INSTITUTE FOR ENVIRONMENTAL NEGOTIATION
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DATE: 8/13/97

NUMBER OF PAGES TO FOLLOW 1

COMMENTS:
Please deliver this invitation to Elizabeth Drye, Domestic Policy Counsel. Thank you.

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Aug. 13, 1997

Domestic Policy Cousel

Dear Ms. Elizabeth Drye,

On behalf of the Southern Tobacco Communities Project, and in coordination with the Concerned Friends for Tobacco, I would like to invite you to participate in a tobacco grower's Field Briefing and Farm Tour from 6:00 - 9:00 p.m., Aug. 21, and 8:30 a.m. to 1:30 p.m., Aug. 22, in South Boston, Virginia. The Concerned Friends for Tobacco is hosting an evening of presentations and discussions about tobacco growers' current interests and concerns, a morning's worth of on-farm and related demonstrations, and a concluding lunch.

This Field Briefing and Farm Tour is being organized especially for health advocates and policy makers interested in hearing how the growers view the proposed tobacco settlement between manufacturers and states' attorneys-general, as well as other related issues. Virginia Delegate Ted Bennett and U. S. Congressman Virgil Goode, representatives for this area, will be offering their perspectives, and several other elected officials will also be in attendance. The growers will be unveiling for the first time in such a public forum their unified statement of interest concerning what they would like to see out of the settlement. Mr. Andrew Shepherd, Vice-President of the Flue-Cured Tobacco Stabilization Corporation, will lead this portion of the presentation and discussion.

Due to the short notice we have for this event (thanks to the circumstances surrounding the settlement), we are asking people to respond by telephone. For more information or to indicate your plans to attend, please call the Institute for Environmental Negotiation at 804-924-1970. You may ask for Tanya Denckla or Karen Van Gilder. We will give you information about hotel registration and directions. The sponsored events (dinner, tour and lunch) are free, and there is limited funding available to reimburse for travel and hotel costs should that be necessary.

We anticipate considerable interest in this event, so if you do wish to come please respond as soon as you can. If you are unable to make it, we encourage you to send staff concerned with health or tobacco issues.

Sincerely,

E. Franklin Dukes
Associate Director

P.S. Reimbursement is available for travel for you and/or a staff member. Please fax a letter stating your need for funds and the estimated travel costs to (804) 924-0231.

July 30, 1997

REVISING THE LOOK-BACK

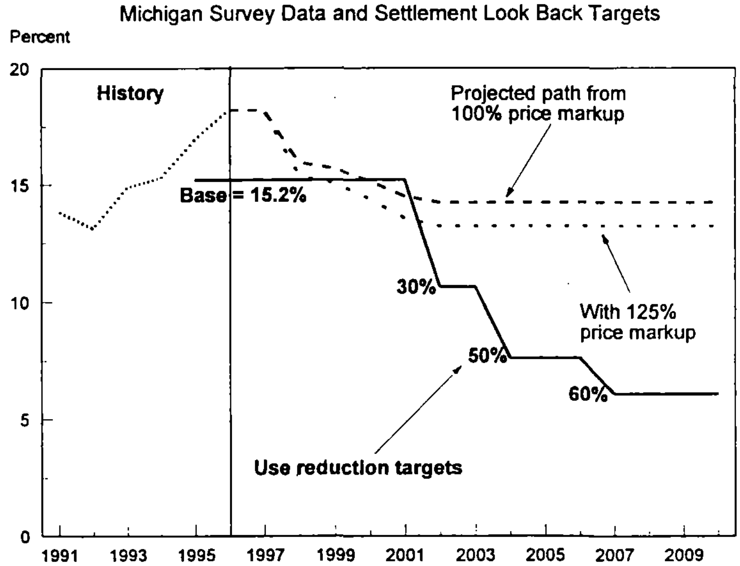
The proposed settlement contains a "look-back" provision with the stated purpose of providing economic incentives to tobacco firms to achieve "dramatic and immediate reductions in the number of underage consumers of tobacco products." Manufacturers would face a surcharge if tobacco-use reduction targets for underage users are not met. The surcharge would be imposed on the basis of a "look-back" comparing actual underage teen tobacco use to the targeted reduction percentages. Manufacturers could petition the FDA for partial abatement of the surcharge if they act in good faith and in full compliance with the Act.

The proposed surcharge would be small in terms of the price per pack of cigarettes -- at the $2 billion cap it would represent about 8 cents per pack, and with a 75 percent abatement, only 2 cents per pack. Moreover, firms can readily pass this small cost through to the price of cigarettes, since the payments are adjusted for sales. *A lookback surcharge at this level is therefore unlikely to provide strong incentives for tobacco companies to reduce youth smoking.*

The chart illustrates the targeted reductions in teen smoking, and the paths of teen smoking projected to occur under alternative assumptions about the passthrough into prices of the industry payments under the proposed settlement. Clearly, the price increases induced by the other aspects of the plan will not be sufficient to cause the targets to be met.

Underage Daily Cigarette Smoking Percentages and Targets

Michigan Survey Data and Settlement Look Back Targets



The % price markup is relative to the per pack penalty payment; the reductions in teen use shown resultfrom the effects of the price increases via the teen elasticity of demand.

PROBLEMS AND PRINCIPLES

The settlement's look-back provision is based on the principle that the penalty should reflect the present discounted value of the profits earned by attracting youth smokers over and above the targeted number. But such a penalty merely makes the industry indifferent about whether it meets the target or not. A larger penalty is required to achieve meaningful deterrence. To correct this and other problems, the structure of the look-back should be altered in some rather fundamental ways.

1. Penalty as a multiple of profits; No $2 billion cap. To assure that firms are given an adequate incentive to reduce underage youth smoking, ***the surcharge penalty should be a multiple of the present value of profits*** and ***the $2 billion cap should be eliminated.***

- The base amount for the surcharge in the agreement -- $80 million per percentage point of the shortfall of the percent decline in underage use relative to the reduction target percentage -- was determined as part of the negotiations between the Attorneys General and the industry. Our estimate for the "break-even" surcharge level under the current structure is $75 million per percentage point, similar to the $80 million of the agreement.

