

**Written Testimony Before the  
Senate Committee on Agriculture, Nutrition, and Forestry  
Hearings on the  
Tobacco Settlement and the Future of the Tobacco Industry**

**Jeffrey E. Harris M.D. Ph.D<sup>1</sup>**

**106 Dirksen Senate Office Building  
Washington, D.C.**

**September 11, 1997**

Mr. Chairman, my name is Jeffrey Harris. I thank you for inviting me to testify today. I am a primary-care physician at the Massachusetts General Hospital in Boston and a tenured member of the economics faculty at the Massachusetts Institute of Technology. For your reference, I have attached a short biographical sketch to my testimony.

Under the Proposed Resolution of June 20, 1997,<sup>2</sup> tobacco manufacturers would be required to make continuing annual payments whose face value has been reported to be \$368.5 billion over 25 years. Today, I address three questions concerning the magnitude of the proposed tobacco-industry payments.

- 1. How much money would the tobacco industry actually pay over the next 25 years? What is the current market value of such payments?**
- 2. How does the size of tobacco industry payments compare with the public and private costs of illness and disability caused by tobacco use? Who will be compensated for tobacco-related injuries, and who will not?**
- 3. What is the monetary value of the industry-wide settlement to the tobacco industry? How much would the industry be willing to pay?**

My comments today, while critical of Proposed Resolution, are intended to be constructive.

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<sup>1</sup> The opinions expressed in my testimony today do not necessarily represent those of the Massachusetts General Hospital, Massachusetts Institute of Technology, or any other organization.

<sup>2</sup> "Proposed Resolution: For Settlement Discussion Purposes Only. 6/20/97, 3:00 p.m. DRAFT."  
68pp.

Tobacco Industry Payments: Volume Adjustments, Present Market Value

The Proposed Resolution contains a little-noted but important provision that pegs annual industry payments directly to the volume of tobacco products sold.<sup>3</sup> This “volume adjustment” provision was explicitly written into the industry’s recent settlements with both the state of Mississippi<sup>4</sup> and the state of Florida.<sup>5</sup> In particular, if domestic tobacco sales go down, then tobacco-industry payments go down, too.

Tobacco manufacturers are expected to finance the required payments by raising prices.<sup>6,7</sup> By the fifth post-settlement year, the required price increase on cigarettes will amount to approximately \$0.62 per pack in real (that is, inflation-adjusted)

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<sup>3</sup> Title VI, B.5 of the *Proposed Resolution* (pp. 34-35) states:

“5. Adjustment for Volume Decrease (Adult Volume Only) or Total Volume Increase

“<sup>co</sup> Beginning in year 1; payment made equal to scheduled annual payment times the ratio of actual relevant domestic tobacco product unit sales volume to relevant base volume. In the event of a decline in volume, relevant actual volume and relevant base volume are adult volume figures; in the event of an increase in volume, relevant actual volume and relevant base volume are total volume figures. Base volume is 1996 volume.”

<sup>4</sup> Memorandum of Understanding. *In Re Mike Moore, Attorney General ex rel, State of Mississippi Tobacco Litigation. Cause No. 94-1429. In the Chancery Court of Jackson County, Mississippi.* Washington, D.C., July 2, 1997. Paragraph 3 (pp. 4-5) states: “The above payments will also be decreased or increased, as the case may be, in accordance with decreases or increases in volume of domestic tobacco product volume sales as provided in Paragraph B.5 on pages 34-35 of the June 20, 1997 Proposed Resolution.”

<sup>5</sup> Settlement Agreement. *The State of Florida, et al. v. The American Tobacco Company, et al. Civil Action No. 95-1466 AH. Circuit Court of the Fifteenth Judicial Circuit, In and For Palm Beach County, Florida.* August 25, 1997, 11:20. The section entitled “B. Monetary Provisions. 3. Annual Payments” (p. 9) states: “Such payments will also be decreased or increased, as the case may be, in accordance with decreases or increases in volume of domestic tobacco product volume sales as provided in Paragraph B.5 on pages 34-35 of the Proposed Resolution.”

<sup>6</sup> The *Proposed Resolution* explicitly provides that the annual industry payments be passed on to consumers in the form of higher prices. Title VI, B.7 (page 35) states: “B.7 Pass-Through. In order to promote maximum reduction in youth smoking, the statute would provide for the Annual Payments to be reflected in the prices manufacturers charge for tobacco products.”

