Prepared Statement Before the Senate Democratic Task Force on Tobacco, Sen. Kent Conrad (D-ND), Chairman

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Summary

• I have estimated the future price and consumption of cigarettes as well as the profits of cigarette manufacturers during 1997–2006 under three different policy scenarios:

(a) enactment during 1998 of the proposed National Tobacco Policy and Youth Smoking Reduction Act (S.1415RS, May 1, 1998 Version);[2]

(b) enactment of a proposed amendment to the "Payments by Industry" Sections[3] of the Act to raise the price of a pack of cigarettes by $0.50 in 1999, $1.00 in 2000, $1.50 in 2001, and $1.50 adjusted for inflation thereafter (the $1.50-per-pack amendment); and

(c) no significant new Federal legislation through 2006.

• To determine the effect of S.1415RS or any other bill, we need to recognize that cigarette prices will continue to rise even if no Federal statute is passed. State governments will continue to raise cigarette excise taxes. Wholesalers and retailers will continue to adjust cigarette price markups to reflect their rising costs. Most important, cigarette manufacturers will continue to raise their prices in order to cover the costs of settling law suits. What matters is not the absolute rise in price from its current level, but the additional increase in price, if any, that would result from Federal intervention.

• U.S. cigarette manufacturers have the market power to pass through very substantial cost increases to consumers in the form of higher prices. In fact, cigarette manufacturers have already passed through their recent settlement costs

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[1] This work is based in part on an analysis commissioned by the American Cancer Society. See Harris JE. *The Price of Cigarettes and the Profits of Cigarette Manufacturers With and Without Federal Intervention, 1997–2006*, May 11, 1998, to be issued by the American Cancer Society on May 14, 1998. The opinions expressed in this testimony are the author's sole responsibility. They do not necessarily reflect the opinions of the Senate Democratic Task Force, the American Cancer Society, the Massachusetts Institute of Technology, or the Massachusetts General Hospital.

[2] Internet: http://thomas.loc.gov/cgi-bin/query/C?c105:./temp/~c1058qN43q

[3] Secs. 403(a), 403(b), and 404 of S. 1415RS.

to their customers. As of April 1998 (prior to the recent Minnesota settlement), defendant manufacturers had incurred cumulative settlement costs equal to $1.712 billion, an amount equivalent to 10.9 cents per pack sold. Through a series of wholesale price increases on premium brands during September 1997, January 1998, and April 1998, manufacturers recouped these settlement costs.

• I have analyzed trends in the components of the retail price of cigarettes during 1994–1997. While manufacturers raised their wholesale prices sharply in 1997, the other components of price – including state excise and sales taxes, Federal excise taxes and wholesaler/retailer markups – continued to follow past trends. In particular, state excise taxes rose at a real rate of 1 percent, while sales taxes, Federal excise taxes, and wholesaler/retailer markups did not keep pace with inflation. There was no evidence that rising manufacturers' wholesale prices had a multiplier effect on other components of the price of cigarettes.

• Without significant Federal intervention, the real price of a pack of cigarettes will continue to rise from $2.12 in 1997 to $2.54 in 2003, as manufacturers settle law suits with an increasing proportion of states. Once all state settlements are in place by 2003, real price will then decline slightly to $2.52 by 2006 as a result of the volume-adjustment provisions of the state settlement agreements.

• Under the current version of S.1415RS, the real price of cigarettes will rise progressively to $3.38 in 2003–2004 as the required payments under Secs. 403-404 of the Act escalate. The real price will then fall to $3.07 per pack by 2006 as a result of the volume adjustment provision (Sec. 404(2)) that will take effect in 2005.

• Under the $1.50-per-pack amendment to Secs. 403-404 of the Act, the real price of cigarettes will rise to $3.64 by 2001 and then decline slightly to $3.60 by 2006 as other components of price (such as the Federal excise tax) do not keep pace with inflation.

• Thus, under S.1415RS, the real price of a pack of cigarettes would be 85 cents higher in the year 2003 than if there had been no Federal intervention. Under the $1.50-per-pack amendment in the year 2003, the real price would be $1.08 higher. Put differently, under S.1415RS, the real price of cigarettes will rise by $1.27 per pack during 1997–2003. Under the $1.50-per-pack amendment, the real price would rise by $1.50 per pack during 1997–2003. If there were no Federal intervention, the real price would rise by $0.42 per pack.

• Without significant Federal intervention, total U.S. cigarette consumption will decline by 12.4% during 1997–2006. Under S.1415RS, consumption will decline by 21.3%, while under the $1.50-per-pack amendment, consumption will decline by 29.1%. So long as manufacturers can fully pass their costs through to consumers – and thus maintain a constant profit margin per pack – domestic operating profits will decline by the same percentages as total consumption. Thus, the real operating profits of the domestic tobacco-producing divisions of U.S. cigarette manufacturers will decline from $7.2 billion to $6.3 billion with no Federal intervention, to $5.7 billion under S.1415RS, and to $5.1 billion under the $1.50-per-pack amendment. There is no evidence that these firms will become financially insolvent under any of the three scenarios.