- A penalty which is set exactly equal to the foregone profit stream offers no incentive to reduce youth smoking. Instead, the penalty should be a multiple of foregone profits, to provide an incentive to firms to find ways to reduce youth smoking. Setting the penalty as a multiple -- say 3 times -- of profits would point to a base surcharge level of about $225 million under the current structure of the settlement.

- The current structure includes a $2 billion cap for annual industry payments under the look-back surcharge. But this cap would have the perverse feature of removing the incentive to reduce youth smoking if youth smoking were to remain high. Moreover, it is more likely that the cap would be hit under the principle of having the surcharge penalty be a multiple of profits. Thus, *this cap should be removed.*

2. Company by Company Fines: ***Fines should be levied on a firm-by-firm basis to create the right incentives and to avoid "free-rider" problems.*** Because the smoking reduction targets are specified based on industry-wide underage usage, individual firms have an incentive to keep selling to youths because they reap the full reward while bearing only part of the penalty. As each firm has this same incentive, in practice it is less likely that the reduction targets would be met. By specifying the fines on a company by company basis, the fine will hit an individual firm's profits directly if it fails to reduce youth smoking of its brands.

   - However, there are important data problems with a company-by-company approach that must be addressed. Company-by-company fines would require that the Michigan Survey be expanded to ask the underage tobacco users about their brand preferences and use. Also, it is not yet known what the base market share is for each company; if the Michigan Survey were expanded for that purpose, firms would have an incentive to boost their sales to teens in the near term so as to establish an inflated baseline from which to attain reductions. Finally, a mechanism must be developed to deal with reported use of more than one brand.

   - Implementation on a company-by-company basis would require that the fines be specified on a *per youth smoker* basis in order to make proper calculations.

3. No tax deductibility: ***The surcharge payments should be treated as a fine or penalty for tax purposes.***

    - Typically, payments required to be payable to government entities as fines or penalties are *not* tax deductible. The agreement states, however, that payments "shall be deemed ordinary and necessary business expenses . . . and no part thereof is a . . . fine or penalty . . .". *We should reiterate that these payments are fines and are not tax deductible*. (If, contrary to our recommendations, deductibility is retained, the fine estimates shown below should be increased by about 50%).

4. No Volume Adjustment: ***The base surcharge should not be reduced by a decline in the volume of industry sales***. The agreement calls for the surcharge amount to be adjusted for the change in the sales-weighted level of per unit profits. The sales adjustment would be relative to a base 1996 level.

    - With the volume adjustment, firms would be able to pass the penalty through to customers through price increases and not bear the penalty themselves. However, if the volume adjustment is eliminated, to the extent that the costs are absorbed by the firms and their stockholders, the effect on prices and teen use would be reduced.

Fine Levels: Our calculations show that, with the above provisions, the *break-even* value for the fine would be about \$1460 *per youth smoker*. Over time, the \$1460 base value would have to be adjusted by the change in industry per unit profits (\$ per unit) relative to the base year of the agreement -- otherwise it could be eroded by inflation and wouldn't capture true profit effects. The principle of having penalties equal to three times profits would therefore point to a total *surcharge level of \$4380 per youth smoker.*

The use-reduction targets on a firm-by-firm basis would be specified as the number of teen smokers consistent with the targeted percentage reduction (e.g. 60%) from the base number of teens who smoked that firm's product. This number would be adjusted to account for the percentage change in the overall population of teens from the base year to the surcharge year.

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5. Improved Partial Abatement Mechanism: ***The partial abatement*** -- under which firms could receive up to 75% abatement of the surcharge -- ***should be adjusted to create the proper incentives***.

- There is substantial concern that the abatement in its present form would erode the incentive provided by the surcharge and likely would cause it to do little actual "work" in its stated purpose of having firms comply with the agreement. Many believe that it would be too easy for firms to qualify for the abatement.

- In general, there is a tradeoff between motivating firms to follow the rules and motivating them to promote lower smoking. A substantial abatement would offer strong incentives to follow the rules, but would limit incentives to consider innovative means of lowering youth smoking. Eliminating the abatement would provide an incentive to firms to figure out how to lower youth smoking, but offer no penalty for not following the rules.

- These considerations suggest that the proper penalty structure should have two parts:

    - a *non-abatable penalty* which is substantially higher than forgone profits, to provide the incentive to firms to find ways to reduce teen smoking of their brand. This must be higher than foregone profits to provide private incentives.

    - an *abatable penalty* which is removed if firms are found (through a clear and unambiguous regulatory process, not a judicial process) to have "followed the rules". The government should have the flexibility to update these regulations to capture innovations in youth smoking reduction.

6. <u>Penalty should be nonlinear to maximize impact</u>. The *non-abatable* part of the surcharge could be structured to cost more per percentage point of youth use at higher levels than at lower levels. This would have the effect of increasing the penalty as the level of noncompliance rises.

- A suggested schedule, once fully phased in, might be:

    - teen use declines by between 50-60%: fine is 2 times profits
    - teen use declines by between 40-50%: fine is 2.5 times profits
    - teen use declines by between 30-40%: fine is 3 times profits
    - teen use declines by between 20-30%: fine is 3.5 times profits
    - teen use declines by between 10-20%: fine is 4 times profits
    - teen use declines by less than 10%: fine is 5 times profits

- Another way of implementing this nonlinear penalty approach would be to have the abatement percentage increase as the level of teen smoking got closer to the reduction target.

7. **Incentives and the 18- to 21-year old age group**. Because the agreement is targeted at underage youth smokers, we must be aware of the incentives it creates relative to slightly older groups. For example, data show that 90% of adult smokers begin smoking as teenagers, and since the reduction targets are specified in terms of 13-17 year-olds, the industry may just simply target 18- to 20-year olds.

