competitors, Conwood and Swisher, are unconcerned about losing loose leaf sales to UST.

6. Dual Usage is Not Evidence of Price-Based Substitution

105. Some users of loose leaf also use moist snuff. This "dual usage" reflects consumers' desire for variety, as a consumer might sometimes drink Coca-Cola and sometimes drink water, or eat white bread and rye bread on different occasions. A Swedish Match marketing study states that many loose leaf users choose to use moist snuff when chewing tobacco is not acceptable:

> A majority of respondents in all groups claimed they also dipped some Moist Snuff, primarily for a *change-of-pace* and *social reasons.* The latter included

[12]The IRS mileage rate for business use of an automobile is 32.5 cents per mile. Revenue Procedure 99-38, Internal Revenue Bulletin 1999-43 (Oct. 6, 1999).

> situations where they (a) cannot spit with ease or comfort, and/or (b) want to conceal from other people the tobacco in their mouth. *For most dual users, Loose Leaf vs. Moist Snuff was mainly an "outdoors/indoors thing"* . . . . Unquestionably, they preferred pouch tobacco with activities such as hunting & fishing, playing ball, and working in many jobs. But when indoors -- or in the company of certain people -- they elected to "dip."

PX 24 at 0076, 0083 (emphasis added). Similarly, a 1998 study found that "[t]he usage pattern by loose leaf/moist snuff users is primarily loose leaf when out-of-doors and moist snuff when indoors" and that "[o]utdoor activities, overall, are viewed as appropriate for loose leaf usage, because they don't have to be concerned with a spit cup, and they are less likely to be subjected to social pressures." PX 220 at 7450-51; *accord* PX 175 at 78, 79 (Price dep.).

106. Dual users choose between loose leaf and moist snuff based on various factors, but not on price. Thomas Ryan, Executive Vice President of Sales and Marketing for Swisher, states:

> We have never felt that is was price driven. The reason why they would select to use a loose-leaf product versus a moist-snuff product -- as I said earlier, I think most if it is situational or [sic] in nature, and if they are working indoors, they might use a moist-snuff product; if they're working outdoors, a loose-leaf product. But it's not really driven by price.

9/5 p.m. tr. 34:3-9 (Ryan).

107. UST currently runs Catalina couponing programs in which consumers are automatically given discount coupons for the purchase of moist snuff printed on the back of their register receipts when they buy loose leaf products. DX 714. Despite the large values of these coupons relative to the cost of a container of Skoal or Copenhagen ($.75 to $1.50 off on a $3.50 product), the historic redemption rates on these coupons are low relative to Catalina's average redemption rates. DX 714 (redemption rates ranging from 5.8% in 1998 on a $1.50 coupon on

Skoal or Copenhagen to 2.8% in 2000 on $1.00 coupon on Copenhagen); PX 238 (Catalina reports historic redemption rates of 8-14% on its web-site); 9/7 a.m. tr. 13:22-25, 14:1-6 (Simpson). A Swedish Match market survey states that 70% of loose leaf users look for coupons in magazines and, that 93% of those who look, use coupons, suggesting that loose leaf consumers are frequent coupon users. DX 214 at 0920. The low redemption rates on Catalina coupons suggests that very few loose leaf consumers are interested in Skoal or Copenhagen even at prices comparable to Red Man.

108. The strength of consumer preference for loose leaf chewing tobacco is underscored by a 1998 Swedish Match study of potential alternative products to loose leaf chewing tobacco. This study concluded that:

> Few respondents are interested in a tobacco alternative to loose-leaf chew. They feel no need to lessen the amount of spitting required when chewing, yet they recognize the social unacceptability of the product. Of the alternative products discussed in this study, respondents preferred the products that had similar attributes to loose-leaf chew, such as moistness, color, texture, and size.

PX 219 at 3272.

109. Defendants rely on a 1999 marketing study which found that 29% of moist snuff users use loose leaf chewing tobacco and that 44% of loose leaf users use moist snuff. DX 214 at 0835, 0872; *see* 6/8 a.m. tr. 59:20-25 (Wu). Defendants rely on the highest estimate of dual use from a broad range of estimates in their own market studies. PX 312. A 1998 Swedish Match survey found that of those who primarily used loose leaf chewing tobacco, only 10.8% used moist snuff as a secondary tobacco product, about the same percentage who used cigarettes as a secondary tobacco product. PX 25 at 9436. Another 1998 Swedish Match survey found "very few of the respondents use multiple forms of tobacco" and that "[s]everal of the respondents

stated that they had formerly been dual users, but discontinued their moist snuff usage because the product was too rough on their mouth." PX 220 at 7450. Similarly, a 1999 Swedish Match survey relating to Southern Pride (a new Swedish Match loose leaf price value brand) found that only 10% of Southern Pride users also use moist snuff. PX 15 at 0529. 90% of Southern Pride users did not use moist snuff at all; of those that did, 71% used less than 2 cans of moist snuff per week. PX 15 at 0529

110. There is no indication in the marketing study on which defendants rely, DX 214, of what question was asked on dual usage, or what the survey respondents understood the question to mean. DX 214. Defendants' own expert, Dr. Wu, testified that he is uncertain whether he saw the questionnaire, and does not know how the dual usage question was posed. 9/8 a.m. tr. 63: 19-25, 64:1-4 (Wu). A response depends heavily on how the question is asked. Defendants' expert, Dr. Wu, testified that how the question was asked could lead to variance in the responses. 9/8 a.m. tr. 66:10-16; 67:24-25. 68:1 (Wu).

111. Studies by other loose leaf producers show a lower rate of dual usage than that claimed by Swedish Match. A study by Conwood shows that only 16% of loose leaf users also use moist snuff. PX 231 at 34. A Conwood study found that only 15% of users of moist snuff also use loose leaf. PX 232 at 33. Mr. Rosson believes that the Conwood study overestimates the rate of dual usage, because the study asked loose leaf consumers what other types of tobacco they had used within the last year. (Consequently, a loose leaf consumer who had used loose leaf only once in the last year would be considered a dual user under the Conwood study.) 9/5 p.m. tr. 96:3-25, 97:1-5 (Rosson); PX 255 at 124 (Rosson dep.).

112.

PX at 12087. Another UST study found that of moist snuff users, only 7% has used loose leaf in the last week (whereas 58% had “ever” used loose leaf), suggesting that for moist snuff users secondary usage of loose leaf is an infrequent proposition. PX 237 at 1703.

113. Dr. Wu testified that he did not know how much loose leaf dual users use. 9/8 a.m. tr. 61:2-5 (Wu). That information is found in Swedish Match's market research surveys, on which Dr. Wu relies. A 1997 survey of 1,000 moist snuff users done by ICR Survey Research Group, DX 224, found that 229 of the respondents (or 23% of moist snuff users) were dual users. Of those dual users, the average consumption of loose leaf was 1 pouch per week. DX 224 at 6658. Swedish Match's 1999 Rose study finds that the *average* loose leaf user (44% of whom also use snuff) uses 5.2 pouches of loose leaf per week. DX 214 at 0874; *accord* PX 15 at 0523. This implies that dual users purchased only about 8.5% of loose leaf sold, accepting *arguendo* defendants' claim that 44% of loose leaf users are dual users (1 pouch per week for dual users * 0.44/5.2 pouches for all loose leaf users). Under Dr. Train's formula, DX 800 at 4 n.3, a 5% price increase would be defeated by a 7.1% loss in loose leaf sales. Therefore, dual users would have to reduce their loose leaf purchases by 83.5% to defeat a 5% price increase (.835 x .085 = .071). Even if all dual users stopped purchasing loose leaf altogether, the resulting 8.5% volume decrease would be insufficient to defeat a *10%* price increase.

CORRECTED 9/26/00

114. The number of dual users cannot be known with any real certainty. Whatever the number of dual users, there is no reason to believe that dual users would substitute moist snuff for any significant portion of their loose leaf purchases in response to a 5% increase in the price of loose leaf relative to moist snuff.

7. Declining Loose Leaf Demand is Not Evidence of Price-Based Substitution

115. Loose leaf sales are declining.[13] There are various reasons for the decline. The most important are changing demographics and the decline in outdoor occupations. 9/5 p.m. tr. 35:8-18 (Ryan); PX 254 at 115-16 (McClure dep.). Swedish Match's 1998 annual report, published in 1999, states: "Consumption of chewing tobacco has been declining at 2-3 percent annually for some time, and in 1997 and 1998 the decline accelerated to 4-5 percent. The reason is primarily demographic -- the increasingly higher average age of consumers and fewer jobs in farming and other outdoor sectors." PX 49 at 13. That annual report (the last issued before the acquisition was announced) does not identify migration to moist snuff as a reason for loose leaf decline.

116. Most new users of smokeless tobacco use moist snuff. 9/5 p.m. tr. 71:8-21 (Ryan); 9/5 p.m. tr. 108:6-13 (Rosson). In the words of Swedish Match North America's former president, "the [loose leaf] entry level base was basically taken away in the 1970s" by U.S. Tobacco's active media campaign. PX 254 at 115, 116 (McClure dep.).

117. The evidence shows that any switching from loose leaf is driven by convenience and other non-price factors, and not price. 9/5 p.m. tr. 37:5-6 (Ryan).

---

[13]In 1999, loose leaf usage based on pounds declined 3.3% according to the Maxwell report, DX 134 at 0117, less than the 5.5% per year defendants assert. 9/8 p.m. tr. 25:7-11 (Ray).

PX at 1611-12.

118. Declining demand for loose leaf is not evidence that consumers would switch away from loose leaf in significant numbers in response to a 5% increase in the price of that product. New users of smokeless tobacco are choosing moist snuff. The evidence shows that any switching from loose leaf is driven by convenience and other non-price factors, and not price.

8. Loose Leaf and Moist Snuff Pricing Move Independently

119. There is no obvious correlation between loose leaf price changes and moist snuff price changes. PX 337, which depicts retail prices of Skoal moist snuff and Red Man loose leaf from November 1997 to June 2000, clearly shows that the prices of these two products move independently. 9/7 a.m. tr. 14:7-25, 15:1-5 (Simpson). Similarly, PX 338, which depicts average prices of loose leaf and moist snuff from 1986-1997, shows that moist snuff pricing has increased at a greater rate than loose leaf pricing over the period. 9/7 a.m. tr. 14:7-25, 15:6-17 (Simpson). A recent National document highlights the fact that loose leaf chewing prices move independently from other tobacco pricing:

PX at 1321 (emphasis added).

120.

PX at 1726.

121. Swedish Match increased the price of loose leaf 4% in July 1997 while simultaneously decreasing the price of Timber Wolf moist snuff by 36%. The dramatic price cut of Timber Wolf was a direct result of U.S. Tobacco introducing a price value moist snuff, Red Seal, in direct competition with Timber Wolf. Swedish Match's executive vice president for sales and marketing testified that, at the time of these price movements, Swedish Match executives did not consider whether the dramatic cut in the price of moist snuff relative to loose leaf would cause users to switch from loose leaf to moist snuff, PX 175 at 67 (Price dep.), plainly showing that, in making business decisions, Swedish Match does not believe that moist snuff prices affect loose leaf sales.

122. Swedish Match's distributors, who have intimate knowledge of loose leaf and moist snuff pricing, observe no correlation between the pricing of loose leaf and moist snuff. PX 205 (Martindale dec.) ¶ 5; PX 264 at 84-86 (Martindale dep.); PX 207 ¶ 6 (Cross dec.); PX 266 at 85-86 (Cross dep.); PX 208 ¶ 10 (Bryant dec.); PX 259 at 65-67 (Bryant dep.); PX 209 ¶ 13 (Robinette dec.); PX ¶ 8 ( ); PX at 59-60 ( ); PX 211 ¶ 8 (Kallman dec.); PX 265 at 73-74 (Kallman dep.). Myron Williams, a loose leaf distributor, states: "They [moist snuff and loose leaf] seem to be independent of one another with regard to

price changes. They don't necessarily increase within the same period of time." 9/6 a.m. tr. 23:5-7 (Williams), *accord* 9/6 a.m. tr. 40:11-18 (Pittman)

123. When a loose leaf competitor such as Swedish Match runs a special on its loose leaf brands, the other leaf competitors (Conwood, National, and Swisher) will typically react by running corresponding specials. PX 201 ¶ 6 (O'Rourke dec.); PX 205 ¶ 7 (Martindale dec.). However, U.S. Tobacco does not alter the pricing of its moist snuff brands in reaction to pricing changes among loose leaf competitors. PX 201 (O'Rourke dec.) ¶ 6; PX 205 ¶ 7 (Martindale dec.); *accord* 9/8 p.m. tr. 62:12-16 (Ray).

124. The evidence shows no correlation between loose leaf and moist snuff pricing.

125. Loose leaf chewing tobacco is a properly defined product market.

9. Defendants' Econometric Analysis Fails to Support Defendants' Argument that Loose Leaf Chewing Tobacco Is Not a Product Market

126. Defendants rely on an econometric analysis to refute their own documents and their customers' testimony. *See*, *e.g.*, PI Opp. at 23-24; PX at 7-8. Defendants' "econometrics" purport to be statistically based estimates of the demand elasticity of loose leaf faced by the entire loose leaf industry, *i.e.*, the percentage change in the quantity of loose leaf demanded in response to a percentage change in loose leaf price. DX 800 at 3-5 (Train Rep.). In presenting this analysis, defendants attempt to address the "hypothetical monopolist" question framed by the *Merger Guidelines*: Would a hypothetical monopolist of loose leaf be able to raise price 5% without losing so many sales that the price increase would be unprofitable?

127. The U.S. Dep't of Justice & Federal Trade Comm'n, *Horizontal Merger Guidelines* § 1.11 ("*Merger Guidelines*") do not require (or even specifically endorse)

econometric estimation, but state instead that "the Agency will take into account all relevant evidence," *id*. In a 1996 article published when he was Deputy Assistant Attorney General in charge of economics at the Antitrust Division of the U.S. Department of Justice, Professor Carl Shapiro of the University of California at Berkeley, cautioned:

> In arguing for a broad market, a common tactic is to calculate a "critical elasticity" of demand for a group of products being considered as a market, and then argue that the true elasticity is above this critical level, making a 5 percent price increase unprofitable. This method must be used with great caution in the context of differentiated products, to avoid at least two pitfalls. First, there is no reason to restrict attention to a uniform price increase of 5 percent for the purposes of market definition if a single firm controlling the entire product category would find it optimal to increase the prices of different brands by different amounts. Second, care must be taken to ensure that the claimed "market" elasticity is consistent with information about each brand's own elasticity of demand and the cross-elasticities of demand among the products in the category. Remember, the "market" elasticity will be lower than the individual brand elasticities of demand, and significantly so if the Diversion Ratios are large. If each brand sells at a high markup, this is strong evidence of a low price elasticity for each brand, which is inconsistent with a high "market" elasticity of demand. If the Premerger markups are large and the Diversion Ratios among the brands are large, claims of a large "market" elasticity of demand are not credible.

Shapiro, *Mergers with Differentiated Products*, Antitrust, Spring 1996, 23 at 28-29 (attached hereto as Attachment A for the convenience of the Court).

a. History of Defendants' Econometric Arguments

128.

PX at 4-7 ( ).

PX ( ). Following further discussions with representatives of the FTC, NERA submitted a third econometric analysis on June 20, 2000. PX 366. Despite a

request by the FTC for production of the computer programs used to generate NERA's various results, defendant refused to produce the programs. Applying standard econometric techniques to the data utilized by NERA, Professor Ashenfelter was unable to reproduce NERA's results. 9/11 tr. 62:24-63:11, 64:5-16 (Ashenfelter). Before this Court, defendants have not relied on any of the analyses presented to the FTC.

129. As a first step in their work on this case, defendants' expert, Dr. Wu estimated gross margins, and Dr. Train used Dr. Wu's estimated margins to calculate a critical elasticity of 1.75. According to Dr. Train, a 5% price increase by a hypothetical monopolist would be unprofitable *if* the estimated demand elasticity exceeds the estimated "critical elasticity" of 1.75, and hence loose leaf would not be a properly defined product market. Dr. Train explained in his expert report that a 5% price increase would be *profitable* if the estimated demand elasticity is less than the "critical elasticity" of 1.75, and, therefore, loose leaf would be a properly defined product market. DX 800 at 4-5 (Train Rep.).

130. Having set 1.75 as the bar, Dr. Train made at least eight different estimates of the "own-price elasticity" of loose leaf chewing tobacco, *i.e.*, the percentage change in the quantity of loose leaf demanded in response to a change in the price of loose leaf. PX 290 ¶ 9 (Ashenfelter Decl.); DX 1005 at 3 (Supplementary Report of Kenneth E. Train).

131. Dr. Train presented four instrumental variables ("IV") estimates of the demand for loose leaf tobacco in his core areas. The first of these estimates was presented in his July 28 report; the second estimate was presented in his August 15 report; and the third and fourth estimates were presented in Dr. Train's September 6 report. Dr. Train's August Report also includes an alternative estimate of his revised model computed with ordinary least squares.

Dr. Train testified at his deposition that he considers his ordinary least squares estimator inferior to his instrumental variables estimator. PX 271 at 122:10-25 (Train dep.)

132. According to Dr. Train, the results in Dr. Train's reports are not the only results he relied on in concluding that loose leaf tobacco is not a relevant product market. Dr. Train testified at deposition that he was relying on a number of results other than those that are described in his reports. *See, e.g.*, PX 271 at 62-64, and 75:6-11 (Train dep.).[14] Dr. Train further testified in his deposition that he has run many regressions besides those he reported. In addition to the results in his reports, since starting his work on this project Dr. Train has analyzed the data using the following models: an AIDS model, PX 271 at 54:2-5 (Train); generalized first differences, PX 271 at 62:3 (Train); lagged dependent variables, PX 271 at 62:4 (Train); price lags, PX 271 at 62:5 (Train); six-period lagged price, PX 271 at 72:6 (Train); time trends, PX 271 at 62:11 (Train); and quadratic time trends, PX 271 at 62:11 (Train). Dr. Train estimated models with and without instruments. PX 271 at 62:7 (Train). For various models, he used as instruments prices in the non-core areas, PX 271 at 63:4 (Train); prices in the core area, PX 271 at 63:5 (Train); the producer price index, PX 271 at 63:8 (Train); the consumer price index, PX 271 at 63:10 (Train); and a lagged dependent variable, PX 271 at 63:19 (Train). He estimated models on the 17 region 'core area' and also on a ten region area that Swedish Match indicated to him included the highest volume regions. PX 271 at 213:20 (Train). There are many possible combinations of the above elements, but Dr. Train did not reveal what combinations he considered to arrive at his conclusion. Dr. Train did not report the results or

[14]At the hearing, however, Dr. Train testified that his newest estimate was his "best" estimate. 9/8 p.m. tr. 90:10-12.

provide the underlying calculations for these various models that he ran. PX 290 ¶ 13 (Ashenfelter Dec.).

133. At his August 18 deposition, Dr. Train was asked, "What estimates do you rely on in concluding that loose leaf is not a market?" PX 271 at 75:7-9 (Train). He answered, "The entire set of analyses that I've been describing to you go into my conclusion." PX 271 at 75:10-11 (Train); *see also* PX 290 ¶ 15 (Ashenfelter Dec.).

134. However, defendants refused to provide, as required by Rule 26(a)(2)(B), the various programs and estimates generated by Dr. Train that form the basis for his opinions. Plaintiff's Supplemental Memorandum in Further Support of In Limine Motion to Exclude Testimony of Defendants' Expert Kenneth Train, August 31, 2000, at 2-3, and Exhibit B.

135. Dr. Train acknowledged that some of the analyses that he considered, but did not report, had an estimated demand elasticity for loose leaf tobacco that was below 1.75. He indicated in his deposition that first differences, generalized first differences, and price lags gave elasticity estimates of less than 1.75. PX 271 at 66:5-16 (Train). He also indicated that other unreported models gave elasticity estimates higher than 1.75. PX 290 ¶ 14 (Ashenfelter Dec.).

136. On July 28, Dr. Train reported a "conditional" elasticity of 2.30 and an "unconditional" elasticity of 2.33. DX 800 at Table 1 (Train Rep.). Dr. Train distinguishes between the "conditional elasticity of demand," the elasticity of demand for loose leaf tobacco holding total expenditures on smokeless tobacco constant, and the "unconditional elasticity of demand," which takes into account the effect of price changes on total expenditures on smokeless tobacco. PX 290 ¶ 9 (Ashenfelter Dec.).

137. Dr. Train's July 28 estimates are based on a model of demand for loose leaf tobacco that includes as explanatory variables the price of loose leaf tobacco, the price of moist snuff, expenditures on smokeless tobacco, region specific effects, and time specific effects. The estimates were calculated by instrumental variables (two-stage least squares). PX 290 ¶ 10 (Ashenfelter Dec.).

138. Professor Ashenfelter found that the analyses discussed in Dr. Train's July Report suffered from several flaws. The most important flaw was that his estimate of the elasticity of demand (which was estimated by an instrumental variables technique) depends on the order in which data from different regions (used as instrumental variables) appear in his data base. PX 290 ¶ 6 (Ashenfelter Dec.). His data happened to be ordered alphabetically by region within his core and non-core groups. Other equally arbitrary orderings of these data lead to substantially different estimates of the elasticity of demand. *Id*. In his deposition and at the hearing, Dr. Train testified that he acknowledges the problem , 9/8 p.m. tr. 91:18-22 (Train); PX 271 at 76:10-23, 110:1-111:4 (Train), and now places no weight on these estimates. 9/8 p.m. tr. 91:23-92:2 (Train); PX 271 at 76:5-7 (Train).

139. Dr. Train's August 15 report presented a new estimate of the elasticity of demand, based on a new model which is similar to, but not the same as, the model presented in Dr. Train's July 28 Report. PX 290 ¶ 7 (Ashenfelter Dec.). The new model includes a "lagged dependent variable" (quantity sold from the previous period) as an additional explanatory variable and reflects a new method of implementing Dr. Train's instrumental variables calculation. PX 290 ¶ 11 (Ashenfelter Dec.).

140. This model, when estimated by Dr. Train's new implementation of his instrumental variables (two-stage least squares), reported on August 15, gives a conditional demand elasticity estimate of 1.83 and an unconditional elasticity estimate of 1.84. PX 290 ¶ 11 (Ashenfelter Dec.). Professor Ashenfelter found that the new model has been estimated by a new instrumental variables procedure which corrects the flaw in Dr. Train's July report estimate but introduces a different fault that results in an inconsistent estimator, because he failed to include, in the first stage regression, all of the predetermined variables in the second stage regression. PX 290 ¶ 7 (Ashenfelter Dec.). In addition, Professor Ashenfelter found the estimate is so imprecise that it cannot be distinguished statistically from Dr. Train's critical elasticity at any conventionally used level of confidence. *Id*. Dr. Train claimed in that report that he had calculated "robust standard errors," DX 801 at 3 (Train Supplemental Report), but he did not disclose those robust standard errors. PX 271 at 108:20-22 (Train dep.).

141. The August Report also presents results calculated by means of Ordinary Least Squares ("OLS"). OLS refers to a standard method of preparing regression estimates. PX 279 at 7 (Ashenfelter Rep.). Dr. Train testified that he reported this model in response to issues raised in Professor Ashenfelter's August 4 expert report. 9/8 p.m. tr. 111:22-112:15 (Train). Dr. Train's OLS procedure yields an estimated conditional elasticity of demand of 1.81 and an estimated unconditional elasticity of demand of 1.75. PX 290 ¶ 12 (Ashenfelter Dec.).

142. Dr. Train testified at the hearing that, after his deposition, he began work on the econometric model that he now states provides the "best estimate" of the elasticity of demand for loose leaf chewing tobacco. Tr. 9/8 p.m. 94:6-95:2 (Train). However, on August 23, the date set

for submission of defendants' brief and evidence, defendants made no mention of the estimates and econometric model that Dr. Wu and Dr. Train would rely on at the hearing two weeks later.[15]

143. On the evening of August 30, defendants presented plaintiff with computer disks containing two computer programs and a short cover letter that stated only: "Enclosed please find the back-up for two econometric analyses that Dr. Train will present at trial." Although the prehearing schedule required defendants to submit their Rule 26(a)(2)(B) expert disclosures by July 28 and to submit any supplement thereto by August 15, this communication was the first notice received by plaintiff that Dr. Train would present econometric analyses different from those about which he testified in his August 18 deposition.

144. On September 1 and September 2, defendants presented to plaintiff supplemental proposed exhibits, including two printouts of computer programs, identified as DX 823 and DX 824, that differed from the programs defendants had provided on the computer disks on August 30. *See* 9/8 p.m. tr. 137:7-138:10 (Train).

145. On September 5, the Court directed defendants to provide to plaintiff a second supplemental report disclosing the new conclusions about which Dr. Train would testify. 9/5 a.m. tr. 17:8-16. Defendants provided this report on the evening of September 6, midway through the hearing and less than 48 hours before Dr. Train took the stand.

146. In this third report, Dr. Train reported that he now estimates the elasticity for loose leaf to be 2.17, and he reported that the standard error is 0.65. DX 1005 at 1. In addition, Dr. Train reported another model yielding an elasticity estimate of 1.60 with a standard error of

[15]Indeed, in their brief defendants cited Dr. Train's conclusions in his initial report, DX 800. *See* PI Opp. 23-24. At the hearing, Dr. Train testified that he was not relying on the results cited in defendants' brief. 9/8 p.m. tr. 91:18-92:2 (Train).

0.57. DX 1005 at 2. In this report, Dr. Train disclosed for the first time that he and Dr. Wu had elected to reposition the critical elasticity from 1.75 to the new level of 1.50. DX 1005 at 2. Dr. Train did not disclose that his reported standard errors apply only to the conditional elasticity and do not take into account the effect of errors from the first stage regression.

147. Professor Ashenfelter analyzed Dr. Train's new models and found that Dr. Train had again failed to include, in the first stage regression, all of the predetermined variables contained in the second stage regression. PX 359 at 2; 9/11 tr. 82:12-17, 84:16-87:2 (Ashenfelter).

148. In addition, Professor Ashenfelter found that Dr. Train's new econometric analysis demonstrates that Dr. Train's use of the Hausman, Leonard, Zona version of a multi-stage budgeting model is inappropriate for estimating the demand elasticity of loose leaf, because the model is rejected by simple specification tests. 9/11 tr. 127:8-18 (Ashenfelter). In computing his new elasticity estimates, Dr. Train included among his instrumental variables measures of employment interacted with area-specific effects. PX 359 at 1. Professor Ashenfelter tested the validity of the Hausman, Leonard, Zona two-stage budgeting model employed by Dr. Train, by including this employment measure in the demand equation, to determine whether it has a significant effect on the quantity of loose leaf demanded. 9/11 tr. 85:17-86:11 (Ashenfelter). Dr. Train's model is based on the assumption that income (Dr. Train uses employment as a proxy for income) is a factor that determines expenditures on smokeless tobacco but does not enter into the demand equation for either loose leaf tobacco or moist snuff. 9/11 tr. 121:24-123:13 (Ashenfelter). As applied to this case, the model recognizes that total consumption of smokeless tobacco is affected by employment and income but presumes that once consumers' total budget

for smokeless tobacco has been specified through the first stage regression, employment and income should not materially affect the demand for loose leaf in the second stage regression. However, when Professor Ashenfelter tested this assumption, he found that Dr. Train's new instrument, the employment measure, is indeed a significant predictor of loose leaf sales volume independent of the price of loose leaf. PX 359 at 1; 9/11 tr. 84:16-87:2 (Ashenfelter).

149. Rerunning Dr. Train's program, but including the interacted variables in the demand equation, as would be appropriate if employment in an area has a significant effect on loose leaf demand in the area, yielded a conditional elasticity estimate of 0.95, with a standard error of 0.90, excluding the errors introduced in the first stage regression, and an unconditional elasticity of 0.95. PX 359 at 1. Rerunning Dr. Train's program again under the correct procedure of including the lagged dependent variable among the instruments, reduces the conditional elasticity estimate to 0.77, with a standard error of 0.96 and an unconditional elasticity of 0.76. PX 359 at 1.

150. Small changes in model specification should not materially change the estimate if the model is correctly specified. Based on the observation that Dr. Train's model is sensitive to small changes, Dr. Ashenfelter concluded that Dr. Train's "best" estimate is unreliable. 9/11 tr. 85:17-88:3 (Ashenfelter).

b. Defendants' Expert Withheld and Destroyed Econometric Results that Were Adverse to Defendants' Case

151. At his deposition, Dr. Train disclosed for the first time that he calculated other estimates but had not reported them. PX 271 at 54, 62-64, 66, 72, 213 (Train). Dr. Train testified that three different models he had run yielded demand elasticity estimates *below* 1.75. –

none of which he ever reported to the FTC, his colleagues, defense counsel or Dr. Wu. PX 271 at 65, 70-71 (Train).

152. These below 1.75 elasticity calculations were not produced to the FTC because Dr. Train had erased the computer programs. PX 271 at 83, 107 (Train). Dr. Train also revealed that there were other regression model calculations – yielding undisclosed results – that he had performed but not reported to the FTC or defense counsel. *Id.* at 54, 62-64, 66, 72, 213.

153. Nevertheless, Dr. Train claimed at his deposition that he is relying on these undisclosed estimates to support his opinion. PX 271 at 75, 82 (Train). However, Dr. Train failed to submit the programs and results that he relies on for his conclusion regarding the elasticity of demand. *Id.* at 82 ("I have submitted the data and the programs that were used for the models that I include in the reports as illustration, and there is no other backup documents.").

154. There is no way to tell whether these results support or undermine his opinion. Dr. Train failed to disclose, in any of his reports, and defendants have refused to provide, the various computer programs and elasticity estimates generated by those programs upon which Dr. Train testified he relies in reaching his conclusion that loose leaf chewing tobacco is not a market.

c. Dr. Train's Estimates Depend on his Selection of Instrumental Variables, which He Has Neither Justified Nor Explained

155. All of the econometric models Dr. Train has relied on have used "instrumental variables" to estimate the demand elasticity for loose leaf. DX 800 at 6 (Train Rep.); DX 801 at 4; 9/8 p.m. tr. 94:6-13 (Train). In each of his disclosed estimates based on instrumental variables (2.32 in DX 800, 1.84 in DX 801, 2.17 in DX 1005), Dr. Train has used *different*

instrumental variables. 9/8 p.m. tr. 91:5-92:4, 93:23-94:23 (Train); 9/11 tr. 82:3-9 (Ashenfelter). The underlying data has not changed; one reason the estimates have changed is that the instrumental variables constructed by Dr. Train have changed.