<sup>7</sup> Cigarette manufacturers have already raised prices, possibly in anticipation of settlement payments. Wholesale prices on premium- and discount-brand cigarettes rose by \$2.50 per 1,000 during March-April, 1997, and by \$3.50 per 1,000 in September, 1997 (Tom Capehart, USDA Economic Research Service: personal communication). The combined price increase, which amounts to 12 cents per pack, is expected to raise an additional \$2.8 billion annually.

dollars.<sup>8</sup> This increase in price will in turn cause a 14% reduction in smoking, which, through the volume adjustment provision, will result in 14% lower industry payments. Hence, the industry will actually pay \$12.9 billion in that year, and not the oft-cited face amount of \$15 billion. As a result of the volume adjustment provision, the total face value of tobacco industry payments over 25 years will actually be \$304.3 billion, rather than the oft-quoted total of \$368.5 billion.<sup>9</sup> My calculations are detailed in Appendix Table 1.

While tobacco manufacturers will directly make the annual payments prescribed by the *Proposed Resolution*, nearly all of the money will come indirectly from continuing current smokers, as well as future tobacco users. Over 25 years, I estimate that tobacco consumers will pay a cumulative face value of \$272.0 billion,

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<sup>8</sup> By the fifth post-settlement year, the face value of total payments is \$15 billion. (See *Proposed Resolution*, Title VI. B.3. Face Amounts. p. 34.) The 1996 base volume of cigarettes sold was 24.165 billion packs. (See John C. Maxwell, "Market Up: Philip Morris and Lorillard report 1996 growth in U.S. cigarette market." *Tobacco Reporter*, April 1997, p. 22.) If industry payments were financed entirely through cigarette revenues, then the required price increase would be: \$15 billion ÷ 24.165 billion packs = \$0.62 per pack. The *Proposed Resolution* does not specify what portion of total industry payments would be paid by United States Tobacco Co., which sells primarily smokeless tobacco, not cigarettes. If UST paid 5.1 percent (its share of total domestic tobacco revenues in 1996, as detailed below) and the other four participant cigarette manufacturers (Philip Morris, RJ Reynolds, Brown & Williamson, Lorillard) paid 94.9 percent, then cigarette prices would rise by 59 cents per pack. The table below shows participant firms' sales revenues from domestic tobacco for 1996, as derived from their annual reports. (The estimate for Brown & Williamson is based on the assumption that domestic sales accounted for 73% of 1996 net sales revenue of \$4,248.5 million. See pie chart on page 3 of *Brown & Williamson Tobacco Corporation Annual Review 1996*.)

Participant Firm	1996 Revenues (\$billions)	Percent of Total
Philip Morris	12,462	53.0%
RJ Reynolds	4,551	19.3%
Brown & Williamson	3,101	13.2%
Lorillard	2,217	9.4%
US Tobacco	1,195	5.1%
Total	23,526	100.0%

<sup>9</sup> See also Harris JE. *Comments on Proposed Tobacco Industry-Wide Resolution*, Commissioned by the American Cancer Society, June 26, 1997, esp. Table 2. The calculations in Appendix Table 1 assume that the revenues from federal excise tax increases of 10 cents per pack, scheduled for the year 2000, and an additional 5 cents per pack, scheduled for the year 2002, will be credited toward total industry payments, as provided in current law.

while the remaining \$32.3 billion will come from foregone tobacco industry profits. (See Appendix Table 1.)<sup>10</sup>

Money to be paid in the future is worth less than money in hand right now. Accordingly, I used current long-term interest rates to compute the real present market value of future industry payments, often called its “presented discounted value” by economists. In essence, I asked: If the tobacco industry had to raise the required payments over the next 25 years by issuing long-term corporate bonds, what would be the market value of those bonds today? Put differently: How much money would the tobacco industry need to invest today in long-term US Treasury bonds to have enough money to make the 25 years of payments?

As delineated in Appendix Table 1, I have estimated the present market value of industry payments over the first 25 post-settlement years to be \$194.5 billion. Of this amount, \$175.3 would be paid by consumers through higher prices, while \$19.3 billion would derive from lost profits.

Costs of Tobacco-Related Illness and Disability: Who is Compensated?