• My analysis of the impact of S. 1415RS does not include the effect on price of any additional "look-back assessments" imposed on cigarette manufacturers for failing to meet underage smoking targets (Sec. 202(b)). If manufacturers failed to meet such targets, then the real price of cigarettes could rise by a maximum of 15 cents per pack beyond that specified above.

• My analysis of all three scenarios does not include the effect on price of any additional settlement payments or judgments resulting from litigation other than the states' suits, such as the law suits brought by Blue Cross/Blue Shield plans. If the tobacco industry were to enter into nationwide settlement agreements with Blue Cross/Blue Shield plans similar to that of Minnesota, then my preliminary estimate is that cigarette prices would gradually rise by an additional 20 cents per pack through 2003, but fall toward zero by 2008 as manufacturers completed their scheduled payments. These additional effects on cigarette prices would apply equally to both S.1415RS, the $1.50-per-pack amendment, and the no-intervention case.

<u>Cigarette Manufacturers Have Passed Through Their Recent Settlement Costs To Consumers in the Form of Higher Prices.</u>

U.S. cigarette manufacturers have the market power to pass through very substantial cost increases to consumers in the form of higher prices. The U.S. cigarette industry is an oligopoly. No significant new competitors have entered the domestic market for over 40 years, and barriers to new entry remain high. There are no close substitutes for cigarettes as a product. The demand for cigarettes is inelastic. As a result, an increase in price will raise more revenue even though it causes consumption to fall.[4] Historically, U.S. cigarette manufacturers have consistently passed on the costs of higher Federal excise taxes to their customers.[5]

During 1997, defendant cigarette manufacturers entered into settlement agreements with two states – Mississippi[6] on July 3 and Florida[7] on August 25 – as well as with plaintiffs in the *Broin* flight attendant case[8] on October 9. These settlements required payments of $896.8 million in 1997, including $246.8 million to Mississippi, $650 million to Florida, and $149 million to the Broin plaintiffs.[9] During 1998, manufacturers have thus far entered into new settlement agreements with the state of Texas[10] on January 16 and most recently with the state of Minnesota and

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[4] The best estimate is that cigarette consumption falls about 0.4 percent for every 1-percent increase in real price. See: Sweanor D, Ballin S, Corcoran RD, et al. Report of the Tobacco Policy Research Study Group on tobacco pricing and taxation in the United States. *Tobacco Control* 1992;1(Suppl):S31-6; Harris JE. The 1983 increase in the federal excise tax on cigarettes. In: Summers L, ed. *Tax Policy and the Economy*, vol 1. Cambridge, Massachusetts: MIT, 1987:87-111; and Harris JE. A working model for predicting the consumption and revenue impacts of large increases in the US Federal cigarette excise tax. Working Paper No 4803. Cambridge, Massachusetts: National Bureau of Economic Research, Jul 1994.): Working Paper No. 4803. One group of economists claims to have measured 0.8-percent long-run decline in consumption for every 1-percent price increase, based upon pre-1985 data on states' tax receipts. See Becker GS, Grossman M, Murphy KM, An empirical analysis of cigarette addiction. *Am Econ Rev* 1994;84(3):396-418. Such an extreme finding has thus far not been clearly replicated.

[5] Harris JE. The 1983 increase in the federal excise tax on cigarettes. *op. cit*.

[6] In the Chancery Court of Jackson County, Mississippi. In Re Mike Moore, Attorney General ex rel., State of Mississippi Tobacco Litigation, Cause No. 94-1429. Memorandum of Understanding. July 3, 1997. http://stic.neu.edu/MS/mssettle.htm.

[7] Circuit Court of the Fifteenth Judicial Circuit, In and For Palm Beach County, Florida. The State of Florida, et al., v. The American Tobacco Company, et al., Civil Action No. 95-1466 AH. Settlement Agreement, August 25, 1997. http://stic.neu.edu/Fl/flsettle.htm

[8] In the Circuit Court of the 11th Judicial Circuit In and For Dade County, Florida General Jurisdiction Division. Norma R. Broin, et al., v. Philip Morris Incorporated, et al. Case Number: 91-49738 CA (22). Settlement Agreement. October 9, 1997. http://www.tobacco.neu.edu/extra/hotdocs/broin.htm.

[9] Mississippi payments in 1997 included: $170 million in an initial lump-sum payment; $15 million in costs; and $61.8 million for a pilot program to prevent underage smoking. Florida payments in 1997 included: $550 million in an initial lump-sum payment and $100 million for a pilot program to reduce underage smoking.

[10] In the United States District Court for the Eastern District of Texas, Texarkana Division, The State of Texas vs. The American Tobacco Company, et al., No. 5-96CV-91. Comprehensive Settlement Agreement and Release. January 16, 1998. http://stic.neu.edu/Tx/Texas-settlement.htm.