- One option would be to expand the use-reduction targets to include 18-20 year-olds. The teen use survey would have to be expanded even further in the effort to identify the percentage of smokers 18-20 years old.

    -- Approximate calculations indicate that the base surcharge per smoker would be higher under this option, at about $4575 per youth smoker. Industry lost profits are higher (about $1525) because of the more intensive smoking that occurs at the higher ages and because of the fact that individuals kept from smoking by age 21 will be less likely to take up smoking as adults (relative to not smoking by age 18).

- From a philosophical as well as practical standpoint, it may be undesirable to penalize a private firm for making a legal sale of a legal product to a legal adult. It may be preferable to *raise the legal age to 21* if the intent is to reduce under-21 smoking. Raising the legal age would have the additional benefit of making it more difficult for high schoolers to have friends who have access to cigarettes. Raising the legal age could be done even if the look-back surcharge is put in place.

    -- If the legal age were to be raised, it presumably would have to be phased in to "grandfather" those who currently are under 21 and are legally permitted to purchase cigarettes.

8. The *double-counting provision* of the settlement should be reconsidered. In practice, if the double counting adjustment were eliminated, firms would face the prospect of paying for a 13-year old smoker five times over a 5-year period. That would produce a significant incentive for firms to keep young teens from taking up smoking.

- Since more years of smoking as a teen will increase the odds of addiction, it may be appropriate to increase the fines for each year that a teen smokes.

- An additional justification for eliminating the double-counting provision is that it would be extremely difficult in practice for the FDA to calculate the proper adjustment for double-counting. The targets are specified in terms of the percentage reduction of all underage users and not the number of users by age category. This problem would be further complicated if fines were to be specified on a company-by-company basis.

July 30, 1997

BUDGETARY IMPACTS OF TOBACCO SETTLEMENT

Overview

The following tables provide four alternative scenarios of the budget effects of the tobacco settlement. There are some underlying assumptions that are common to all four scenarios, and other assumptions that distinguish the scenarios from each other. Some of the influences on the actual deficit would not be recognized for purposes of enforcement of the Budget Act. There are some additional considerations that could drive all of these results in one direction or the other.

Common assumptions. The tobacco settlement specifies that industry payments should be devoted to numerous activities, some undertaken by the Federal Government and some not. However, the settlement does not specify or create an agent to collect and distribute these funds. Accordingly, the tables that follow assume that the Federal Government fulfills that role. All of the tobacco industry funds are therefore assumed to be Federal receipts in the first instance. Funds are disbursed for the various activities specified in the settlement; the residual funds are assumed to be the compensation for past Medicaid costs that motivated the States to undertake their negotiations with the industry. It is assumed that those residual funds are divided between the Federal Government, on the one hand, and the States, on the other, according to the historical average matching rate for Medicaid expenditures (approximately 57 percent Federal). The Federal Government is assumed to spend all of its share of the residual funds. (Therefore, the deficit effects would not be different if it were assumed that all of the residual funds were distributed among the States, with no share for the Federal Government).

Other assumptions are identical across the four scenarios. For example, tobacco purchases are estimated to decline by 22 percent, which reduces Federal (and State) tobacco excise tax receipts. Civil suits are assumed to claim damages at the maximum amount specified in the settlement.

Assumptions that differ across scenarios. The four scenarios differ according to the budgetary treatment of the Federal Government's receipts, and the assumed outcome for the youth smoking reduction targets. Each of these issues has two possible outcomes; the two issues with two outcomes each yield the four scenarios.

First, if the Federal Government were to raise the same amount of funds from an excise tax increase as it would from the tobacco settlement, those revenues would be "scored" for budget purposes at only 75 percent of the gross receipts. (This is the result of a highly technical adjustment for the national income and product accounts' treatment of indirect business taxes. While abstruse, this adjustment is widely accepted and of long standing.) One might argue that the Federal Government's receipts from the tobacco settlement would be in practice indistinguishable from an excise tax. The receipts would be paid to the Federal Government; they would arise from an exercise of the Federal Government's sovereign powers (through the implementing legislation); they would rise and fall according to tobacco sales; and they would be expected to be passed through to the consumer in the price of the product.

On the other hand, one might argue that these receipts would not be the practical equivalent of an excise tax. They are not Federal revenues as generally construed, because the settlement was entered into in some sense voluntarily, or through a judicial process, by the tobacco industry ("fines" would not be scored with the same 25 percent reduction as "excise taxes," for example); for several uses of funds specified in the settlement, the Federal Government serves only as a conduit to other governmental and nongovernmental entities; and unlike most other Federal excise tax receipts, for many of their prospective uses they presumably would not be subject to appropriations, but would be spent automatically. Thus, the receipts from the settlement might or might not be scored as indirect business taxes, with a substantial (i.e., 25 percent of the gross) difference in the effect on available Federal resources.

The second issue on which these scenarios differ is whether the industry does or does not meet its target for youth smoking reduction. If the industry does not meet the target, payments are higher. There is of course no way at this time to know the outcome of the settlement for youth smoking.

Implications of the Budget Act. The numbers in the tables that follow provide a complete (though uncertain) picture of the effects of the tobacco settlement on the budget deficit. However, the scoring rules in the Budget Act would not recognize some of the likely effects. For example, the settlement would raise the price of tobacco products, which would increase the consumer price index, which would in turn increase future Federal benefit payments and decrease income tax revenues through its effect on indexation. Further, the increase in the price of tobacco products would decrease consumption, which would decrease Federal (and State, incidentally) excise tax receipts. However, under budget scoring conventions, these consequences would be considered as "indirect" effects, and would not be scored. Finally, the debt service implications of the settlement would not score. Because all of these unscored, indirect effects would tend to increase the deficit, the scored effects on the deficit for purposes of the legislative process would be more favorable (or less unfavorable) than those that would actually obtain, all else equal.