Under the *Proposed Resolution*, one-third of the tobacco industry’s annual “base payments” are to be allocated to a fund to pay for judgments and settlements against participating companies. The contributions to this fund are to constitute an annual aggregate cap on judgments and settlements against the participating manufacturers. The size of this annual liability cap is also subject to the same “volume adjustment” provision as total industry payments.<sup>11</sup>

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<sup>10</sup> Some commentators have noted that the tax treatment of industry payments as ordinary business expenses (*Proposed Resolution*, Title VI, D. Tax Treatment, p. 35) will cost state and federal governments billions in foregone income tax revenues. This observation, while plausible, is not entirely accurate. If industry payments were not tax-deductible, then I would expect the retail price of cigarettes to rise even higher in order to pay the additional costs. For example, if combined federal and state corporate tax rate were 42%, then the price increase required to cover industry payments would have to be multiplied by a factor of  $1/(1-0.42) = 1.72$ . As a result, the retail price of cigarettes would rise by \$1.07 per pack, rather than by the currently estimated \$0.62 per pack. Over 25 years, the total face value of industry payments, after volume adjustment, would be \$476.2 billion, of which \$431.6 billion would come from smokers and \$44.6 billion would come from lost profits.

<sup>11</sup> The *Proposed Resolution* (Title VIII: Civil Liability. B.9. Annual aggregate cap for judgments/settlements, p. 40) provides that 33% of “base annual industry payment (including any reductions for volume decline)” be allocated for judgment/settlements. In the event that the annual cap is not exceeded in a given year, the unused funds are to be disbursed by a Presidential Commission (B.10, at p. 41).

Based upon these and other provisions in the *Proposed Resolution*, I estimate that the total volume-adjusted industry payments of \$304.3 billion over 25 years will be allocated as: \$89.9 billion in contributions to the aggregate liability cap; \$162.8 billion to the states; and the remaining \$51.6 billion for administrative costs and public health purposes.<sup>12</sup> Similarly, the \$194.5 billion present market value of industry payments over 25 years will be apportioned as: \$54.8 billion toward the aggregate liability cap; \$104.8 billion to the states; and the remaining \$34.9 billion for administrative costs and public health purposes.

While these aggregate payments may appear substantial, they are dwarfed by the total costs of tobacco-related illness and disability imposed upon the public and private sectors of our economy. In recent testimony before the Senate Judiciary Committee, which I attach to this written testimony, I estimated the present discounted value of *future* smoking-related costs to the Medicaid program over the next 25 years conservatively to be \$178.3 billion. This estimate does not include the present value of *past* smoking-related costs to the Medicaid program, which, during fiscal years 1991-1995 alone, amounted to \$40.4 billion. Total past smoking-attributable costs since the inception of the Medicaid program in the 1960's, I estimated, would amount to hundreds of billions of dollars.

Based upon a very conservative estimate, I further testified that, over a 25-year period, the present discounted value of smoking-attributable Medicare expenditures would come to \$192.3 billion. This estimate did not include the past costs to the Medicare program that resulted from smoking-related illness.

The illness and injury caused by tobacco use result not only in increased spending on medical care, but also in disability and lost productivity. Higher rates of disability mean higher rates of eligibility for Medicaid, Medicare, and other federal entitlement programs including the compensation program administered the Veterans Benefits Administration.

In testimony before the House Ways and Means Committee in November, 1993, I estimated that in the year 1995 alone, the adverse health effects of cigarette smoking would be responsible for \$88 billion in health-care spending.<sup>13</sup> A large

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<sup>12</sup> Both the Florida and Mississippi settlements (cited in text footnotes 4 and 5 above) give the face value of aggregate payments to states as: \$4 billion in year 1; \$4.5 billion in year 2; \$5 billion in year 3; \$6.5 billion in years 4 and 5; and \$8 billion from the sixth post-settlement year onward. My estimates of state payments are based on the this schedule of payments, subject to the same volume adjustments that I used in Appendix Table 1.

<sup>13</sup> Harris JE, *Testimony Before the Committee on Ways and Means, U.S. House of Representatives, In Public Hearings on the Financing Provisions Of the Administration's Health Security Act*. Washington DC, November 18, 1993.  
(cont'd)

fraction of these costs are borne by private parties, including insurance companies, charitable institutions, and other benefit plans.