Blue Cross/Blue Shield of Minnesota[11] on May 8. These settlements – along with continuing obligations from the previous year's settlements – will require payments totaling $2.4 billion during 1998, including $1,324 million to Texas, $588 million to Minnesota and Minnesota Blue Cross/Blue Shield, $68 million to Mississippi, $320 million to Florida, and $100 million to the Broin plaintiffs.[12]

These financial obligations can be translated into cents per pack. Thus, total 1997 settlement payments of $896.8 million amounted to 3.7 cents per pack (that is, $896.8 million divided by 24 billion packs sold). As of April of this year, cumulative payments for 1997-1998 equaled $1.712 billion, which amounted to 10.9 cents per pack.[13]

Figure 1 below shows the wholesale price of premium-brand cigarettes quoted by U.S. manufacturers during the period from November 1993 through April 1998.[14] In November 1993, manufacturers set their wholesale price at $1.12 per pack. This price remained unchanged until May 1995, when it increased to $1.15 per pack. Wholesale premium prices were again raised to $1.19 per pack in May 1996 and

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[11] The full text of the settlement agreement has not been made public as of this writing. The main financial terms are given at:
http://www.ag.state.mn.us/press/newssearch.qry?function=detail&Layout_0_uid1=33334.

[12] Texas payments in 1998 include: $725 million in an initial lump-sum payment, $264 million for certain public health and research programs, $45 million in costs and attorneys fees, and a first-year installment of $290 million, which equals Texas' 7.25% share of state payments under the first year of the Proposed Resolution of June 20, 1997. Mississippi payments in 1998 include: $68 million, which is the state's 1.7% share of state payments during the first year of the Proposed Resolution. Florida payments in 1998 include: $100 million toward the pilot program to reduce underage smoking; and $220 million, which is the state's 5.5% share of state payments during the first year of the Proposed Resolution. Minnesota payments in 1998 include: $240 million in retroactive damages; $142 million in attorneys' fees and costs; $10 million for a special research fund; $94 million to Blue Cross/Blue Shield; and $102 million, which equals Minnesota's 2.55% share of state payments under the first year of the Proposed Resolution. (It appears that, unlike Texas, Mississippi, and Florida, Minnesota's share was based on smoking-attributable Medicaid costs rather than state population. For the differential effects of these two criteria on state recoveries, see Harris JE. *Written Testimony Before the Subcommittee on Courts and Intellectual Property, Committee of the Judiciary, U.S. House of Representatives, Oversight Hearing on "Attorneys Fees and the Proposed Global Tobacco Settlement,"* Washington, DC, December 10, 1997.)

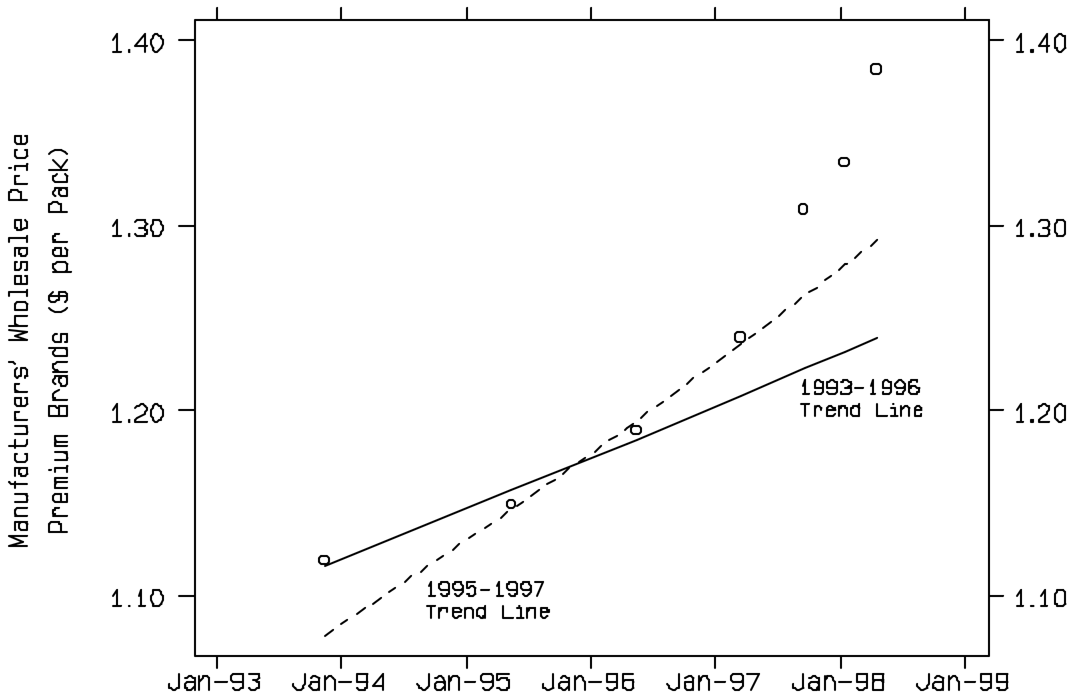
[13] All four parent companies – Philip Morris, RJR Nabisco, Loews, and BAT Industries – charged their respective shares of 1998 initial payments to Texas to the fourth quarter of 1997. See *Philip Morris Companies Annual Report 1997*, p.55; *RJR Nabisco Annual Report 1997*, p. 67; and *Loews Corporation Annual Report* 1997, p. 79; *BAT Industries Annual Report 1997*, p. 13, and *BAT Industries Directors' Report and Accounts* 1997, p. 56. As a result, total 1997–1998 settlement payments expensed during 1997 equaled $2.192 billion, or 9.1 cents per pack.