156. In calculating his estimate of 2.32, disclosed on July 28, Dr. Train used, among other variables, "the prices in the other (non-core) areas." DX 800 at 6. However, "the particular values [Dr. Train] uses for his instrumental variables depend on the specific order of his data," meaning that the instrumental variables in Dr. Train's first attempt had arbitrary values, and as a result his reported estimate of 2.32 was likewise an arbitrary value. *See* PFF 187-189 below.

157. In calculating his estimate of 1.84, disclosed on August 15, Dr. Train used only "the average price in the non-core areas." DX 801 at 4. According to Dr. Train, "I calculated the average price in the non-core areas and used this average price as an instrument for the prices in each core area." *Id.*

158. In calculating his estimate of 2.17, disclosed on September 6, Dr. Train used the following variables as instruments: the average price of smokeless tobacco in the noncore areas, the average price of loose leaf in the noncore areas, the average price of moist snuff in the noncore areas, employment, a constant for each area (region specific effects), and a constant for each time period (time specific effects). Each of the three noncore prices and employment were interacted with the region specific effects. DX 1005 at 1. According to Dr. Train, he changed his instrumental variables after his deposition because "I re-examined things and was thinking about other ways of doing the instruments. And I, in fact, figured out how to do something I hadn't been able to figure out before." 9/8 p.m. tr. 94:6-9 (Train).

159. Because Dr. Train's estimate of demand elasticity depends on the instrumental variable he selects, the Court must be satisfied that Dr. Train has selected an appropriate instrumental variable. Dr. Train and defendants have presented no basis on which the Court may make such a determination. PFF 164-170 below. Dr. Train acknowledged in his deposition that, if different instruments yield substantially different results, he would have to examine what the different instruments are and what gives rise to the differences. PX 271 at 119:25-120:4 (Train dep.).

160. The "true" elasticity of demand should not depend critically on the instrument selected, yet Dr. Train's "best" estimate of 2.17 (elastic demand) becomes 0.77 (inelastic demand) if one of his instruments (which may well influence demand, and therefore be inappropriately used as an instrumental variable) is instead treated as one of the predetermined variables in the demand equation. PFF 175-178 below. Therefore, the Court cannot rely on Dr. Train's selection of his instrumental variables, or on his use of the two-stage budgeting model, and therefore cannot rely on his estimate of demand elasticity.

(1) Dr. Train Has Not Justified His Instruments

161. "Instrumental variables" refers to a standard econometric technique that can be used to determine the effect of one observed variable (*e.g.*, price) on another (*e.g.*, quantity), while recognizing that both supply and demand are changing simultaneously (*i.e.*, endogeneity). PX 290 ¶ 32 (Ashenfelter); 9/8 p.m. tr. 82:23-85:20 (Train); *see* DX 801 at 3 (Train 2d Report, explaining that "causation runs in two directions"). A proper instrument is one that clearly *does not* influence the variable under study, such as birthdays or random assignment to a treatment program. 9/11 tr. 60:12-61:4 (Ashenfelter).

> To use the IV estimator one must first find an "instrument" for each regressor that is contemporaneously correlated with the error. This is a new independent variable which must have two characteristics. First, it must be contemporaneously uncorrelated with the error; and second, it must be correlated (preferably highly so) with the regressor for which it is to serve as an instrument.

Kennedy, *A Guide to Econometrics*, (4th Edition), The MIT Press, Cambridge 1998, page 139 (emphasis added).

162. In estimating demand elasticities using instrumental variables, econometricians therefore conventionally look for instruments that are uncorrelated with (*i.e.*, would not influence) demand itself. Instead, econometricians conventionally use variables that would shift *supply* and not *demand*. DX 153 at 19:9-22 (Ashenfelter dep.) ("I think in the demand context, if you are trying to estimate a demand function, ideally you would like to select as instruments variables that . . are shifters of supply, shift supply functions, which means, one interpretation would be shift costs independently of demand, factors that would change costs but not demand"); 9/11 tr. 74:18-21 (Ashenfelter); 9/8 p.m. tr. 85:22-24 (Train) ("the best instruments are things that capture the cost shifting because then you're tracing out the demand curve as well as possible"); 9/8 p.m. tr. 126:12-15 (Train) ("The best instruments are ones that represent shifts in the cost curve"). Appropriate instrumental variables can be used to solve the difficulty caused by the fact that prices and quantities are simultaneously determined by the interaction of supply and demand. PX 290 ¶ 32 (Ashenfelter Dec.).

163. Dr. Train himself defined appropriate instruments as "variables that are uncorrelated with the unobserved factors and correlated with the observed factors." PX 271 at 34:23-35:5 (Train dep.). More technically, "an instrument[al] variable is a variable that is uncorrelated with the error terms in the model and correlated with the explanatory variables." *Id.*

at 98:4-7; *accord* PX 270 at 159:24-160:18 (Wu dep.). While "any variable" can be used in an instrumental variables calculation, "an *appropriate* instrument *that leads to an unbiased or consistent, both, estimator* would be one that has the properties I described," *i.e.*, "uncorrelated with the unobserved factors and correlated with the observed factors." PX 271 at 98:8-17 (Train dep.).[16]

164. When using instrumental variables, it is conventional practice in the field of econometrics to explain why the instruments that have been selected are valid and appropriate. 9/11 tr. 60:7-8, 61:5-6 (Ashenfelter). Since judgment is involved in selecting instruments, it is necessary to understand that judgment -- and to understand why the selected instruments do not affect demand -- in order to rely on an estimate based on that instrument.

165. In order to assess the reliability of an econometric estimate, Dr. Wu would look at whether or not the manner in which the econometric model had been specified followed standard econometric practice. 9/8 a.m. tr. 5:25-6:1, 6:17-20 (Wu). Moreover, "I would want to know whether the estimates were consistent with each other, so, yes, I would look at different models of specifications." 6/8 a.m. tr. 6:11-16 (Wu). In this case, however, Dr. Wu has not formed any judgment about whether the instruments used by Dr. Train are valid, but is relying on Dr. Train to establish the validity of the instruments. 9/8 a.m. tr. 6:21-7:1, 8:15-19 (Wu). Dr. Wu was not aware that Dr. Train had used state employment levels as an instrument in obtaining his

[16]Although Dr. Train recognizes that the "best" instruments in estimating demand are instruments that shift supply (and do not affect demand), he maintains that "anything that's outside the system can be an instrument." 9/8 p.m. tr. 85:24-25 (Train). As his deposition testimony reflects, while any variable can be called an instrument in a calculation, that does not mean it is an appropriate instrument. Dr. Train's hearing testimony that "anything that's outside the system can be an instrument," *id*., should not be understood to mean -- contrary to his own deposition testimony -- that anything can be an *appropriate* instrument.

September 6 elasticity estimate of 2.17, the estimate Dr. Wu accepted as Dr. Train's "best" estimate. 9/8 a.m. tr. 8:8-14 (Wu).[17] At the time that Dr. Wu testified, he believed that Dr. Train would address, in his testimony, the question of why the instruments he has chosen to obtain his elasticity estimates are valid. 9/8 a.m. tr. 8:20-23 (Wu).

166. Dr. Train has not provided any explanation, in any of his reports or in his testimony, of why the instrumental variables he has chosen are appropriate. 9/11 tr. 59:19-21, 60:7-8; 9/11 tr. 88:10-11 ("There's no discussion of the validity of the instruments at all [in his reports]."); 9/11 tr. 88:14-15 (Ashenfelter) ("I heard no discussion of why the instruments that were selected were selected [in Train's testimony].").[18]

167. Moreover, Dr. Train has not presented the results of any tests to inform the Court whether one estimator, which includes a particular selection of instruments, is to be preferred or is significantly different from another. 9/11 tr. 83:12-14 (Ashenfelter). Dr. Train did not run any tests "formally" to determine whether his earlier instruments were appropriate. PX 271 at 98:24-99:7 (Train dep.).

168. In his September 6 report, Dr. Train for the first time used total consumption of smokeless tobacco as an endogenous variable in his model (yielding his estimate of 2.17). He has done no testing and has provided no justification of whether it is appropriate to use total expenditure as an endogeneous variable. 9/11 tr. 83:6-14 (Ashenfelter). By treating total consumption of smokeless tobacco as endogeneous, Dr. Train departs from the Hausman/Leonard/Zona model he purports to follow.

---

[17]Dr. Wu believed that "the instruments are the prices of moist snuff and loose leaf in states other than what Dr. Train has called the core state[s], which is basically Swedish Match's main selling area for loose leaf." 9/8 a.m. tr. 8:11-14 (Wu).

[18]Although Dr. Train stated in his testimony that "I will talk about" what he "figured out" about his instruments since his deposition, 9/8 p.m. tr. 94:8-10 (Train), he never did so.

169. Likewise, defendants and Dr. Train have made no attempt to justify or explain the use of prices in non-core areas as instruments.

170. Nor has Dr. Train tested whether his employment instrument is appropriate. A good instrument for estimating a demand curve will affect supply but not demand. 9/11 tr. 74:18-21 (Ashenfelter). Dr. Train's September 6 estimates use measures of employment as one instrument, DX 1005 at 1; he had not previously used that variable as an instrument in any disclosed model. 9/11 tr. 85:17-21 (Ashenfelter).

171. Demand for loose leaf is seasonal. 9/6 a.m. tr. 62:17-25 (Pittman). When agricultural activity and employment increase, chewers spend more time outdoors, and consumption of loose leaf likely increases.

172. Dr. Train has used time dummies to control for seasonal demand shocks that are common across all core states. DX 1005 at 1 ("a constant for each time period"). Seasonality has different effects across the core region. In colder climates, stores experience reduced traffic count in winter, resulting in reduced levels of sales of loose leaf. 9/6 a.m. tr. 46:17-22, 62:17-63:12 (Pittman) Different seasonal patterns characterize Florida, Texas, and other southern states where more time may be spent outdoors during the cooler months. Consequently, seasonal variations in employment are not accounted for by the time dummies and are likely to affect demand for loose leaf rather than the supply of loose leaf.

173. Changes in employment could well affect demand for loose leaf, either because it affects income or because it affects time outdoors (whether working in outdoor occupations, such as farming, or at leisure activities). *See* PX 49 at 13. As explained by Professor Ashenfelter:

> one could imagine that those variables would be shifters of demand, that they would belong in the demand function. . . . In other words, if employment fluctuations influence the consumption of this product for whatever reason, either because they tell you what's happening to income or because they tell you what's happening to how much people are working, then those variables should be in the equation.

9/11 tr. 85:22-86:8 (Ashenfelter). If indeed changes in employment affects demand for loose leaf, then employment is not an appropriate instrument.

174. There is no stated (or obvious) reason to assume, as Dr. Train apparently assumes, that changes in employment can be used as a proxy for changes in the *supply* of loose leaf tobacco. There is no reason to expect that changes in individual state employment would affect the cost of supplying loose leaf chewing tobacco to those states.

175. Professor Ashenfelter tested the validity of Dr. Train's assumption that employment properly can be used as an instrument. Professor Ashenfelter included the state employment measure in the demand equation, to determine whether it has a significant effect on the quantity of loose leaf demanded. PX 359 at 1; 9/11 tr. 85:17-86:2 (Ashenfelter). Professor Ashenfelter found that employment is a significant predictor of loose leaf sales volume independent of the price of loose leaf. PX 359 at 1; 9/11 tr. 86:9-11 (Ashenfelter). Therefore, employment is not uncorrelated with demand and is not a proper instrument. Kennedy, *A Guide to Econometrics*, (4th Edition), The MIT Press, Cambridge 1998, page 139, supra.

176. Professor Ashenfelter reran the model, including the employment variables in the demand equation, as would be appropriate if employment has a significant effect on loose leaf demand. PX 359 at 1. This estimation yielded a conditional elasticity estimate of 0.77, with a standard error of 0.96. PX 359 at 1; 9/11 tr. 85:10-11 (Ashenfelter).[19]

177. Thus, testing Dr. Train's September 6 model for sensitivity to small and plausible changes, such as treating employment as correlated with demand rather than supply, demonstrates that his estimate depends critically on his selection of instruments, which have not been justified. Dr. Train's results do not permit the Court to say that the "best" estimate of demand elasticity is 2.17 rather than 0.77 -- a difference that would change Dr. Train's conclusion whether or not loose leaf is a product market.

178. The test performed by Professor Ashenfelter shows that the employment variables belong in the structural demand equation. 9/11 tr. 86:9-11, 86:19-23 (Ashenfelter). This indicates that Dr. Train's implementation of the Hausman, Leonard, Zona multi-stage budgeting model to estimate the demand elasticity for loose leaf is inappropriate, because the premise of the model is not satisfied in this case. 9/11 tr. 85:17-86:8; 9/11 tr. 127:8-18; 9/11 tr. 124:20-24 (Ashenfelter) ("Apparently it wasn't [an appropriate way to do the econometric analysis in this case] I mean, I've tested whether that was an appropriate way by including these employment variables in the second stage."); 9/11 tr. 132:21-25 (Ashenfelter) (if a two-stage budgeting model is correct, employment would not be a significant determinant of the demand for loose leaf in the

[19]This estimate also corrects Dr. Train's error in implementing two-stage least squares. Unlike Dr. Train, Prof. Ashenfelter included all predetermined variables from the demand equation in the first stage regression. *See* PFF 193-214. If that error is not corrected, but employment is included in the demand equation, the estimated conditional elasticity would be 0.95, with a standard error of 0.90. PX 359 at 1.

structural demand equation). Further, the test indicates that the instrument selected by Dr. Train is not a valid instrument, because it affects demand rather than supply.

179. The multi-stage budgeting model has been subject to much criticism, 9/11 tr. 124:18-19 (Ashenfelter), and is not an economic model with general application; rather it is a highly specialized model of demand behavior. Professor Ashenfelter explained at the hearing:

> The idea is actually that consumers utility function has some specified restrictions on it, and that then leads to the result that you can use a decentralized budgeting model. In other words, this is actually an assumption about consumer preferences that's driving this analysis. It's not an assumption about economics. It's an assumption about how people behave, which is not tested normally. In other words, it's a highly specialized model of demand behavior, not the most general by any means.

9/11 tr. 101:11-20 (Ashenfelter).

180. Professor Ashenfelter followed a standard procedure for testing the applicability of this specialized model, by testing it against a more general model:

> The basic way in which econometrics works is if we write down a highly specialized model, we can often ask that in a more general model. In a test of whether the highly specialized model makes any sense is whether the more general model has significant effects for variables [that] the specific model [says] shouldn't be significant. So the way the general procedure for testing whether a model is sensible is by testing alternative specifications. That's basically what's being done here. . . . All it tells you is–what it suggests is that the simple decentralized budgeting model is not appropriate for this model. Dr. Train could have done this test. It would have been perfectly sensible.

9/11 tr. 125:6-20 (Ashenfelter).

181. It is not surprising that Dr. Train chose the wrong model and inappropriately selected as instruments variables that are significant determinants of demand for loose leaf and that therefore properly belong instead, together with price, in the structural demand equation for loose leaf. Dr. Train chose to conduct his analysis of demand, and to select his instruments, in

isolation, without reviewing any of the defendants's documents that would have illuminated the forces affecting demand and supply.

> Q: Did you examine business documents or business planning documents to get a sense regarding the nature of the products for the demand elasticity?
>
> A: No.
>
> Q: Why not?
>
> A: I didn't ask for such documents, I again was asked to examine the econometric evidence and did not consider the statements that might have been made by business people to be part of that analysis.

PX 271 at 81:20-82:5 (Train dep.) Had Dr. Train simply looked at Swedish Match's annual reports he would have seen that changing employment patterns are affecting demand for loose leaf. PX 49 at 13 ("The reason [for declining consumption of chewing tobacco] is primarily demographic – the increasingly higher average age of consumers and fewer jobs in farming and other outdoor sectors.")

182. Professor Ashenfelter cautions that in undertaking an econometric analysis, "first of all, you have to . . . learn something about the subject. So the first thing would be to learn what is the literature on demand for products of this type. From that you'd specify what kind of demands you think are sensible based upon the literature in that area." 9/11 tr. 90:7-13 (Ashenfelter). Dr. Train selected his model, modified it, and chose his instruments without first carefully considering the factors likely to affect demand for loose leaf.

183. Caution should be observed before accepting at face value the estimates generated through Dr. Train's inventive efforts to introduce untested instruments into a specialized model and apply them without first studying the industry:

> I guess my feeling is that we shouldn't be inventing new scientific procedures for the courtroom. They–on the whole, we should be taking off-the shelf procedures in the courtroom. . . . I think [that] is a better way to guarantee that something is not being incorporated or imported, which is not conventional with the science. The only real value [in an] expert is the extent to which they have actual[] scientific credibility.

9/11 tr. 132:6-14 (Ashenfelter).

d. Dr. Train Never Submitted a Two-Stage Regression Result that Was Correctly Calculated

184. Dr. Wu testified that in order to assess the reliability of an econometric estimate, he would look at whether or not the manner in which the econometric model had been specified followed standard econometric practice. 9/8 a.m. tr. 5:25-6:1, 6:17-20 (Wu).

185. None of Dr. Train's various attempts to construct an elasticity estimate using a two-stage least squares method conforms to established scientific practice. 9/11 tr. 88:4-6 (Ashenfelter).

(1) Dr. Train's Analysis of the Elasticity of Demand for Loose Leaf Tobacco Presented in his July 28 Expert Report Fails to Follow Accepted Scientific Method

186. Although determining the appropriate instruments is a fundamental step in correctly estimating a relationship, there is also the separate question of whether the chosen instruments were used correctly. Dr. Train's failure to choose proper instruments and justify that choice is discussed above. See PFF155-181. Professor Ashenfelter concluded that Dr. Train's analysis does not fulfill the second requirement either as it is not based on standard methods. 9/11 tr. 89:25-90:3 (Ashenfelter).

187. Dr. Train's initial model used "instrumental variables" based on the prices of loose leaf in 17 "non-core" regions of the United States. DX 800 at 6 (Train Rep.). Professor

Ashenfelter recognized that Dr. Train's instrumental variables, used to estimate the elasticity of 2.3, would yield different results if the order in which the core and non-core regions were listed was varied (*i.e.*, Dr. Train's estimate would change if the regions were listed geographically, or by size, randomly, or by some other order rather than alphabetically). PX 279 at 4-7 (Ashenfelter Rep.); PX 271 at 79-80 (Train); 9/11 tr. 59:16-18, 65:3-5 (Ashenfelter). The effect of Dr. Train's error is that his results suggest that loose leaf is not a market because "Ohio" precedes "Pennsylvania" in the alphabet.

188. Professor Ashenfelter ran 250 random variations of the order of the 17 core regions (out of more than 20 trillion possible variations), and obtained elasticity estimates ranging from 0.86 to 2.68. PX 279 at 6 (Ashenfelter Rep.); 9/11 tr. 66:24-67:18 (Ashenfelter). Since there is no significance to the names of the States in analyzing elasticity (PX 271 at 80 (Train)), Dr. Train's estimate of 2.3 is no more valid than any of the other 20 trillion possible estimates using his method. PX 279 at 6-7 (Ashenfelter Rep.); 9/11 tr. 67:1-6, 70:11-71:4 (Ashenfelter).

189. This is hardly "quibbling" as asserted by defendants. PI Opp at 24. The procedure followed by Dr. Train is inappropriate and fails to follow any known conventional procedure in the field of econometrics. 9/11 tr. 65:22-24, 66:6-8 (Ashenfelter). Professor Ashenfelter concluded that what Dr. Train had relied upon was not something that anyone should rely on because the procedure used by Dr. Train did not make any sense. 9/11 tr. 72:10-14 (Ashenfelter).

190. Using Dr. Train's data, Professor Ashenfelter ran two conventional econometric programs in order to illustrate the range of results the data would generate. Using an ordinary

least squares ("OLS") program, Professor Ashenfelter generated an elasticity of 1.52, with a standard error of 0.38. 9/11 tr. 67:19-25 (Ashenfelter). Using first differences, i.e., the change in quantity and the change in estimated price, Professor Ashenfelter generated an elasticity of 0.74 with a standard error of 0.20. 9/11 tr. 68:17-22 (Ashenfelter). Professor Ashenfelter found that the disparity in these estimates, which should not have been substantially different, indicates that there is something wrong with the assumptions being made. 9/11 tr. 68:23-69:5 (Ashenfelter); 9/8 p.m. tr. 112:16-24 (Train).

191. After considering Professor Ashenfelter's criticisms, Dr. Train backed away from his 2.3 elasticity estimate and would not place any weight on it:

> Q: Do you believe today that the 2.33 estimate of elasticity of demand and the 2.30 estimate of coefficient presented in your July 27th report is reliable?
>
> A: The individual estimate I am not. I'm placing practically no weight on that in my decision right now. I am not sure how to interpret that result at this stage and as a result am placing essentially no weight on it.

PX 271 at 76 (Train). Dr. Train came to understand that the IV procedure he designed and relied on to produce that estimate has "the arbitrariness that Dr. Ashenfelter identified, and I'm not sure what the implications of that are as of today." PX 271 at 76 (Train); *accord* 9/8 p.m. tr. 91:18-22 (Train) ("Dr. Ashenfelter pointed out in reply to my report a particular problem with those instruments that I had not recognized. I had been thinking of the instruments in a particular way; and he pointed out an aspect of them that I hadn't thought of.")

192. The estimates contained in Dr. Train's first report (the highest elasticities that have been claimed by defendants) are now acknowledged by Dr. Train to have been based on a

fundamentally flawed model, and he does not rely on those results. 9/8 p.m. tr. 91:25-92:2 (Train) ("I don't feel that I want to rely on them, and I don't rely on them now.")

(2) Dr. Train's 2-Stage Regressions Presented at the Hearing Fail to Follow Accepted Scientific Method

193. Dr. Train has attempted to implement a statistical method known as "two stage least squares regression." PX 271 at 150 (Train); PX 290 ¶ 10 (Ashenfelter dec.) In this procedure, the statistician performs two regressions. *Id.* Standard statistical methodology requires that all of the predetermined variables in the second stage regression be included in the first stage regression. PX 290 ¶¶ 36-39 (Ashenfelter Dec.); PX 359 at 2. If a statistician fails to follow this procedure, standard econometric textbooks warn that the results will be biased. PX 290 ¶ 38 (Ashenfelter Dec.) and attachments thereto.

194. Dr. Train made this error in his second and third reports. 9/11 tr. 77:9-13 (Ashenfelter). In his second report, the only instrumental variable he included in the first stage regression was the average price in the non-core states. However, in the second stage regression he included predetermined variables that were not included in the first regression, in particular "time dummies." PX 290 ¶¶ 36-37 (Ashenfelter Dec.); *see also* 9/11 tr. 77:9-15 (Ashenfelter).

195. Dr. Train's August 15 first stage regressions use only one explanatory variable: his instrument, the average price in the non-core areas. He does not include his controls for time specific effects as explanatory variables (instruments) in his first stage regressions. PX 271 at 118:4-6 (Train); PX 259 ¶ 36 (Ashenfelter dec.). Dr. Train testified that he believes that this procedure does not introduce bias into his estimate of the demand function. PX 271 at 155:19-

160:4 (Train). According to Professor Ashenfelter and a variety of econometric texts, this statement is not correct. PX 290 ¶ 36-38 (Ashenfelter Dec.).

196. Professor Ashenfelter explained that even if Dr. Train's instrumental variables procedure removes the correlation between prices and the unobserved factors, it introduces a new source of correlation between the explanatory variables in his demand equation and the unobserved factors. PX 290 ¶ 37(Ashenfelter Dec.). Because they are not included among the instruments used in Dr. Train's first stage regression, his time specific effects will now be correlated with the unobserved factors in the second stage regression (the demand equation). *Id*. This correlation between the time specific effects and the unobserved factors can lead to bias for exactly the same reasons as the correlation between prices and the unobserved factors might have led to bias if Dr. Train had not used instrumental variables at all. *Id*.

197. In his September 6 report, Dr. Train represented that "I have estimated models that use all of the exogenous variables as instruments." DX 1005 at 1; 9/11 tr. 82:12-14 (Ashenfelter). Dr. Train repeated this claim during the hearing, 9/8 p.m. tr. 125:24-126:2, 133:21-24 (Train), and acknowledged that "[t]here is a strong logic for doing that . . . ." 9/8 p.m. tr. 127:6-7. However, in response to further questioning, Dr. Train admitted that some of the predetermined variables, i.e., the lagged dependent variables, were not included among the instruments he employed in his September 6 first stage regressions. 9/8 p.m. tr. 133:25-134:2 (Train); PX 359 at 2. Dr. Train further acknowledged: "If I were to follow exactly what I think Dr. Ashenfelter was recommending . . . then it would include the pre-determined variables." 9/8 p.m. tr. 134:13-17.

198. Professor Ashenfelter explained, at the hearing, that the lagged dependant variable should have been included in the reduced form, i.e., in the first-stage equation, and it was not. 9/11 tr. 82:15-21 (Ashenfelter). Consequently, neither the 2.17 nor the 1.60 elasticity estimate introduced by Dr. Train in his September 6 report is consistent. 9/11 tr. 82:22-24 (Ashenfelter).

199. As a result of these omissions, Dr. Train did not follow standard statistical methodology in calculating any of the two-stage regression estimates that he presented at the hearing and reported in his August 15 and September 6 reports. PX 359 at 2; PX 290 ¶¶ 38 (Ashenfelter Dec.). This failure to conduct a two-stage least squares regression, in the manner consistently specified by statisticians, results in an inconsistent estimator and biases his results. PX 290 ¶ 37 (Ashenfelter Dec.); 9/11 tr. 82:22-24 (Ashenfelter). This is demonstrated by numerous standard texts on econometrics. PX 290 ¶ 38 (Ashenfelter Dec.).

200. For example, Kelejian and Oates (1989) state:

> If, however, [a predetermined variable which is included in the second stage regression] were not used in constructing [the predicted values from the first stage regressions], the above procedure would not lead to consistent estimators.

Kelejian and Oates, *Introduction to Econometrics, Principles and Applications*, Harper and Row,

New York 1989, page 279. PX 290 ¶ 38 (Ashenfelter Dec.) and attachment. This is a fundamental point in econometrics; Kelejian and Oates is an undergraduate text. 9/11 tr. 84:9-12 (Ashenfelter).

201. Cassidy (1981) states:

> In general, for linear structural equations, *all* the *predetermined* variables in the entire system of equations will be included as regressors in *each* reduced-form equation.

Cassidy, *Using Econometrics a Beginners Guide*, Reston Publishing Company, Inc., Reston Va. 1981, page 219 (emphasis in original). PX 290 ¶ 38 (Ashenfelter Dec.) and attachment.

202. Katz (1982) states:

> Each endogenous variable appearing on the right side of the equation is regressed on all the exogenous variables in the model.

Katz, *Econometric Theory and Application*, Prentice-Hall, Inc., Englewood Cliffs NJ 1982, page 213. PX 290 ¶ 38 (Ashenfelter Dec.) and attachment.

203. Gujarati (1995) states:

> To get rid of the likely correlation between [an endogenous variable] and [unobserved factors], regress first [the endogenous variable] on *all* the predetermined variables in the *whole system.*

Gujarati, *Basic Econometrics* (3rd Edition), McGraw Hill, Inc., New York 1995, page 687 (emphasis in original). PX 290 ¶ 38 (Ashenfelter Dec.) and attachment.

204. Pindyck and Rubinfeld (1991) state:

> In the first stage, the reduced form equation for [an endogenous variable] is estimated using ordinary least squares. In general, this is accomplished by regressing [the endogenous variable] on all the predetermined variables in the equation system.

Pindyck and Rubinfeld, *Econometric Models and Econometric Forecasts* (3rd Edition), McGraw Hill, Inc., New York 1991, page 299. PX 290 ¶ 38 (Ashenfelter Dec.) and attachment.

205. Studemund and Cassidy (1987) state:

> Recall that all predetermined variables appear as right-side variables in each of the reduced-form equations.

Studemund and Cassidy, *Using Econometrics a Practical Guide*, Little, Brown and Company, Boston 1987, page 353. PX 290 ¶ 38 (Ashenfelter Dec.) and attachment.

206. Griffiths, Hill, and Judge (1993) state:

> This matrix represents the set of exogenous variables that are contained in the statistical model for the *complete* demand and supply system.

Griffiths, Hill, and Judge, *Learning and Practicing Econometrics*, John Wiley and Sons, Inc., New York 1993, page 614 (emphasis in original). PX 290 ¶ 38 (Ashenfelter Dec.) and attachment.

207. Brown (1991) states:

> Recall that exactly one reduced form equation exists for each endogenous variable in the system, and each reduced form equation must have all of the exogenous variables on the right side.

Brown, *Introducing Econometrics*, West Publishing Company, St. Paul 1991, page 232. PX 290 ¶ 38 (Ashenfelter Dec.) and attachment.

208. Adhering to his position that his failure to include all of his predetermined variables in the first-stage regression is not an error, Dr. Train relied on the observation by Kelejian and Oates that the two-stage least squares technique may be used even where data is unavailable by excluding from the two-stage regression variables for which the data is incomplete, as long as an "adequate set" of predetermined variables are available for use in the regressions. 9/8 p.m. tr.128:7-25 (Train); PX 290 (Ashenfelter Dec.) Kelejian & Oates attachment at 279.

209. However, Dr. Train admitted that he does not understand the explicit explanation by Kelejian & Oates that "we point out that the adequate set of predetermined variables must always include *all of the predetermined variables appearing in the equation being estimated*" and their statement that failure to do so "would not lead to consistent estimators." 9/8 p.m. tr.

129:12-14 (Train); PX 290 (Ashenfelter Dec.) Kelejian & Oates attachment at 279-80 (emphasis in original); 9/11 tr. 84:7-12 (Ashenfelter).

210. Dr. Train has misinterpreted the Kelejian and Oates text. 9/11 tr. 75:7-14 (Ashenfelter). The two-stage regression procedure permits generation of an estimate without estimating the whole system of equations for supply and demand. 9/8 p.m. tr. 128:17-24 (Train). This does not mean that predetermined variables that are selected for use in the second stage regression can be omitted from the instruments used in the first stage regression. 9/11 tr. 129:18-130:5 (Ashenfelter). Dr. Train acknowledged, in part, his confusion of these distinct points when confronted with his failure to include the lagged dependent variables as instruments: "[T]he critique I was taking to be more general about the exogenous variables and all the other variables that are in the system." 9/8 p.m. tr. 134:11-13 (Train). After considering Dr. Train's explanation and conferring with colleagues, Dr. Ashenfelter reaffirmed that Dr. Train's instrumental variables procedure is "just wrong." 9/11 tr. 84:2-4 (Ashenfelter).