How Much Could the Tobacco Industry Pay?

Appendix Table 2 shows my calculations of the profits of the major tobacco manufacturers for 1996, which are based upon my analysis of company annual reports. I estimate that the total pre-tax domestic operating profits of the five major U.S. cigarette manufacturers were \$7.175 billion in 1996. With total 1996 domestic cigarette sales volume at 24.165 billion packs, the average operating profit per pack would be \$0.30. These calculations do not include the profits of UST, Inc., which sells primarily moist smokeless tobacco products, and not cigarettes. If I include UST, Inc., then total pre-tax domestic operating profits would be \$7.926 billion in 1996. The combined corporate-wide pre-tax profits of all major tobacco producers amounted to \$15.781 billion in 1996.

It might appear that the industry-wide operating profit of \$7.9 billion on domestic tobacco sales should be taken as a practical upper limit on its ability to pay. If not, then perhaps total pre-tax corporate profits of nearly \$16 billion should constitute an effective ceiling. These conclusions are unwarranted, however, because they incorrectly assume that tobacco manufacturers will not or cannot raise prices in order to finance settlement payments.

In reality, the cigarette industry's ability to pay damages is bounded by the maximum amount of money it could extract from smokers if the price of cigarettes were set at its full, monopoly profit-maximizing level. In a recent article,<sup>14</sup> I calculated that the full monopoly, profit-maximizing price of cigarettes in the United States in 1995 was approximately \$4.08 per pack. By contrast, the nation-wide average price of cigarettes in 1995 was about \$1.88 per pack. Accordingly, any increase in price up to \$2.20 per pack would generate additional profits for manufacturers or revenues for governments. A \$2.20-per-pack increase, I calculated, would generate over 32 billion dollars annually, which could be divided between liability payments and industry profits. That would mean, for example, that \$27 billion could be allocated to a global industry-wide resolution, while the industry would retain \$5 billion in pre-tax profits.

As many commentators have noted, the *Proposed Resolution* makes sweeping changes in our current system of civil liability with respect to tobacco and health.

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<sup>14</sup> Harris JE. American cigarette manufacturers' ability to pay damages: overview and a rough calculation. *Tobacco Control*, Winter 1996, Vol. 5, pp. 292-294.

Punitive damages for all pending and future claims are barred, so long as they are based solely on past industry conduct (p. 39). Future law suits can only take the form of individual trials. Class actions and other consolidations are eliminated (p. 39). After June 9, 1997, third-party payors can only file suit based on subrogation of individual claims (p. 40). The development of "reduced risk" tobacco products cannot be used as evidence in court of liability for past actions (p. 40). As I have already noted, there is an aggregate liability cap whose total value goes down as tobacco sales fall.

How much would the enactment of these sweeping legal changes be worth to tobacco manufacturers? Market analysts have suggested that tobacco stock prices have been depressed as much as 50% by the cloud of legal liability hanging over the industry.<sup>15</sup> I believe, however, that the traditional estimate of a 50% litigation discount should now be considered too low. During the past 2 years, the new wave of litigation aimed at the tobacco industry has been propelled not only by state attorneys general, but by private law firms with substantial resources who have been willing to accept high-risk contingency fee arrangements.<sup>16</sup> In addition to law suits filed by state and local governments, class actions have been brought by groups ranging from airline flight attendants to workers' health and welfare funds. Without the legislative changes contemplated by the *Proposed Resolution*, this wave of litigation is likely to swell further. As more cases proceed toward trial, more

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<sup>15</sup> See, for example, France M. Big Tobacco may be ready to deal. *Business Week* 1996 Oct 7: 150, 152 (citing estimates from Smith Barney and Salomon Bros).

<sup>16</sup> In the Mississippi Memorandum of Understanding, cited in text footnote 4 above, settling defendants agreed to pay the Attorney General \$2.5 million for the best estimate of costs and expenses attributable to his office and other appropriate state agencies, while \$12.5 million was to be paid to plaintiffs' private counsel for their best estimate of their costs and expenses. (See Mississippi Memorandum of Understanding, pp. 3-4.) In the Florida Settlement Agreement, cited in text footnote 5 above, settling defendants agreed to pay the Attorney General \$10 million and private counsel \$12 million for costs and expenses. See Florida Settlement Agreement, p. 13.

documents concerning possible egregious conduct of tobacco manufacturers may become available. Litigation costs to successive plaintiffs may fall as each litigant learns from the previous cases.