Additional considerations and uncertainties. As noted above, these tables presume that the Federal Government spends every dollar of receipts from the tobacco settlement. However, because of the 25 percent offset for indirect business taxes (if the settlement were so treated), and the effects on excise tax receipts and on indexation, spending the proceeds of the settlement dollar-for-dollar would **increase** the deficit, not leave it unchanged. Therefore, to hold the deficit constant, it would be necessary for the Federal Government to retain some of the proceeds of the settlement to make up for these incidental effects.

Furthermore, because the excise tax, indexation and debt service implications of the agreement would not score, and so the deficit effect for the purposes of the Budget Act would differ from the actual deficit impact, the amount of the settlement which the Federal Government would have to refrain from spending to hold the actual deficit harmless would differ from the amount that would hold the deficit harmless for Budget Act purposes. In effect, the Congress and the President would have to choose whether to retain a smaller amount of the proceeds to achieve deficit neutrality for purposes of the Budget Act, or to retain a larger sum to hold the actual deficit unchanged.

Finally, the behavior of the States might have significant implications for the impact on the Federal budget. The States would likely receive anywhere from 43 percent to 100 percent of the residual of the industry payments over the specified uses in the settlement -- in their view, implicit in their negotiations, to compensate them for Medicaid costs caused by the use of tobacco. (This amount could be as high as $44.4 billion over 1998-2008, including the $10 billion "up-front payment.") In theory, the States could use these funds for any purpose. If they chose to spend a significant share of those proceeds on Medicaid -- over and above what they otherwise would have spent -- then the Federal Government would be required to match that spending, in the amount of 57 percent, on average, of total spending (i.e., more than a dollar-for-dollar match). (There may be other State uses of the funds that would have Federal budgetary consequences.) Therefore, depending on State behavior, the Federal Government might find itself confronted with additional and unpredictable mandatory outlays for Medicaid that would detract from its resources from the settlement.

Potential Budgetary Impacts of Tobacco Agreement -- Assuming Industry Payments Are Classified As Indirect Business Taxes and Youth Targets Are Met
(in billions of dollars)

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	1998	1999	2000	2001	2002	2003	04-08	98-03	98-08
Federal revenues:									
Industry payments:									
Up-front payment	10.0	0.0	0.0	0.0	0.0	0.0	0.0	10.0	10.0
Public health trust funds in bill	0.0	2.5	2.5	3.5	4.0	5.0	7.5	17.5	25.0
Base amounts in bill	0.0	6.0	7.0	8.0	10.0	10.0	67.5	41.0	108.5
Adult sales volume adjustments	0.0	-1.1	-1.7	-2.6	-3.4	-3.7	-19.6	-12.5	-32.2
Credits for civil suits at cap	0.0	-1.4	-1.5	-1.6	-2.0	-2.0	-13.1	-8.5	-21.7
Inflation adjustments on above	0.0	0.0	0.2	0.4	0.8	1.2	9.7	2.6	12.3
Look-back surcharge	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
User fees for nonparticipants	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net penalties	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Subtotal, industry payments	10.0	6.0	6.5	7.7	9.4	10.4	51.9	50.0	101.9
Tax offset at 25% (IBT)	-2.5	-1.5	-1.6	-1.9	-2.3	-2.6	-13.0	-12.5	-25.5
Reduction in tobacco excise taxes (non-PAYGO)	-0.4	-0.5	-0.7	-0.9	-0.9	-1.0	-5.0	-4.4	-9.3
Tax indexation impact of higher CPI (non-PAYGO)	0.0	-0.1	-0.4	-0.7	-0.9	-1.1	-5.9	-3.3	-9.1
Total, Federal revenues	**7.1**	**3.9**	**3.8**	**4.2**	**5.2**	**5.8**	**28.1**	**29.9**	**58.0**
Federal outlays:									
Public health trust funds in bill	0.0	2.5	2.6	3.7	4.4	5.6	9.0	18.8	27.7
HHS direct programs and grants to States	0.0	0.1	0.1	0.1	0.2	0.3	1.4	0.9	2.3
FDA direct enforcement and grants to States	0.0	0.3	0.3	0.3	0.3	0.3	1.8	1.6	3.4
Grants to States for ASSIST-type programs	0.0	0.1	0.1	0.1	0.1	0.1	0.8	0.5	1.3
Direct Federal R&D to discourage tobacco use	0.0	0.1	0.1	0.1	0.1	0.1	0.6	0.5	1.1
Payments to tobacco-sponsored events/teams	0.0	0.0	0.1	0.1	0.1	0.1	0.5	0.3	0.8
Public educ. campaign run by non-profit board	0.0	0.5	0.5	0.5	0.5	0.6	3.1	2.7	5.7
HHS payments for tobacco use cessation programs	0.0	1.0	1.0	1.1	1.1	1.7	9.2	5.9	15.1
Spending of look-back surcharge (90% grants)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Subtotal, specified spending in bill	0.0	4.6	4.8	6.0	6.9	8.8	26.3	31.2	57.5
Unspecified residual to reach total payments	**10.0**	**1.4**	**1.7**	**1.7**	**2.5**	**1.6**	**25.6**	**18.9**	**44.4**
COLA impact of higher CPI (non-PAYGO)	0.0	0.5	1.1	1.8	2.5	2.8	16.5	8.7	25.1
Total, Federal outlays, excl. debt Service	**10.0**	**6.5**	**7.6**	**9.5**	**11.9**	**13.3**	**68.4**	**58.7**	**127.1**
Federal deficit:									
Revenues (deficit effect)	-7.1	-3.9	-3.8	-4.2	-5.2	-5.8	-28.1	-29.9	-58.0
Programmatic outlays	10.0	6.5	7.6	9.5	11.9	13.3	68.4	58.7	127.1
Debt service	0.1	0.2	0.4	0.6	0.9	1.3	13.5	3.5	17.0
Federal deficit	**3.0**	**2.8**	**4.2**	**5.9**	**7.6**	**8.8**	**53.8**	**32.3**	**86.1**
MEMORANDUM: PAYGO budget effects:									
Revenues (deficit effect)	-7.5	-4.5	-4.9	-5.8	-7.0	-7.8	-38.9	-37.5	-76.5
Outlays	10.0	6.0	6.5	7.7	9.4	10.4	51.9	50.0	101.9
Total PAYGO deficit effect	**2.5**	**1.5**	**1.6**	**1.9**	**2.3**	**2.6**	**13.0**	**12.5**	**25.5**
ADDENDUM: Potential additional Federal deficit effects (non-PAYGO):									
Potential increase in Federal matching grants	0.9	0.8	1.0	0.9	1.4	0.9	14.6	5.9	20.5
Post-2008 long -run medical care expenditures (-)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Post-2008 long-run retirement programs (+)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