211. Dr. Train's procedure is not consistent with that used in peer reviewed economic journals. 9/11 tr. 57:9-12, 57:15-18 (Ashenfelter). He has used an inconsistent estimator to attempt, through two-stage regression, to correct the problem of an inconsistent estimator. 9/11 tr. 57:12-14 (Ashenfelter).

212. Professor Bo Honore, a distinguished econometric theorist at Princeton University, provided a careful, mathematical proof that Dr. Train's procedure results in inconsistent estimates. PX 359 Exhibit A; 9/11 tr. 57:21-58:12, 59:4-9, 71:16-21, 84:5-6, 84:14-15; 119:8-120:21 (Ashenfelter).

213. Standard econometric programs will not permit the user to commit Dr. Train's error. 9/11 tr. 75:15-21, 120:13-14 (Ashenfelter). But Dr. Train used a non-standard procedure to estimate his instrumental variables model which, in effect, overrode the safeguards that are built into the standard program. 9/11 tr. 75:22-25 (Ashenfelter).

214. Professor Ashenfelter examined the effect on the value of the elasticity estimate of Dr. Train's departure from established econometric procedure. When he intentionally repeated Dr. Train's error of omitting from the first stage regression the lagged dependent variable used in the structural demand equation increases, from 0.76 to 0.95, the elasticity estimate generated by Professor Ashenfelter including employment in the structural demand equation in the program submitted by defendants on August 30. PX 359 at 1; 9/11 tr. 85:9-11 (Ashenfelter). This test demonstrated that Dr. Train's erroneous instrumental variables procedure resulted in an elasticity estimate that is 25 percent higher than the same estimate if all the predetermined variables used in the demand equation are included in the first stage regression, as instructed by all identified econometric texts. This substantial difference in the two results shows that Dr. Train's steadfast refusal to follow established econometric procedure, even after Professor Ashenfelter had brought to Dr. Train's attention an array of econometric texts pointing out the problem, is not simply a technical departure from convention; it substantially inflates the elasticity estimate. 9/11 tr. 85:8-16 (Ashenfelter).

215. Irrespective of whether Dr. Train will ever be convinced that his two-stage regression procedure is improper, the Court is not a place for experimentation with techniques that are not employed in normal scientific practice. Professor Ashenfelter explains:

> This is a point that I really think there is a right and a wrong, and it would be wrong to use the procedure that Dr. Train uses in litigation when we know it is not used in scientific practice, except inadvertently.

9/11 tr. 128:8-11 (Ashenfelter).

e. Dr. Train Never Submitted a Result that Allows him or the Court to Reject the Null Hypothesis that Loose Leaf Chewing Tobacco Is a Product Market

216. As acknowledged by Dr. Wu, a standard error is a fundamental measure of econometric reliability. 9/8 a.m. tr. 5:25-6:8 (Wu).

217. None of the elasticity estimates presented by Dr. Train during the hearing were included in his first report. 9/8 p.m. tr. 111:20-21 (Train). In his first report in July, Dr. Train reported a standard error of .247 for his 2.3 elasticity estimate. DX 800 at Table 1 (Train Rep.). This standard error implies that a 95% confidence interval around his 2.3 estimate extends from approximately 1.8 to 2.8. Dr. Wu relied on that estimate when he submitted his expert report. 9/8 a.m. tr. 11:23-12:3.

218. Prof. Ashenfelter observed a flaw in the methodology that caused Dr. Train to underestimate the standard error. Professor Ashenfelter observed that Dr. Train's standard errors failed to take account of the possibility of clustering in the data, and such clustering dictates the use of "robust standard errors." PX 279 at 9-10 (Ashenfelter Rep.); 9/11 tr. 66:9-13 (Ashenfelter). Professor Ashenfelter calculated a robust standard error of .821, indicating that the proper confidence interval around Dr. Train's estimate of 2.3 would extend from 0.7 to 3.9

(two standard errors of .821 in either direction from 2.3). PX 279 at 9-10 (Ashenfelter Rep.); 9/11 tr. 66:14-20 (Ashenfelter).

219. Using the correct standard error, Professor Ashenfelter calculated that the proper confidence interval around Dr. Train's 2.3 conditional elasticity estimate actually extended *below* (and above) the 1.75 critical elasticity, and indeed below 1.00[20] – from 0.7 to 3.9. Thus, Dr. Train had substantially overstated the precision of his estimates. PX 279 at 10. As a result, it would not be appropriate to conclude from Dr. Train's first set of results (even if they had been correctly estimated) that loose leaf is not a properly defined product market.

220. Conceding the flaw in his first report, Dr. Train stated that he calculated a robust standard error in his second report, DX 801 at 3, but did not report the robust standard error. PX 271 at 108:20-22 (Train). Dr. Wu observed that a report or article that gave an econometric estimate without reporting any standard error would not be acceptable. 9/8 a.m. tr. 21:22-25 (Wu).

221. At the time of his August 18th deposition, Dr. Train's "illustration" of a conditional elasticity of demand for loose leaf was 1.83, PX 271 at 66:8-16, 69:6-12, 92:24-93:21, 187:12-18 (Train) – an "illustration" he selected to be consistent with his conclusion that the elasticity is above 1.75. *Id.* at 69:6-12, 92:24-93:21. Dr. Train adhered to this estimate,

[20]An elasticity of 1.00, also referred to as "unitary elasticity," is revenue neutral. If the elasticity of demand is 1.00, the dollar sales of a hypothetical monopolist remain unchanged as it increases or decreases price; any percent change in volume is exactly equal to the percent change in price. If the elasticity of demand is less than 1.00, demand is said to be "inelastic"; if the elasticity of demand is greater than 1.00, demand is said to be "elastic." 9/6 p.m. tr. 24:3-5 (Simpson).

among others, at the hearing. 6/8 p.m. tr. 94:3-5 (Train); DX 1005 at 3 (Supplementary Report of Kenneth E. Train).

222. Dr. Train admits that his econometric results are not statistically significantly different from his former benchmark critical elasticity of 1.75, or his new benchmark of 1.5, or even from 1.00 at conventional (95% or 90%) levels of statistical confidence. 9/8 p.m. tr. 119:9-21 (Train). Therefore, it cannot be said at conventional confidence levels that loose leaf is not a properly defined product market.

223. Dr. Train explained at his deposition:

> Q: What does that mean to the layperson?
>
> A: I said that the easiest way to state this is that you cannot reject the hypothesis at [the] 95% confidence [level] that the true elasticity is below 1. However, it's also important to realize that you cannot reject the hypothesis that it is above 1.75.
>
> Q: So you can't reject the hypothesis that the true elasticity is above or below 1.75, is that correct?
>
> A: That's correct.

PX 271 at 101-02 (Train dep.).

224. In response to the observation by Prof. Ashenfelter that Dr. Train had failed to follow accepted practice by failing to disclose the standard errors associated with his elasticity estimates, Dr. Train calculated standard errors for his conditional elasticity estimates. DX 1005 at 3. These standard errors do not take into account additional estimation errors resulting from the first stage regression. 9/8 p.m. tr. 138:11-139:17 (Train).

225. Econometric methods only derive estimates of the demand elasticity and, therefore, it is standard practice to estimate and report measures of the precision of the estimates. PX 290 ¶ 16 (Ashenfelter Dec.). An "estimate has a margin of error attached to it." PX 271 at 136:21-23 (Train dep.). Dr. Wu explained that the possibility that Dr. Train's elasticity estimate is wrong, "is exactly why we have our confidence intervals. That is exactly why we are concerned about the confidence intervals." 9/8 a.m. tr. 30:3-5 (Wu).

226. To account for the margin of error, statisticians and econometricians report the "standard error" – a measure of the estimate's precision – along with their estimates. PX 290 ¶¶ 16-17 (Ashenfelter Dec.). The "standard error" is used to calculate "confidence intervals" and "tests of statistical significance." PX 290 ¶ 17. A confidence interval provides a range around the estimated value in which the true value will fall with a given probability. *Id.* ¶ 18.

227. 95% is a commonly used probability for forming confidence intervals. PX 290 ¶ 19 (Ashenfelter Dec.); PX 271 at 188:7-12 (Train dep.) (the 95% confidence level "is a commonly used confidence level for purposes of rejecting hypotheses."). 95% confidence intervals are calculated as two standard errors in each direction from the demand elasticity estimate. 9/11 tr. 65:13-16 (Ashenfelter); *see* PX 271 at 97:18-24 (Train). Other confidence intervals conventionally used in statistical analysis are 99% and 90%. 9/8 a.m. tr. 18:15-17 (Wu) ("The convention in economic literature is typically a 95 percent confidence interval, or 90 percent confidence interval . . . ."); 9/8 a.m. tr. 19:7-11 (Wu) ("And some people might want to look at 99 percent; some people might want to look at 95; some people might want to use 90

percent confidence interval, but again that is something that usually you want to leave to the reviewer or the reader.").

228. Dr. Train claims that his new "best" estimate of 2.17 means that there is an 85 percent probability that the elasticity of demand is above defendants' new "critical elasticity" estimate of 1.5. This representation is not a conventional level of statistical significance or confidence. 9/8 a.m. tr. 19:12-18 (Wu); PX 290 ¶ 19 (Ashenfelter dec.); PX 271 at 188:7-12 (Train dep.). Dr. Train's newest, best estimate is only significantly different from his previous critical elasticity of 1.75 at the 72 percent confidence level. 9/8 p.m. tr. 117:16-22 (Train). Dr. Wu would not rely on a confidence level below 85%, and would not find a 75% confidence level to be reliable. 9/8 a.m. tr. 23:5-14 (Wu).

229. Moreover, Dr. Train's reported standard error applies only to his conditional elasticity estimate. The standard errors of his unconditional elasticity estimates are unknown. See PFF 251-256 below.

230. Dr. Wu attempts to bolster Dr. Train's 85% probability claim by noting that the probability of the alternative is only 15 percent. 9/7 p.m. tr. 69:18-70:4 (Wu). This does not make his estimate statistically significant. Dr. Train's 85% probability claim should be considered in the light of the 50% probability that the outcome would be correct if we decided the product market on the basis of a coin toss, 9/8 p.m. tr. 118:7-10 (Train), and the 83% probability of a successful outcome in playing Russian roulette with a six-shot revolver (5 / 6).

231. Professor Ashenfelter normally uses a 95 percent confidence interval and normally uses conventional significance levels for testing hypotheses. 9/11 tr. 107:25-108:1,

113:21-22 (Ashenfelter). Dr. Wu could not identify any instance, prior to this case, where he used a confidence level lower than 90 percent. 9/8 a.m. tr. 20:14-16 (Wu) ("Typically, I look at the 90 percent, but again this goes to, this goes to what the underlying question that you are trying to ask."); 9/8 a.m. tr. 21:1-4 (Wu) ("Usually I like to report both the estimate and the standard error, and I will also give some indication as to whether it satisfies a 90 percent significance test. Also I report all of those.").

232. Likewise, when Dr. Train testified that he believed that his elasticity estimates are significantly different from zero, he employed the standard of a 95% confidence level:

> What I was referring to then is standard nomenclature. When you say it's significant, you mean–it's a shorthand for significant 95 percent compared to zero....

9/8 p.m. tr. 146:22-147:3 (Train).

233. Contrary to Dr. Wu's standard practice, Dr. Train testified that it is not his standard practice to report standard errors for all estimates, but only for coefficients. 9/8 p.m. tr. 123:11-124:8 (Train); *but see* PX 291, 292, 293, 295. Dr. Wu therefore should find Dr. Train's work unreliable, since Dr. Train does not provide a basis to draw a conclusion about the precision of his estimates. 9/8 a.m. tr. 21:5-12 (Wu).

234. Tests of statistical significance are used by statisticians to determine whether the difference between two numbers is meaningful. PX 290 ¶ 20 (Ashenfelter Dec.). As applied to Dr. Train's estimates, a statistical significance test examines the difference between the estimated elasticity and the critical elasticity and asks whether the observed difference is so large that it is

highly unlikely that the true elasticity is not different from the critical elasticity. 9/7 p.m. tr. 68:3-70:7 (Wu).

235. A statistical significance test begins with the construction of a benchmark, or "null hypothesis," against which the observed estimate will be compared. PX 290 ¶ 21 (Ashenfelter Dec.). For example, if one wanted to determine the reliability of a political poll showing that 52% of voters favored Jones while 48% favored Smith, a null hypothesis could be that the two candidates are, in fact, equally popular with 50% favoring both Smith and Jones. *Id.* ¶¶ 20-21. The next step would be to determine how likely it is that one would observe a difference as large or larger than the observed difference. *Id.* ¶ 22. If the probability is less than 5% (the most commonly used significance level), the statistician will conclude that the observed estimate is reliable because the observed difference is said to be "statistically significant." *Id.* at ¶¶ 21-22. In the political poll example, if there is less than a 5% probability that the difference would be as large or larger than observed, the statistician will conclude that the difference is "statistically significant," reject the null hypothesis and conclude that Jones is more popular than Smith. *Id.* ¶ 22.[21]

236. The results of significance tests are sometimes expressed at "t-statistics," and, generally speaking, a difference is statistically significant only if the "t-statistic" is greater than

[21]Dr. Train attempted to introduce the irrelevancy that his estimates are statistically significantly different from zero. 9/8 p.m. tr. 122:4-123:4, 142:19-143:3 (Train). All this means is that the demand curve has a downward slope, i.e., it is not vertical. 9/8 p.m. tr. 122:19-22. He acknowledged, however, that “the more relevant question” is whether the elasticity is significantly different from his critical elasticity (now 1.5), not whether it is different from zero. 9/8 p.m. tr. 142:24-143:1 (Train).

2.0 (courts commonly refer to this as "two standard deviations"). PX 290 ¶ 24 (Ashenfelter Dec.). The "t-statistic" is the ratio between the difference and the standard error of the difference. *Id.* The two standard deviations measure was accepted by the Supreme Court in *Castaneda v. Partida*, 430 U.S. 482, 496 n.17 (1977) ("As a general rule for such large samples, if the difference between the expected value and the observed number is greater than two or three standard deviations, then the hypothesis that the jury drawing was random would be suspect to a social scientist.").

237. Dr. Train did not disclose, in his August 15 report, the standard error either for his new estimates or for his coefficients. PX 270 at 147-48 ("Perhaps it isn't" in Dr. Train's second report) (Wu). At his deposition, Dr. Train stated that he once calculated the standard errors, but he could not remember the precise figures. PX 271 at 97:7-17, 100:1-11 (Train). Dr. Train could only say that he performed a "quick sense" calculation for his 1.83 estimate, and that the standard error was "large" relative to the estimate, but did not provide the actual standard error. *Id.* at 100. Dr. Train did not provide a confidence interval for either estimate, but admitted that the confidence interval for both embraces 1.00 and 1.75. *Id.* at 97-98, 101-02. Thus, Dr. Train "cannot reject the hypothesis at 95 percent confidence that the true elasticity is below 1." *Id.* at 101-02; 9/8 p.m. tr. 124:9-12 (Train).

238. Using Dr. Train's backup program, Professor Ashenfelter has calculated a standard error of 0.64 for the conditional elasticity estimate reported in Dr. Train's second report. PX 290 ¶ 28 (Ashenfelter Dec.). This means that the confidence interval around Dr. Train's 1.83 estimate is from 0.55 to 3.11, which embraces 1.75, 1.50 and 1.00, as Dr. Train admitted. PX

271 at 100-02 (Train); 9/8 p.m. tr. 124:9-12 (Train). Dr. Train's August 15 estimate (even if it were correctly estimated) would merely indicate that the only statistically valid conclusion Dr. Train can reach is that the conditional demand elasticity for loose leaf tobacco is between 0.55 and 3.11.

239. Professor Ashenfelter also calculated a standard error of 0.42 for Dr. Train's OLS estimate reported in Dr. Train's August 15 report. PX 290 ¶ 28 n.7 (Ashenfelter Dec.). This means that the confidence interval around Dr. Train's OLS conditional elasticity estimate of 1.81 is from 0.97 to 2.65, which embraces 1.75, 1.50 and 1.00. Dr. Train's August 15 OLS estimate (if correctly estimated) would merely indicate that the only statistically valid conclusion Dr. Train can reach is that the conditional demand elasticity for loose leaf tobacco is between 0.97 and 2.65.

240. The estimates from Dr. Train's second report are so imprecise that it is not possible to conclude, at 95% confidence, that the product market is broader than loose leaf chewing tobacco. PX 271 at 101-02 (Train); PX 290 ¶ 31 (Ashenfelter dec.). These estimates also suffer from Dr. Train's failure to follow standard statistical methodology. *See* PFF199, 213-214 above. At his deposition, Dr. Train further admitted that he developed other estimates that were *below* 1.75, but he omitted them from his reports and destroyed them. PX 271 at 83:10-22, 107:10-13 (Train).

241. As explained by defendants' other economic expert, Dr. Lawrence Wu, even a 0.01 difference between the actual elasticity and the 1.75 critical elasticity is sufficient to conclude that a price increase by a hypothetical monopolist would be profitable. PX 270 at

171:10-172:2 (Wu); see 9/8 p.m. tr. 116:15-21 (Train: "I was needing to make a binary choice. Either it is a market or not a market.")

242. As with his first report, Dr. Train's August 15 estimates suffer from a lack of precision and flawed methodology.

243. Dr. Ashenfelter has examined Dr. Train's August 15 calculations and confirmed Dr. Train's conclusion that his estimates are not statistically significantly different from the critical elasticity of 1.75. PX 290 ¶¶ 28, 31 (Ashenfelter Dec.); 9/11 tr. 77:22-78:10, 79:13-18 (Ashenfelter).

244. Applying the statistical significance test to Dr. Train's August 15 estimates, Professor Ashenfelter found that the t-statistic is 0.14, which is smaller than 2.00 or two standard deviations. PX 290 ¶ 28 (Ashenfelter Dec.). The difference between Dr. Train's 1.83 estimate and 1.74 is 0.09, and when divided by 0.64 to calculate the t-statistic, the result is 0.14. PX 290 ¶ 28. Thus, Professor Ashenfelter concludes that the difference is not statistically significant and, therefore, Dr. Train's estimate is too imprecise to support the conclusion that the demand elasticity is larger than 1.75. PX 290 ¶ 31.

245. Dr. Train's admission that the confidence interval around his demand elasticity estimate extends below 1.75 would make Dr. Train's "illustrations" of estimates unreliable in Dr. Wu's view. In fact, only an estimate *above* 1.75 (but not equal to 1.75) would have satisfied Dr. Wu at his deposition:

> Q: Does [Dr. Train's] estimate of 1.84 include within a proper confidence interval the value of 1.75?

A: I do not know.

* * *

Q: If Dr. Train's estimate of demand elasticity of 1.83 or 1.84, using his instrumental variables, includes within an appropriate confidence interval the value of 1.75, do you believe it is appropriate for you to rely on the 1.83 or 1.84 estimates in concluding that Dr. Train's estimate is equal to or greater than 1.75?

A: This is how I have thought about this. If Dr. Train believes that the power of his test is *such that he is comfortable that 1.75 is outside the range of his confidence interval,* then I will rely on his expertise in that.

* * *

Q: So you defer to him with regard to whether or not 1.75 is within an appropriate confidence interval of his estimate, is that correct?

A: Yes, and more specifically, I will rely on his expertise to determine what that appropriate confidence interval is.

PX 270 at 153-55 (Wu) (emphasis supplied, objections omitted).

246. Dr. Train has no basis other than his econometrics (and his personal sampling of loose leaf and moist snuff) to support his conclusion. PX 271 at 81:6-11 (Train). He has not examined any of the defendants' business documents, *id.* at 81-82, or any of their market research, *id.* at 80:13-24. "It is my common practice to do econometric analysis without soliciting or examining statements made by business people in the field, or in some occasions I have merged econometric analysis with survey data, but I don't usually do that." *Id.* at 84.

247. Professor Ashenfelter prepared PX 356, which he discussed in his direct testimony, to illustrate the wide ranging elasticity estimates disclosed by Dr. Train or generated by Professor Ashenfelter by correcting various errors committed by Dr. Train, by testing the sensitivity of Dr. Train's model to minor alternative assumptions, or by applying fundamental

econometric methods, such as Ordinary Least Squares or First Differences to the data on which Dr. Train relies. PX 356.

248. Professor Ashenfelter concluded that Dr. Train's elasticity estimates are unreliable. 9/11 tr. 57:5-7 (Ashenfelter); 9/11 tr. 87:25-88:3 (Ashenfelter) ("I don't think to this point that we have reliable estimates of the elasticity of demand for this product."). Further, Professor Ashenfelter concluded that Dr. Train's econometric analyses provide no scientific basis for Dr. Train's conclusion that the elasticity of demand for loose leaf tobacco is at least 1.75 or even greater than 1.00. PX 290 ¶ 4 (Ashenfelter Dec.). Accordingly, Professor Ashenfelter concludes that he does not consider Dr. Train's results to be "helpful in telling us what the elasticity of demand for this product is." 9/11 tr. 92:9-10 (Ashenfelter).

249. In relying on Dr. Train's best estimate of the elasticity of demand for loose leaf, Dr. Wu believed that Dr. Train's calculation of the probability that the elasticity of demand is above 1.50 was accurate. 9/7 p.m. tr. 65:8-67:9, 69:14-70:7 (Wu). Dr. Wu believed that "Dr. Train would be able to do a calculation as to what . . . the appropriate confidence interval . . . would be." and that Dr. Train "actually did the calculation to tell me that I can be 85 percent confident . . . that the true elasticity is likely to be greater than 1.5." 9/8 a.m. tr. 13:15-22 (Wu).

250. Standard errors calculated on the basis of Dr. Train's conditional elasticity estimates overstate the precision of Dr. Train's estimates. At his deposition Dr. Train acknowledged that the standard errors calculated by his computer program and reported in his statistical back-up materials fail to account for errors introduced into the estimation by his "first

stage regression" and that, if he were to take this factor into account, the estimated standard error would be even larger. PX 271 at 189:22-190:12 (Train); PX 290 ¶ 29 (Ashenfelter Dec.).

251. At the hearing, Dr. Train revealed that the standard errors shown in Table 1 to his September 6 report, which he relied on to calculate his 85% probability claim, are not the standard errors for the unconditional elasticity estimates, 9/8 p.m. tr. 138:11-139:17 (Train), although that is how he presented them in the report. DX 1005 at 3. Instead, they are only the standard errors for the conditional elasticity coefficients generated in his second stage regression. 9/8 p.m. tr. 140:11-141:11 (Train). Dr. Train testified that the standard errors for the elasticity estimates he presented at trial are "indeterminate," *i.e.*, unknown. 9/8 p.m. tr. 139:1-17 (Train).

252. Dr. Train has admitted that the standard errors he presented in his reports and to which he testified are not correct. 9/8 p.m. tr. 141:22-142:12 (Train); 9/11 tr. 61:15-16 (Ashenfelter). Incorporating the errors associated with the first stage regression would result in larger estimated standard errors. 9/8 p.m. tr. 139:18-24 (Train).

253. Consequently, the confidence intervals, which have been calculated from the reported standard errors, are too small. 9/11 tr. 61:17-19 (Ashenfelter). Professor Ashenfelter concluded that Dr. Train's analysis is unreliable. 9/11 tr. 89:25-90:3 (Ashenfelter).

254. Likewise, the P values stated in Dr. Train's third report, and cited by Dr. Wu and Dr. Train in their direct testimony, are not accurate; in fact the P values are indeterminate. 9/8 p.m. tr. 140:2-25 (Train). When asked to explain how he calculated his P values if the correct standard error is indeterminate, Dr. Train responded: "standard errors are extremely hard to calculate. . . . to get a better one, I don't know actually how to do it this time." 9/8 p.m. tr.

140:4-10 (Train). Dr. Train explained further why he had claimed to know the P values when, in fact, they could be anywhere:

> every layer of uncertainty has another layer of uncertainty under it; a range, in a sense. We got a range of estimates. Each one has a probability associated with it, and then we got the standard errors, and each of those has a range. And then if you were to calculate the uncertainty in the standard error, you would have another estimate, and it just keeps layering.

9/8 p.m. tr. 142:4-12 (Train).

f. Defendants' Critical Elasticity Estimates Are Unreliable

255.

. DX at 22 n.35; DX 800 at 5 n.5; 9/8 a.m. tr. 33:23-36:14 (Wu). Defendants' experts have never calculated a confidence interval around the critical elasticity. PX 271 at 135-37 (Train); PX 270 at 173-74 (Wu).

256. The authority relied on by defendants for their critical elasticity estimate observes that measurement of marginal cost is difficult. DX 804 at 394 (Werden, G., *Demand Elasticities in Antitrust Analysis*, 66 Antitrust Law Journal 363, 394 (1998). Dr. Werden explains further:

> Marginal cost normally cannot be measured at all, but rather only proxied for by average variable cost. This typically is a legitimate practice if marginal cost is roughly constant, which commonly is the case. Nevertheless, a measure of actual production costs, even the incremental cost of producing the last unit, may not be a valid indication of economic marginal cost. . . .
>
> When average variable cost is a valid proxy for marginal cost, there can be significant difficulties in determining average variable cost, stemming from

> ambiguities about which costs should be treated as fixed and which should be treated as variable.

DX 804 at 394 (*id*.)

(1) Midway through the Hearing, Defendants Inappropriately Moved the Benchmark for Critical Elasticity so as to Recast their Elasticity Estimates in a Light More Favorable to Their Case

257. Defendants maintained, through the second day of the hearing in this matter, that the estimated "critical elasticity" – the benchmark the true elasticity must exceed to draw Dr. Train's conclusion – is 1.75. *See* DX 800 at 5 (Train Rep.), cited in Defendants' Joint Memorandum in Opposition to Plaintiff's Motion for Preliminary Injunction, August 23, 2000, at 23-24; DX 801 at 1 (Train Supp. Rep.); *see* 6/8 a.m. tr. 16:13-16 (Wu) ("critical elasticity is the benchmark for determining whether loose leaf was a product market or not"). Dr. Wu and Dr. Train described 1.75 as a conservative estimate. 9/8 a.m. tr. 10:15-11:1 (Wu); 9/8 p.m. tr. 113:17-25 (Train); DX 800 at 4 (Train Rep.).

258. For the first time, on the night before Dr. Wu testified regarding Dr. Train's conclusions, defendants disclosed that Dr. Wu and Dr. Train had decided to shift the goal post, resetting the critical elasticity at 1.50. DX 1005 at 2 (2nd Train Supplementary Report); 9/8 a.m. tr. 16:4-7 (Wu) ("the critical elasticity is no longer the 1.75 that Dr. Train had been using in July and August; isn't that correct? A. That is correct."). Defendants' estimated critical elasticity of 1.75 is based on National Tobacco's gross margin of 55%. DX 800 at 4. The revised estimated critical elasticity of 1.50 is based on Swedish Match's gross margin of approximately 65%, the highest margins in the industry. 9/7 p.m. tr. 64 (Wu). Defendants' experts claimed they decided to move the benchmark long before they disclosed that "opinion" on September 6. 9/8 a.m. tr.

15:2-21 (Wu). National Tobacco is the only loose leaf manufacturer that does not also make moist snuff. 9/8 a.m. tr. 33:11-13 (Wu). Therefore, National Tobacco's margins are most likely to reflect the margins of loose leaf production and are least likely to be distorted by other production and sales activities. 9/8 a.m. tr. 33:14-22 (Wu).

259. Defendants' calculations of critical elasticity based on marginal cost involve an application of the Lerner Index, which posits that a hypothetical monopolist will set its price at a level above its marginal cost (gross margin) to maximize profit based on the elasticity of demand it faces. DX 804 (Werden, G., *Demand Elasticities in Antitrust Analysis*, 66 Antitrust Law Journal 363 (1998) ("Economic theory teaches that the profit-maximizing price for a hypothetical monopolist is determined by the elasticity of demand it faces."), 373 ("The measure of monopoly power is also the Lerner Index, but with long-run marginal cost used in place of short-run marginal cost."), 392 ("the degree of market power is related to the reciprocal of the demand elasticity"), cited in DX 800 at 4 n.3, 5 n.5 (Train Rep.).

260. The authority cited by Dr. Train for his critical elasticity calculation is Dr. Werden's derivation of the critical elasticity from the hypothetical monopolist's marginal cost through use of the Lerner Index. DX 804 at 410 (("Setting $p^m = p^1$, $\theta(p^m) = p^m/(p^m - c) = p^1/(p^1 - c) = [p^1/p^0]/[(p^1 - c)/p^0] = (1 + t)/(m + t)$"); *see* DX 800 at 5 n.5.

261. By adopting Swedish Match's gross margin rather than that of National Tobacco, for purposes of their critical elasticity estimation, defendants posit that, following the acquisition, National Tobacco's margins will increase to the level of Swedish Match, *i.e.*, the difference between Swedish Match's variable cost for loose leaf and the price Swedish Match realizes for its

loose leaf brands. Shifting production of the National Tobacco brands to Swedish Match's plant addresses only cost, not price, and thus generates only part of this result. 9/8 a..m. tr. 11:15-21 (Wu) ("that tells you what the true cost this [sic] hypothetical monopolist is."). In order to realize a 65% gross margin on the National Tobacco brands, Swedish Match must also raise the price of the National Tobacco brands to the level of the corresponding Swedish Match brands.

262. In each category of loose leaf tobacco identified by Dr. Wu, Swedish Match's brands are priced substantially above National Tobacco's brands. PX 333; DX

( ).

PX 106:17-107:2 ( ). Among the premium brands of loose leaf, the average price per pound of Red Man is 10.95% higher than Beech Nut ($11.29 / $10.18). PX 333,

DX ( ).

Id.

PX 107:6-11 ( ). The average price per pound of Red Man Golden Blend is 61.35% higher than Trophy ($10.53 / $6.52). PX 333, DX Exh. 10A ( ). Among the price value brands of loose leaf, the average price per pound of Swedish Match's Southern Pride is 4.79% higher than National Tobacco's Durango ($6.81 / $6.49). *Id*.