[14] Prices are quoted inclusive of the Federal excise tax, which remained unchanged at 24 cents per pack during the period covered by Figure 1.

$1.24 per pack in March 1997. Thereafter, from March 1997 through April 1998, wholesale premium price increased by 14 cents per pack.

Figure 1 also shows the expected trend lines in wholesale prices based on two different assumptions. For the solid line, I assume that the March 1997 increase anticipated the nationwide settlement on June 20 and the Mississippi settlement on July 3. For the dashed line, I assume that the March 1997 price increase did not reflect such anticipated payments. Under these two assumptions, respectively, the price of premium cigarettes increased by 14 and 9 cents per pack beyond the predicted trend.

Figure 1. U.S. Cigarette Manufacturers' Wholesale Prices
on Domestically Sold Premium-Brand Cigarettes, November 1993 – April 1998



Caption to Figure 1: The open circles represent quoted wholesale prices per pack of 20 cigarettes. (Source: USDA Tobacco Situation and Outlook Report.[15]) The solid line represents the best-fitting log-linear regression line for the points from November 1993 through May 1996. The dashed line represents the corresponding best-fitting line for the points from May 1995 through March 1997. The predicted values of these two trend lines for April 1998 are, respectively, $1.24 and $1.29. The actual quoted wholesale price in April 1998 was $1.38.

[15] USDA Economic Research Service. *Tobacco Leaf Situation and Outlook Report*. Table 8: Wholesale cigarette price revisions, 1980-97. Updated 5/4/98. http://www.econ.ag.gov/Briefing/tobacco/Table8.htm

Other Components of the Retail Price of Cigarettes, Including State Excise and Sales Taxes and Wholesaler and Retailer Markups, Have Not Risen Sharply.

In recent discussions of Federal tobacco legislation, some analysts have forecast that retail cigarette prices will exceed $5.00 per pack. Interpretation of these forecasts requires that we clearly distinguish between nominal and real (or inflation-adjusted) prices. Even at a relatively low inflation rate of 3% per year, a five-dollar bill in the year 2006 would be worth less than four dollars in 1998 currency. In this report, I will frame my results in constant, inflation-adjusted dollars.

Table 1 below shows my analysis of trends in the individual components of the retail price of cigarettes during 1994–1997.[16] As shown on Line 7, the nominal average retail price of cigarettes increased from $1.92 per pack in 1994 to $2.02 per pack in 1996, which corresponded to a rate of increase just under the overall growth in the consumer price index (CPI). By contrast, the average retail price rose to $2.12 in 1997.[17] As shown in Line 8, state and local excise taxes increased at a real rate of 1.0 percent annually during 1994–1996 and 1.3 percent annually during 1994–1997. As shown in Line 3, state sales taxes actually declined when measured as a percentage of the pre-tax price. As shown in Line 10, the Federal excise tax remained constant in nominal terms but declined in real terms.

If one subtracts all Federal, state and local taxes from the retail price, one is left with the revenues to manufacturers, wholesalers and retailers, as shown in Line 11. During 1994–1996, this quantity rose at about the same rate as the CPI. Lines 12 and 13 decompose this quantity into manufacturers' receipts per pack and wholesale/retail margins per pack. The data clearly show that wholesale/retail margins have been declining in real terms. The only significant component of recent price increases is manufacturers' wholesale prices (Line 12.)

The results in Table 1 contradict the hypothesis that increases in manufacturers' wholesale prices resulting from settlement costs somehow cause other components of price to rise in tandem. With the exception of state excise taxes, which have been rising about a 1-percent annual real rate, the other components of price – Federal excise taxes, state sales taxes, and wholesaler/retailer markups – have not kept pace with inflation.

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[16] This analysis updates an earlier study of trends during 1994–1996. Harris JE. *Prepared Statement Before the Senate Democratic Task Force on Tobacco*, Sen. Kent Conrad (D-ND), Chairman, Washington DC, October 21, 1997

[17] The computed average retail prices in Table 1 are higher than those ordinarily reported by the Tobacco Institute, which exclude state sales taxes.

Table 1. Retail Price, Excise and Sales Taxes, Manufacturers Revenues, and Wholesale/Retail Margins on Cigarettes, 1994-1997

	Calendar Year				Real Annual Average Change (Percent)	
	1994	1995	1996	1997	1994-1996	1994-1997
1. Expenditures on Cigarettes, Excluding Sales Taxes ($billions)	44,544	45,793	47,233	48,734		
2. State Sales Tax Revenues on Cigarettes ($billions)	2,016	2,083	2,007	2,086		
3. State Sales Taxes as Percent of Pre-Tax Price	4.53%	4.55%	4.25%	4.28%		
4. Total Expenditures on Cigarettes ($billions)	46,560	47,876	49,240	50,820		
5. State and Local Excise Taxes on Cigarettes ($billions)	7,220	7,717	7,817	7,926		
6. Total Cigarette Consumption, USDA Series (billions, cigarettes)	486	487	487	480		
7. Nominal Retail Price per Pack (cents)	191.6	196.6	202.2	211.8	-0.2%	1.0%
8. Nominal State and Local Excise Tax per Pack (cents)	29.7	31.7	32.1	33.03	1.0%	1.3%
9. Nominal State Sales Tax per Pack (cents)	8.3	8.6	8.2	8.7	-3.1%	-1.6%
10. Nominal Federal Excise Tax per Pack (cents)	24.0	24.0	24.0	24.0	-2.8%	-3.9%
11. Nominal Mfrs + Wholesale/Retail Revenues per Pack (cents)	129.6	132.4	137.9	146.0	0.2%	2.0%
12. Nominal Manufacturers Revenues per Pack (cents)	70.1	72.6	76.5	83.20	1.5%	4.7%
13. Nominal Wholesale/Retail Margin per Pack (cents)	59.5	59.8	61.4	62.83	-1.3%	-1.3%
14. Wholesale/Retail Margin as a Percent of Manufacturers' Price (%)	20.0%	19.6%	19.4%	18.8%		
15. Consumer Price Index (percent of 1982-1984)	148.2	152.4	156.9	160.5		