1. Reduction in adult and youth tobacco consumption is assumed to result from price increases due to passthrough of industry payments. Youth consumption, but not adult, is also assumed to be reduced to target by access restrictions, public education, and cessation programs, etc.
2. Civil liability settlements are assumed to be at cap (33% of industry basic payments). Cap is assumed to be a single 33% cap for suits based on past and future conduct.
3. Surcharge double count adjustment is estimated as 80/60/40/20% of surcharge payments made 1/2/3/4 years prior.
4. No manufacturers are assumed to qualify for 75% good faith surcharge abatement.
5. All manufacturers are assumed to participate in the settlement.
6. All manufacturers are assumed to meet compliance plan and corporate culture requirements.
7. Amounts are assumed to increase for inflation as follows: (a) industry payments increase for inflation beginning in 2000; (b) outlays increase for inflation beginning in 2000; (c) surcharge amount and cap increase for inflation beginning in 1997.
8. All industry payments are assumed to score as Federal Indirect Business Taxes (excise tax receipts). As Indirect Business Taxes, industry payments are subject to a 25% income offset (BEA convention).
9. All payments are assumed to be spent as Federal outlays.
10. States are assumed to increase total medicaid spending by the amount of the residual state payments, generating a 57% Federal match.

Potential Budgetary Impacts of Tobacco Agreement -- Assuming Industry Payments Are Classified As Indirect Business Taxes and Youth Targets are Not Met
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Inflation adjustments on above	0.0	0.0	0.2	0.4	0.8	1.2	9.7	2.6	12.3
Look-back surcharge	0.0	0.0	0.0	0.0	0.0	2.4	9.5	2.4	12.0
User fees for nonparticipants	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net penalties	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Subtotal, industry payments	10.0	6.0	6.5	7.7	9.4	12.9	61.4	52.5	113.9
Tax offset at 25% (IBT)	-2.5	-1.5	-1.6	-1.9	-2.3	-3.2	-15.4	-13.1	-28.5
Reduction in tobacco excise taxes (non-PAYGO)	-0.4	-0.5	-0.7	-0.9	-0.9	-0.9	-4.5	-4.3	-8.8
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Total, Federal revenues	**7.1**	**3.9**	**3.8**	**4.2**	**5.2**	**7.7**	**35.7**	**31.8**	**67.5**
Federal outlays:									
Public health trust funds in bill	0.0	2.5	2.6	3.7	4.4	5.6	9.0	18.8	27.7
HHS direct programs and grants to States	0.0	0.1	0.1	0.1	0.2	0.3	1.4	0.9	2.3
FDA direct enforcement and grants to States	0.0	0.3	0.3	0.3	0.3	0.3	1.8	1.6	3.4
Grants to States for ASSIST-type programs	0.0	0.1	0.1	0.1	0.1	0.1	0.8	0.5	1.3
Direct Federal R&D to discourage tobacco use	0.0	0.1	0.1	0.1	0.1	0.1	0.6	0.5	1.1
Payments to tobacco-sponsored events/teams	0.0	0.0	0.1	0.1	0.1	0.1	0.5	0.3	0.8
Public educ. campaign run by non-profit board	0.0	0.5	0.5	0.5	0.5	0.6	3.1	2.7	5.7
HHS payments for tobacco use cessation programs	0.0	1.0	1.0	1.1	1.1	1.7	9.2	5.9	15.1
Spending of look-back surcharge (90% grants)	0.0	0.0	0.0	0.0	0.0	2.4	9.5	2.4	12.0
Subtotal, specified spending in bill	0.0	4.6	4.8	6.0	6.9	11.3	35.9	33.6	69.5
Unspecified residual to reach total payments	**10.0**	**1.4**	**1.7**	**1.7**	**2.5**	**1.6**	**25.6**	**18.9**	**44.4**
COLA impact of higher CPI (non-PAYGO)	0.0	0.5	1.1	1.8	2.5	2.8	16.5	8.7	25.1
Total, Federal outlays, excl. debt Service	**10.0**	**6.5**	**7.6**	**9.5**	**11.9**	**15.7**	**77.9**	**61.2**	**139.0**
Federal deficit:									
Revenues (deficit effect)	-7.1	-3.9	-3.8	-4.2	-5.2	-7.7	-35.7	-31.8	-67.5
Programmatic outlays	10.0	6.5	7.6	9.5	11.9	15.7	77.9	61.2	139.0
Debt service	0.1	0.2	0.4	0.6	0.9	1.3	13.8	3.6	17.4
Federal deficit	**3.0**	**2.8**	**4.2**	**5.9**	**7.6**	**9.4**	**56.0**	**32.9**	**88.9**
MEMORANDUM: PAYGO budget effects:									
Revenues (deficit effect)	-7.5	-4.5	-4.9	-5.8	-7.0	-9.7	-46.1	-39.4	-85.4
Outlays	10.0	6.0	6.5	7.7	9.4	12.9	61.4	52.5	113.9
Total PAYGO deficit effect	**2.5**	**1.5**	**1.6**	**1.9**	**2.3**	**3.2**	**15.4**	**13.1**	**28.5**
ADDENDUM: Potential additional Federal deficit effects (non-PAYGO):									
Potential increase in Federal matching grants	0.9	0.8	1.0	0.9	1.4	0.9	14.6	5.9	20.5
Post-2008 long-run medical care expenditures (-)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Post-2008 long-run retirement programs (+)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