263. By imputing Swedish Match's gross margins to a hypothetical monopolist, and thereby to the National Tobacco brands following the acquisition, defendants' economic experts have, therefore, assumed a substantial price increase for the National Tobacco brands, amounting to over ten percent for Beech Nut, as much as 61 percent for Trophy, and over four percent for Durango, before they begin their analysis of whether further price increases would be profitable.

g. Even If Dr. Train's Retail Elasticity Estimate Were Reliable It Cannot Meaningfully Be Compared to Dr. Wu's Manufacturing Critical Elasticity Estimates

264. Dr. Wu and Dr. Train estimated critical elasticities of 1.75 and 1.50 representing the maximum percent reduction in volume of sales a hypothetical monopolist in the manufacture of loose leaf chewing tobacco could lose if it raised its price one percent before that price increase would be unprofitable. DX 800 at 4-5. The critical elasticity is the elasticity faced by the manufacturer. 9/8 a.m. tr. 37:11-22 (Wu).

265. DX at 126:6-7 ( ). He purported to estimate the change in retail sales resulting from a change in the retail price of loose leaf tobacco. DX 800 at 6 (Train Rep.) Even if Dr. Train could correctly and reliably estimate

the retail elasticity of demand for loose leaf tobacco, his estimate cannot be compared to his critical elasticity estimates without first taking into account how a price increase at the manufacturing level might affect retail prices. Simple algebra shows that if a given percentage change in wholesale prices translates into a smaller *percentage* increase in retail prices, then the elasticity facing manufacturers will be smaller than the retail-level elasticity.

266. Dr. Train and Dr. Wu have assumed this issue away, for purposes of their analysis, by assuming that the retail elasticity is the same as the elasticity at the manufacturing level. 9/8 p.m. tr. 101:6-10 (Train) ("I'm taking as given that the elasticity at the retail level is the same as the elasticity at the manufacturer level."); 9/8 a.m. tr. 37:17-22 (Wu). This assumption follows from their further assumption that there is a constant geometric relationship between the price realized by loose leaf manufacturers and the price paid by consumers. Tr 9/8 p.m. 101:11-19 (Train) ("An equivalent way of saying that assumption is that a percent change at the manufacturer level translates into a percent change at the retail level.") If the markups are not a constant percentage, the retail and wholesale elasticities must differ. 9/8 a.m. tr. 38:3-7 (Wu).

267. Dr. Train relies on Dr. Wu for the assumption that manufacturing and retail elasticity are identical. 9/8 p.m. tr. 101:15 (Train). Dr. Wu bases this assumption on his general sense of retailing, not on any specific knowledge of this industry. PX 270 at 165 (Wu dep.)

268. Dr. Simpson explained that a 5-percent price increase at the manufacturing level would not necessarily translate into a five-percent price increase at the retail level. 9/6 p.m. tr. 22:9-24 (Simpson). Factors that could influence the pass-through of a five-percent price increase by loose leaf manufacturers to the retail level include the shape of the demand curve, the level of

competition in the retail sector, and the application of taxes and similar charges. *Id*. These factors are cumulative and could work together so that there would not be a direct one-to-one percentage relationship between changes in manufacturers' prices and changes in price at the retail level. *Id*.

(1) Competition at the Retail Level Can Dampen the Effect on Retail Prices of an Increase in Price by Loose Leaf Manufacturers

269. Competition at the retail level may prevent retailers from passing through a price increase. PX 266 at 86:18-87:1 (Cross) ("we do deviate from [our standard margin or markup] and sell it for less in competitive situations").

270.

PX at 1502

( ).

(2) Excise Taxes Can Cause the Elasticity of Demand Faced by Loose Leaf Manufacturers to Be Less than the Retail Elasticity of Demand

271. Federal and state excise taxes provide a buffer between price changes at the manufacturing level and price changes at the retail level.

272. Federal excise taxes and some state excise taxes on loose leaf are based on weight. 9/8 p.m. tr. 108:12-14 (Train). The federal tax on loose leaf is 17 cents per pound and will increase to 19.5 cents per pound after December 31, 2000. PX 241 at 0001. (For convenience of reference the relevant data in PX 241 is summarized in demonstrative exhibit PX 334). The excise tax in Alabama is 3/4 cents per ounce or fraction thereof. PX 241 at 0003; PX 334.[22] Various cities and counties in Alabama charge additional taxes specified as a certain number of cents per package. PX 241 at 0003-4. The excise tax in Arizona is 6.5 cents per ounce. PX 241 at 0009; PX 334. These taxes would remain unchanged if loose leaf manufacturers increase the price of loose leaf. The effect of these taxes is to reduce the percent increase in the retail price resulting from a given percent increase in price by loose leaf manufacturers, 9/8 p.m. tr. 108:18-109:4 (Train), so that the elasticity of demand faced by manufacturers is lower than the retail elasticity of demand.

273. In many states the excise tax is a percent of the manufacturer's price before discounts. The tax rate in each of these states is as follows: California 66.5% (PX 241 at 0014; PX 334); Colorado 20% (PX 241 at 0016; PX 334); Delaware 15% (PX 241 at 0022; PX 334); Florida 25% (PX 241 at 0026; PX 334); Idaho 40% (PX 241 at 0034; PX 334); Indiana 15% (PX 241 at 0039; PX 334); Iowa 22% (PX 241 at 0041; PX 334); Maine 62% (PX 241 at 0052; PX 334); Mississippi 15% (PX 241 at 0066; PX 334); Montana 12.5% (PX 241 at 0070; PX 334); Nevada 30% (PX 241 at 0074; PX 334); New York 20% (PX 241 at 0084; PX 334); North

[22] During the hearing counsel for Swedish Match erroneously represented that there is no evidence in the record as to the level of taxation in the states. 9/8 p.m. tr. 110:17-19 (Williamson). PX 241 is a National Tobacco compilation of federal and state laws pertaining to smokeless tobacco, including excise taxes on loose leaf and moist snuff.

Carolina 2% (PX 241 at 0086; PX 334); North Dakota 28% (PX 241 at 0088; PX 334); Oklahoma 30% (PX 241 at 0093; PX 334); South Dakota 10% (PX 241 at 0105; PX 334); Tennessee 6% (PX 241 at 0108; PX 334); Washington 74.9% (PX 241 at 0123; PX 334); Wisconsin 20% (PX 241 at 0127; PX 334); Wyoming 20% (PX 241 at 0129; PX 334). The tax rate in Texas is 35.213% of the factory list price; the statute does not define "factory list price." (PX 241 at 0111; PX 334). Taxes that are computed on the manufacturer's price before discounts would reduce the percent increase in the retail price resulting from a given percent increase in price by loose leaf manufacturers if the manufacturers implemented the price increase by reducing discounts. 9/8 p.m. tr. 109:19-110:6 (Train). Consequently, the elasticity of demand faced by loose leaf manufacturers, with respect to sales in these states, would be lower than the retail elasticity. For example, in Florida, the 25% excise tax reduces the elasticity faced by manufacturers to 76.2 percent of the retail demand elasticity. PX 335 ¶ D.

274. The effect of excise taxes on reducing the percent increase in retail price associated with a given percent increase in the manufacturer's price is magnified to the extent distributors and retailers include the tax in their cost for purposes of calculating their markups. PX at 71:6-10 ( ) (

).

(3) If Loose Leaf Manufacturers Increase Price by Reducing Discounts and Promotions, the Elasticity of Demand Faced by Loose Leaf Manufacturers Would Be Less than the Retail Elasticity of Demand

275. Defendants argue that discount promotions, such as cents-off promotions and various forms of coupons, represent the majority of loose leaf sales. DX 901; DX 903; 9/8 p.m. tr. 31:13-36:6 (Ray); 9/8 p.m. tr. 100:13-16 (Train).

276. Coupons, including Catalina coupons, which are generated at the point of sale, direct mail coupons, and coupons distributed through print media, instruct the retailer to reimburse to the bearer, or reduce from the bearer's total bill, the face amount of the coupon, provided that the specified product is purchased. See 9/8 p.m. tr. 37:13-18 (Ray); 9/8 a.m. tr. 90:10-22 (Wu). The manufacturer or its agent agrees to reimburse the retailer for the face amount of the coupon plus, in most cases, a small handling fee. Coupons do not alter the price paid by the distributor to the manufacturer, the price paid by the retailer to the distributor, or the nominal retail price for the item. Consequently, distributor and retailer markups on the item, in cents per unit, are unaffected by use of coupons.

277. A 50¢ coupon, on a pouch of loose leaf, saves the consumer 50 cents and reduces the net price realized by the manufacturer by 50 cents. In percent terms, the effect of the coupon is greater at the manufacturing level than at the retail level due to taxes and markups between the manufacturer and the retail customer. The price of premium loose leaf sold by manufacturers to distributors is $1.64, without discounts. 9/8 p.m. tr. 20:8-10 (Ray); 9/6 a.m. tr. 13:11-16 (Williams). A 50¢ coupon represents 30.49 percent of the manufacturer's price of $1.64 and 43.86 percent of the net price of $1.14 realized by the manufacturer after the coupon ($1.64 - $0.50). The retail price of premium loose leaf varies between approximately $2.09 to $2.49 per pouch, depending on competition at the retail and distribution levels of the industry. 9/6 a.m. tr.

17:23-18:5 (Williams). The same 50¢ coupon represents 23.92 percent of a retail price of $2.09 and 20.08 percent of a retail price of $2.49. Computed on the basis of the net cost to the consumer, including the coupon, the 50¢ coupon represents 31.45 percent of a net cost of $1.59 ($2.09 - $0.50) and 25.13 percent of the net cost of $1.99 ($2.49 - $0.50).

278. If loose leaf manufacturers increase price by eliminating the coupon, the net price realized by the manufacturers would increase by 43.86 percent ($0.50 / $1.14). However, the increase in the net cost to the consumer would be only between 25.13 percent ($0.50 / $1.99) and 31.45 percent ($0.50 / $1.59), depending on the actual retail price. In percent terms, the increase in the cost to the consumer would be between 57.29 percent (25.13% / 43.86%) and 71.70 percent (31.45% / 43.86%) of the net price increase realized by the manufacturer. *See* 9/8 p.m. tr. 107:10-23 (Train) for equivalent calculation. This means that the elasticity of demand faced by the manufacturers would likewise be between 57.29 percent and 71.70 percent of the retail elasticity of demand. *See* 9/8 p.m. tr. 107:10-23 (Train) for equivalent calculation.

279.

PX 1504 ( ).

[23]

[23]

PX at 1504.

280. The retailers observed by National Tobacco in 1998 are not alone in their practice of calculating mark-ups on the basis of loose leaf manufacturer's regular list price, and then subtracting any cents-off promotion offered by the manufacturer on the product. Myron Williams is a wholesale distributor predominantly serving convenience stores in North Carolina and Virginia. 9/6 a.m. tr. 3:18-4:6 (Williams). He testified that his cost for a pouch of premium loose leaf tobacco is $1.64 per pouch, without any promotions on the product, 9/6 a.m. tr. 13:11-16 (Williams), that his standard markup on the product is approximately 4.5 percent over the manufacturer's list price, 9/6 a.m. tr. 14:23-15:4 (Williams), and the average retail margin in the convenience store industry is 32 percent return on selling price. 9/6 a.m. tr. 17:23-18:5. (Williams) .

281. Mr. Williams explained that when a loose leaf manufacturer offers a 40¢-off promotion, the manufacturer lowers the price to him by 40¢ per unit, 9/6 a.m. tr. 15:20-24 (Williams); he lowers his price to the retailers he serves by exactly 40¢ per unit, 9/6 a.m. tr. 16:15-19 (Williams); and most retailers lower the price to their retail customers by exactly 40¢

per unit, although some retailers who may face little retail competition may not lower their price, at all, to their retail customers. (9/6 a.m. tr. 17:7-15 (Williams). He explained that in offering a cents-off promotion, the manufacturer does not, and cannot, require the distributor to contribute toward the promotion, 9/6 a.m. tr. 15:25-16:12 (Williams), and that the distributor's cents-per unit profit remains the same irrespective of whether the product is a $1.64 regular list price product or is marked 40¢ off. 9/6 a.m. tr. 16:20-23. Mr. Williams explained further:

> If it is a 40 cents off label and that product is packed 12 to the carton, that means it is $4.80 off the carton price and that is how we sell it to our customer, by the carton. And then that carton will be priced $4.80 below what they normally would pay, so we still have our base margin in that product. The manufacturer doesn't give us any more than $4.80. We don't give our customers any more than $4.80.

9/6 a.m. tr. 16:25-17:6.

282. Defendants argued, on September 11, that notwithstanding Mr. Williams' testimony, it should be conclusively presumed that a constant percent margin is maintained by all distributors and retailers irrespective of whether the product is sold by the manufacturer at the regular price, at a 25¢-off price, or at a 40¢-off price. 9/11 tr. 4:10-9:2 (Kearney); 9/11 tr. 15:12-23:17 (Kearney); 9/11 tr. 23:20-24:18 (Gruenberger); 9/11 tr. 29:21-34:18 (Kearney). Defendant relied on displaying Swedish Match and National Tobacco price schedules showing regularly priced product, 25¢-off promotion product, and 40¢-off promotion product with distinct SKU designations. e.g., 9/11 tr. 15:22-16:23 (Kearney). From this they argued that the term "list price" refers to all of these products irrespective of whether there is a discount promotion offered on the product and that therefore any testimony that distributor or retail markups are calculated based on list price conclusively shows that a constant percent markup is maintained by retailers

and distributors irrespective of cents-off promotions. 9/11 tr. 6:10-21 (Kearney). These assertions are contradicted by defendants' only fact witness, who testified that when National Tobacco increased its list price and other loose leaf manufacturers were slow to follow, National Tobacco "had to increase our promotion effort, our cents off, buy twos, buy ones, in order to give consumer [sic] a competitive price at the retail level." 9/8 p.m. tr. 29:14-30:3 (Ray).

9/8 p.m. tr. 30:1-3 (Ray); *see* PX at 1502.

283. To the extent that distributors and retailers pass-through cents-off promotions at face value, rather than magnifying the promotion by contributing their normal percent markup to the promotion (as argued by defendants), a price increase instituted by loose leaf manufacturers by curtailing cents-off promotions would result, measured in percent terms, in a price increase at the retail level that is substantially lower than the price increase at the manufacturing level. 9/8 p.m. tr. 103:24-105:15 (Train) ("if that were the case, then the percent increase at the retail level would be less than the percent increase at the wholesale level").

284. Consequently, the elasticity of demand faced by the manufacturer would be less than the elasticity of demand faced by the retailer. 9/8 p.m. tr. 105:16-21 (Train). This is illustrated in PX 335, which shows the calculation based on a hypothetical distributor and retail markup of 50 percent, and in PX 355, which uses the figures reported by Myron Williams in his testimony in this proceeding. Dr. Train testified that the computations in PX 355 appear to be correct. 9/8 p.m. tr. 106:10-108:5 (Train).

285. As illustrated in PX 355, if loose leaf manufacturers increase price by 10 cents by reducing the discount on 25¢-off packages to 15¢ off, the increase in the price realized by manufacturers would be 7.2%, while the corresponding increase in price to retail customers would be only 4.4%. PX 355. Thus, the increase in the retail price, in percent terms, would be only 61.2% of the increase in price realized by the manufacturers. PX 355. This means that the elasticity of demand faced by loose leaf manufacturers is only 61.2% of the retail elasticity of demand. PX 355. Applied to Dr. Train's estimate of a retail elasticity of demand of 2.17, the corresponding elasticity of demand faced by loose leaf manufacturers would be 1.329, far below Dr. Train's and Dr. Wu's critical elasticities of 1.50 and 1.75. PX 355.

286. PX 355 also illustrates the effect of a price increase by loose leaf manufacturers with respect to 40¢-off promotional product. If loose leaf manufacturers increase price by 10 cents by reducing the discount on 40¢-off packages to 30¢ off, the increase in the price realized by manufacturers would be 8.1%, 9/8 p.m. tr. 106:21-107:3 (Train), while the corresponding increase in price to retail customers would be only 4.7%. 9/8 p.m. tr. 107:4-9 (Train); PX 355. Thus, the increase in the retail price, in percent terms, would be only 58.5% of the increase in price realized by the manufacturers. PX 355. This means that the elasticity of demand faced by loose leaf manufacturers is only 58.5% of the retail elasticity of demand. PX 355; 9/8 p.m. tr. 107:10-23. Applied to Dr. Train's estimate of a retail elasticity of demand of 2.17, the corresponding elasticity of demand faced by loose leaf manufacturers would be 1.269, 9/8 p.m. tr. 107:24-108:5 (Train), far below Dr. Train's and Dr. Wu's critical elasticities of 1.50 and 1.75. PX 355.

h. The Data Used by Dr. Train Do Not Provide a Reliable Basis for Estimating the Effect of Changes in the Price of Loose Leaf Chewing Tobacco

287. Dr. Wu acknowledges that reliable market data is a prerequisite to using econometric estimation to estimate elasticity. 6/8 a.m. tr. 4:23-25 (Wu) ("*if you have market data that are reliable*, then econometric estimation is one way to get at elasticity," emphasis added). *See* Kennedy, *A Guide to Econometrics*, (4th Edition), The MIT Press, Cambridge 1998, page 140 ("Many economists feel that the greatest drawback to econometrics is the fact that the data with which econometricians must work are so poor.")

288. Professor Ashenfelter observed that persistence in the data used by Dr. Train cast doubt on whether the number of observations covered by the data and the time period covered by the data are adequate to support the kind of analysis Dr. Train has attempted. 9/11 tr. 88:16-89:16 (Ashenfelter) ("the problem here in part is that there's not a long enough time series with data which have such persistence in them to get . . . the effect of real exogenous changes in the prices.")

289. Dr. Train simply worked with the data defendants had earlier used in their presentation to the FTC. PX 271 at 59:14-60:1 (Train dep.) Standard scientific procedure would have required him to determine what data he needs to conduct his analysis, determining what data is available, and obtaining the necessary data. As explained by Professor Ashenfelter,

> when you set up an analysis, the first thing you do is ask questions like how much data would you need to get a reliable estimate of a parameter. . . . I would be surprised if this set of data would be what I would think would be enough to actually precisely estimate the demand elasticity for this product.

9/11 tr. 89:10-16 (Ashenfelter). Professor Ashenfelter has ascertained from Frank Pietrowski, a Vice President of AC Nielsen, that AC Nielsen sells data that is more complete with respect to loose leaf prices than the data Dr. Train used for his analysis. 9/11 tr. 120:25-121:8 (Ashenfelter); PX 279 at 3-4.

290. Dr. Train represented in his Expert Report:

> I used data on the quantity of loose leaf tobacco and moist snuff that was purchased by consumers from October 1997 to June 2000 *as well as the prices at which these quantities were sold. These data represent the actual purchases of consumers in the marketplace.*

DX 800 at 2 (emphasis added). This statement is incorrect. 9/11 tr. 91:21-22 (Ashenfelter) ("He did not compare actual prices."). Elsewhere in his report Dr. Train reveals that he did not use price data at all. Instead, Dr. Train used aggregate data reporting, for each state or other area, for the retail outlets sampled by Nielsen, the total quantity of loose leaf and of moist snuff, in pounds, sold during four-week intervals and the gross revenue generated by sales of loose leaf and of moist snuff during the four-week intervals. DX 800 at 5.

291. Defendants' sole fact witness testified that the Nielsen data is incomplete and may undervalue sales by some producers. 6/7 p.m. tr. 15 (Ray). He also explained that data based on pounds is not an accurate indicator of actual consumer behavior:

> the consumer doesn't buy pounds. The consumer buys units. And when a consumer goes into a retail store, he will buy four cans of snuff and two pouches of loose-leaf chewing tobacco.
>
> Q: He doesn't ask for pounds?
>
> A: He does not ask for pounds.
>
> Q: He doesn't carry out pounds?

A: No, he does not.

6/7 p.m. tr. 27:8-15 (Ray).

292. The data used by Dr. Train combines together sales of regularly priced product, 25-cents-off promotions, 40-cents-off promotions, buy-one-get-one-free promotions, and buy-two-get-one-free promotions, although cents-off data is available from Nielsen. 6/7 p.m. tr. 34:13-18 (Ray). The effectiveness of such promotions, either in loose leaf or in moist snuff, in influencing the level of consumption of loose leaf or moist snuff is not revealed in the data used by Dr. Train for his analyses.

293. The Nielsen data used by defendants is reported separately for each brand. In fact,

However, Dr. Train elected not to examine elasticities by brand. PX 271 at 50:11-20 (Train). Instead, he aggregated for all loose leaf brands and for all moist snuff brands the brand-specific quantity and revenue data that he obtained from Nielsen. DX 800 at 5-6. In doing so he masked the effects of changes in the price of one brand of loose leaf on the quantity of sales of that brand of loose leaf, on the quantity of sales of each other brand of loose leaf, and on the quantity of sales of each brand of each other product, e.g., moist snuff and cigarettes.

294. In particular, by aggregating the data for all brands, Dr. Train avoided generating any results that might shed light on the cross-elasticity of demand between Swedish Match's loose leaf brands and National Tobacco's brands, i.e., the extent to which the two firms are a significant constraint on one another's loose leaf prices. PX 271 at 46:12-25, 50:8-20 (Train) (“I could have, there are data to do analysis at the individual firms’ branded product level, but I did

not do that."); PX 271 at 219:15-17 (Train) ("I did not do analysis on products or product groups within the loose leaf category.") Although he had conducted such analyses in his work for the Antitrust Division in its *Earthgrains* investigation, Dr. Train concluded that such an analysis was beyond the scope of the assignment he had been given by defendants. PX 271 at 39-41, 45-46, 50:1-20, 219 (Train)

295. Dr. Train estimated the average price of loose leaf and the average price of moist snuff by dividing the dollar sales of loose leaf by the quantity of loose leaf sold and dividing the dollar sales of moist snuff by the quantity of moist snuff sold. DX 800 at 5-6; 9/11 tr. 91:16-20 (Ashenfelter). Defendants' fact witness doubts whether such average price information is meaningful. Mr. Ray explained:

> The consumer looks at the market as a range of prices, and I think we should look at this as a price range that is offered to the consumer.
>
> Q: If a consumer went into a retail store and asked for an average price of loose leaf, what would the clerk give him?
>
> A: The clerk wouldn't know what to give him except a strange look.
>
> Q: Why?
>
> A: There is no such thing as average.
>
> Q: And if that consumer went into a retail store and asked for an average tin of moist snuff, what would the clerk give him?
>
> A: The same thing. You just can't look at averages.

6/7 p.m. tr. 22:11-24 (Ray).

296. Because Dr. Train estimated the prices that he used in his analyses by dividing revenue data by quantity data, any variation or discrepancies in the reporting or collection of quantity data over the periods for which the data was collected would be translated by Dr. Train

into a change in price, even if actual prices remained unchanged. This effect is recognized in the field of econometrics as "division bias." Professor Ashenfelter explained that because of the risk of division bias, econometric estimation of the relationship between price and quantity should use actual prices, not prices that are themselves calculated from the quantity data:

> Well, what hasn't been pointed out here I don't think is that what's been measured here is the total amount of the product and then the amount spent on the product, and the prices are computed by taking the ratio of those two, expenditure to quantities. This could potentially lead to division [bias] I call it and in effect an artificial negative correlation between the calculated price and the quantity. Ideally, you would get data on real prices. That's not what's been used here. You get actual prices, and then this criticism of division bias would not be feasible for this particular problem.

6/11 tr. 90:23-91:8 (Ashenfelter).

i. Dr. Train's Results Are Inconsistent with Economic Theory and Are Contradicted by the Evidence

297. Defendants argue that price promotions by U.S. Tobacco on its moist snuff products have had a negative effect on loose leaf sales. 9/8 p.m. tr. 36:13-37:18 (Ray). This proposition is contradicted by defendants' econometric expert, who concluded that the cross elasticity of demand for loose leaf with respect to changes in the price of moist snuff is negative, indicating that the demand for loose leaf increases when the price of moist snuff falls and that the demand for loose leaf falls when the price of moist snuff rises. PX 271 at 160:2-162:8 (Train dep.) At his deposition Dr. Train explained:

> Q: Could you explain for the record when you say that the cross elasticity of demand for loose leaf with respect to moist snuff has a negative sign, what does that mean in terms of how customers are reacting to a price increase?
>
> A: What this is saying is that as the price of moist snuff rises there is less consumption of loose leaf. That's what the negative sign means.

PX 271 at 162:9-13, 163:11-16 (Train dep.)

298. The negative cross elasticity indicates that loose leaf and moist snuff are not competing products. Mansfield, *Microeconomics* (Fourth Edition), W.W. Norton and Company, New York (1982) page 121 ("Whether goods *X* and *Y* are classified as substitutes or complements depends on whether the cross elasticity of demand is positive or negative.") According to Dr. Train, "What this is saying is that as the price of moist snuff rises there is less consumption of loose leaf. That's what the negative sign means." PX 271 at 163:11-14 (Train dep.)

299. Because Dr. Train claims that increases in the price for loose leaf result in a loss of loose leaf sales to moist snuff, Dr. Train concluded that an identical percent change in the price of both loose leaf and moist snuff leads to substitution by consumers of moist snuff for loose leaf:

> Q: All right , but you think if the price of both loose leaf chewing tobacco and moist snuff were to increase by identical percentage, that would cause some shift in demand between the two products?
>
> A: It would produce some shift between the products.

PX 271 at 165:11-19 (Train dep.); accord PX 271 at 166:14-24 (Train dep.) This means that, according to the estimates generated by Dr. Train's models, general economic inflation causes a shift in demand from loose leaf to moist snuff. However, Dr. Train could think of no authority in the economic literature for the proposition that general economic inflation, reflecting an increase in prices and wages, will result in a shifting of demand between one product and another. PX 271 at 166:8-13 (Train dep.)

300. Dr. Train testified further that if loose leaf producers and moist snuff producers reduce price by an identical percent amount demand would shift back from moist snuff to loose leaf. PX 271 at 167:7-14 (Train dep.) If Dr. Train is correct, loose leaf producers could reduce their price to reverse the decline in the quantity of loose leaf demanded. Defendants contend, however, that they cannot affect demand for loose leaf by lowering price.

301. Dr. Train confirmed in his deposition that his elasticity estimates apply to both increases and decreases in the price of loose leaf.

> The own price elasticity you estimated with respect to loose leaf chewing tobacco, does that own price elasticity work both up and down, the price goes up, the price goes down, the elasticity should hold?
>
> A: That's correct.

PX 271 at 163:19-25 (Train dep.)

302. Dr. Train's elasticity estimate of 2.17 for loose leaf means that if loose leaf producers lower price by one percent they would increase their volume of sales by 2.17 percent and if they lower price by 10 percent they would increase their volume of sales by approximately 22 percent. 9/8 a.m. tr. 26:18-27:2 (Wu). Defendants maintain that loose leaf producers have high margins and excess capacity. Consequently, if Dr. Train were correct in his elasticity estimate, loose leaf producers could profitably increase their sales, their capacity utilization, and their profits simply by lowering their price. 9/8 a.m. tr. 27:3-14.

303. If loose leaf manufacturers are maintaining margins of 55% to 65%, notwithstanding Dr. Train's elasticity estimate, which indicates that loose leaf producers could

increase their profits significantly simply by reducing their price, this is a strong indication that loose leaf manufacturers do not share Dr. Train's assessment of the market elasticity of demand.

304. Moreover, Dr. Train's elasticity estimate indicates that a hypothetical monopolist in loose leaf tobacco could significantly improve its profits by reducing its price from the current level. In his deposition, Dr. Train used the Lerner Index calculation to compute the elasticity of demand faced by a profit-maximizing hypothetical monopolist if it has a margin of .55 (1 / .55 = 1.81). PX 271 at 170:19-171:1 (Train dep.) ("going through the calculations here I think that if you use a margin of .55 . . . the elasticity a hypothetical monopolist at its profit maximizing level would have is about 1.81."). Applying the same calculation used by Dr. Train and using Dr. Train's elasticity estimate of 2.17, a hypothetical monopolist would maximize its profits by setting its price at a level that would yield a margin of 46 percent (1 / 2.17 = 0.46). Dr. Train endorsed this computation at the hearing. 9/8 p.m. tr. 143:4-17 (Train). As Dr. Train acknowledged at the hearing, this means that the current loose leaf margin is 41 percent (.65 / .46) above the profit maximizing margin for a loose leaf monopolist. 9/8 p.m. tr. 143:18-24 (Train). But Dr. Wu testified that he does not think that it would be a profit maximizing strategy for loose leaf manufacturers to price above the monopoly level, i.e., the profit maximizing price of a hypothetical monopolist. 9/8 a.m. tr. 27:8-14 (Wu).

305. Dr. Wu confirmed that Dr. Train's elasticity estimate of 2.17 means that a hypothetical monopolist in loose leaf would increase its sales volume by 22 percent if it reduces price by 10 percent from the current level. 9/8 a.m. tr. 28:2-8 (Wu). Dr. Wu further confirmed that, with excess capacity, it would be profitable for a hypothetical monopolist to reduce price

from the current level if the market elasticity of demand is 2.17. 9/8 a.m. tr. 29:3-5 (Wu). Dr. Wu was unable to explain how Dr. Train's estimate could be correct in light of its implication that loose leaf producers are currently pricing above the monopoly level. 9/8 a.m. tr. 28:19-30:5.

306. The evidence shows, and defendants argue, that competition among loose leaf sellers is holding prices down, not up. It is possible, notwithstanding the evidence of head-to-head price competition between Swedish Match and National Tobacco, and other producers of loose leaf, that loose leaf producers have actually maintained the price of loose leaf above the monopoly level. *See* 9/8 a.m. tr. 29:13-15 (Wu). Dr. Wu testified that this would not be profit maximizing behavior. 9/8 a.m. tr. 27:8-14 (Wu). If loose leaf producers were already colluding, either tacitly or overtly, to keep the price above the monopoly level, this would certainly not be a defense to a merger. A far more likely explanation is that Dr. Train's elasticity estimate is simply wrong. Even Dr. Wu acknowledges, in light of these anomalous implications of Dr. Train's estimates, that Dr. Train's estimate may be wrong. 9/8 a.m. tr. 29:21-30:5 (Wu).

III. THE MERGER WOULD SUBSTANTIALLY LESSEN COMPETITION

A. The Relevant Geographic Market Is the United States

307. The FTC, Swedish Match and National have stipulated that the United States is the relevant geographic market for analysis of the Acquisition. Stipulations ¶ 4.

B. The Merger Will Substantially Increase Concentration in the Loose Leaf Market

308. Market concentration is a useful indicator of the likely potential competitive effect of a merger. *Merger Guidelines* § 1.51. A merger that leads to a large increase in concentration in an already concentrated market will likely lead to higher prices for consumers. 9/7 a.m. tr. 17:7-9 (Simpson).