Notes to Table 1:

1. Source: USDA Economic Research Service. *Tobacco Leaf Situation and Outlook Report*. Table 22 Expenditures for tobacco products and disposable personal income, 1986-97. Updated 5/4/98. http://www.econ.ag.gov/Briefing/tobacco/Table22.htm.
2. USDA Economic Research Service. op. cit. Table 23. Governmental revenues from tobacco products, 1986-96. Updated 5/4/98. http://www.econ.ag.gov/Briefing/tobacco/Table23.htm.
3. Line 2 ÷ Line 1.
4. Line 1 + Line 2.
5. USDA Economic Research Service. op. cit. Table 23.
6. USDA Economic Research Service. op. cit. Table 1. Cigarettes: U.S. output, removals, and consumption, 1988-97. Updated 5/4/98. http://www.econ.ag.gov/Briefing/tobacco/Table23.htm.
7. 2 × Line 4 ÷ Line 6.
8. 2 × Line 5 ÷ Line 6.
9. 2 × Line 2 ÷ Line 6.
10. Based on prevailing Federal tax rate of $12 per 1,000 units.
11. Line 7 – Line 8 – Line 9 – Line 10.
12. Based on the following data from company annual reports and the Maxwell Reports (*Tobacco Reporter*, March 1996, April 1997, May 1998, in press):

	1994	1995	1996	1997
3-firm (PM,RJ,Lo) shipments (billions)	386.6	383.8	390.3	393.9
3-firm (PM,RJ,Lo) revenues ($millions)	19,162.3	19,535.7	20,681.1	22,289.8
3-firm (PM,RJ,Lo) rev/pack (cents)	99.1	101.8	106.0	113.2
Less Federal Excise Tax (24 cents)	75.1	77.8	82.0	89.2
4-firm (PM,RJ,Lo,BW) revenues ($m)			23,807.3	
4-firm (PM,RJ,Lo,BW) rev/ pk (cents)			100.5	
Less Federal Excise Tax (24 cents)	70.1	72.6	76.5	83.2

The first row shows total unit shipments (in billions of cigarettes) for three firms: Philip Morris, RJ Reynolds, and Lorillard. The second row shows total net sales of these three firms. (The PM and Lorillard annual report include Federal excise taxes in net sales. Since the RJ annual report excluded Federal excise taxes, RJ Reynold's share was added back to this line.) The third line shows the 3-firm revenue per pack sold, inclusive of Federal excise tax, while the fourth line excludes the Federal excise tax. The latter data reflect receipts by firms with a disproportionate share of the premium-priced market. Data for Brown & Williamson, however, were available only for 1996. (See *Brown & Williamson Tobacco Corporation Annual Review* 1996). The fifth, sixth and seventh lines therefore compute revenues per pack less Federal excise taxes for four firms in 1996. The 4-firm estimates for the remaining years were based on the assumption that ratio of 4-firm to 3-firm prices remained constant.

13. Line 11 – Line 12.
14. Line 13 ÷ (Line 7 – Line 10 + Line 11).
15. CPI, All Urban Consumers, Annual Average.

S.1415RS Will Result in a Real Retail Cigarette Price per Pack in 2003 That is 85 Cents Higher Than the Expected Price Without Federal Intervention. The $1.50-Per-Pack Amendment Will Result in a Real Price That is $1.08 Higher.

Figure 2 shows the results of my analysis of the path of real cigarette prices with and without Federal intervention. The triangles (corresponding to S.1415RS), the squares (corresponding to the $1.50-per-pack amendment) and the open circles (corresponding to no intervention) start at $2.12 per pack in 1997.

Under S.1415RS, the real price rises progressively to $3.38 in 2003–2004 as the required payments under Secs. 403-404 of the Act escalate. The real price then falls to $3.07 per pack by 2006 as a result of the volume adjustment provision (Sec. 404(2)) that takes effect in 2005. Under the $1.50-per-pack amendment, the real price rises to $3.35 by 1999 and $3.64 by 2001, after which it declines slightly. Without significant Federal intervention, the real price continues to rise to $2.54 in 2003, as manufacturers settle with an increasing proportion of states. Once all state settlements are in place by 2003, real price then declines slightly to $2.52 by 2006 as a result of the volume-adjustment provisions of the state settlement agreements.