1. Reduction in tobacco volume is assumed to result solely from price increases due to passthrough of industry payments. Access restrictions, public education, and cessation programs are assumed to have no additional effect.
2. Civil liability settlements are assumed to be at cap (33% of industry basic payments). Cap is assumed to be a single 33% cap for suits based on past and future conduct.
3. Surcharge double count adjustment is estimated as 80/60/40/20% of surcharge payments made 1/2/3/4 years prior.
4. No manufacturers are assumed to qualify for 75% good faith surcharge abatement.
5. All manufacturers are assumed to participate in the settlement.
6. All manufacturers are assumed to meet compliance plan and corporate culture requirements.
7. Amounts are assumed to increase for inflation as follows: (a) industry payments increase for inflation beginning in 2000; (b) outlays increase for inflation beginning in 2000; (c) surcharge amount and cap increase for inflation beginning in 1997.
8. All industry payments are assumed to score as Federal Indirect Business Taxes (excise tax receipts). As Indirect Business Taxes, industry payments are subject to a 25% income offset (BEA convention).
9. All payments are assumed to be spent as Federal outlays.
10. States are assumed to increase total medicaid spending by the amount of the residual state payments, generating a 57% Federal match.

Potential Budgetary Impacts of Tobacco Agreement -- Assuming Industry Payments Are Classified As Voluntary (Offsetting) Payments and Youth Targets Are Met
(in billions of dollars)

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	1998	1999	2000	2001	2002	2003	04-08	98-03	98-08
Federal revenues:									
Industry payments:									
Up-front payment	10.0	0.0	0.0	0.0	0.0	0.0	0.0	10.0	10.0
Public health trust funds in bill	0.0	2.5	2.5	3.5	4.0	5.0	7.5	17.5	25.0
Base amounts in bill	0.0	6.0	7.0	8.0	10.0	10.0	67.5	41.0	108.5
Adult sales volume adjustments	0.0	-1.1	-1.7	-2.6	-3.4	-3.7	-19.6	-12.5	-32.2
Credits for civil suits at cap	0.0	-1.4	-1.5	-1.6	-2.0	-2.0	-13.1	-8.5	-21.7
Inflation adjustments on above	0.0	0.0	0.2	0.4	0.8	1.2	9.7	2.6	12.3
Look-back surcharge	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
User fees for nonparticipants	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net penalties	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Subtotal, industry payments	10.0	6.0	6.5	7.7	9.4	10.4	51.9	50.0	101.9
Reduction in tobacco excise taxes (non-PAYGO)	-0.4	-0.5	-0.7	-0.9	-0.9	-1.0	-5.0	-4.4	-9.3
Tax indexation impact of higher CPI (non-PAYGO)	0.0	-0.1	-0.4	-0.7	-0.9	-1.1	-5.9	-3.3	-9.1
Total, Federal revenues	**9.6**	**5.4**	**5.4**	**6.1**	**7.5**	**8.4**	**41.1**	**42.4**	**83.5**
Federal outlays:									
Public health trust funds in bill	0.0	2.5	2.6	3.7	4.4	5.6	9.0	18.8	27.7
HHS direct programs and grants to States	0.0	0.1	0.1	0.1	0.2	0.3	1.4	0.9	2.3
FDA direct enforcement and grants to States	0.0	0.3	0.3	0.3	0.3	0.3	1.8	1.6	3.4
Grants to States for ASSIST-type programs	0.0	0.1	0.1	0.1	0.1	0.1	0.8	0.5	1.3
Direct Federal R&D to discourage tobacco use	0.0	0.1	0.1	0.1	0.1	0.1	0.6	0.5	1.1
Payments to tobacco-sponsored events/teams	0.0	0.0	0.1	0.1	0.1	0.1	0.5	0.3	0.8
Public educ. campaign run by non-profit board	0.0	0.5	0.5	0.5	0.5	0.6	3.1	2.7	5.7
HHS payments for tobacco use cessation programs	0.0	1.0	1.0	1.1	1.1	1.7	9.2	5.9	15.1
Spending of look-back surcharge (90% grants)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Subtotal, specified spending in bill	0.0	4.6	4.8	6.0	6.9	8.8	26.3	31.2	57.5
Unspecified residual to reach total payments	**10.0**	**1.4**	**1.7**	**1.7**	**2.5**	**1.6**	**25.6**	**18.9**	**44.4**
COLA impact of higher CPI (non-PAYGO)	0.0	0.5	1.1	1.8	2.5	2.8	16.5	8.7	25.1
Total, Federal outlays, excl. debt Service	**10.0**	**6.5**	**7.6**	**9.5**	**11.9**	**13.3**	**68.4**	**58.7**	**127.1**
Federal deficit:									
Revenues (deficit effect)	-9.6	-5.4	-5.4	-6.1	-7.5	-8.4	-41.1	-42.4	-83.5
Programmatic outlays	10.0	6.5	7.6	9.5	11.9	13.3	68.4	58.7	127.1
Debt service	0.0	0.1	0.1	0.3	0.5	0.7	8.1	1.6	9.7
Federal deficit	**0.4**	**1.1**	**2.3**	**3.7**	**4.8**	**5.6**	**35.4**	**17.9**	**53.3**
MEMORANDUM: PAYGO budget effects:									
Revenues (deficit effect)	-10.0	-6.0	-6.5	-7.7	-9.4	-10.4	-51.9	-50.0	-101.9
Outlays	10.0	6.0	6.5	7.7	9.4	10.4	51.9	50.0	101.9
Total PAYGO deficit effect	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
ADDENDUM: Potential additional Federal deficit effects (non-PAYGO):									
Potential increase in Federal matching grants	0.9	0.8	1.0	0.9	1.4	0.9	14.6	5.9	20.5
Post-2008 long -run medical care expenditures (-)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Post-2008 long-run retirement programs (+)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