309. Market concentration is a function of the number of firms that are in the relevant market and their respective market shares. *Merger Guidelines* at § 1.5. In a differentiated product market, market concentration is properly measured by shares of dollar sales, rather than unit sales or another measure. 9/8 a.m. tr. 57:11-15 (Wu); 9/7 a.m. tr. 77:25-78:7 (Simpson); *Merger Guidelines* § 1.41. Measurement by dollar sales, rather than pounds or units, takes account of product differentiation. 9/8 a.m. tr. 57:16-20 (Wu).

310. Based on defendants' data of loose leaf dollar sales in 1999, Swedish Match has a 42% market share; Conwood has a 33% market share; National has a 18% market share; Swisher has a 6% market share; and Fred Stoker has a 1% market share. PX 305.

311. Post-Acquisition, Swedish Match will have about 60% of the highly concentrated loose leaf market. PX 314. Swedish Match’s market share will be nearly double its closest competitor, Conwood, and between the two, they will control over 90% of the loose leaf market. PX 314.

312. The Herfindahl-Hirschman Index ("HHI") is used in the *Merger Guidelines* to measure market concentration.[24] Based on defendants' HHI calculations, the Acquisition will increase concentration in the loose leaf market by 1,514 points, to 4,733 points. PX 305.

313. The U.S. loose leaf market will be highly concentrated as a result of the Acquisition, and concentration would increase by significantly more than 100 HHI points.[25] *See* PCL 51.

C. The Merger Likely Will Have Anticompetitive Price Effects

1. The Characteristics of the Loose Leaf Market

314. The U.S. loose leaf market displays characteristics conducive to an anticompetitive unilateral price increase by Swedish Match after the Acquisition and/or coordinated pricing by Swedish Match and the remaining loose leaf firms.

315. Loose leaf consumption has declined over the years. 9/7 a.m. tr. 42:19-23 (Simpson). In the early 1990s, consumption declined by 2-3% annually (based on pounds sold). PX 49 at 13. In the later 1990s, decline has been 4-5% annually. PX 49 at 13. In 1999, however, the decline slowed to 3.3%. 9/8 p.m. tr. 57:1-17 (Ray). Defendants' expert would have expected falling demand to put downward pressure on loose leaf prices. 9/8 a.m. tr. 104:10-16

[24]The HHI is calculated by squaring the individual market shares of all firms in the market and adding up the squares. *Merger Guidelines* § 1.5.

[25]Even when calculated on the basis of pounds sold, the Acquisition will increase concentration in the loose leaf market by 1,244 points, to 4,116 points. PX 278 at Exh. 5 (Simpson Report).

(Wu). However, prices have risen (and inflation-adjusted prices have remained constant) during this period. PX 307; PX 308; 9/8 a.m. tr. 102:23-103:18 (Wu).

316.

PX at 4326; PX at 0693; PX at 141, 150 ( ). Swedish Match recently instituted a policy of aggressively promoting Red Man and other brands with cents-off coupons. PX at 4326; PX 12 at 0341.03; PX 55 at 3668.

317. Increased promotional activity in the loose leaf market has not resulted in the consumer paying a lower price. *See* PX 307; PX 308. Loose leaf manufacturers began to use price promotions in 1985 as a result of legislation that prohibited firms from advertising loose leaf products on television and radio. 9/5 p.m. tr. 64:3-15 (Ryan). Today, manufacturers prominently display their promotions on the front of every loose leaf pouch as a form of advertisement. *See*, *e.g.*, PX 367. These promotions, however, frequently coincide with and/or are offset by increases in the retail list price, so that the effective price to the consumer is the same as if there had been no promotions in the first place. For example, Swedish Match originally introduced J.D.'s Blend as a value brand. As a way to "reenergize" sales, Swedish Match increased J.D.'s Blend's retail list price but printed a $0.50 discount snipe on the front of each pouch. PX 175 at 61 (Price dep.). In effect, the consumer ended up paying the same price as before the "promotion." PX 175 at 60 (Price dep.). National employs a similar strategy of increasing retail prices while at the same time offering promotions. 9/8 p.m. tr. 29:7-30:3 (Ray).

318.

PX at 10 ( ); PX 168 at 8 (National); DX 138 at 3188 (Swisher); DX 401 at 1173 (Conwood).

319. The decline in loose leaf consumption, the increase in promotional activity, and the excess manufacturing capacity have not caused loose leaf prices to fall. Instead, loose leaf prices have been rising, PX 307, and inflation-adjusted prices have been roughly constant. PX 308; 9/8 a.m. tr. 102:23-104:9 (Wu).

PX .

320.

DX at ¶ 38 ( ); *see also* 9/8 p.m. tr. 66:12-14 (Ray). PX .

321. DX ¶ 38 ( ); PX 49 at 13 (Swedish Match 1998 Annual Report: "The market for chewing tobacco is declining, but profitability remains strong"); PX 50 at 17 (Swedish Match 1999 Annual Report: "Swedish Match's goal is to maintain and strengthen its leading position in the declining but still highly profitable market for chewing tobacco"); PX at 631 ( ); PX 126 at 14 (National 1997 form S-1: "high profit margins, consistent price increases at the wholesale level").

322. There is a standard pricing pattern among the loose leaf firms. Swedish Match usually takes the lead in announcing price increases on loose leaf products. 9/5 p.m. tr. 29:2-6 (Ryan); PX 175 at 71 (Price dep.). The other loose leaf manufacturers wait for and follow Swedish Match's lead. 9/5 p.m. tr. 29:7-10 (Ryan); 9/5 p.m. tr. 112:23-25 (Rosson); 9/7 a.m. tr. 33:6-25 (Simpson); PX 123 at 1916; PX 128 at 2642; PX 140 at 1078; PX 175 at 44-45, 70-71 (Price dep.); PX 264 at 93-96 (Martindale Dep). This lockstep pricing pattern has prevailed since at least 1996. 9/8 p.m. tr. 68:19-71:9 (Ray).

323. Industry members and the parties' experts agree that there is strong brand loyalty in the loose leaf market. 9/7 p.m. tr. 19:10-15 (Simpson); 9/8 a.m. tr. 69:24-70:5 (Wu); 9/8 p.m. tr. 65:24-66:1 (Ray); PX at 47, 65; DX 214 at 878. Simply cutting prices on one brand will not necessarily generate sufficient switching from another brand to make the price decrease profitable. 9/7 a.m. tr. 37:15-20 (Simpson). Swedish Match's marketing chief explained that its loose leaf products are grouped "as much on the brand itself and to a certain extent on its price point . . . but it's more branded based and consumer perception based than it is sheerly on pure pricing tiers." PX 175 at 52 (Price dep.).

324. Market research conducted by Swedish Match, and National documents, demonstrate the importance of brand loyalty among loose leaf consumers. DX 218 at 4320 (85% of loose leaf consumers "buy only my regular brand"); PX at 0631 ( ); PX 24 at 0077 ("There was no evidence to indicate that other elements such as *price*, packaging, promotion, imagery or advertising have any significant influence on brand selection") (emphasis added); PX 220 at 7449 ("The attitude

expressed by most is that they will continue to pay increasing prices for their favorite brand rather than switching to a lower price, lesser known brand or a brand that they have tried and rejected"); PX 286 at 2727 ("Moreover, and also similar to moist snuff findings, price/value is not a primary purchase driver in the loose leaf category. Consistent with findings among dippers, the attributes *shops for a good value* and *cheap* are two of the lowest rated product descriptors in terms of derived importance"); DX 214 at 878 ("brand loyalty is also strong").

325. Loose leaf is a differentiated product market. 9/7 a.m. tr. 17:21-23, 91:6-16 (Simpson); 9/8 a.m. tr. 55:21-57:10 (Wu); PX 270 at 35 (Wu dep.). The various loose leaf brands are differentiated by taste, texture, brand image and price. 9/7 a.m. tr. 17:21-23 (Simpson); 9/8 a.m. tr. 55:21-57:10 (Wu); PX 6 at 0509.

326. In the loose leaf market, certain loose leaf brands compete more closely with one set of brands than with another. For example, Swedish Match's Red Man brand compete most intensively with Conwood's Levi Garrett brand and with National's Beech-Nut brand. 9/7 a.m. tr. 17:15-18:3 (Simpson); *see* PX at 650 (

); PX 23 at 3732.

327. The loose leaf market is not fully competitive today. It is instead characterized by oligopolistic behavior, in which a small number of firms monitor each others' prices, follow Swedish Match's price increases, have high margins and profits. *See* PFF 319-322. These firms have not reduced prices to stem the reduction in output. *Id*. According to defendants' expert, Swedish Match may be refraining from lowering prices in fear of reactions of their rivals. *See* PFF 368. Since the market is not fully competitive today, there is no reason to think that the

loose leaf market will become more competitive with the elimination of National as a competitive threat.

2. A Unilateral Price Increase by Swedish Match Is Likely

328.

PX at 109 ( ).

PX at 106-07 ( ).

329. National is an effective competitor to Swedish Match in the loose leaf market.

PX at 182 ( ); *see also* PX 254 at 131 (McClure dep.).

PX at 178-80 ( ).

330. Swedish Match's Red Man brand is one of the oldest consumer brands in the U.S., dating back to 1887. PX 26 at 1009.

PX at 0638. Red Man is the largest selling loose leaf brand, with a 22% market share, and Beech-Nut is the third largest, with a 13% market share. PX 172; PX 305.[26]

PX at 106 ( ).

[26]Conwood's Levi Garrett is the second highest selling brand, with a 21% market share. PX 305.

331. Swedish Match's internal documents demonstrate that National constrains the prices of Swedish Match's loose leaf brands. One document observes that: "Beech Nut regular is Red Man's prime competitor above the Mason Dixon line and Levi Garrett is the primary competition in the South. Pricing and promotional programs should incorporate this fact." PX 23 at 3732; *see also* PX at 0860-1, 0876-77; PX at 0247 (

); PX at 0709;

PX at 2309 ( ); PX 282 at 72, 76, 88 (emphasizing that the price of J.D.'s Blend should be lowered to compete with National's Trophy and Durango brands).

332. Swedish Match has been disproportionally affected by increasing industry competition. Red Man's share fell from 24.1% in 1994 to 18.7% in 1998. PX 55 at 3664. Swedish Match's 1999 budget review states:

PX at 0693 (emphasis added).

333. National's internal documents show a reciprocal price constraining influence by Swedish Match's loose leaf brands. A 1998 National memo discussing pricing to the military states: "The above price increases should result in military retail prices on Beech-Nut Regular

and Wintergreen that remain under Red Man, and Trophy should remain under [Conwood's] Levi Garrett." PX at 0972; *see also* PX at 0394; PX at 1609 (

); PX at 2 (

); PX 147 at 0027; PX 244 at 1622; PX at 106 ( ) ( ).

334. Many wholesalers and distributors have observed the direct competition between National and Swedish Match on loose leaf prices. PX 208 ¶ 5 (Bryant dec.); PX 209 ¶ 6 (Robinette dec.); PX 202 ¶ 5 (Ray dec.) ("There is significant direct competition between Swedish Match and National Tobacco. Swedish Match's popular "Red Man" brand competes directly with National Tobacco's "Beech- Nut" brand. When one company runs a special on one of these brands, the other company will match that special, or offer another type of discount."); PX 201 ¶ 6 (O'Rourke dec.). These wholesalers view National as a viable competitor that promotes its loose leaf brands as aggressively as does Swedish Match. PX 208 ¶ 7 (Bryant dec.); PX 259 at 35-36, 64-65 (Bryant dep.); PX 266 at 38-39 (Cross dep.); PX 269 at 29 (Pittman dep.).

335. National vigorously competes against Swedish Match and constrains Swedish Match's pricing power in the loose leaf market. PFF 328-334.

336. Because of this direct price competition between Swedish Match and National, combined with the market dynamics noted above, particularly strong brand loyalty, PFF 314-327. Swedish Match cannot unilaterally increase its Red Man prices without the Acquisition. If Swedish Match unilaterally raised prices on Red Man, a sufficient number of Red Man customers would switch to National's Beech-Nut and other brands so that the price increase would not be profitable. 9/7 a.m. tr. 18:4-10, 23:20-24:20 (Simpson); PX 26 at 0999-1000; PX at 693; PX 278 ¶ 43 (Simpson Report); PX 341.

337. Post-acquisition, the scenario changes because an aggressive competitor (National) in a highly concentrated market, *see* PFF 308-313, will have been eliminated, which increases the risk that prices will rise after the merger.

338. A unilateral price increase is particularly plausible in this market, where brand loyalties are strong, PX 25 at 9474, PX at 1764, and the merged firm's brands would have a 60% market share, PX 160.

339. Swedish Match would find it profitable to exercise a unilateral price increase for Red Man after the Acquisition if the profits from the higher-priced Red Man *plus* the profits from new sales on Beech-Nut (attributable to Red Man users switching) outweigh the profits lost as some users switch to non-Swedish Match/National brands. 9/7 a.m. tr. 25:18-26:2 (Simpson); PX 342; *see* PCL 68.

340. The size of the Red Man price increase depends on two factors: National's margin and the diversion ratio reflecting the sales that would leave Red Man for Beech-Nut. 9/7 a.m. tr. 26:4-16 (Simpson); PX 343; PX 278 ¶ 45 (Simpson Report). The margin of the merger

partner determines the per unit profit that is recovered on each unit that shifts to the merger partner. PX 278 ¶ 45 (Simpson Report). The diversion ratio, which is the percentage of lost sales that go to the merger partner, determines the total units that shift to the merger partner. *Id.* Since the additional profit at the merger partner determines whether a price increase will be profitable, high margins at the merger partner and high diversion ratios would support large price increases. *Id.*; 9/7 a.m. tr. 27:7-17 (Simpson); PX 343.

341. Economists generally support the view that high margins and high diversion ratios lead to large post-merger price increases. PX 278 ¶ 46 (Simpson Report). Defendants' expert, Dr. Wu, used margins to calculate projected unilateral price increases in *FTC v. Tenet Health Care Corp.*, where he testified on behalf of the FTC. PX 270 at 189-91 (Wu dep.); DX Exh. 1.

342. Plaintiff's and defendants' experts conclude that Swedish Match and National have high margins, ranging from 55% to above 65%. 9/7 a.m. tr. 28:11-14 (Simpson); PX ¶ 38 ( ); PX 278 ¶ 18 (Simpson Report).

343. If Swedish Match increased the price of its loose leaf brands, about 25% of the lost sales would be diverted to National's brands. 9/7 a.m. tr. 30:8-11 (Simpson); if National increased the price of its loose leaf brands, about 40% of the lost sales would be diverted to Swedish Match's brands. 9/7 a.m. tr. 30:1-7 (Simpson).

344. These high diversion ratios are supported by the defendants' own market research on the buying habits of loose leaf consumers. One study found that 37% of Red Man chewers will purchase Beech-Nut when Red Man is not available. PX 26 at 0987. Another study shows

that 25% of Red Man users also purchase Beech-Nut. PX 5 at 0904. The same study found that 38% of Beech-Nut customers who have left the Beech-Nut brand migrate to Red Man, more than for any other brand. PX 5 at 0913; *see also* PX 25 at 9458. Another 7.8% migrate to Red Man Golden Blend, Swedish Match's second most popular brand. PX 5 at 0913; PX 25 at 9458.

345. Applying standard economic theory to these margins and diversion ratios, the Acquisition will result in a price increase for Swedish Match's loose leaf brands of approximately 11%, and a price increase for National's loose leaf brands of approximately 21%. 9/7 a.m. tr. 31:8-18 (Simpson); PX 278 ¶ 54 (Simpson Report).

346. Multiplying these price increases by Swedish Match's and National's 1999 loose leaf chewing tobacco sales, Swedish Match's customers would pay about $14.1 million more per year. National's customers would pay about $9.5 million more per year following the Acquisition. 9/7 a.m. tr. 46:18-25 (Simpson); PX 278 ¶ 54 (Simpson Report).

347. This approximately $24 million annual anticompetitive effect will not likely be defeated by any repositioning by Conwood, Swisher or Fred Stoker after the Acquisition (*see* PFF 352-361), nor will it be outweighed by the trivial efficiencies that will likely result from the Acquisition (*see* PFF 402-408).

348. Swisher, which will be the third largest loose leaf manufacturer if National is acquired, predicted that Swedish Match could profitably increase the prices of the Swedish Match and National brands by 5-10%. 9/5 p.m. tr. 41:16-42:7 (Ryan). The price increase would be profitable because the loose leaf industry is characterized by strong brand loyalty and product differentiation. *Id.* Lower-priced brands, such as Swisher's private label brands, have not been

able to take significant amounts of business away from higher-priced brands, like Red Man and Beech-Nut, and have seen their market share remain stagnant at 3% over 12 years. *Id.*

349. National's experience against Swedish Match confirms the likelihood of the post-Acquisition price increase.

PX at 1609; 9/7 a.m. tr. 32:3-10 (Simpson). If Swedish Match had owned National's brands in 1997, the 25 cent discount would not have been introduced. 9/7 a.m. tr. 32:11-16 (Simpson).

350. The post-Acquisition unilateral price increases estimated by Dr. Simpson may actually be low. The industry's pattern of following Swedish Match's price leadership indicates that Swedish Match could increase its prices after the Acquisition even further. PX 278 ¶ 56 (Simpson Report). Swisher predicted that it would match a 5-10% price increase by Swedish Match following the Acquisition. 9/5 p.m. tr. 41:5-11 (Ryan).

351. The Acquisition will eliminate competition between differentiated products. This will enable Swedish Match to unilaterally and profitably increase loose leaf prices – something it could not do before the Acquisition – and harm consumers by an estimated $24 million annually.

352. It is unlikely that a unilateral price increase by Swedish Match after the Acquisition would be defeated by any repositioning by Conwood, Swisher or Fred Stoker, or by a new entrant.

353. Defendants' expert, Dr. Wu, conceded that a new firm would not enter the market in response to any lessening of competition in loose leaf. 9/8 a.m. tr. 81:22-25 (Wu).

354. For the existing loose leaf manufacturers, several characteristics of the industry make it unlikely that they could introduce new brands, reposition existing brands, reduce prices or take other measures to defeat Swedish Match's unilateral price increase, especially a price increase on premium brands such as Red Man or Beech-Nut.[27] First, strong brand loyalty makes it difficult to get consumers to switch to a new brand, PX 278 ¶ 57 (Simpson Report), DX 214 at 878, and to convince distributors to carry the new brand, PX 253 at 93 (Williams dep.). Brand-loyal loose leaf consumers would likely reject a repositioned loose leaf brand much the same way as Coca-Cola consumers rejected new Coke. 9/7 a.m. tr. 35:10-25, 36:1-2 (Simpson).

DX ¶ 15(a) ( ); 9/8 a.m. tr. 85:21-86:20 (Wu); PX 278 ¶ 57 (Simpson Report); PX 175 at 183-184 (Price dep.).

DX ¶ 15(c) ( ); 9/8 a.m. tr. 86:2-20 (Wu).

355. In the face of market stalwarts Red Man and Beech-Nut, which together control 34% of the entire loose leaf market and enjoy century-old heritages, *see* PFF 330, and a market in which brand loyalty makes even price cutting sometimes insufficient, it is unlikely that introducing new brands or repositioning existing (non-premium) brands would defeat a unilateral

[27]Red Man and Red Man Golden Blend account for 82% of Swedish Match's loose leaf sales. Beech-Nut accounts for 75% of National's sales. *See* PX 305.

price increase by Swedish Match after the Acquisition. Swisher confirmed this when its marketing chief predicted that it could not increase its market share even if Swedish Match unilaterally increased prices. 9/5 p.m. tr. 40:8-24 (Ryan). Despite a history of aggressive pricing and marketing of new brands, Swisher has not been able to increase its market share above 8%. *Id.*

356. Historical experience underscores the likelihood that a rival manufacturer could not defeat a unilateral price increase by Swedish Match. In 1998, Swedish Match introduced Southern Pride to compete specifically against Conwood's Levi Garrett. PX 19 at 1602. Swedish Match priced Southern Pride about 30% below Levi Garrett. PX 19 at 1613. Despite Southern Pride's lower price, it gained only a meager 2-3% market share, while Levi Garrett has lost only 1-2%. 9/7 a.m. tr. 36:13-37:13 (Simpson); PX 344; PX 345. Southern Pride drew as many customers from Swedish Match's own brands as it did from Levi Garrett. 9/7 a.m. tr. 37:4-7 (Simpson); PX 15 at 0523.

357. In 1997, Swedish Match launched J.D.'s Blend Wintergreen to compete against National's Beech-Nut Wintergreen. PX 175 at 127 (Price dep.). Swedish Match discontinued J.D.'s Blend Wintergreen when it failed to garner any substantial sales. *Id.* at 128. Swedish Match's marketing chief explained that J.D.'s Blend Wintergreen was unsuccessful because "the consumers of the Beech-Nut Wintergreen had been fairly loyal consumers for a long time and simply weren't interested in a change." *Id.* at 128-29.

358. Conwood, the second largest loose leaf player, would be the logical candidate to take any actions against Swedish Match, but it has not had significant success with its new

brands. For example, Conwood introduced a discount brand called Morgan's in the mid-1990s, but has seen little growth in it. 9/7 a.m. tr. 37:25-38:24 (Simpson); PX 346; PX 203 ¶ 16 (Rosson dec.).

359. Swisher, the third largest loose leaf firm if the Acquisition proceeds, has introduced new brands in the past but none have managed to grow to more than a 5% market share, and Swisher's overall loose leaf market share has remained flat at 8% since 1985. 9/7 a.m. tr. 38:25-39:6 (Simpson); PX 347; 9/5 a.m. tr. 11:1-6 (Ryan).

360. Swisher predicted that if Swedish Match unilaterally raised loose leaf prices by 5-10% after the Acquisition, it would not introduce any new brands because it already has sufficient brands at various price points on the market. 9/5 a.m. tr. 42:16-23 (Ryan). Swisher would also not attempt to reformulate or reposition its current brands out of fear that doing so would jeopardize the quality of the product and consumer confidence in its existing brands. 9/5 p.m. tr. 42:24-43:12 (Ryan).

361. It is unlikely that private label brands would prevent Swedish Match from initiating a unilateral price increase. Private label brands make up less than 2% of the loose leaf market. Swisher, which apart from Conwood is the only manufacturer of private label brands, has marketed private label brands for 12 years at prices at least 50% below premium brands without ever achieving more than a 3% market share. 9/5 p.m. tr. 7:1-5, 8:1-7, 9:3-21 (Ryan). Based on its stagnant historical market share, Swisher does not hold high aspirations for growth in its private label business, even in the face of a unilateral price increase by Swedish Match. 9/5 p.m. tr. 9:14-21, 41:16-42:7 (Ryan).

362. It is unlikely that a new entrant or current loose leaf manufacturers could or would introduce new brands, reposition their brands or take other measures to defeat a unilateral price increase by Swedish Match after the Acquisition.

363. Thus, it is likely that the Acquisition will have anticompetitive effects in the form of a unilateral price increase by Swedish Match that would cost consumers as much as $24 million a year more than what they currently pay for the Swedish Match and National loose leaf brands.

3. The Acquisition Will Increase the Likelihood of Coordinated Interaction

364. All of the requirements for successful coordinated interaction are present in the loose leaf market: The participating firms are able to reach terms of coordination, monitor compliance with those terms, and punish any firm that defects from those terms. 9/7 a.m. tr. 40:14-24 (Simpson); PX 278 ¶ 60 (Simpson Report).

365. Coordination can take the form of explicit collusion in which sellers explicitly agree to increase prices or tacit collusion in which sellers, through repeated interaction, learn to coordinate their behavior so as to increase price. 9/7 a.m. tr. 40:7-13 (Simpson); PX 278 ¶ 61.

366. Coordination is likely in the loose leaf market because demand is inelastic, entry is difficult, firms are few, and the market is highly concentrated. PX 278 ¶ 62 (Simpson Report).

367.

PX at 88-89 ( ). Among the four manufacturers, there is already coordinated pricing. Industry executives agree and documents show that Swedish Match typically initiates a price increase and other sellers follow shortly thereafter. 9/5 p.m. tr. 29:2-10 (Ryan); 9/5 p.m. tr. 112:23-25 (Rosson); PX 175 at 71 (Price dep.); PX 254 at 157 (McClure dep.); 9/8 p.m. tr. 68:19-71:9 (Ray); PX at 1186 (

).

368. Another indicia of coordinated pricing in the loose leaf market comes from defendants' expert. Dr. Wu stated that Swedish Match's margins may be higher than they otherwise would be because Swedish Match is concerned about the reactions of its rivals. 9/8 a.m. tr. 100:11-15 (Wu); PX 270 at 89 (Wu dep.); DX ¶ 10 ( ). This means that Swedish Match forbears from cutting prices and reducing its margins because it fears that its competitors would do the same. *See* PX 270 at 90-92 (Wu dep.). Swedish Match's behavior reflects coordination rather than competition. PX 270 at 289-93 (Wu dep.).

369. Successful coordinated interaction becomes easier as the number of sellers involved declines. 9/7 a.m. tr. 41:25-42:8 (Simpson); PX 278 ¶ 67 (Simpson Report).

370. The Acquisition would reduce the number of major competitors and effectively establish a duopoly. If the Acquisition proceeds, two firms, Swedish Match and Conwood, would control over 90% of loose leaf tobacco sales; together with Swisher, three firms would control 99% of the market. PX 160.

371. Swisher will be the third firm with any sizeable loose leaf sales after the Acquisition, but it is too small to constrain Swedish Match's and Conwood's pricing behavior.

With only an 8% share of the market and lacking an individual brand with significant power, Swisher can only follow its larger competitors' lead. 9/5 p.m. tr. 27:2-14 (Ryan).

372. Swedish Match and Conwood do not differ in their incentives to reach an agreement on loose leaf prices. Swedish Match and Conwood have similar product mixes in that both sell moist snuff and loose leaf (whereas National only sells loose leaf). 9/8 a.m. tr. 97:25-98:18 (Wu). Swedish Match and Conwood also have common brand mixes: Both sell premium brands of loose leaf, subpremium brands and price value brands. 9/8 a.m. tr. 99:1-7 (Wu).

373. National only sells loose leaf so its product mix differs from Conwood and Swedish Match, and therefore (according to Dr. Wu's "incentive" analysis) has an incentive *not* to behave in the same manner as Conwood, Swedish Match and Swisher. 9/8 a.m. tr. 98:10-18 (Wu). The removal of National from the competitive scene reduces the product mix differentiation among the loose leaf manufacturers, reducing the differences in incentives that Dr. Wu contends would make coordination more difficult.

374. Monitoring compliance with the terms of coordination is relatively easy in this industry. A.C. Nielsen provides monthly price and sales data with only a three-week lag, and all of the loose leaf manufacturers purchase this data. 9/7 a.m. tr. 41:12-19 (Simpson); PX 6 at 499; PX 147 at 18-38. The A.C. Nielsen information would allow the firms in a collusive group to quickly detect cheating by another firm. PX 175 at 184 (Price dep.); PX 176 at 130-31 (Ray dep.).

375. Internal company documents demonstrate the industry-wide practice of publicly announcing price increases to wholesalers and monitoring competitors' prices. PX 27 at 512; PX

29 at 97; PX 35 at 787; PX 138 at 1041, 1044. Sales representatives are also able to track competitors' pricing at the retail level. PX 175 at 117 (Price dep.); PX 40 at 57-58; *see also* 9/6 a.m. tr. 25:21-26:4 (Williams) ("There are no secrets in our industry with regard to pricing.").

376. The discounts and other promotions offered by loose leaf manufacturers are no secret. Most loose leaf pouches contain a clearly visible "snipe" at the corner alerting everyone to the amount of the discount off the retail price. *See, e.g.*, PX 401. Loose leaf firms keep track of what brands are promoted, the percentage of that brand's volume that is promoted, the amount of the promotion and how much the promotion costs the firm. PX at 4324.

PX at 130-31 ( ).

377. Successful price coordination also requires the ability to punish anyone who cheats. The most obvious mechanism in the loose leaf industry would be to lower prices for a sufficiently long period of time. 9/7 a.m. tr. 41:20-24 (Simpson). The coordinating firms could narrowly tailor their punishment by lowering prices in a product market niche or geographic area where the cheating firm has a disproportionately large amount of its sales. PX 278 ¶ 65.

378. Because transactions in the loose leaf market are numerous and small, firms have little incentive to cheat on the terms of coordination because the gains from cheating would be small. *See, e.g.*, PX at 1794; *see also Merger Guidelines* § 2.12.

379. Observing periods of cooperation interrupted by occasional price wars is consistent with economic theories of collusion. PX 278 ¶ 66 (Simpson Report). This has occurred in the loose leaf market.

PX at 1768.

see also PX 129 at 625 ("The Company believes that the intensity and scope of price discounting which started in late 1992 is beginning to abate. Management believes that the minor market share swings attributable to price and discount promotions are not sufficient to justify the considerable expense incurred by the two market share leaders ([Swedish Match] and Conwood). The loose leaf tobacco industry is highly brand loyal, and the current discounting efforts have primarily benefitted each company's existing consumer base.").

380. Swedish Match seeks to maintain price cooperation among loose leaf firms. In a 1992 internal Swedish Match memo titled "Pricing Strategies for Hostile Times," the author uses an article as way of background to commend U.S. Tobacco's "strong, predictable price discipline" in the moist snuff category. PX 39. The author then states that Swedish Match has "behaved in the same manner" within the loose leaf category and issues warnings about what happens when "price leadership breaks down and discounting is allowed to create a hostile industry." *Id.*

381. The loose leaf market already possesses the critical elements for successful coordinated pricing interaction: common pricing patterns, mechanisms to monitor each other and the means to punish cheaters. By reducing the number of significant loose leaf sellers from four to three, this Acquisition only heightens the likelihood of coordinated interaction.

IV. NEW ENTRY AND FRINGE EXPANSION IS UNLIKELY TO DEFEAT THE EXPECTED ANTICOMPETITIVE EFFECTS OF THE MERGER

382. The defendants recognize that they are safe from the threat of competition from new entrants. National's SEC filing of September 17, 1997, made subject to liability under § 10(b) of the Exchange Act, 15 U.S.C. § 78j(b), states:

> The company believes that the smokeless tobacco market, including loose leaf chewing tobacco, and the RYO cigarette paper industry are each characterized by non-cyclical demand, brand loyalty, *significant barriers to entry*, minimal capital expenditure requirements, high profit margins, consistent price increases at the wholesale level as well as the ability to generate strong and consistent free cash flows.

PX 126 at *10 (emphasis added). See also PX 143 at *2; PX 144 at *1; PX 145 at *1; PX at 108-109 ( ).

PX at 1751.

383.

PX ;

PX .