Based upon these economic considerations, I believe that the financial value to the tobacco industry of the proposed legal reforms substantially exceeds the aggregate amount of payments mandated under the current industry-wide resolution. I would not be surprised to learn that legal and economic experts advising the industry have reached a similar conclusion.

**Appendix Table 1. Estimated Cigarette Industry Payments During the First 25 Post-Settlement Years**

Payment Year	Face Amount of Total Payments (billions) <sup>1</sup>	Price Increase (real dollars per pack) <sup>2</sup>	Retail Price (real dollars per pack) <sup>3</sup>	Predicted Domestic Consumption (bill. packs) <sup>4</sup>	Real Volume-Adjusted Total Payments (\$billions) <sup>5</sup>	Real Volume-Adjusted Lost Profits (\$billions) <sup>6</sup>	Real Present Discounted Value of Total Payments (\$billions) <sup>7</sup>	Real Present Discounted Value of Lost Profits (\$billions) <sup>7</sup>
0	10.0	0.41	2.46	22.3	10.0	0.6	10.0	0.6
1	8.5	0.35	2.40	22.4	7.9	0.5	7.6	0.5
2	9.5	0.39	2.44	22.1	8.7	0.6	8.1	0.6
3	11.5	0.48	2.53	21.6	10.3	0.8	9.2	0.7
4	14.0	0.58	2.63	21.1	12.2	0.9	10.5	0.8
5	15.0	0.62	2.67	20.8	12.9	1.0	10.7	0.8
6	15.0	0.62	2.67	20.7	12.8	1.1	10.2	0.8
7	15.0	0.62	2.67	20.5	12.7	1.1	9.8	0.8
8	15.0	0.62	2.67	20.4	12.7	1.1	9.3	0.8
9	15.0	0.62	2.67	20.3	12.6	1.2	8.9	0.8
10	15.0	0.62	2.67	20.2	12.5	1.2	8.6	0.8
11	15.0	0.62	2.67	20.0	12.4	1.2	8.2	0.8
12	15.0	0.62	2.67	19.9	12.4	1.3	7.8	0.8
13	15.0	0.62	2.67	19.8	12.3	1.3	7.5	0.8
14	15.0	0.62	2.67	19.7	12.2	1.3	7.2	0.8
15	15.0	0.62	2.67	19.6	12.1	1.4	6.9	0.8
16	15.0	0.62	2.67	19.4	12.1	1.4	6.6	0.8
17	15.0	0.62	2.67	19.3	12.0	1.4	6.3	0.8
18	15.0	0.62	2.67	19.2	11.9	1.5	6.0	0.7
19	15.0	0.62	2.67	19.1	11.9	1.5	5.7	0.7
20	15.0	0.62	2.67	19.0	11.8	1.6	5.5	0.7
21	15.0	0.62	2.67	18.9	11.7	1.6	5.3	0.7
22	15.0	0.62	2.67	18.8	11.6	1.6	5.0	0.7
23	15.0	0.62	2.67	18.6	11.6	1.7	4.8	0.7
24	15.0	0.62	2.67	18.5	11.5	1.7	4.6	0.7
25	15.0	0.62	2.67	18.4	11.4	1.7	4.4	0.7
<b>Total</b>	<b>368.5</b>				<b>304.3</b>	<b>32.3</b>	<b>194.5</b>	<b>19.3</b>

Notes to Appendix Table 1:

1. Face value of total payments, as specified in Title VI of the *Proposed Resolution*. Surcharges under the "Look Back" provision (Appendix V of the *Proposed Resolution*) not included.
2. The price increase was computed as  $t = X_0/q_0$ , where  $X_0$  = Face Value of Total Payments and  $q_0$  = 24.165 billion packs shipped in 1996, as reported by Maxwell, *op. cit.*, text footnote 8.
3. Retail price was computed as  $p = t + 2.05$ , where the base price was estimated to be \$2.05/pack. The based price was derived as the ratio of total consumer spending to total cigarette consumption for 1996. Total consumer spending (inclusive of state sales taxes) was \$49,334 million in 1996 (T. Capehart, USDA Economic Research Service: personal communication).
4. Total domestic tobacco consumption was predicted from the equation:

$$q = \exp(3.5849 - 0.1951p - 0.006T),$$

where  $p$  is real price per pack and  $T$  is year of payment, based on model reported in Harris JE, "A Working Model for Predicting the Consumption and Revenue Impacts of Large Increases in the U.S. Federal Cigarette Excise Tax," Cambridge MA: National Bureau of Economic Research, July 1994. See (Internet) <http://web.mit.edu/jeffrey/harris/workingmodel.html>.