1. Reduction in adult and youth tobacco consumption is assumed to result from price increases due to passthrough of industry payments. Youth consumption, but not adult, is also assumed to be reduced to target by access restrictions, public education, and cessation programs, etc.
2. Civil liability settlements are assumed to be at cap (33% of industry basic payments). Cap is assumed to be a single 33% cap for suits based on past and future conduct.
3. Surcharge double count adjustment is estimated as 80/60/40/20% of surcharge payments made 1/2/3/4 years prior.
4. No manufacturers are assumed to qualify for 75% good faith surcharge abatement.
5. All manufacturers are assumed to participate in the settlement.
6. All manufacturers are assumed to meet compliance plan and corporate culture requirements.
7. Amounts are assumed to increase for inflation as follows: (a) industry payments increase for inflation beginning in 2000; (b) outlays increase for inflation beginning in 2000; (c) surcharge amount and cap increase for inflation beginning in 1997.
8. All industry payments are assumed to score as Voluntary Payments (scored in Federal budget as offsetting receipts). As Voluntary Payments (offsetting receipts), industry payments are not subject to a 25% income offset as would Indirect Business Taxes.
9. All payments are assumed to be spent as Federal outlays.
10. States are assumed to increase total medicaid spending by the amount of the residual state payments, generating a 57% Federal match.

Potential Budgetary Impacts of Tobacco Agreement -- Assuming Industry Payments Are Classified As Voluntary (Offsetting) Payments and Youth Targets are Not Met
(in billions of dollars)

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	1998	1999	2000	2001	2002	2003	04-08	98-03	98-08
Federal revenues:									
Industry payments:									
Up-front payment	10.0	0.0	0.0	0.0	0.0	0.0	0.0	10.0	10.0
Public health trust funds in bill	0.0	2.5	2.5	3.5	4.0	5.0	7.5	17.5	25.0
Base amounts in bill	0.0	6.0	7.0	8.0	10.0	10.0	67.5	41.0	108.5
Adult sales volume adjustments	0.0	-1.1	-1.7	-2.6	-3.4	-3.7	-19.6	-12.5	-32.2
Credits for civil suits at cap	0.0	-1.4	-1.5	-1.6	-2.0	-2.0	-13.1	-8.5	-21.7
Inflation adjustments on above	0.0	0.0	0.2	0.4	0.8	1.2	9.7	2.6	12.3
Look-back surcharge	0.0	0.0	0.0	0.0	0.0	2.4	9.5	2.4	12.0
User fees for nonparticipants	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net penalties	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Subtotal, industry payments	10.0	6.0	6.5	7.7	9.4	12.9	61.4	52.5	113.9
Reduction in tobacco excise taxes (non-PAYGO)	-0.4	-0.5	-0.7	-0.9	-0.9	-0.9	-4.5	-4.3	-8.8
Tax indexation impact of higher CPI (non-PAYGO)	0.0	-0.1	-0.4	-0.7	-0.9	-1.1	-5.9	-3.3	-9.1
Total, Federal revenues	**9.6**	**5.4**	**5.4**	**6.1**	**7.6**	**10.9**	**51.0**	**45.0**	**96.0**
Federal outlays:									
Public health trust funds in bill	0.0	2.5	2.6	3.7	4.4	5.6	9.0	18.8	27.7
HHS direct programs and grants to States	0.0	0.1	0.1	0.1	0.2	0.3	1.4	0.9	2.3
FDA direct enforcement and grants to States	0.0	0.3	0.3	0.3	0.3	0.3	1.8	1.6	3.4
Grants to States for ASSIST-type programs	0.0	0.1	0.1	0.1	0.1	0.1	0.8	0.5	1.3
Direct Federal R&D to discourage tobacco use	0.0	0.1	0.1	0.1	0.1	0.1	0.6	0.5	1.1
Payments to tobacco-sponsored events/teams	0.0	0.0	0.1	0.1	0.1	0.1	0.5	0.3	0.8
Public educ. campaign run by non-profit board	0.0	0.5	0.5	0.5	0.5	0.6	3.1	2.7	5.7
HHS payments for tobacco use cessation programs	0.0	1.0	1.0	1.1	1.1	1.7	9.2	5.9	15.1
Spending of look-back surcharge (90% grants)	0.0	0.0	0.0	0.0	0.0	2.4	9.5	2.4	12.0
Subtotal, specified spending in bill	0.0	4.6	4.8	6.0	6.9	11.3	35.9	33.6	69.5
Unspecified residual to reach total payments	**10.0**	**1.4**	**1.7**	**1.7**	**2.5**	**1.6**	**25.6**	**18.9**	**44.4**
COLA impact of higher CPI (non-PAYGO)	0.0	0.5	1.1	1.8	2.5	2.8	16.5	8.7	25.1
Total, Federal outlays, excl. debt Service	**10.0**	**6.5**	**7.6**	**9.5**	**11.9**	**15.7**	**77.9**	**61.2**	**139.0**
Federal deficit:									
Revenues (deficit effect)	-9.6	-5.4	-5.4	-6.1	-7.6	-10.9	-51.0	-45.0	-96.0
Programmatic outlays	10.0	6.5	7.6	9.5	11.9	15.7	77.9	61.2	139.0
Debt service	0.0	0.1	0.1	0.3	0.5	0.7	8.0	1.6	9.7
Federal deficit	**0.4**	**1.1**	**2.3**	**3.6**	**4.8**	**5.5**	**34.9**	**17.8**	**52.7**
MEMORANDUM: PAYGO budget effects:									
Revenues (deficit effect)	-10.0	-6.0	-6.5	-7.7	-9.4	-12.9	-61.4	-52.5	-113.9
Outlays	10.0	6.0	6.5	7.7	9.4	12.9	61.4	52.5	113.9
Total PAYGO deficit effect	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
ADDENDUM: Potential additional Federal deficit effects (non-PAYGO):									
Potential increase in Federal matching grants	0.9	0.8	1.0	0.9	1.4	0.9	14.6	5.9	20.5
Post-2008 long -run medical care expenditures (-)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Post-2008 long-run retirement programs (+)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