PX ¶ 16 ( ).

PX ¶ 16 ( ).

384.

PX at 186-87 ( )

PX at 12.

PX at 12.

PX at 5. Conwood also estimates that a new loose leaf manufacturing plant would cost around $20 million. PX 203 ¶ 16 (Rosson dec.).

385.

PX at 0667.

386.

(PX at 12).

(PX at 12). Conwood similarly estimates that a new loose leaf manufacturing facility would take two to three years to complete. PX 203 ¶ 16 (Rosson dec.). It would take a considerable inventory investment and at least two years for a new entrant

to enter production, since loose leaf tobacco is aged for two years. 9/5 p.m. tr. 37:19-25, 38:1-11 (Ryan).

387. Defendant's expert witness is not "counting on entry by new firms" in this market. 9/8 a.m. tr. 82:1-5 (Wu).

PX at 108-109 ( ). However, many of the firms that defendants rely on have exited the loose leaf business. Some of the cigarette producers used to manufacture loose leaf but have divested those businesses. 9/5 p.m. tr. 39:8-10 (Ryan).

PX at 1752. U.S. Tobacco had a loose leaf product, but was unsuccessful, and withdrew from the market. 9/5 p.m. tr. 39:15-23 (Ryan). U.S. Tobacco is unlikely to reenter the market. 9/5 p.m. tr. 40:2-4 (Ryan). It is also the opinion of plaintiff's economic expert, Dr. John Simpson, that U.S. Tobacco is unlikely to reenter the loose leaf market. Dr. Simpson bases his opinion on an interview with the Vice President of U.S. Tobacco, Richard Cutler, in which Cutler stated that even a 10 percent increase in loose leaf prices would not prompt U.S. Tobacco to enter the loose leaf market. 9/7 a.m. tr. 44:21-25, 45:1-3 (Simpson). Defendant's expert witness also concedes that he is not counting on entry by U.S. Tobacco into the loose leaf market. 9/8 a.m. tr. 82:6-10 (Wu).

388. There are other characteristics of the loose leaf chewing tobacco market that make new entry or expansion unlikely.

PX

at 0555. This decline is expected to continue into the foreseeable future. 9/8 a.m. tr. 69:3-11 (Wu); PX 270 117 (Wu dep.); DX 151 at 43 (Robinette dep.).

PX at 108-109 ( ); PX 270 at 130-131 (Wu dep.); 9/8 a.m. tr. 68:23 - 69:2 (Wu). Declining consumption limits the sales opportunities available to a new entrant. It also requires a new entrant to takes sales from incumbent competitors which increases competition and decreases market pricing. This makes it more difficult for a new entrant to earn an acceptable return on investment. PX 203 ¶ 15 (Rosson dec.).

389. Excess capacity in the loose leaf industry also deters entry. The decline in loose leaf consumption has caused excess capacity. PX 270 at 123 (Wu dep.). There is substantial overcapacity in the loose leaf industry. 9/8 p.m. tr. 28:18-24 (Ray); 9/5 p.m. tr. 55:22-23 (Ryan). Conwood has excess capacity of around 50 percent, while Swisher has excess capacity of about 48 percent. 9/7 p.m. tr. 86:17-20 (Wu). Excess capacity deters entry because incumbent firms have the ability to expand their sales in response to entry. 9/8 a.m. tr. 86:21-25, 87:1 (Wu).

390. Chewing tobacco users are very brand loyal. 9/6 a.m. tr. 6:16-19 (Williams); 9/6 a.m. tr. 78:16-18 (Cross); PX at 1751; PX 129 at 0624; PX at 74 ( ); DX 214; DX 218. A new entrant would have to overcome the brand loyalty of existing consumers in order to gain market share. 9/7 a.m. tr. 44:8-10 (Simpson); PX 278 ¶ 57 (Simpson Report). Strong brand loyalty discourages entry by new or existing firms.

391. Regulatory restrictions on advertising and merchandising loose leaf tobacco make promotion of a new brand difficult. PX 254 at 161 (McClure dep.). Virtually all marketing and

advertising outlets are closed off to new brands of loose leaf tobacco, including billboards, leaving only print, magazine, and store point of sale. PX 254 at 161-162 (McClure dep.).

392. Some states have enacted legislation that requires all tobacco products, including loose leaf tobacco, to be placed behind the counter. 9/8 a.m. tr. 84:3-6 (Wu). This restricts the amount of retail space that is available for tobacco products and makes it more difficult for a new brand to gain distribution. PX 130 at 0311; PX 254 at 51-52, 161-162 (McClure dep.); PX at 184-85 ( ); 9/8 a.m. tr. 84:18-22 (Wu).

PX at 0313; *see also* PX 5 at 0931, 933. The combination of advertising restrictions and behind-the-counter regulations means that no one will introduce new products; neither existing manufacturers, nor new entrants. PX 254 at 162 (McClure dep).

393. Tobacco litigation and legislation may saddle any new entrant with significant future liabilities, making new entry even more risky.

PX at 4264.

394. The chewing tobacco industry has demonstrated that sufficient expansion by a fringe firm also is not likely.

PX at 14.

PX ; *see also* PX at 0631, (

), the only entrant into this market in years still has attained only a 1% market share (PX 160) underscores the difficulty of entry and expansion into this market.

395. A postmerger price increase would not be defeated by product repositioning by existing firms. 9/7 a.m. tr. 35:4-9 (Simpson). Product repositioning would require that brands be altered in some way to make them more like the brands whose prices had been increased. 9/7 a.m. tr. 34:11-25, 35:1-3 (Simpson). Such a strategy would be defeated by the brand loyalty of consumers, 9/5 p.m. tr. 41:16-42:7 (Ryan), who would likely reject the "repositioned" product, in much the same way as Coca-Cola consumers rejected new Coke. 9/7 a.m. tr. 35:10-25, 36:1-2 (Simpson). Competitors would not attempt to reformulate or reposition their current brands out of fear that doing so would jeopardize the quality of their products and consumer confidence in existing brands. 9/5 p.m. tr. 42:24-43:12 (Ryan).

396. The introduction of new brands is unlikely, PX 278 ¶ 59 (Simpson Report), and cannot be expected to defeat price increases. 9/7 a.m. tr. 36:3-6 (Simpson). Introductions of new brands by existing firms has little to no effect on the prices of existing brands. 9/7 a.m. tr. 36:7-22 (Simpson).

See PX at 56-57

( )( ); PX at 93 (Williams dep.)(manufacturers must convince distributors to carry the new brand). Any new brand would

need to overcome strong consumer loyalty, behind-the-counter shelf space restrictions, advertising restrictions, and increasing government regulation. PX 278 ¶ 57 (Simpson Report); DX ¶ 15(a) ( ); 9/8 a.m. tr. 85:21-86:20 (Wu); PX 175 at 183-184 (Price dep.).

397. Several recently introduced brands have failed, while others have attained very little market share. PX 278 ¶ 57 (Simpson Report). Swedish Match introduced Southern Pride about two years ago to compete with Conwood's Levi Garrett. PX 19 at 1602. Although Southern Pride was priced at 30 percent below Levi Garrett, Conwood did not reduce the price of Levi Garrett. PX 278 ¶ 58 (Simpson Report). Swedish Match was not successful in specifically targeting Levi Garrett, as Swedish Match's other brands of loose leaf lost almost as much market share to Southern Pride, as did Levi Garrett. PX 15 at 0523; PX 278 ¶ 58 (Simpson Report). Despite Southern Pride's lower price, it gained only a meager 2-3% market share, while Levi Garrett has lost only 1-2%. 9/7 a.m. tr. 36:13-37:13 (Simpson); PX 344; PX 345. Swedish Match also attempted to introduce J.D.'s Blend Wintergreen to compete with Beach-Nut Wintergreen, PX 175 at 127 (Price dep.), but J.D.'s Blend Wintergreen failed in the marketplace. *Id.* at 128; PX at 184 ( ); PX . Swedish Match was not able to overcome the brand loyalty of Beech-Nut Wintergreen consumers with its new loose leaf offering. PX 175 at 128-9 (Price dep.).

398. Conwood, the second largest loose leaf player, would be the logical candidate to take any actions against Swedish Match, but it has not had significant success with its new brands. For example, Conwood introduced a discount brand called Morgan's in the mid-1990s,

but has seen little growth in it. 9/7 a.m. tr. 37:25-38:24 (Simpson); PX 346; PX 203 ¶ 16 (Rosson dec.).

399. Swisher, the third largest loose leaf firm if the Acquisition proceeds, has introduced new brands in the past but none have managed to grow to more than a 5% market share, and Swisher's overall loose leaf market share has remained flat at 8% since 1985. 9/7 a.m. tr. 38:25-39:6 (Simpson); PX 347; 9/5 a.m. tr. 11:1-6 (Ryan). Swisher already has brands at the various price points in the market and asserts that it will not introduce more in the face of a Swedish Match price increase. 9/5 a.m. tr. 42:16-23 (Ryan).

400. Private label brands cannot be expected to discipline prices. The price at which private label brands are sold depends on manufacturing costs. 9/8 a.m. tr. 84:24 - 85:2 (Wu). For a private label brand, the manufacturing cost would be the cost of acquiring the product from a manufacturer. A company trying to develop a private label brand would have to purchase its tobacco from an existing manufacturer. 9/8 a.m. tr. 83:2-6 (Wu). Manufacturers have the option to quote high, or refuse to quote, when approached by companies wishing to develop a private label brand. PX 254 at 138 (McClure dep.). Prices of private label brands are determined by the manufacturers. 9/5 p.m. tr. 70:4-7 (Ryan).

401. New entry and fringe expansion will not defeat the likely anticompetitive effects of the merger because they will not be (a) timely; (b) likely; and (c) sufficient.

V. THE EFFICIENCIES ATTRIBUTED TO THIS TRANSACTION ARE NOT SUFFICIENT TO OVERCOME THE ANTICOMPETITIVE HARM TO CONSUMERS

402.

PX at 2682.

PX at 91 ( ).

Id. at 100.

403. In evaluating the efficiencies of a transaction, variable costs are more important than fixed costs because they are more likely to be passed along to consumers. 9/8 a.m. tr. 78:19-22 (Wu); PX 278 ¶ 75 (Simpson Report). Fixed costs will not be passed on to consumers. PX 278 ¶ 75 (Simpson Report). If fixed costs ever were to be passed on, this would only occur in the distant future. PX 270 at 298 (Wu dep.). Fixed costs should not be included in calculating efficiencies that offset anticompetitive harm. PX 278 ¶ 75 (Simpson Report); PX 270 at 298 (Wu dep.).

404. Defendants assert that they can verify annual, variable cost savings of only $1.4 million. 9/8 a.m. tr. 78:15-16 (Wu); Stipulation ¶ 19. There is no evidence that any of these cost savings will be passed on to consumers, and defendants have made no effort to estimate a pass-through rate. 9/8 a.m. tr. 78:23-25, 79:1-2 (Wu).

PX at 101 ( ),

PX

at 101-102 ( ). If any of these savings actually are passed on to consumers, they will not be passed on dollar for dollar. 9/8 a.m. tr. 79:8-11 (Wu). In no event is it likely that more than 100 percent of the savings would be passed through. PX 270 at 299 (Wu dep.).

405. Defendants' asserted variable cost savings are insufficient to offset the consumer harm of nearly $24 million in unilateral price increases. PX 278 ¶ 75 (Simpson Report). Standard economic theory demonstrates that the merged entity will increase the price of its Swedish Match products by 11 percent, and its National products by 21 percent. In 1999 prices, the increase would be $14.1 mm for consumers of Swedish Match brands, and $9.5 mm for consumers of National brands. PX 278 ¶ 54 (Simpson Report). The expected consumer harm is more than 17 times the verifiable, variable cost savings that defendants expect to achieve.

406. Loose leaf sales in 1999 were approximately $290 million. 9/8 a.m. tr. 80:1-2 (Wu). If loose leaf sales continue to decline at 5 percent a year, the total loose leaf sales in the year 2001 will be approximately $260 million. 9/8 a.m. tr. 80:6-9 (Wu). A mere one percent price increase in the year 2001 would be $2.6 million, or almost twice the cost savings that defendants assert they will achieve.

407.

PX at 192 ( ); Stipulation ¶ 15.

PX at 195 ( ). All of the efficiencies claimed by defendants that could also be achieved by this manufacturing contract are not merger specific.

408. Defendants have not met their burden of showing (a) that any efficiencies are merger-specific; (b) that any efficiencies would benefit consumers; and (c) that the amount of claimed, quantified, variable cost savings ($1.4 mm annually) would offset any likely competitive harm resulting from this transaction.

VI. THE MERGER WILL HAVE ANTICOMPETITIVE EFFECTS BECAUSE THE COMBINED ENTITY WILL HAVE SUFFICIENT MARKET POWER TO FORCE COMPETITORS OFF OF RETAIL SHELVES

409. The proposed acquisition will reduce Swedish Match's loose leaf competitors' access to retail shelf space. 9/5 p.m. tr. 46:7-12 (Ryan). After the acquisition, Swedish Match will have a greater ability to drive smaller-share competitors like Swisher and Conwood off retail shelves. 9/5 p.m. tr. 52:10-13 (Ryan); PX at 185-186 ( ). Swedish Match will have the temptation and opportunity to use its market power to affect the amount of shelf space that competitors can get at the retail level. 9/5 p.m. tr. 112:9-13 (Rosson). Losing shelf space would injure competitors, 9/5 p.m. tr. 52:10-13 (Ryan), because regulatory restrictions on advertising make point-of-sale advertising critical for the sale of loose leaf. DX 122 at 168 (Ryan dep.); DX at 17 ¶ 26.

410. Swedish Match will be able to force competitors off the shelves, because, as the loose leaf category leader, retailers will look to Swedish Match to assist in "category management," which means Swedish Match will assist chains in determining how they place and merchandise their loose leaf products. 9/5 p.m. tr. 45:11-21 (Ryan).

PX at 38-39 ( ). Category management is all about presenting a company's own advertisements and products to the public. 9/8 p.m. tr. 41:16-20 (Ray); DX 904.

411.

PX at 3,

PX at 8.

PX at 18.

PX at 18; PX at 40 ( ), PX at 41

( ).

PX at 19; DX ¶ 26 ( ).

412.

See PX at 41-42 (

). These methods, rather than price competition would be employed to force competitors out of stores. 9/5 p.m. tr. 52:17-20 (Ryan). This is something that worries loose leaf competitors, because many experienced a similar problem in the moist snuff market with UST, which has a 75 percent share of the moist snuff market. 9/5 p.m. tr. 112:4-13 (Rosson); 9/8 p.m. tr. 47:14-19 (Ray).

PX at 41 ( ). In Conwood v. U.S. Tobacco Co., 2000 U.S. Dist LEXIS 12797 (W.D. Ky. Aug. 10, 2000), the court denied UST's motions for judgment as a matter of law and motion for a new trial, and entered a $350 million judgment against UST on a jury verdict finding that UST, in violation of the Sherman Act 15 U.S.C. § 2, used its position as industry leader to influence retailers and exclude competitor's signs and brands of *moist snuff* from retail shelves. *Id*. at *2-3. The court noted

Conwood's claim that UST's exclusionary practices were especially harmful in light of the restrictions on tobacco advertising. *Id.*

413. There is a trend to move all tobacco products, including loose leaf tobacco, behind store counters. PX 259 at 37 (Bryant dep.); 9/5 p.m. tr. 48:11-13 (Ryan); 9/8 a.m. tr. 84:3-6 (Wu); 9/8 p.m. tr. 47:24-25, 48:1-5 (Ray). This restricts the amount of retail space that is available for tobacco products. PX 130 at 0311; PX 254 at 51-52, 161-162 (McClure dep); PX 258 at 184-85 (Ryan dep.); 9/8 a.m. tr. 84:18-22 (Wu); 9/8 p.m. tr. 48:10-12 (Ray). The regulation of retail space will enhance the anticompetitive power that Swedish Match has to force competitors off the shelf.

414.

PX at 18-20; PX at 3. As a result, Swedish Match will acquire more retail shelf space, and more ability to advertise its brands in stores, at the expense of smaller-share competitors like Swisher. The loss of shelf space and point-of-sale advertising opportunities will reduce smaller-share loose leaf tobacco companies' ability to compete, and thereby reduce competition in loose leaf overall.

VII. THE FACTS OF THIS CASE SHOW THAT INJUNCTIVE RELIEF IS NECESSARY

415. The strong public interest in effective enforcement of the antitrust laws weighs heavily in favor of a preliminary injunction here. Without an injunction, the FTC cannot be assured of meaningful relief at the end of the administrative process and consumers will be at risk of significant interim anticompetitive harm. Defendants have not suggested any equities other than their insignificant cost savings. PI Opp. 42.

416. The evidence shows that each of the defendants is a strong company that will continue to be competitive and financially sound whether the proposed mergers are delayed or abandoned. *See* PFF 321 (loose leaf is a highly profitable business); PX 50 (Swedish Match's 1999 net income up 500% over 1998; dividends increased; share repurchase proposed); PX 125 at 22-24 ( ).

417.

PX at 15. Roll-your-own requires different equipment and a different production line than loose leaf. DX 102 at 219:8-23 (Brunson dep.).

A. Strong Equities Weigh In Favor of an Injunction

418. The public interest in these cases is the public's interest in the effective enforcement of the antitrust laws. That interest will be compromised if the parties are allowed to consummate the Acquisition. Absent an injunction, National will cease to be an independent

manufacturer and marketer of loose leaf, and will convert its manufacturing operation from loose leaf to roll-your-own tobacco, making make it difficult to restore the competitive *status quo ante* following an administrative proceeding. In the interim, consumers would be at risk of serious competitive harm. The compelling public equities clearly outweigh the public and private equities implied or advanced by the defendants.

419. In the absence of a full-stop injunction, National's brands will be integrated into the operations of Swedish Match in a manner that will prevent National from being reconstituted as a stand-alone marketer of loose leaf tobacco.

420. Competition between these defendants has led to increased promotions and introduction of new brands of loose leaf, and prevented Swedish Match and National from raising prices more than they have raised them. *See* PFF 328-336 above.

B. Purported Equities Asserted By Defendants Do Not Outweigh the Public's Interest in Effective Antitrust Enforcement

421. Defendants are financially sound. *See* PFF 10, 16. A preliminary injunction, pending administrative adjudication, does not threaten the future of any of the defendants.

422. Defendants' claimed equities (PI Opp. 42) are that it will achieve the modest cost savings described above, PFF 402-08; that "some of the savings are likely to be passed on to consumers," although defendants have made no effort to demonstrate pass-through, PFF 404; and that the Acquisition will "eliminate excess capacity," which defendants claim put downward pressure on price.

423. The Commission has certified this matter for "fast track" treatment in the event that administrative adjudication becomes necessary. Under the Commission's "fast track" procedures, the Commission will render its decision within 13 months of the entry of a preliminary injunction. FTC Rule 3.11A, 16 C.F.R. § §3.11A.

CONCLUSIONS OF LAW

I. NATURE OF THE ACTION, JURISDICTION AND VENUE

1. This is an action pursuant to Section 13(b) of the Federal Trade Commission Act, 15 U.S.C. § 53(b), by which the Federal Trade Commission ("FTC") seeks a preliminary injunction against the proposed acquisition (the "Acquisition") by Swedish Match North America Inc. ("Swedish Match") from National Tobacco Co. ("National") of National's loose leaf chewing tobacco brands and related assets (the "National Assets").

2. This Court has jurisdiction over the subject matter of this action, seeking preliminary injunctive relief pending administrative adjudication of the underlying merits of whether the Acquisition violates Clayton Act § 7, 15 U.S.C. § 18, or Federal Trade Commission Act ("FTC Act") § 5, 15 U.S.C. § 45. Stipulations ¶ 1; FTC Act § 13(b), 15 U.S.C. § 53(b).

3. This Court has jurisdiction over the persons of the defendants. Stipulations ¶ 1; PFF ¶ 1.

4. The FTC is vested with authority and responsibility for enforcing, *inter alia*, Section 7 of the Clayton Act. Stipulations ¶ 5; Clayton Act § 11(a), 15 U.S.C. § 21(a). Section 13(b) of the FTC Act, 15 U.S.C. § 53(b), authorizes the FTC to seek a preliminary injunction in order to enforce Section 7 of the Clayton Act.

5. At all times relevant herein, defendants Swedish Match and National have been and are each engaged in "commerce," as defined in Section 4 of the FTC Act, 15 U.S.C. § 44 and Section 1 of the Clayton Act, 15 U.S.C. § 12; Stipulations ¶ 3; PFF ¶ 18.

6. Venue is proper in this district under Section 13(b) of the FTC Act and 28 U.S.C. § 1391(c). Stipulations ¶ 2; PFF ¶ 2.

7. The Acquisition is a transaction subject to Section 7 of the Clayton Act, 15 U.S.C. § 18, and Section 5 of the FTC Act, 15 U.S.C. § 45; Stipulations ¶ 3.

8. The FTC has jurisdiction, pursuant to Section 11 of the Clayton Act, 15 U.S.C. § 21, and Section 5 of the FTC Act, 15 U.S.C. § 45, to bring administrative proceedings against the Acquisition challenged in this action. The FTC has jurisdiction to issue a cease and desist order, after an administrative hearing on the merits, against defendants, if the FTC determines that consummation of the Acquisition would violate Section 7 of the Clayton Act, 15 U.S.C. § 18, or Section 5 of the FTC Act, 15 U.S.C. § 45.

9. This Court has jurisdiction, pursuant to Section 13(b) of the FTC Act, 15 U.S.C. § 53(b), to issue a preliminary injunction against the consummation of the Acquisition by defendants, pending administrative adjudication by the FTC.

II. THE STANDARD FOR A PRELIMINARY INJUNCTION – SERIOUS AND SUBSTANTIAL QUESTIONS GOING TO THE MERITS – IS MET HERE

10. Section 13(b) of the FTC Act provides that a preliminary injunction may be granted "upon a proper showing that, weighing the equities and considering the Commission's likelihood of ultimate success, such action would be in the public interest." Under that standard, this Court should: (1) determine the likelihood that the Commission will ultimately succeed on the merits in its case under Section 7 of the Clayton Act, and (2) balance the equities. *FTC v. Weyerhaeuser Co.*, 665 F.2d 1072, 1080 (D.C. Cir. 1981); *FTC v. Cardinal Health, Inc.*, 12

F. Supp. 2d 34, 44 (D.D.C. 1998). Under § 13(b), the Court may presume that the public interest will be served by an injunction from the Commission's showing of a likelihood of success on the ultimate merits. *Weyerhaeuser*, 665 F.2d at 1082.

11. The FTC satisfies its burden to show likelihood of success if it "raises questions going to the merits so serious, substantial, difficult, and doubtful as to make them fair ground for thorough investigation, study, deliberation and determination by the Commission in the first instance and ultimately by the Court of Appeals." *FTC v. University Health, Inc.*, 938 F.2d 1206, 1218 (11th Cir. 1991); *FTC v. Warner Communications, Inc.*, 742 F.2d 1156, 1162 (9th Cir. 1984); *Cardinal*, 12 F. Supp. 2d at 45; *FTC v. Staples, Inc.*, 970 F. Supp. 1066, 1071 (D.D.C. 1997). Under this standard, the FTC "must show a reasonable probability that the proposed transaction would substantially lessen competition in the future." *University Health*, 938 F.2d at 1218; *Cardinal*, 12 F. Supp. 2d at 45; *Staples*, 970 F. Supp. at 1072.

12. In this preliminary injunction proceeding in aid of the FTC's administrative jurisdiction, the FTC "need not prove that the proposed merger would in fact violate Section 7 of the Clayton Act. 'The determination of whether the acquisition actually violates the antitrust laws is reserved for the Commission and is, therefore, not before this Court.'" *Cardinal*, 12 F. Supp. 2d at 45, *quoting Staples*, 970 F. Supp. at 1070; *accord, e.g., FTC v. Alliant Techsystems, Inc.*, 808 F. Supp. 9, 19 (D.D.C. 1992). Therefore, in deciding whether a significant showing has been made, doubts are to be resolved against the transaction and in favor of a preliminary injunction. *FTC v. Elders Grain, Inc.*, 868 F.2d 901, 906 (7th Cir. 1989), *citing United States v. Philadelphia Nat'l Bank*, 374 U.S. 321, 362-63 (1963).

13. In a plenary administrative proceeding by the FTC, as in a trial on the merits, the government meets its *prima facie* burden of proof under Section 7 of the Clayton Act, 15 U.S.C. § 21, by demonstrating that a merger will lead to a significant increase in concentration in, and result in a highly concentrated, product and geographic market. *Philadelphia Nat'l Bank*, 374 U.S. at 362-64; *United States v. Baker, Hughes, Inc.*, 908 F.2d 981, 982-83 (D.C. Cir. 1990); *Cardinal Health*, 12 F. Supp. 2d at 52.

14. The burden of producing evidence that the merger is not in fact anticompetitive would then shift to the defendant. "To meet their burden, the defendants must show that the market-share statistics . . . 'give an inaccurate prediction of the proposed acquisition's probable effect on competition.'" *Cardinal*, 12 F. Supp. 2d at 54, *quoting Staples*, 970 F. Supp. at 1083; *accord U.S. v. Citizens & Southern Nat'l Bank*, 422 U.S. 86, 120 (1975); *U.S. v. Marine Bancorporation*, 418 U.S. 602, 631 (1974); *Baker, Hughes*, 908 F.2d at 991. If the defendant comes forward with evidence sufficient to rebut the presumption, the burden of producing further evidence of anticompetitive effect shifts to the government, which retains the burden of proof at all times. *Baker, Hughes*, 908 F.2d at 982-83; *Cardinal Health*, 12 F. Supp. 2d at 54; *U.S. v. Ivaco, Inc.*, 704 F. Supp. 1409, 1420-21 (W.D. Mich. 1989).

15. The Supreme Court has held that Section 7 "creates a relatively expansive definition of antitrust liability" regarding mergers and acquisitions. *California v. American Stores Co.*, 495 U.S. 271, 284 (1990). The statute prohibits any acquisition of stock or assets "where in any line of 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.

16. In proscribing mergers that "may . . . substantially lessen competition, or tend to create a monopoly," Congress used the words "may be" to "indicate that its concern was with probabilities, not certainties." *Brown Shoe Co. v. United States*, 370 U.S. 294, 323 (1962). Thus, the Supreme Court reaffirmed in *American Stores* that "plaintiff need only prove that [the challenged acquisition's] effect '*may be* substantially to lessen competition.'" 495 U.S. at 284 (emphasis in original).

17. It follows from Section 7's incipiency standard that the statute "does not require proof that a merger or other acquisition has caused higher prices in the affected market. All that is necessary is that the merger create an appreciable danger of such consequences in the future. A predictive judgment, necessarily probabilistic and judgmental rather than demonstrable . . . is called for." *Hospital Corp. of America v. FTC*, 807 F.2d 1381, 1389 (7th Cir. 1986) (Posner, J.) (*citing Philadelphia National Bank*, 374 U.S. at 362), *cert. denied*, 481 U.S. 1038 (1987). Section 7 does not require "a certainty, or even a high probability," that an acquisition will substantially lessen competition. *Elders Grain*, 868 F.2d at 906. "[D]oubts are to be resolved against the transaction." *Id.* To satisfy Section 7, the government need only show "a reasonable probability that the proposed transaction would substantially lessen competition in the future." *University Health*, 938 F.2d at 1218.

18. In enacting the Clayton Act, Congress "intended to reach incipient monopolies and trade restraints outside the scope of the Sherman Act." *Brown Shoe*, 370 U.S. at 318 n.32. The object of the Act was to prevent acquisitions or mergers *before* they created competitive harm. A post-acquisition Sherman Act challenge to anticompetitive practices is not a viable

alternative to a Clayton Act case. Although some anticompetitive practices could be attacked post-acquisition under the Sherman Act, Congress perceived the need to prevent these practices in their incipiency. "The intent [was] to cope with monopolistic tendencies in their incipiency and well before they have attained such effects as would justify a Sherman Act proceeding." *Brown Shoe*, 370 U.S. at 318 n.32 (quoting S. Rep. No. 1775, 81st Cong., 2d Sess. 4-5); *FTC v. Coca-Cola Co.*, 641 F. Supp. 1128, 1132 & n.8 (D.D.C. 1986) (citing cases); *vacated as moot*, 829 F.2d 191 (D.C. Cir. 1987) (Section 7 designed as "a prophylactic measure, intended 'primarily to arrest apprehended consequences of intercorporate relationships before those relationships could work their evil").

19. Courts have also recognized that Section 7's incipiency standard protects against mergers and acquisitions that would enable firms to coordinate on price and output -- and thereby harm consumers -- without committing a detectable violation of the Sherman Act. *See Elders Grain*, 868 F.2d at 905 (reduction of the number of competitors from 6 to 5 "will make it easier for leading members of the industry to collude on price and output without committing a detectable violation of Section 1 [of the Sherman Act]"); *Cardinal*, 12 F. Supp. 2d at 45 n.8; *FTC v. PPG Indus., Inc.*, 628 F. Supp. 881, 885 n.9 (D.D.C.), *aff'd in pertinent part, rev'd in part*, 798 F.2d 1500 (D.C. Cir. 1986); *cf.* U.S. Dep't of Justice & Federal Trade Comm'n, *Horizontal Merger Guidelines*, § 2.1 (1997) (hereafter "*Merger Guidelines*") (coordinated interaction which raises competitive problems "includes tacit or express collusion, and may or may not be lawful in and of itself").

20. Section 7 thus rectifies two problems of relying solely on Section 1 of the Sherman Act. First, as the court noted in *Elders Grain*, there is a difficulty in detecting Section 1 violations. Second, the concerns addressed by Section 7 extend beyond the types of overt conduct that can be remedied under the Sherman Act. As the Supreme Court recently stated, Section 7 seeks to prohibit "excessive concentration, and the oligopolistic price coordination it portends." *Brooke Group Ltd. v. Brown & Williamson Tobacco Corp.*, 509 U.S. 209, 229-30 (1993). Such coordination is feared by antitrust policy even more than express collusion, for tacit coordination, even when observed, cannot easily be controlled directly by the antitrust laws. It is a central object of merger policy to obstruct the creation or reinforcement by merger of such oligopolistic market structures in which tacit coordination can occur. 4 P. Areeda, *Antitrust Law*, ¶ 901b2 at 9 (1998 rev. ed.) (hereafter "Areeda").