5. Total payments were computed as  $R = tq$ , where  $t$  = real price increase and  $q$  = number of packs.
6. Face value of lost profits was computed as  $L = m*(q_0 - q)$ , where  $m = \$0.30$  is the industry-wide average pre-tax profit margin per pack,  $q_0$  is base volume in 1996, as  $q$  is projected domestic tobacco consumption.
7. The real present discounted value of total payments was computed as  $R*(1.03/1.07)^T$ , where  $T$  is year of payment. An annual inflation rate of 3% was used (*Proposed Resolution*, Title V, B.4 Inflation Protection for Annual Payments, p. 34); and a long-term interest rate of 7% was used, based upon the Merrill Lynch Corporate Index, the Lehman Bros. T-Bond Index, and the 30-year Treasury Bond rate.
8. The real present discounted value of lost profits was computed as  $L*(1.03/1.07)^T$ . See previous note.

**Appendix Table 2. U.S. Tobacco Manufacturers' Pre- and Post-Tax Income, 1996**

Compiled by Jeffrey E. Harris MD PhD

Tobacco Manufacturer	Operating Companies Pre-Tax Income (\$millions)					Corporate-Wide	Corporate-Wide
	U.S. Domestic Tobacco	International Tobacco	Total Tobacco	Total Non-Tobacco	All Operating Companies	Pre-Tax Income (\$millions)	After-Tax Income (\$millions)
Philip Morris (1)	4,206	4,078	8,284	4,521	12,805	10,683	6,303
RJR Nabisco (2)	1,450	803	2,253	1,063	3,316	1,196	611
Loews (3)	722	-	722	2,100	2,822	1,701	1,384
Brown & Williamson (4)	791	198	988	-	973	1,476	891
Liggett (5)	7	-	7	-	7	(18)	(18)
Cigarette Subtotal	7,175	5,079	12,254	7,684	19,923	15,037	9,170
UST (6)	751	-	751	19	770	745	464
Tobacco Total	7,926	5,079	13,005	7,704	20,694	15,781	9,634

NOTES:

1. Source: *Philip Morris Companies, Inc. 1996 Annual Report*, pp. 1, 24, 30. Operating companies' income is income before amortization of goodwill, unallocated corporate expenses and interest and other debt expense, net. Corporate-wide income reflects deductions for these categories, including \$1,086 million interest and other debt expense, net. See p. 30. Non-tobacco operations include: food, beer, financial services and real estate.
2. Source: *RJR Nabisco Annual Report 1996*, pp. 2, 8, 29-30. Operating company contributions equal operating income before amortization of trademarks and goodwill and exclusive of restructuring expenses and interest and debt expenses. Corporate-wide income reflects deductions for these categories, including \$927 million interest and debt expense. Minority interest in Nabisco Holdings (\$3 million) also excluded from corporate income. See pp. 29-30. Non-tobacco operations include: food (Nabisco).
3. Source: *Loews Corporation 1996 Annual Report*, pp. 3, 27, 73-74. All operating companies income is income before minority interest and allocation of interest expense and corporate expense. Corporate-wide income reflects these categories. See note (e) p. 74. Non-tobacco operations include: insurance, hotels, drilling, watches and clocks.
4. Source: *Brown & Williamson Tobacco Corporation Annual Review 1996*, pp. 3, 5, 7, 9. Total tobacco income includes cigarette sales in U.S., Japan, Korea and Mexico, as well as export leaf tobacco. U.S. domestic tobacco income estimated as 80% of total tobacco income based on 73% of unit volume (p. 3) and 50% higher profit margin. Corporate-wide pre- and after-tax income based on parent BAT Industries income, reported in *BAT Industries Annual Review and Summary Financial Statement 1996*. Pre-tax and after-tax profits of BAT Industries were £2,495 and £1,506 million, respectively. Computed incomes based on 10a.m. 12/30/96 midpoint exchange rate of 1.6908 reported by Federal Reserve Bank of New York. See Internet FTP site: <ftp://ftp.frb.org/forex/10am/1996/DEC/10A1230.96>.
5. Source: *Liggett Group, Inc. Securities and Exchange Commission Form 10-K/A No. 1, for the fiscal year ended December 31, 1996*. Corporate-wide income includes interest expense and extraordinary item, including settlement of certain tobacco litigation. See pp. 12 and 22-23.
6. Source: *UST 1996 Annual Report*, pp. 1, 24-32. Tobacco segment includes only domestic smokeless products. "Non-tobacco" segment includes wine and "Other" (moist smokeless tobacco sales to Canada and Mexico, cigars, and Cabin Fever Entertainment). See p. 18.