My analysis of price entailed the following assumptions:

1. The Federal excise tax on cigarettes, currently at $0.24 per pack, will increase to $0.34 per pack in 2000, and to $0.39 per pack in 2002, but remain unchanged thereafter.

2. State and local excise taxes, which amounted to 33.03 cents per pack in 1997, will increase at a real, inflation-adjusted rate of 1% annually.

3. State sales taxes will remain at 4.28% of the pre-sales tax price.

4. Wholesaler and retailer markups, which amounted to 62.83 cents per pack in 1997, will keep pace with inflation.

5. The Consumer Price Index (CPI) will increase at an average annual rate of 3.0 percent.

6. Manufacturers' wholesale prices will have two components: a base component equaling 79.50 cents per pack, which rises at the same rate as the CPI; and an additional component reflecting the costs of all settlement payments or required Federal payments.

7. In the absence of significant Federal legislation, the major tobacco manufacturers will continue to settle with individual states, as they have so far done with Mississippi, Florida, Texas, and Minnesota. Based on the trial

schedules and filing dates of the individual states' complaints, I assume that 10% of the remaining suits will be settled by the end of 1998; 20% by the end of 1999; 40% by the end of 2000; 60% by the end of 2001; 80% by the end of 2002; and 100% by the end of 2003.

8. Adequate licensing procedures, export controls, and enforcement mechanisms can be established to prevent a significant illegal market in contraband cigarettes.[18]

9. Total cigarette consumption (in billions of packs annually) will follow the model: $\log Q = 3.591 - 0.006T - 0.195P$, where Q is the number of packs, P is the real price of cigarettes in 1997 dollars, T is the number of years since 1997, and *log* represents the natural logarithm.[19]

10. Smokeless tobacco manufacturers will contribute an estimated 1.2 percent of payments required under Sec. 403–405 of the Act.[20]

My analysis of the impact of S. 1415, as given in Figure 2, does not include the effect on price of any additional "look-back assessments" imposed on cigarette manufacturers for failing to meet underage smoking targets (Sec. 202(b)). If manufacturers failed to meet such targets, then the real price of cigarettes could rise up to an additional 15 cents per pack beyond that specified in Figure 2.[21]

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[18] Testimony of Lawrence Summers to Senate Judiciary Committee, April 30, 1998; Testimony of David Sweanor to Senate Judiciary Committee, April 30, 1998; and Testimony of David Sweanor to Senate Democratic Task Force on Tobacco Sen. Kent Conrad (D-ND), Chairman, May 4, 1998.

[19] Under this "log-linear" model, the price elasticity of demand for cigarettes rises from -0.42 at the current price of $2.12 per pack up to -0.66 at a real price of $3.38 per pack. See Harris JE. *Comments on Proposed Tobacco Industry-Wide Resolution*, Commissioned by the American Cancer Society, June 26, 1997, Table 2, note 4. Harris, JE. *Written Testimony Before the Senate Committee on Agriculture, Nutrition, and Forestry Hearings on the Tobacco Settlement and the Future of the Tobacco Industry*, Washington DC, September 11, 1997; Appendix Table 2, note 4. Harris JE, "A Working Model for Predicting the Consumption and Revenue Impacts of Large Increases in the U.S. Federal Cigarette Excise Tax," op. cit.

[20] Under Sec. 403(a)(1) of the Act, smokeless tobacco manufacturers are to contribute 3.2% of the initial $10 billion payment. Based upon Maxwell Reports (*Tobacco Reporter* April 1997, p. 22; *U.S. Trade Distribution Journal* November 21, 1997, p. 27), I estimate that 24.165 billion packs of cigarettes, 735 million 1.2-ounce cans of moist snuff, and 360 million cans of other smokeless products were sold in 1996. Under Sec.403(d)(3)(A)(1) of the Act, this would amount to 24.165 adjusted units of cigarettes, 0.29 billion adjusted units of moist snuff, and 0.09 adjusted units of other smokeless products.

[21] Since the real payments under Sec. 202(b) are adjusted for changes in industry volume, they function essentially as an excise tax. (Harris JE. *Comments on Proposed Tobacco Industry-Wide Resolution*, Commissioned by the American Cancer Society). The maximum impact on price can therefore be calculated as the maximum real payment ($3.5 billion) divided by base consumption (24 billion packs).

My analysis of both S. 1415 and the no-intervention scenario does not include the effect on price of any additional settlement payments or judgments resulting from litigation other than the states' suits, such as the law suits brought by Blue Cross/Blue Shield plans. If the tobacco industry were to enter into nationwide settlement agreements with Blue Cross/Blue Shield plans similar to that of Minnesota, then my preliminary estimate is that cigarette prices would gradually rise by an additional 20 cents per pack through 2003, but fall toward zero by 2008 as manufacturers completed their scheduled payments.[22] These additional effects on cigarette prices would apply equally to S.1415RS, the $1.50-per-pack amendment, and the no-intervention case.