III. LOOSE LEAF CHEWING TOBACCO IS A RELEVANT PRODUCT MARKET

21. "Congress neither adopted nor rejected specifically any particular tests for measuring the relevant markets, either as defined in terms of product or in terms of geographic locus of competition, within which the anticompetitive effects of a merger were to be judged." *Brown Shoe Co. v. United States*, 370 U.S. 294, 320-21 (1962). Modern merger policy and merger law focuses on "the unifying theme . . . that mergers should not be permitted to create or enhance market power or facilitate its exercise." *Merger Guidelines* § 0.1[28]; *see U.S. v. Archer-Daniels-Midland Co.*, 866 F.2d 242, 246 (8th Cir. 1988), *cert. denied*, 493 U.S. 809 (1989).

[28]"Market power to a seller is the ability profitably to maintain prices above competitive levels for significant period of time." *Id.*

Professor Fisher explains the concept of constraint, as applied to product definition (in the context of monopolization cases), as follows:

> The conventional first step in analyzing whether a given firm does or does not have monopoly power is to define the relevant market in which the alleged power is exercised. Unfortunately, this is not as simple as it sounds and tends to lead to confusion, if not abuse. . . .
>
> Let us begin by recalling what the purpose is of market definition. It is the beginning of an analysis of monopoly power. Monopoly power, however, is the ability to act in an unconstrained way. Hence, market definition, if it is to be an aid to analysis, has to place in the relevant market those products and services and firms whose presence and actions can serve as a constraint on the policies of the alleged monopolist. . . .
>
> Thus, the primary question in defining a relevant market ought to be that of the constraints on the alleged monopolist. . . . The courts have paid appropriate attention to demand and supply substitutability – appropriate because those are the criteria by which to judge the constraints on the alleged monopolist. It should not be forgotten, however, that *it is the constraints which are the object of analysis and not the properties of substitutability themselves.*

F. Fisher, *Industrial Organization, Economics and the Law* 9-10 (1991) (emphasis added).

22. "The *outer boundaries* of a 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*, 370 U.S. at 325 (emphasis added). "Reasonable interchangeability" and "cross-elasticity of demand" are distinct concepts. *Staples*, 970 F. Supp. at 1074. "Reasonable interchangeability" asks whether products or services perform the same function. "Cross-elasticity of demand" asks whether demand for one product is affected by the

price of the other product, and seeks to determine whether customers would in fact substitute one for the other in the event of small changes in price. *Id.*

23. Within the broad range of "reasonably interchangeable" products, "well-defined submarkets may exist which, in themselves, *constitute product markets for antitrust purposes*." *Brown Shoe*, 370 U.S. at 325, *citing U.S. v. E.I. du Pont de Nemours & Co.*, 353 U.S. 586, 593-95 (1956); *see Staples*, 970 F. Supp. at 1075-81 (finding submarket of office supply superstores within broader market of sale of office supplies).

24. Reasonable interchangeability alone, *i.e.*, the fact that some products may superficially (or even on careful examination) appear to be similar in use, or have similar "attributes," does not warrant including a purportedly interchangeable substitute in the product market. "Functional interchangeability," *i.e.*, whether products are similar in character and use, defines the outer bounds of the product market, not the product market itself. "[T]he Supreme Court did not stop after finding a high degree of functional interchangeability" in *du Pont*, 351 U.S. at 400, and this Court did not stop with functional interchangeability in *Staples*, even though identical office supplies could be purchased through vendors other than the merging office supply superstore chains. 970 F. Supp. at 1074.

25. Reliance on functional interchangeability alone can result in significant market definition error, *e.g.*, the inclusion of all methods of transportation (cars, bicycles, feet) when evaluating a merger of Ford and General Motors. *Allen-Myland, Inc. v. International Business Machines Corp.*, 33 F.3d 194, 206 (3d Cir.), *cert. denied*, 513 U.S. 1066 (1994). "The key test for determining whether one product is a substitute for another is whether there is a cross-

elasticity of demand between them: in other words, whether the demand for the second good would respond to changes in the price of the first." *Id*.

26. Courts have frequently recognized that apparent "reasonable interchangeability" is insufficient to define markets of consumer goods, where consumer preferences (and not merely "reasonable interchangeability") dictate consumer choices. *See, e.g., Borden, Inc. v. FTC*, 674 F.2d 498, 507-10 (6th Cir. 1982) (fresh lemons not in the same market as reconstituted lemon juice, i.e., ReaLemon), *vacated and remanded for entry of consent order*, 461 U.S. 940 (1983); *Tasty Baking Co. v. Ralston Purina, Inc.*, 653 F. Supp. 1250, 1257-60 (E.D. Pa. 1987) (snack cakes and pies constitute an "'economically significant submarket,'" which does not include donuts, danish, cookies, brownies, etc.); *Coca-Cola*, 641 F. Supp. at 1133 (rejecting argument that carbonated soft drinks are "reasonably interchangeable" with all other beverages including tap water).

27. Products that are "reasonably interchangeable" may be in different antitrust markets because of the price disparity between the two products. For example, the Supreme Court found that aluminum cable constituted a distinct submarket from copper cable (and therefore a distinct market for Clayton Act purposes), even though "each does the job equally well," in light of the fact that copper cable was 50% more expensive than aluminum cable. *U.S. v. Aluminum Co. of America*, 377 U.S. 271, 276-77 (1964) ("here, where insulated aluminum conductor pricewise stands so distinctly apart, to ignore price in determining the relevant line of commerce is to ignore the single, most important, practical factor of the business"). The same

rule would place loose leaf in a distinct product market from premium snuff, which is about 75% more expensive than premium loose leaf, PFF ¶ 24, even if "each does the job equally well."

28. The relevant product market "must be drawn narrowly to exclude any other product to which, within reasonable variations in price, only a limited number of buyers will turn." *Times-Picayune Pub. Co. v. United States*, 345 U.S. 594, 612 n.31 (1953); *Merger Guidelines* § 1.11 ("the Agency will begin with each product (narrowly defined) produced or sold by each merging firm and ask what would happen if a hypothetical monopolist of that product imposed at least a 'small but significant and nontransitory' increase in price," adding products only until such a price increase would be profitable). As Areeda puts it:

> the "line of commerce" language of § 7 of the Clayton Act and the general principles of merger policy require the government to identify *some* grouping of sales that constitutes a relevant market in which prices might rise as a consequence of the merger. That a larger group of sales might also constitute a market is beside the point.

4 Areeda ¶ 929d at 130.

29. "[I]t is ordinarily quite difficult to measure cross-elasticities of supply and demand accurately. Therefore, it is usually necessary to consider other factors that can serve as useful surrogates for cross-elasticity data." *U.S. Anchor Mfg., Inc. v. Rule Indus., Inc.*, 7 F.3d 986, 995 (11th Cir. 1993), *quoting International Tel. & Tel. Co.*, 104 F.T.C. 280, 409 (1984), *cert. denied*, 512 U.S. 1221 (1994). Since it is ordinarily quite difficult to measure cross-elasticity (or own-elasiticy) directly, there is no burden on the government to do so.

30. Because it is usually difficult to measure cross-elasticities of demand, courts also have identified "practical indicia" of product market boundaries, such as

> industry or public recognition of the submarket [or market] as a separate economic entity, the product's particular characteristics and uses, unique production facilities, distinct customers, sensitivity to price changes, and specialized vendors.

Brown Shoe, 370 U.S. at 325; *see also Cardinal Health,* 12 F. Supp. 2d at 46; *Staples,* 970 F. Supp. at 1075; *Coca-Cola,* 641 F. Supp. at 1133 (citing cases).

31. "Analysis of the market is a matter of business reality -- a matter of how the market is perceived by those who strive for profit in it." *Coca-Cola,* 641 F. Supp. at 1132 & n.8 (citing cases). The defendants' internal business documents reflect the fact that their primary competitive focus is on other loose leaf chewing tobacco ("loose leaf"), not on moist snuff or on the broader "smokeless tobacco" market defendants advocate in this case. PFF ¶¶ 53-63. Those documents are far more probative of the "business reality" of this market than is the self-serving testimony of defendants' businessmen and consultants.

32. In defining markets, courts and the antitrust agencies normally look at all available evidence, including in particular the ordinary course of business documents of the merging parties, *e.g., Warner*, 742 F.2d at 1163 ("record company documents"); *Cardinal*, 12 F. Supp. 2d at 49; *Staples*, 970 F. Supp. at 1076; *Olin Corp.*, 113 F.T.C. 400, 597 (1990), *aff'd sub nom. Olin Corp. v. FTC,* 986 F.2d 1295 (9th Cir. 1993), *cert. denied*, 510 U.S. 1110 (1994); and on the testimony of competitors and customers (including intermediate purchasers such as retailers). *E.g., PPG*, 798 F.2d at 1504 ("buyers' and sellers' perceptions"); *Warner*, 742

F.2d at 1163; *Borden*, 674 F.2d at 507-08 ("buyers for large supermarket chains and representatives of processed lemon juice companies").

33. One surrogate for cross-elasticity data is the "hypothetical monopolist" test, *i.e.*, to examine whether customers would switch to other products in response to a hypothesized small but significant, non-transitory increase in price ("SSNIP") for the products of a hypothetical monopolist consisting of the merging firms and all other firms to which customers would switch. *Merger Guidelines* § 1.11; *see, e.g., Olin Corp. v. FTC*, 986 F.2d 1295, 1301-03 (9th Cir. 1993) (adopting and applying "5% test"), *cert. denied*, 510 U.S. 1110 (1994).[29] If loose leaf consumers would not reduce loose leaf consumption by an amount sufficient to make the price increase unprofitable, the market is established. *Merger Guidelines* § 1.11.

34. The "hypothetical monopolist" or "5% test" cannot normally be applied with mathematical precision. "Although the antitrust enforcement agencies attempt to apply this hypothetical monopolist test, most often, the data simply is not there to do so." ABA Section of Antitrust Law, *Mergers and Acquisitions: Understanding the Antitrust Issues* 48-49 (2000). Therefore, the *Merger Guidelines* themselves state:

> In considering the likely reaction of buyers to a price increase, the Agency will take into account all relevant evidence, including, but not limited to, the following:

[29] While the *Merger Guidelines* are not binding on the courts, courts have considered them in determining the impact on competition of a proposed acquisition. *See PPG*, 798 F.2d at 1503; *University Health*, 938 F.2d at 1211 n.12; *Olin*, 986 F.2d at 1299; *Cardinal Health*, 12 F. Supp. 2d at 53 (measuring market shares), 55-58 (analyzing entry), 61-62 (analyzing efficiencies).

> (1) evidence that buyers have shifted or have considered shifting purchases between products in response to relative changes in price or other competitive variables;
>
> (2) evidence that sellers base business decisions on the prospect of buyer substitution between products in response to relative changes in price or other competitive variables . . . ."

Merger Guidelines § 1.0. There is no requirement in the *Guidelines* or in the law that the government show (either on application for a preliminary injunction or at trial on the merits) precisely how many consumers would or would not substitute what products in response to a 5% price increase.

35. A loose leaf monopolist could profitably impose at least a small but significant increase in price (here 5%, or 10 cents per pouch) for a nontransitory period of time (one year). PFF ¶¶ 69-71 *supra*. The test considers a "hypothetical monopolist" in order to separate the effect of competition *within* the hypothesized product market from competition from products and suppliers *outside* the hypothesized product market.

36. Price differences may, in the appropriate case, define different product markets. *Alcoa*, 377 U.S. 271, 276-77 (1964) (50% price difference). Therefore, in applying the "narrowest market" principle, the Court should consider separately whether substitution to *premium* moist snuff (UST's Skoal or Copenhagen) or *price value* moist snuff (Swedish Match's Timber Wolf, Conwood's Kodiak, UST's Red Seal and Rooster, etc.) would constrain a price increase on loose leaf.

37. It is implausible that loose leaf customers would substitute any significant portion of loose leaf consumption by switching their consumption to *premium* moist snuff in response to a 10 cent price increase on loose leaf. The price differential between premium loose leaf and premium moist snuff, even after a price increase on loose leaf relative to snuff, would still be approximately $1.45. There is no evidence (only speculation) to suggest that *any* consumer would substitute premium snuff for premium loose leaf in response to a price increase on loose leaf. PFF ¶¶ 69-72.

38. Substitution by loose leaf users to price value snuff (itself an unlikely proposition) would not make a price increase by a hypothetical monopolist unprofitable, since approximately 78% of price value moist snuff is sold by loose leaf firms (Swedish Match, Conwood and Swisher), *i.e.*, firms within the hypothetical monopolist. PFF ¶ 74. The purpose of the hypothetical monopolist test is to determine whether "the reduction in sales of the product would be large enough that a hypothetical monopolist would not find it profitable to impose such an increase in price." *Merger Guidelines* § 1.0. It would be a perverse result, unsupported by law, economics or policy, to ignore the fact that the substitution was to the hypothetical monopolists' own products, and no authority supports such a result.

39. Defendants urge the court to rely on econometric estimates of the elasticity of demand of loose leaf prepared by defendants' expert, Kenneth Train. Dr. Train and defendants' other experts have tried and failed, over a period of at least five months, to produce a properly conducted econometric analysis. PFF 155-215. Dr. Train's "best estimate," presented at trial, differed in methodology and result from the estimates he presented in both of his expert reports

during the discovery period. PFF 131-150. That "best estimate" failed to implement the accepted methodology for conducting two-stage least squares regressions, PFF 193-215; admittedly failed to produce properly calculated measures of statistical confidence (standard errors), but instead produced standard errors that are "indeterminate," PFF 251; admittedly failed to produce an estimate that was statistically significantly different from any suggested benchmark at conventional levels of statistical confidence, PFF 240-253; only produced an estimate that was claimed to be statistically significantly different from *any* benchmark by (1) moving the benchmark during the trial, and (2) adopting a level of statistical confidence unknown in science, PFF 227-230; failed to provide an econometric model that is not sensitive to small changes in model specification, PFF 177; failed to offer any justification for the instrumental variables used, PFF 161-170; and implied that loose leaf firms are today charging more than the *monopoly* price for loose leaf – a result inconsistent with basic economic principles. PFF 302-306.

40. Expert opinion that is unreliable should not be relied upon. *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993). The *Daubert* rule applies to all expert testimony, not only "scientific" testimony, *Kumho Tire Co. v. Carmichael*, 526 U.S. 137, 152 (1999), and *Daubert* has been applied to exclude economic testimony in antitrust cases. *E.g.*, *Concord Boat Corp. v. Brunswick Corp.*, 207 F.3d 1039, 1057 (8th Cir. 2000); *Blue Dane Simmental Corp. v. American Simmental Ass'n*, 178 F.3d 1035, 1040-41 (8th Cir. 1999); *Coastal Fuels of Puerto Rico, Inc. v. Caribbean Petroleum Corp.*, 175 F.3d 18, 34 (1st Cir. 1999).

41. The standard level of statistical significance customarily employed by courts (as well as by statisticians in a wide variety of fields, including economics) is to determine whether

the estimate is statistically significantly different from the benchmark at the 95% confidence (5% significance, or two-standard-deviation) level. *Castaneda v. Partida*, 430 U.S.482, 496 n.17 (1977) ("as a general rule for such large samples, if the difference between the expected value and the observed number is greater than two or three standard deviations, then the hypothesis that the jury drawing was random would be suspect to a social scientist").

42. Courts, like scientists, should consider the precision of any statistical estimate before relying on statistical studies. *Hazelwood School District v. United States*, 433 U.S. 299, 312 n.17 (1977) (discussing requirement of two to three standard deviations); *Castaneda v. Partida*, 430 U.S. at 496 n.17; *Brock v. Merrell Dow Pharmaceuticals, Inc.*, 874 F.2d 307, 312 (5th Cir. 1989) ("it is important to remember that the confidence interval attempts to express mathematically the magnitude of possible error . . . and therefore a study . . . must always be considered in light of its confidence interval before one can draw conclusions from it"), *cert. denied*, 494 U.S. 1046 (1990); *Moultrie v. Martin*, 690 F.2d 1078, 1082-83 (4th Cir. 1982) ("the courts of this circuit must apply a standard deviation analysis . . . before drawing conclusions from statistical comparisons . . . . Without the use of hypothesis testing, a court may give weight to statistical differences which are actually mathematically insignificant").

43. Therefore, statistical and econometric evidence that fails to produce statistically significant results at conventional levels of statistical confidence are normally not submitted to juries and inappropriate for reliance by finders of fact. *Allen v. Pennsylvania Engineering Corp.*, 102 F.3d 194, 197 (5th Cir. 1996); *Brock v. Merrell Dow*, 874 F.2d at 312 (reversing denial of judgment n.o.v. for defendant where plaintiff's expert evidence showed "confidence interval"

indicative of equal likelihood of no causal link between plaintiff's birth defects and defendant's product); *Richardson v. Richardson-Merrell, Inc.*, 857 F.2d 823, 830-31 (D.C. Cir. 1988) (affirming grant of judgment n.o.v. where there was no statistically significant expert evidence linking plaintiff's birth defects to defendant's product), *cert. denied*, 493 U.S. 882 (1989); *Kelley v. American Heyer-Schulte Corp.*, 957 F. Supp. 873, 878 (W.D. Tex. 1997) (motion to exclude evidence where "confidence interval less than one for the relative risk linking breast implants" to plaintiff's illness).

44. Statistically insignificant results cannot be relied upon because they might "suggest" an answer. *Allen*, 102 F.3d at 197; *Daubert*, 43 F.3d at 1321. In those cases the Courts of Appeal rejected expert testimony that found published studies "suggestive"; *a fortiori*, made-for-litigation studies that fail to find statistically significant results should not be relied on by courts.

45. Expert testimony that fails to follow conventional scientific method constitutes unreliable evidence. When an expert fails to follow accepted methodology, the expert can expect his opinion to be excluded from evidence. As Judge Posner observed in excluding expert testimony, if "an expert proposes to depart from the generally accepted methodology of his field and embark upon a sea of scientific uncertainty, the court may appropriately insist that he ground his departure in demonstrable and scrupulous adherence to the scientist's creed of meticulous and objective inquiry." *Braun v. Lorillard Inc.*, 84 F.3d 230, 235 (7th Cir.), *cert. denied*, 519 U.S. 992 (1996).

46. In light of Dr. Train's failure to follow accepted practice, and the lack of statistical significance of his results, no reliance should be placed on Dr. Train's results. The unreliability of these econometric results is confirmed by the fact that they are inconsistent with the weight of the documentary and testimonial evidence.

47. Loose leaf constitutes a relevant product market under the antitrust laws and a "line of commerce" within the meaning of Clayton Act § 7.

IV . THERE IS A SUBSTANTIAL LIKELIHOOD THE ACQUISITION MAY LESSEN COMPETITION IN VIOLATION OF SECTION 7 OF THE CLAYTON ACT

A. The Acquisition Would Significantly Increase Market Concentration, Giving Rise to a Presumption of Anticompetitive Effect

48. The United States as a whole constitutes a relevant geographic market within the meaning of the antitrust laws and a "section of the country" within the meaning of Section 7 of the Clayton Act. Stipulations ¶ 4; PFF 307.

49. "[M]arket shares which companies may control by merging is one of the most important factors to be considered" when analyzing the likely effects of a merger. *Brown Shoe*, 370 U.S. at 343; *see Cardinal*, 12 F. Supp. 2d at 52. A merger that significantly increases market shares and market concentration beyond already high levels is so inherently likely to lessen competition substantially that it is presumptively unlawful under Section 7 of the Clayton Act, and "must be enjoined in the absence of evidence clearly showing that the merger is not likely to have such anticompetitive effects." *Philadelphia Nat'l Bank*, 374 U.S. at 363; *Baker Hughes*, 908 F.2d at 982-83; *PPG*, 798 F.2d at 1502-03.

50. A merger or acquisition that significantly increases market shares and concentration to high levels creates a presumption that the merger is illegal under Section 7 of the Clayton Act. *Philadelphia Nat'l Bank*, 374 U.S. at 363; *Baker, Hughes*, 908 F.2d at 982-83 (D.C. Cir. 1990); *PPG*, 798 F.2d at 1502-03; *Cardinal*, 12 F. Supp. 2d at 52.

51. Market concentration can be measured using the Herfindahl-Hirschman Index ("HHI"), as adopted by the antitrust enforcement agencies. *Merger Guidelines* § 1.5. Courts have likewise adopted and relied on the HHI as a measure of market concentration. *E.g., PPG*, 798 F.2d at 1503; *University Health*, 938 F.2d at 1211 n.12 (HHI is "most prominent method" of measuring market concentration); *Staples*, 970 F. Supp. at 1081-82; *Cardinal Health*, 12 F. Supp. 2d at 53-54; *Ivaco*, 704 F. Supp. at 1419. The HHI is calculated by summing the squares of the market shares of all firms in the market. An HHI over 1800 (post-merger) indicates a highly concentrated market, and an HHI increase of more than 100 is a sufficiently significant increase in concentration to give rise to the *Philadelphia Nat'l Bank* presumption. *Merger Guidelines* § 1.51(c).

52. Loose leaf is a differentiated product market. PFF 325. In a differentiated product market, concentration is properly measured based on shares of dollar sales, rather than unit sales or another measure. PFF 309; *Merger Guidelines* § 1.41. Dollar sales rather than pounds or units takes account of product differentiation. PFF 309. Moreover, the Supreme Court has recognized that dollar sales are "a prediction of future competitive strength," *U.S. v. General Dynamics Corp.*, 415 U.S. 486, 501 (1974), and "the primary index of market power." *Brown Shoe*, 370 U.S. at 322 n.38.

53. The acquisition by Swedish Match of the National Assets would significantly increase concentration in the market for loose leaf in the United States, and result in a highly concentrated market. The Acquisition would result in an HHI of 4733, increasing by 1514. PFF 476. Swedish Match would have approximately 60% of dollar sales in such a market, based on 1999 data. Two firms – Swedish Match and Conwood – would have more than 90% of dollar sales in such a market, based on 1999 data. *Id.* Mergers resulting in increases of concentration greater than 1800 and post-merger concentration levels greater than 100 are presumed to be "likely to create or enhance market power or facilitate its exercise." *Merger Guidelines* § 1.51(c). Post-merger concentration levels of the magnitude found here have been described as "overwhelming" by this Circuit, *PPG*, 798 F.2d at 1502-03, and Swedish Match's post-merger market share would be *double* the share that the Supreme Court found to give rise to a presumption of illegality. *Philadelphia Nat'l Bank*, 374 U.S. at 364 ("without attempting to specify the smallest market share which would be considered to threaten undue concentration, we are clear that 30% presents that threat").

54. Courts, including this court, have barred mergers resulting in substantially lower concentration levels. *Elders Grain*, 868 F.2d at 902 (acquisition increased market shares of largest firm from 23% to 32%); *Hospital Corp.*, 807 F.2d at 1384 (acquisition increased market share of second largest firm from 14% to 26%); *Warner Communications*, 742 F.2d at 1163 (acquisition increased market share of second largest firm from 19% to 26%; four-firm concentration ratio of 75%); *Cardinal Health*, 12 F. Supp.2d at 52 (mergers increasing HHIs from 1648 to 2450 and from 1648 to 2277; increasing market shares from 25% to 37% and from 22% to 40%); *United States v. United Tote, Inc.*, 768 F. Supp. 1064, 1069-70 (D. Del. 1991)

(merger between second and third largest firms in 3-firm market with 13% and 27% of sales, increasing the HHI from 3940 to 4640, held presumptively unlawful); *FTC v. Bass Bros. Enters., Inc.*, 1984-1 Trade Cas. (CCH) ¶ 66,041, at 68,609-10 (N.D. Ohio 1984) (acquisition increased market share of second largest firm from 20.9% to 28.5%, increasing HHI from 1802 to 2320).

55. Courts have found violations where the merged firm would have had a market share under 30%. *See Hospital Corp.*, 807 F.2d at 1384; *Warner Communications*, 742 F.2d at 1163; *RSR Corp. v. FTC*, 602 F.2d 1317, 1325 (9th Cir. 1979) (enjoining merger which increased market share from 12% to 19%); *Liggett & Meyers, Inc. v. FTC*, 567 F.2d 1273, 1275-76 (4th Cir. 1977) (post-merger share of 15.4%). In *Cardinal Health*, which involved two-separate mergers, the Court would have enjoined the mergers based on market shares below the 30% threshold. The Court assessed concentration by excluding large pharmacies that could self-warehouse. In a market of sales to independent pharmacies the mergers increased market shares from 30% to 39% and 14% to 25%. In a market of sales to institutional facilities, the mergers increased market shares from 13% to 26% and from 18% to 37%.

56. Since the FTC has proven that the Acquisition would significantly increase concentration in one or more relevant product markets in one or more sections of the country, the Acquisition is presumed to violate the Clayton Act. *Philadelphia Nat'l Bank*, 374 U.S. at 363; *Baker, Hughes*, 908 F.2d at 982; *Cardinal*, 12 F. Supp. 2d at 52 ("under Section 7 of the Clayton Act, a *prima facie* case can be made if the government establishes that the merged entities will have a significant percentage of the relevant market–enabling them to raise prices above competitive levels").

57. The Supreme Court explained the rationale for this principle in *United States v. General Dynamics Corp.*, 415 U.S. 486, 497 (1974):

> The effect of adopting this approach to a determination of a "substantial" lessening of competition is to allow the Government to rest its case on a showing of even small increases of market share or market concentration in those industries or markets where concentration is already great or has been recently increasing, since "if concentration is already great, the importance of preventing even slight increases in concentration is correspondingly great." *United States v. Aluminum Co. of America*, 377 U.S. 271, 279 *citing United States v. Philadelphia National Bank*, 374 U.S. at 365, n.42.

58. Defendants have not produced significant evidence rebutting the presumption of violation. *Baker, Hughes*, 908 F.2d at 988; *Cardinal Health*, 12 F. Supp. 2d at 54; *Staples*, 970 F. Supp. at 1083. The Court of Appeals for this Circuit has recognized that the presumption is not automatically rebutted by the presentation of *any* evidence by the defendant, however scant. *Baker, Hughes*, 908 F.2d at 988 ("if the totality of a defendant's evidence suggests that entry will be slow and ineffective, then the district court is unlikely to find the prima facie case rebutted").[30]

59. "To meet their burden, the defendants must show that the market-share statistics . . . 'give an inaccurate prediction of the proposed acquisition's probably effect on competition.'" *Cardinal*, 12 F. Supp. 2d at 54 (quoting *Staples*, 970 F. Supp. at 1083). The showing defendants must make to rebut the presumption that flows from a substantial increase in concentration is an evidentiary showing; defendants cannot rebut the presumption with mere argument. This Court's

[30] The Court of Appeals recognized that the Supreme Court has described the presumption from concentration as heavy, and requiring a clear showing to rebut. *Id*. at 989-90. The Court of Appeals nonetheless concluded that a "clear" showing is unnecessary, even while recognizing that the Supreme Court has not overruled its precedents. *Id.* at 990-91.

decision in *Cardinal* makes that point clear: The Court (per Judge Sporkin) carefully considered defendants' evidence on entry, among other defenses, determined that the evidence was insufficient to demonstrate that entry would be sufficient to restore competition, and concluded that "the record developed at trial is not strong enough for the Court to conclude that the Defendants' claim of entry and expansion is sufficient to rebut the Government's prima facie case." 12 F. Supp. 2d at 58. Likewise, "although this Court finds that buyer power exists in the whole market . . . , it alone cannot rebut the Government's prima facie case." *Id.* at 61. Thus, as *Cardinal* clearly holds, merely coming forward with any evidence is insufficient to rebut the prima facie case made from a showing of market concentration; defendants must come forward with sufficient evidence, in light of all the evidence, to support their defenses. *Accord Ivaco*, 704 F. Supp. at 1423-29 (reviewing and rejecting defendants' arguments that the market would continue to be competitive).

60. Alternatively, *if* the Court finds that the defendants have succeeded in rebutting the presumption of violation, the Commission has carried its ultimate burden of persuasion that the Acquisition would significantly reduce competition. *See* PCL 61-77 below.

B. The Acquisition Would Result in a Significant Lessening of Competition

61. Swedish Match and National are current, actual competitors in the manufacture and sale of loose leaf. PFF 328-35. The Acquisition would eliminate that current, actual competition.

62. In a market with few players and no significant likelihood of entry, a merger that eliminates one of a small number of players is a matter of great concern. In *Coca-Cola*, this

Court enjoined Coca-Cola's proposed merger of Dr Pepper, which had only a 4.6% market share because "if the proposed acquisition is consummated there will be one less independent factor in the market to challenge the dominance of Coca-Cola Company." 641 F. Supp. at 1138.

63. The Acquisition would result in the elimination of an aggressive competitor (National) in a highly concentrated market, *see* PFF 328-37, which increases the risk that prices will rise after the Acquisition. *FTC v. Food Town Stores, Inc.*, 539 F.2d 1339, 1345 (4th Cir. 1976) (enjoining merger when merging firms have been "aggressive competitors in the past," opening up stores in each other's markets and increasing sales by greater than the industry sales average).

64. The presumption that flows from showing that the Acquisition would significantly increase concentration cannot be overcome merely by arguing that the market would remain competitive. Once the government makes out a prima facie case of market concentration, "the burden was then upon [defendants] to show that the concentration ratios . . . did not accurately depict the economic characteristics of the . . . market." *Marine Bancorporation*, 418 U.S. at 631. "To meet their burden, the defendants must show that the market-share statistics . . . 'give an inaccurate prediction of the proposed acquisition's probable effect on competition.'" *Cardinal*, 12 F. Supp. 2d at 54, *quoting Staples*, 970 F. Supp. at 1083; *see Baker, Hughes*, 908 F.2d at 991.

65. In *Marine Bancorporation*, the Supreme Court specifically held that the merging defendants had failed to rebut the presumption. In that case, the district court had concluded that the Spokane, Washington, banking market was "highly competitive" notwithstanding the fact that the merger would have left three firms with 92% of total deposits. Indeed, the district court

found that "'the market does not suffer from anticompetitive practices attributable to undue market power.'" 418 U.S. at 631 (quoting district court opinion). The Supreme Court found that the district court erred in that conclusion, finding that defendants had *not* sufficiently rebutted the structural presumption:

> We conclude that by introducing evidence of concentration ratios of the magnitude of those present here the Government established a prima facie case that the Spokane market was a candidate for the potential-competition doctrine. On this aspect of the case, the burden was then upon [defendants] to show that the concentration ratios, which can be unreliable indicators of actual market behavior, see U.S. v. General Dynamics . . . , did not accurately depict the economic characteristics of the Spokane market, and the District Court erred by holding to the contrary. *Appellees introduced no significant evidence of the absence of parallel behavior in the pricing* or providing of commercial bank services in Spokane.