JEFFREY E. HARRIS: Biographical Sketch

Jeffrey Harris, M.D., Ph.D. is a physician and an economist. He is a primary-care internist at Massachusetts General Hospital and a professor at M.I.T, where he teaches health economics and a freshman seminar entitled "AIDS in the 21st Century."

Dr. Harris has testified before the House Ways & Means Committee on financing health-care reform (1993), the Massachusetts legislature on public disclosure of cigarette ingredients (1995), and the Senate Judiciary Committee on the proposed global tobacco settlement (1997). He has advised numerous public and private agencies on health-care policy and health economics, including the Department of Veterans Affairs, Consumer Product Safety Commission, Centers for Disease Control, National Cancer Institute, Congressional Budget Office, American Cancer Society, Federal Trade Commission, and the Massachusetts Department of Public Health. He has served on National Academy of Sciences committees on AIDS, low birthweight, diesel emissions, and risk characterization. He was on the National Advisory Research Resources Council at the National Institutes of Health.

Dr. Harris wrote the seminal chapter in the 1989 *Surgeon General's Report*, in which he estimated that smoking caused nearly 400,000 deaths annually. In a 1990 article in the *Journal of the American Medical Association*, Dr. Harris was one of the first researchers to document that AIDS victims were surviving longer. He authored *Deadly Choices: Coping with Health Risks in Everyday Life* (1993). Last year, he published an evaluation of the impact of the Massachusetts anti-smoking campaign. He is now starting work on a new textbook on health economics and health policy.

JEFFREY E. HARRIS:  
Recent Presentations and Publications Concerning the Tobacco Industry

( Available via Internet at <http://web.mit.edu/jeffrey/harris> )

*Written Testimony Before the Senate Judiciary Committee Hearings on the  
"Proposed Global Tobacco Settlement: Who Benefits?" July 30, 1997*

*Prepared Remarks at the American Cancer Society's Press Conference on the  
Proposed Tobacco Industry-Wide Resolution, Washington DC, July 24, 1997*

*Comments on Proposed Tobacco Industry-Wide Resolution, Commissioned by  
the American Cancer Society, June 26, 1997*

*What Can the Cigarette Industry Afford? Structuring a Long-Term Settlement.*  
Remarks at the 12th Annual Conference of the Tobacco Products Liability Project,  
Northeastern University School of Law, Boston, May 11, 1997

*Estimates of Smoking-Attributable Medicaid Expenditures in Florida. Expert  
report submitted in The State of Florida, et al. v. The American Tobacco  
Company, et al., April 15, 1997*

"American cigarette manufacturers' ability to pay damages: overview and a rough  
calculation," *Tobacco Control* Winter 1996; 5:292-294.

"Cigarette Smoking Before and After an Excise Tax Increase and Antismoking  
Campaign – Massachusetts, 1990-1996," *Morbidity and Mortality Weekly Report*  
November 8, 1996; 45(44):996-970.

*Testimony Before the Mass. Dept. of Public Health Concerning Proposed  
Regulations to Implement Massachusetts General Laws chapt. 94, section  
307A (Cigarette Ingredient Disclosure), Boston, January 30, 1997.*

*A Working Model for Predicting the Consumption and Revenue Impacts of Large  
Increases in the U.S. Federal Cigarette Excise Tax.* National Bureau of Economic  
Research, Cambridge MA, July 1, 1994.

*Testimony Before the Committee on Ways and Means, U.S. House of  
Representatives, In Public Hearings on the Financing Provisions Of the  
Administration's Health Security Act.* Washington DC, November 18, 1993.