<u>Under S.1415RS, total U.S. cigarette consumption and manufacturers' real profits on domestic sales of cigarettes will have declined by 21.3 percent. Under the $1.50-per-pack amendment, the corresponding decline is 29.1 percent. If there were no Federal intervention, I estimate that total U.S. consumption and manufacturers' real domestic profits will decline by 12.4 percent.</u>

Table 2 shows my estimates of the impact on price, consumption, and manufacturers' operating profits, based upon the model detailed above. Under enactment of S.1415RS, consumption will decline from 24 to 18 billion packs during 1997 through 2004, but will then rebound under the current volume-adjustment provision (Sec. 404(2)). Under the $1.50-per-pack amendment, consumption will decline from 24 to approximately 18 billion packs by 2000, and then decline more slowly thereafter. By contrast, consumption under the no-intervention scenario will decline from 24 to 21 billion packs by 2006.

So long as manufacturers can pass their costs on to consumers and thus retain a 30-cent-per-pack operating margin, domestic cigarette profits will follow consumption. Under S.1415RS, as Table 2 shows, real operating profits will fall by $1.8 billion during 1997–2003 and then rise by $0.3 billion during 2003–2006. Under the $1.50-per-pack amendment, real profits will fall by $2 billion during 1997–2000. Under a no-intervention scenario, real profits will fall by $0.9 billion during 1997–2003. In the year 2003, enactment of S.1415RS would thus result in a $1 billion loss in real profit compared to a scenario in which tobacco manufacturers continued to settle cases on their own. In the same year, the $1.50-per-pack

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[22] The Minnesota settlement provides for payment of $469 million to Blue Cross/Blue Shield over a five year period. Since Minnesota's population is approximately 1.75% of the total U.S. population, a comparable payment to all remaining BC/BS plans would equal $5.3 billion. If manufacturers gradually entered into comparable 5-year settlement agreements with the remaining BC/BS plans during 1998–2003, then annual payments would peak at $4.7 billion in 2003 and then fall to zero by 2008.

amendment would result in a loss of $1.2 billion compared to the no-intervention scenario.

Cigarette manufacture in the U.S. is a profitable enterprise. In recent testimony before the Senate Agriculture Committee, I estimated that in 1996, the operating profit per pack of cigarettes was $0.30.[23] With about 24.2 billion packs of cigarettes sold that year,[24] the total operating profits of the domestic tobacco-producing subsidiaries of U.S. manufacturers came to about $7.2 billion. So long as U.S. manufacturers can pass their costs through to customers – and thus retain their 30-cent-per-pack operating margins – cigarettes will remain profitable. Even if manufacturers were saddled with tens of billions of dollars of settlement payments or Federally-imposed assessments, and even if the resulting price hikes caused consumption to decline by 50 percent – as some analysts have claimed – domestic tobacco profits would still be $3.6 billion in 1996 dollars.

An analysis of the impact of Federal legislation on the profits of tobacco manufacturers needs to consider the profitability of their parent companies. Cigarettes are sold by highly diversified multinational firms that derive income from international tobacco divisions and non-tobacco lines of business. In 1996, I estimated that the operating profits of the international tobacco divisions of U.S. tobacco manufacturers were nearly $5.1 billion, while the operating profits of non-tobacco lines of business were nearly $7.7 billion. Even after accounting for interest payments on corporate debt and other corporate-wide expenses, the total pretax income of the parent companies was $15 billion.[25]

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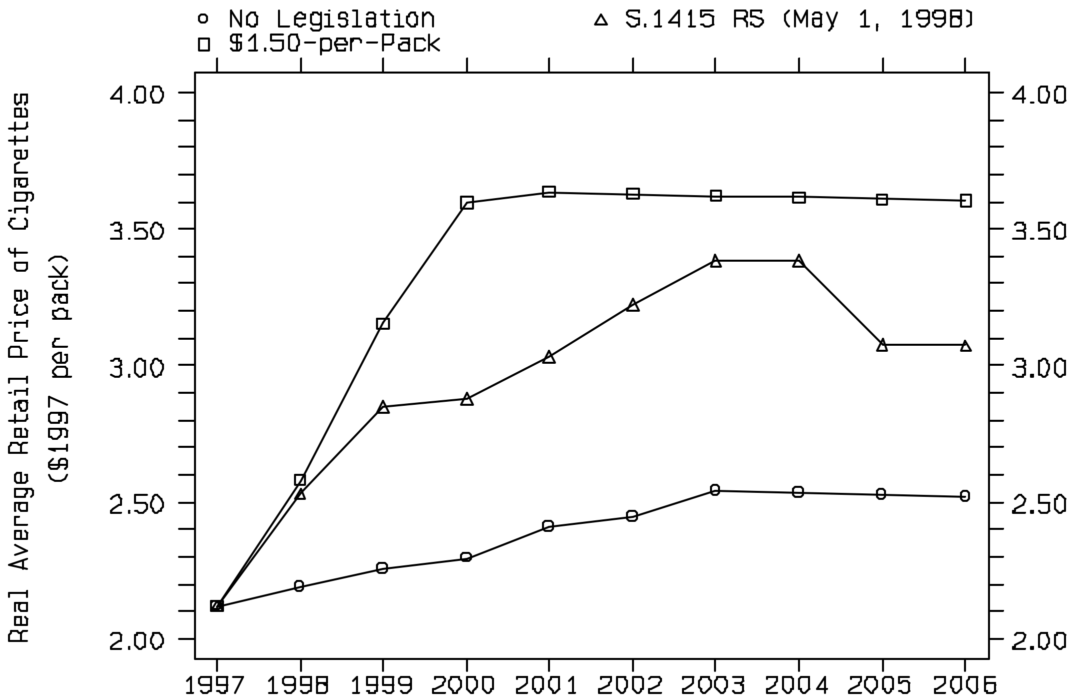
[23] Harris JE. *Written Testimony Before the Senate Committee on Agriculture, Nutrition, and Forestry Hearings on the Tobacco Settlement and the Future of the Tobacco Industry,* Washington DC, September 11, 1997; Appendix Table 2.