418 U.S. at 631-32 (emphasis added).[31]

66. Here, despite defendants' assertions that the loose leaf market is "competitive," the FTC introduced uncontroverted evidence that loose leaf firms follow each other's list price increases, PFF 322, and defendants concede that the competitive "drivers" they identify in the loose leaf market have not eroded prices or margins. PFF 320. Therefore, following *Marine Bancorporation*, it cannot be said that the presumption from concentration has been rebutted.

67. The loose leaf market is not fully competitive today. It is instead characterized by oligopolistic behavior, in which a small number of firms monitor each others' prices, follow

[31]The Supreme Court ultimately affirmed the district court's decision, concluding that the difficulty of entry into commercial banking made the government's potential competition theory (that one of the merging firms would have entered the Spokane banking market but for the merger) to be unsupported. *Id.* at 638.

Swedish Match's price increases, have high levels of excess capacity and high margins and profits. PFF 319-22. These firms have not expanded output to reduce prices, even in the face of falling demand. *Id.* According to defendants' economist, loose leaf firms refrain from lowering prices in fear of reactions of their rivals. PFF 368. Since the market is not fully competitive today, the Court cannot assume that it would be competitive after the Acquisition.

68. The merger is likely to increase Swedish Match's ability to raise loose leaf prices unilaterally. In a differentiated products market, such as loose leaf, the combination of two significant competitors increases the ability of the merged firm to raise price on its own product, because sales that would have been lost to the acquired firm are now recaptured by the merged firm. *Merger Guidelines* § 2.211; *see* ABA Section of Antitrust Law, *Mergers and Acquisitions: Understanding the Antitrust Issues* 104-13 (2000); 4 Areeda ¶ 914; Baker, "Product Differentiation through Space and Time: Some Antitrust Policy Issues," 42 *Antitrust Bull.* 177 (1997); Shapiro, "Mergers with Differentiated Products," 10 *Antitrust* 23 (1996); Willig, "Merger Analysis, Industrial Organization Theory, and Merger Guidelines," *Brookings Papers on Economic Activity* 281, 312 n.43 (1991); *cf. United Tote*, 768 F. Supp. at 1071 (rejecting argument that merger would not reduce competition in light of finding that merging firms were direct, significant competitors); *United States v. Ivaco, Inc.*, 704 F. Supp. 1409, 1419-20 (D. Mich. 1989) (parties to joint venture were "especially" vigorous price competitors, viewing "each other as their primary competitor" in the relevant market).

69. Swedish Match and Conwood would be able to coordinate pricing and bidding after the Acquisition, in a manner that will reduce competition. There is already reason to

believe that coordination is feasible. Other loose leaf firms tend to follow Swedish Match's price increases, and "promotions" and other discounts do not result in falling prices – despite the declining demand and excess capacity relied on by defendants. PFF 315, 319. Defendants' own expert believes that loose leaf margins are higher than they otherwise would be, because loose leaf firms take into account the reactions of their rivals. PFF 368. The absence of evidence rebutting parallel conduct means that the concentration presumption is not rebutted. *Marine Bancorporation*, 418 U.S. at 631-32.

70. Courts recognize that "significant market concentration makes it 'easier for firms in the market to collude, expressly or tacitly, and thereby force price above or farther above the competitive level.'" *University Health*, 938 F.2d at 1218 n.24. "Where rivals are few, firms will be able to coordinate their behavior, either by overt collusion or implicit understanding, in order to restrict output and achieve profits above competitive levels." *PPG*, 798 F.2d at 1503; *see also Cardinal*, 12 F. Supp. 2d at 45 n.8. As the Supreme Court has observed as concentration increases "greater is the likelihood that parallel policies of mutual advantage not competition will emerge." *Alcoa*, 377 U.S. at 280.

71. Tacit coordination is more likely where firms have a better opportunity to monitor their competition and enforce cooperative pricing strategies. The easiest environment in which competitors can engage in coordinated interaction arises when a merger between companies results in a duopoly. It is fundamental that "it is easier for two firms to collude without being detected than for three to do so." *American Hospital Supply Corp. v. Hospital Products Ltd.*, 708 F.2d 589, 602 (7th Cir. 1986).

72. Tacit coordination is particularly a concern where entry barriers are significant, as in this case. Where entry into a market is slow, "colluding sellers need not fear that any attempt to restrict output in order to drive up price will be promptly nullified by new production." *Elders Grain*, 868 F.2d at 905; *Warner Communications*, 742 F.2d at 1162-63; *United States Steel Corp. v. FTC*, 426 F.2d 592, 604 (6th Cir. 1970). High entry barriers protect "the market power of existing firms and intensif[y] their ability to wield oligopolistic and anticompetitive practices with relative impunity." *Id.*; *see also Fruehauf Corp. v. FTC*, 603 F.2d 345, 357 (2d Cir. 1979) (high entry barriers may be a signal that a particular merger carries a potential for impairing competition).

73. Courts have found violations based on concerns over coordination where the decrease in the number of competitors was less significant than this case. *See Elders Grain,* 868 F.2d at 902 (reduction from 6 to 5 competitors); *Hospital Corp. of America*, 807 F.2d at 1387 (reduction from 11 to 7 competitors); *Bass Bros.*, 1984-1 Trade Cas. ¶ 66,041, at 68,609-10 (reduction from 7 to 5).

74. The government need not show a likelihood of explicit collusion. Section 7 seeks to prevent market structure that enhances the ability to engage in both explicit and tacit collusion. As this Court has observed, "The relative lack of competitors eases coordination of actions, explicitly *or implicitly*, among the remaining few to approximate the performance of a monopolist." *PPG*, 628 F. Supp. at 885 n.9 (emphasis added). *See also Brooke Group*, 509 U.S. at 229-30 ("[i]n the § 7 context, it has long been settled that excessive concentration, and the oligopolistic price coordination it portends, may be the injury to competition the Act

prohibits"); *Hospital Corp.*, 807 F.2d at 1386; 4 Areeda ¶ 916, at 85 (Section 7 "is concerned with far more than 'collusion' in the sense of an illegal conspiracy; it is very much concerned with 'collusion' in the sense of tacit coordination not amounting to conspiracy.").

75. Coordination need not be perfect to cause anticompetitive harm. Section 2.11 of the *Merger Guidelines* observe that

> Terms of coordination need not perfectly achieve the monopoly outcome in order to be harmful to consumers. Instead, the terms of coordination may be imperfect and incomplete -- inasmuch as they omit some participants, omit some dimensions of competition, omit some customers, yield elevated prices short of monopoly levels, or lapse into episodic price wars -- and still result in significant competitive harm.

76. Defendants generally have argued in this case that the Acquisition should be allowed because Conwood would continue to act as a vigorous competitor. Any such argument -- that two competitors are enough -- is fundamentally inconsistent with Section 7 of the Clayton Act, which was intended by Congress to prevent even *incipient* lessenings of competition. *Philadelphia Nat'l Bank*, 374 U.S. at 362.

77. The Acquisition likely would lessen competition by allowing Swedish Match to become "category manager" for loose leaf, as Swedish Match hopes, PFF 414, thereby disadvantaging its loose leaf competitors seeking shelf space. PFF 409-10. Mergers that would tend to exclude competitors give rise to antitrust concern. *See Brown Shoe*, 370 U.S. at 323-24 (vertical merger that forecloses competitors from the market "may act as a 'clog on competition'"); 1 ABA Section of Antitrust Law, *Antitrust Law Developments* 351-55 (4th ed. 1997); *cf. Aspen Skiing Co. v. Aspen Highlands Skiing Corp.*, 472 U.S. 585, 605 (1985)

(exclusion of competitor "on some basis other than efficiency," resulting in impairment of competition, constitutes monopolization under Sherman Act § 2, 15 U.S.C. § 2). Indeed, UST's "category management" activities have been held to constitute unlawful monopolization. *Conwood Co. v. U.S. Tobacco Co.*, ___ F. Supp. 2d ___, 2000 U.S. Dist. LEXIS 12797 (W.D. Ky. 2000). This merger raises the risk that it would place Swedish Match in a position to exclude competition for shelf space in loose leaf in the same manner that UST has been found to have excluded competition in snuff.[32]

C. The Existing Fringe Is Unlikely To Constrain the Defendants

78. The mere existence of a "fringe" of two small competitors (Swisher and Stoker) does not of itself obviate the anticompetitive concerns arising from the Acquisition, as the Supreme Court has explicitly recognized:

> Of equally little value, we think, are the assurances offered by appellee's witnesses that customers dissatisfied with the services of the resulting bank may readily turn to the 40 other banks in the Philadelphia area. In every case short of outright monopoly, the disgruntled customer has alternatives; even in tightly oligopolistic markets, there may be small firms operating. A fundamental purpose of amending § 7 was to arrest the trend toward concentration, the tendency to monopoly, before the customer's alternatives disappeared through merger, and

[32]The courts have never countenanced a potential antitrust violation as a "cure" for other illegal acts. *See Kiefer-Stewart Co. v. Joseph E. Seagram & Sons, Inc.*, 340 U.S. 211, 214 (1951) ("If petitioner and others were guilty of infractions of the antitrust laws, they could be held responsible in appropriate proceedings brought against them by the Government or by injured private persons."). In *United States v. Socony-Vacuum Oil Co.*, 310 U.S. 150, 221-22 (1940), the Supreme Court stated that "genuine or fancied competitive abuses [could not constitute] a legal justification for [particular price-fixing] schemes . . ." *See also American News Co. v. FTC*, 300 F.2d 104, 110 (2d Cir.)("resort to practices outlawed by the antitrust laws cannot be justified by the fact that the practices were a defense to illegal activity."), *cert. denied*, 371 U.S. 824 (1962).

> that purpose would be ill-served if the law stayed its hand until 10, or 20, or 30 more Philadelphia banks were absorbed.

Philadelphia Nat'l Bank, 374 U.S. at 367. The Supreme Court therefore enjoined the merger of two banks that would leave the market's top two banks with 59% of the market between them. *Id.* at 365.

79. More recently, Judge Posner of the Court of Appeals of the Seventh Circuit, a noted antitrust expert, has explained why the existence of small, fringe competitors does not obviate the concerns posed by a merger of the market's principal competitors:

> Three firms having 90 percent of the market can raise prices with relatively little fear that the fringe of competitors will be able to defeat the attempt by expanding their own output to serve customers of the three large firms. An example will show why. To take away 10 percent of the customers of the three large firms in our hypothetical case, thus reducing those firms' aggregate market share from 90 percent to 81 percent, the fringe firms would have to increase their own output by 90 percent (from 10 to 19 percent of the market). This would take a while, surely, and would force up their costs, perhaps steeply -- the fact that they are so small suggests that they would incur sharply rising costs in trying almost to double their output, and that is the prospect which keeps them small. So the three large firms could collude to raise price (within limits of course) above the competitive level without incurring the additional transaction costs and risk of exposure that would result from trying to coordinate their actions with that of their small competitors.

United States v. Rockford Mem. Corp., 898 F.2d 1278, 1283-84 (7th Cir.), *cert. denied*, 498 U.S. 920 (1990). The same analysis applies here, on the same numbers: The two largest firms after the Acquisition (Swedish Match and Conwood) would have approximately 90% of the market. PFF 311. Ten percent of the two firms' sales is approximately 9% of the market. The remaining firms would have to increase their output from 9% to 18%, or double their current volume, to counteract a 10% reduction in output by the top two.

80. The Court cannot assume that Swisher or Stoker (or both) would double their current sales in response to a price increase by Swedish Match and Conwood. Swisher does not believe that it could effectively constrain an anticompetitive price increase. 9/5 p.m. tr. 5:6-7, 40:10-15 (Ryan). After many years in the business and six years of manufacturing the product, Fred Stoker only has a one percent market share. PX 167 at 14; PX 305. Defendants' expert does not opine that Swisher and Stoker (alone or together) could constrain a price increase by Swedish Match and Conwood. PX 250 at 280:4-13 (Wu). Treating these fringe firms as a significant constraint is, in Judge Posner's words, a "will o' the wisp." *Rockford*, 898 F.2d at 1286.

D. The Speculative Prospect Entry by New Competitors Is Insufficient To Obviate the Anticompetitive Effects of the Acquisition

81. For entry to obviate concern about a merged entity's market power, it must be so easy that it "would likely avert anticompetitive effects from [the] acquisition." *Baker Hughes*, 908 F.2d at 989; *University Health*, 938 F.2d at 1219-1220; *Merger Guidelines* § 3.0, *quoted with approval, Rebel Oil Co., Inc. v. Atlantic Richfield Co.*, 51 F.3d 1421, 1440 (9th Cir.), *cert. denied*, 516 U.S. 987 (1995); *Cardinal*, 12 F. Supp. 2d at 58. Entry is timely if a new entrant would have a significant market impact within two years. *Merger Guidelines*, § 3.2. Entry is likely if it would be profitable at premerger prices. *Id.* at § 3.3. Entry is sufficient if it would be on a large enough scale to counteract the anticompetitive effects of the transaction. *Id.* at § 3.4.

82. The issue is not simply whether entry is easy, but whether it "would likely avert [the] anticompetitive effects" resulting from the proposed acquisition. *Staples*, 970 F. Supp. at

1086, *quoting Baker Hughes*, 908 F.2d at 989. This Court has adopted the test set forth in the Merger Guidelines: To constitute a defense to an anticompetitive merger, entry must be "timely, likely, and sufficient in its magnitude, character and scope to deter or counteract the competitive effects" of a proposed transaction. *Cardinal Health*, 12 F. Supp.2d at 55-58; *Merger Guidelines*, § 3.0. Entry is timely if a new entrant would have a significant market impact within two years. *Merger Guidelines*, § 3.2. Entry is likely if it would be profitable at premerger prices. *Id.* at § 3.3. Entry is sufficient if it would be on a large enough scale to counteract the anticompetitive effects of the transaction. *Id.* at § 3.4.

83. One of the most critical factors in assessing entry is the history of entry which is particularly probative in assessing the likelihood of future entry. *See Baker Hughes*, 908 F.2d at 988 (firm went from no sales to market leader in 3-4 years); *United States v. Waste Management*, 743 F.2d 976, 982 (2d Cir. 1984) (history of recent entry indicated low entry barriers); *United States v. United Tote*, 768 F. Supp. 1064, 1076, 1080-82 (D. Del. 1991) (lack of historic entry supported finding of barriers).

84. In both *Baker Hughes* and *United Tote*, the court focused on the volatility of market shares to assess the prospect that an entrant could grow sufficiently to defeat an anticompetitive price increase. Even a showing of *actual* entry (absent here) is insufficient to alleviate concern, unless that entry also indicates the likelihood of sufficient growth:

> The crucial aspect of *Baker Hughes* was not that actual competitors had entered the market and established a toehold but rather that the leading firm's "growth suggests that competitors not only can, but probably will, enter or expand if this acquisition leads to higher prices."

United Tote, 768 F. Supp. at 1081 (citations omitted). Thus, "evidence of frequent entry, but on a small scale without significant expansion by fringe firms, may also suggest the existence of barriers to entry on a large scale." 768 F. Supp. at 1081. There is *no* evidence of entry and *growth* in this industry that would suggest that an anticompetitive merger would be alleviated by any such entry and growth.

85. In both *Baker Hughes* and *United Tote*, the courts also examined changes in market share over time -- particularly that of fringe players. *Compare Baker Hughes*, 908 F.2d at 989 (noting that Secoma had become the market leader within four years of making its first sale), *with United Tote*, 768 F. Supp. at 1081 & n.15 (fringe firm had only made two sales in 3-4 years). Here, there has been scarcely any change in market share over 15 years: Swisher's share essentially has remained constant around 8% since 1985. 9/5 p.m. tr. 5:6-7, 40:10-15 (Ryan). Stoker's share has increased to 1% since it began manufacturing loose leaf in 1994. PX 167 at 14; PX 305. This is a far cry from the growth that impressed the *Baker Hughes* court – from no sales to industry leader in the same time frame. 908 F.2d at 989.

86. There are substantial barriers to entry into the loose leaf market. New firms would need to get access to shelf space. PFF 391-92. Loose leaf sales are declining. PFF 388. Substantial sunk costs would need to be incurred in building manufacturing capacity and developing brand identity, PFF 383-85, while excess capacity among incumbents deters sunk-cost entry by new firms. PFF 389. Significant barriers to entry make entry unlikely. *United Tote*, 768 F. Supp. at 1076, 1080-82 (significant reputational barriers); *Ansell, Inc. v. Schmid Laboratories, Inc.*, 757 F. Supp. 467, 474-75 (D.N.J. 1991) (difficulty developing successful

brand name recognition and consumer loyalty prevent entry into retail market); *United States v. Mrs. Smith's Pie Co.*, 440 F. Supp. 220, 229 (E.D. Pa. 1976) (brand name recognition and consumer recognition constitute barriers to entry into retail market); *United States v. Pabst Brewing Co.*, 384 U.S. 546, 560 (1966) (Harlan, J., concurring) ("heavy emphasis on consumer recognition and promotional techniques in the marketing of beer supports the conclusion that there does exist a substantial barrier to a new competitor in a regional market").

87. High margins in loose leaf have not attracted entry that has eroded those margins, PFF 394, negating application of the theory on which entry would be a defense to an otherwise anticompetitive merger. *Cardinal*, 12 F. Supp. 2d at 55, 58 ("entry is one way in which post-merger pricing practices can be forced back down to competitive levels," but finding that entry would not be sufficient to restore competition); *see Merger Guidelines* § 3.0 ("a merger is not likely to create or enhance market power or to facilitate its entry, *if* entry is so easy that market participants, after the merger, either collectively or unilaterally could not profitably maintain a price increase").

88. The history of the lack of entry into this market, the history of exit, the extremely limited amount of fringe expansion, and the remarkable lack of volatility of market share all show that there is an insufficient likelihood of entry to permit the Court to find the presumption from concentration to be rebutted. Even were that presumption rebutted, this same evidence distinguishes this case from *Baker Hughes* and more closely resembles *Rockford* and *United Tote*, where the courts properly found insufficient evidence of entry to conclude that an otherwise problematic merger passed muster.

E. Defendants' Trivial Efficiency Claims Cannot Overcome the Anticompetitive Effects of this Acquisition

89. The Supreme Court has stated that "possible economies cannot be used as a defense to illegality" in Section 7 merger cases. *FTC v. Procter & Gamble Co.*, 386 U.S. 568, 580 (1966); *see also Philadelphia Nat'l Bank*, 374 U.S. at 371. Many courts have followed the Supreme Court's undisturbed precedent. In this court's most recent decision this Court noted the uncertain treatment of the efficiency defense, noting "it remains an unsettled question of law whether the Court can even consider the claimed efficiencies as a factor in adjudication. *Cardinal Health*, 12 F. Supp. 2d at 61.

90. As Judge Gesell wrote: "Any federal judge considering regulatory aims such as those laid down by Congress in Section 7 of the Clayton Act should hesitate before grafting onto the Act an untried economic theory such as the wealth-maximization and efficiency-though-acquisition doctrine expounded by [defendants]. . . . To be sure, efficiencies that benefit consumers were recognized [by Congress] as desirable but they were to be developed by dominant concerns using their brains, not their money by buying out troubling competitors. The Court has no authority to move in a direction neither the Congress nor the Supreme Court has accepted." *Coca-Cola*, 641 F. Supp. at 1141; *see FTC v. Alliant Techsystems, Inc.*, 808 F. Supp. 9, 23 (D.D.C. 1992).

91. Defendants face a substantial burden in seeking to demonstrate that an otherwise anticompetitive merger would instead be deemed procompetitive because of cost efficiencies produced by the merger. *See U.S. v. Rockford Mem. Corp.*, 717 F. Supp. 1251, 1289 (N.D. Ill.

1989) (“very rigorous” evidentiary burden on efficiency claims), *aff'd*, 898 F.2d 1278 (7th Cir.), *cert. denied*, 498 U.S. 920 (1990); *see University Health*, 938 F.2d at 1222-23. Specifically, defendants must demonstrate that claimed efficiencies:

(1) are identified with precision, are not based on “speculation,” can be verified and actually will be achieved, *University Health*, 938 F.2d at 1223; *United States v. Mercy Health Services*, 902 F. Supp. 968, 987-88 (N.D. Iowa 1995); *see also Staples*, 970 F. Supp. at 1089-90 (rejecting efficiency claims where efficiency evidence not credible);

(2) are “merger-specific,” i.e., they cannot be achieved by other means less restrictive of competition, *Cardinal*, 12 F. Supp.2d at 62-63; *Mercy Health*, 902 F. Supp. at 987, n.4; *Ivaco*, 704 F. Supp. at 1425; *Rockford*, 717 F. Supp. at 1289;

(3) are “cognizable,” *i.e.*, they do not result from an anticompetitive reduction in output or quality; *Cardinal*, 12 F. Supp.2d at 62-62; *NCAA v. Law*, 134 F.3d 1010, 1022 (1998); *see also* Pitofsky, “Efficiencies in Defense of Mergers,” 7 Geo. Mason L. Rev. 485, 486-87 (1999) (“efficiencies must not arise from anticompetitive reductions in output, service, or other competitively significant categories such as innovation”);

(4) will be passed on, and produce a significant economic benefit to consumers, *Cardinal*, 12 F. Supp. 2d at 62; *Staples*, 970 F. Supp. at 1089-91; *United Tote*, 768 F. Supp. at 1084-85 (efficiencies rejected because "there are no guarantees that these savings will be passed on to the consuming public"); *California v.*

American Stores, 697 F. Supp. at 1133 (rejecting claim of over $50 million in efficiencies since savings will not "invariably" be passed on to consumers); and

(5) will outweigh the anticompetitive effects of the acquisition and result in a more competitive market. *Cardinal*, 12 F. Supp.2d at 64; *Staples*, 970 F. Supp. at 1089-91; *Ivaco*, 704 F. Supp. at 1427; *United Tote*, 768 F. Supp. at 1085; *see University Health*, 938 F.2d at 1222-23 ("significant economies and that these economies ultimately would benefit competition, and hence, consumers"); *Marathon Oil Co. v. Mobil Corp.*, 669 F.2d 378, 382 (6th Cir. 1981) (observing that "any conceivable benefits" were more "than offset by the potential elimination" of the acquired party), *cert. denied*, 455 U.S. 982 (1982).

92. Defendants agree that potential savings of variable production costs are the most relevant. PFF 403; *see Merger Guidelines* § 4. Defendants acknowledge that the only *quantified* variable cost savings are $1.4 million annually. PFF 404.

93. Defendants' claimed efficiencies in any event are not merger specific. Defendants considered and rejected a joint manufacturing agreement that would have left National as an independent seller of loose leaf. PFF 4. Efficiencies that are not merger-specific do not count. *Cardinal*, 12 F. Supp. 2d at 62-63; *Mercy Health*, 902 F. Supp. at 987, n.4; *Ivaco*, 704 F. Supp. at 1425.

94. There is no assurance that the efficiencies, whatever they may be, will ever benefit consumers. Defendants have not attempted to estimate a pass-through rate, and indeed Swedish Match believes that it will be Swedish Match's decision whether to pass through *any* cost

savings. PFF 404. Defendants acknowledge that less than 100% of their modest variable cost savings would be passed through. *Id.*

95. Even if Swedish Match were to pass on *100%* of the claimed variable production cost savings of $1.4 million, that sum would be dwarfed by the anticompetitive potential of this merger. Even a 1% increase in prices would amount to $2.9 million in higher prices in this $290 million industry, more than twice defendants' claimed variable cost savings. Although there is no guarantee that any cost savings would be passed on to consumers, it is a virtual certainty that such increased prices would be passed on to consumers.

96. As this Court has recognized, competition is the force that drives efficiency and that allows consumers to receive the benefits that the market can produce: "[E]xperience teaches that without worthy rivals ready to exploit lapses in competitive intensity, incentives to develop better products, to keep prices at a minimum, and to provide efficient service over the long term are all diminished to the detriment of consumers." *PPG*, 628 F. Supp. at 885; *see also United States v. Western Elec. Co.*, 592 F. Supp. 846, 874 (D.D.C. 1984), *appeal dismissed*, 777 F.2d 23 (D.C. Cir. 1985) (competition results in "lower prices, highest quality, and the greatest material progress"). After the merger, the competitive constraints imposed by National as an independent firm will no longer exist. As a result, the prices at which Swedish Match will be able to maximize profits may in fact be considerably higher than its current prices, and its volume levels may be correspondingly lower.

97. Thus, absent the most extraordinary circumstances, even substantial proven efficiencies would not justify a merger to monopoly or near-monopoly because the competitive

rivalry that forces firms to pass on the savings from efficiencies is destroyed by such mergers. *See United Tote*, 768 F. Supp. at 1084-85 (rejecting efficiency defense in merger to duopoly; efficiencies insufficient to outweigh the loss of competition since "even if the merger resulted in efficiency gains, there are no guarantees that these savings would be passed on to the consuming public."); *Merger Guidelines*, § 4.0 ("When the potential adverse competitive effect of a merger is likely to be particularly large, extraordinarily great cognizable efficiencies would be necessary to prevent the merger from being anticompetitive").

98. Ultimately, the basis for claimed consumer benefits is defendants' confidence that they can achieve the substantial efficiencies and promise they will pass on those savings. That is not enough to overcome the likelihood of anticompetitive effects. *See University Health*, 938 F.2d at 1223 ("defendant [cannot] overcome a presumption of illegality based solely on speculative, self-serving assertions"); *Ivaco*, 704 F. Supp. at 1428 (rejecting claims because defendants not obligated to produce new product).

V. INJUNCTIVE RELIEF IS NECESSARY HERE

99. The Commission has satisfied its burden in this proceeding of showing likely ultimate success on the merits. After the conclusion of an administrative proceeding, this transaction is likely to be found to violate Section 7 of the Clayton Act. Therefore, a full-stop injunction is *presumed* to be the appropriate remedy. *PPG*, 798 F.2d at 1506-07. Defendants have made no showing to overcome that presumption.

100. Once a court concludes that a proposed consolidation would substantially lessen competition, a decision not to issue a preliminary injunction would frustrate the FTC's ability to

protect the public from anticompetitive behavior, and therefore, the defendants "face a difficult task in justifying anything less than a full stop injunction." *PPG*, 798 F.2d at 1506-07; *University Health*, 938 F.2d at 1225; *cf. Consolidated Gold Fields PLC v. Minorco, S.A.*, 871 F.2d 252, 261 (2d Cir.) (a "preliminary injunction is therefore the remedy of choice for preventing an unlawful merger"), *cert. dismissed*, 492 U.S. 939 (1989).

101. A full-stop injunction is appropriate because the purpose of § 13(b) is to permit the Commission, upon a showing that there is a likely violation, to conduct the administrative process that it has been specifically charged by Congress to conduct. Unlike a case brought by the Department of Justice or by a private plaintiff, this case is brought by the FTC, an administrative agency of the United States vested with jurisdiction to determine the merits of this case, subject to ultimate review by the Court of Appeals and the Supreme Court (and not by this Court). *University Health*, 938 F.2d at 1225; *Warner Communications*, 742 F.2d at 1162; *FTC v. National Tea Co.*, 603 F.2d 694, 698 (8th Cir. 1979).

102. Without preliminary injunctive relief, in the event a violation is found, separation of the merged entities would be extremely difficult, if not impossible. The inherent deficiencies of divestiture have long been recognized by the courts and constitute a primary reason for the enactment of Section 13(b) of the FTC Act. *See, e.g., FTC v. Lancaster Colony Corp.*, 434 F. Supp. 1088, 1096 (S.D.N.Y. 1977) ("at best, divestiture is a slow, cumbersome, difficult, disruptive and complex remedy").

103. A full-stop injunction is the appropriate relief here, as it is in all but the most extraordinary circumstances. Even the lesser relief of a "very stringent" hold-separate order is

disfavored, *PPG*, 798 F.2d at 1506-07, and may only be granted upon a showing of "three countervailing features":

> significant equities favor the transaction and the less drastic restraint of a hold separate order realistically can be expected (a) to safeguard adequate eventual relief if the merger is ultimately found unlawful, and (b) to check interim anticompetitive harm.

Id. at 1507, *quoting Weyerhaeuser*, 665 F.2d at 1085. *Weyerhaeuser* identified several reasons why hold separate orders might be insufficient: they risk transfer of confidential information; they "may be ineffective if unique management personnel serve the acquired company," since "a talented entrepreneur may not remain at the helm of the business once it is placed under the aegis of another company," *id.* at 1086 (and the Court may not compel them to remain at the helm, so long as the Thirteenth Amendment is part of the Constitution); and a hold separate order will not "preserve divestiture as an effective ultimate remedy if the held separate assets are not sufficiently attractive to interest a buyer or if the only likely disposition of the assets is a sale that would itself lessen competition." *Id.* Even were the Court to credit defendants' efficiency claims, a hold separate order would be inappropriate because it would not permit defendants to achieve those efficiencies.

104. A hold separate order (or other relief short of a full-stop injunction) likewise will be insufficient in most cases to remedy anticompetitive harm pending administrative adjudication. *Weyerhaeuser*, 665 F.2d at 1086-87. Competition between the held-separate assets and the acquirer is unlikely to retain pre-merger vigor; a hold-separate will dampen the acquired company's interest in pursuing new ventures; the acquired company will have difficulty retaining personnel; and -- perhaps most importantly -- the companies cannot be expected to compete with each other for the same large customers that they competed for before the merger. No Court has

entered relief short of a hold separate order in any merger case involving for-profit companies in which a violation has been found. *See Weyerhaeuser*, 665 F.2d at 1086 n.31 (reviewing cases).

105. Weighing the relevant equities and considering the FTC's likelihood of ultimate success, it is in the public interest that the Court enter a preliminary injunction enjoining the Acquisition pending completion of the FTC's administrative proceeding.

Respectfully submitted,

DEBRA A. VALENTINE
General Counsel

RICHARD G. PARKER
Director
Bureau of Competition
Federal Trade Commission
600 Pennsylvania Avenue, N.W.
Washington, D.C. 20580

RICHARD LIEBESKIND
JOHN D. GRAUBERT
RHETT R. KRULLA
STEVEN L. WILENSKY
JUDITH A. COLE
CHUL PAK
STEVEN DAHM
Attorneys
Federal Trade Commission
600 Pennsylvania Avenue, N.W.
Washington, D.C. 20580

By:

RICHARD LIEBESKIND
Attorney for Plaintiff
Federal Trade Commission
601 Pennsylvania Avenue, N.W.
Washington, D.C. 20580
(202) 326-2441

September 18, 2000
(Corrected Version)