[24] Maxwell Report for 1996. *Tobacco Reporter* April 1997.

[25] Harris JE. *Written Testimony Before the Senate Committee on Agriculture, Nutrition, and Forestry Hearings on the Tobacco Settlement and the Future of the Tobacco Industry. op. cit.*

Figure 2. Real Average Retail Price of Cigarettes, 1997–2006
under Three Different Scenarios: Enactment of S.1415RS;
Enactment of $1.50-Per-Pack Amendment; and No Federal Intervention



Caption to Figure 2: The triangles represent the real average retail price resulting from enactment of S. 1415 (RS). The squares represent the real average retail price resulting from the $1.50-per-pack amendment. The open circles represent the real average retail price if no significant Federal legislation is enacted. The real price under S. 1415 falls in 2005 because the volume adjustment provision (Sec. 404(2)) takes effect. See text for assumptions.

Table 2. Comparative Impact on Average Retail Cigarette Price, Total Consumption, and Operating Profits of Domestic Tobacco Divisions of U.S. Cigarette Manufacturers, 1997-2006

	No Federal Intervention				Enactment of S.1415(RS)				Enactment of $1.50-Per-Pack Amendment			
Year	Nominal Retail Price ($/pack)	Real Retail Price ($/pack)	Total Consump (billions)	Real Operating Profits ($billions)	Nominal Retail Price ($/pack)	Real Retail Price ($/pack)	Total Consump (billions)	Real Operating Profits ($billions)	Nominal Retail Price ($/pack)	Real Retail Price ($/pack)	Total Consump (billions)	Real Operating Profits ($billions)
1997	2.12	2.12	24.0	7.2	2.12	2.12	24.0	7.2	2.12	2.12	24.0	7.2
1998	2.26	2.19	23.5	7.1	2.61	2.53	22.0	6.6	2.66	2.58	21.8	6.5
1999	2.39	2.26	23.1	6.9	3.02	2.85	20.6	6.2	3.34	3.15	19.4	5.8
2000	2.51	2.29	22.8	6.8	3.14	2.88	20.3	6.1	3.93	3.59	17.7	5.3
2001	2.71	2.41	22.1	6.6	3.41	3.03	19.6	5.9	4.09	3.64	17.4	5.2
2002	2.84	2.45	21.8	6.6	3.73	3.22	18.8	5.6	4.21	3.63	17.3	5.2
2003	3.03	2.54	21.3	6.4	4.04	3.38	18.1	5.4	4.32	3.62	17.3	5.2
2004	3.11	2.53	21.2	6.4	4.16	3.39	18.0	5.4	4.45	3.61	17.2	5.2
2005	3.20	2.53	21.1	6.3	3.90	3.08	19.0	5.7	4.57	3.61	17.1	5.1
2006	3.29	2.52	21.0	6.3	4.01	3.07	18.9	5.7	4.70	3.60	17.0	5.1

Comment

My analysis does not predict financial insolvency for the U.S. domestic tobacco industry. The industry as a whole – as well as individual firms – will lose money but remain profitable.

My analysis entailed three key assumptions. First, I assumed that manufacturers can and will pass through the costs of legal settlements and legislative assessments to consumers in the form of higher prices. My analysis of the impact of the industry's legal settlements on cigarette prices during 1997–1998 amply supports this assumption. Cigarette manufacturers have already raised the price of their product to pay for their legal costs. Second, I assumed that the payments required under S.1415RS or the $1.50-per-pack amendment would not have a multiplier effect on other components of cigarette retail prices, including state excise and sales taxes, Federal excise taxes, and wholesaler/retailer markups. My analysis of trends in the components of cigarette retail prices during 1994–1997 amply supports this assumption. In particular, when cigarette manufacturers raised their prices by approximately 7 cents per pack during 1997, the other components of cigarette price simply continued to follow past trends.

Third, I assumed that in the absence of significant Federal intervention, defendant cigarette manufacturers would continue to settle law suits filed by individual states according the basic model set forth in the agreements with Mississippi, Florida, and Texas. Under such a model, total payments to all states would rise to $8 billion by 2003, with each state receiving a negotiated share of the total. Although the details of the Minnesota settlement are not available at this writing, it appears that this state has likewise followed the industry's model. Accordingly, in my base no-intervention scenario, the defendant manufacturers would gradually settle state cases until all were concluded by 2003. Previous analyses of the impact of Federal tobacco legislation have not generally been explicit about their base-case assumptions. Many analysts appear to have assumed implicitly that the industry would enter no more settlements and prevail in court. The experience of the first four state suits does not support this assumption.