1. Reduction in tobacco volume is assumed to result solely from price increases due to passthrough of industry payments. Access restrictions, public education, and cessation programs are assumed to have no additional effect.
2. Civil liability settlements are assumed to be at cap (33% of industry basic payments). Cap is assumed to be a single 33% cap for suits based on past and future conduct.
3. Surcharge double count adjustment is estimated as 80/60/40/20% of surcharge payments made 1/2/3/4 years prior.
4. No manufacturers are assumed to qualify for 75% good faith surcharge abatement.
5. All manufacturers are assumed to participate in the settlement.
6. All manufacturers are assumed to meet compliance plan and corporate culture requirements.
7. Amounts are assumed to increase for inflation as follows: (a) industry payments increase for inflation beginning in 2000; (b) outlays increase for inflation beginning in 2000; (c) surcharge amount and cap increase for inflation beginning in 1997.
8. All industry payments are assumed to score as Voluntary Payments (scored in Federal budget as offsetting receipts). As Voluntary Payments (offsetting receipts), industry payments are not subject to a 25% income offset as would Indirect Business Taxes.
9. All payments are assumed to be spent as Federal outlays.
10. States are assumed to increase total medicaid spending by the amount of the residual state payments, generating a 57% Federal match.

SUMMARY OF DISPOSITION OF SETTLEMENT FUNDS
(1998-2008, nominal dollars)

	Indirect Business Tax		Voluntary Payment	
	Target Met	Target Not Met	Target Met	Target Not Met
Gross Industry Payment	101.9	113.9	101.9	113.9
Potential Offsets				
Federal Indirect Business Tax Offset	25.5	28.5	N.A.	N.A.
Increased Federal Indexation Costs CPI	34.2	34.2	34.2	34.2
Decreased Federal Excise Taxes	9.3	8.8	9.3	8.8
Decreased State Excise Taxes	12.6	11.9	12.6	11.9
Subtotal	81.6	83.4	56.1	54.9
Net Industry Payment	20.3	30.5	45.8	59.0
Specified Uses of Funds				
Explicitly Federal	43.9	43.9	43.9	43.9
Federal Share of Grantable Uses	2.9	4.1	2.9	4.1
Explicitly State	1.3	1.3	1.3	1.3
State Share of Grantable Uses	2.9	13.7	2.9	13.7
Private	6.5	6.5	6.5	6.5
Subtotal	57.4	69.4	57.4	69.4
Remaining Net Funds	(37.1)	(38.9)	(11.6)	(10.4)
Percent of Gross Industry Payment	-36.4%	-34.2%	-11.4%	-9.2%
Memorandum:				
Gross Payment Less Specified Uses	44.5	44.5	44.5	44.5

July 18, 1997

ON THE LOOK-BACK SURCHARGE

The settlement contains a "look-back" provision that attempts to provide economic incentives to tobacco firms to achieve "dramatic and immediate reductions in the number of underage consumers of tobacco products." Manufacturers would face a surcharge if tobacco-use reduction targets for underage users are not met. The surcharge would be imposed on the basis of a comparison between actual underage teen tobacco use percentages and specific youth smoking targets. The stated goal of the lookback surcharge was to "approximate the present value of the profit that the cigarette industry would earn over the life of underage smokers". Manufacturers could petition the FDA for partial abatement of the surcharge if they have acted in good faith and in full compliance with the Act.

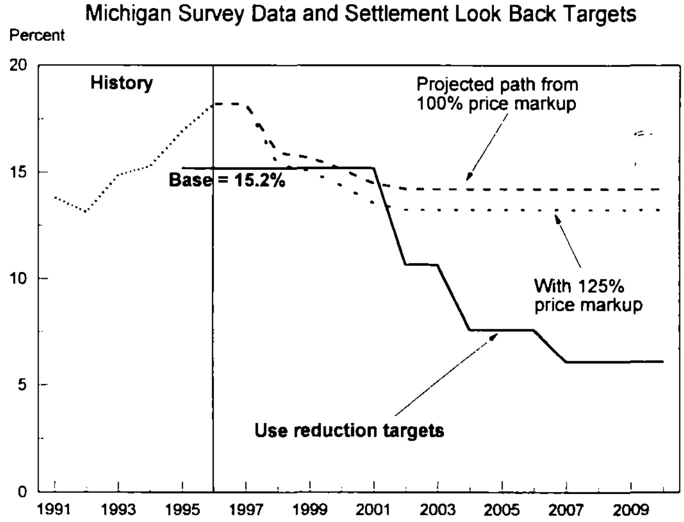
PROBLEMS WITH THE CURRENT STRUCTURE OF THE LOOK-BACK

A number of problems exist with the current structure of the look-back surcharge:

- The lookback penalty -- $80 million per percentage point of underage use in excess of the reduction target -- was determined as part of the negotiations between the Attorneys General and the industry. But our estimates indicate that the *present value to firms of the profit stream* from the underage smokers in excess of the reduction target is about *twice as large as the cost of the surcharge* as specified in the agreement. As a result, this surcharge amount offers little incentive for tobacco companies to reduce teen smoking, beyond the natural reductions that will occur due to higher cigarette prices. The accompanying figure compares projected teen smoking reductions due to price changes alone with the specified lookback targets[1]

Underage Daily Tobacco Use Percentages and Targets

Michigan Survey Data and Settlement Look Back Targets



The % price markup is relative to the per pack penalty payment; estimates include 15% reduction in use from sales and marketing restrictions.

- If the specified surcharge is too low, so that youth smoking falls through the price effect only, our estimates suggest that the surcharge payments would begin at roughly $100 million per year, and rise to roughly $250 million per year after the final step down in the reduction targets.

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[1]The reductions shown in the chart are from price effects alone and do not account for the possible reduction in youth smoking that could result from the marketing restrictions and other components of the agreement intended to help reduce underage smoking.

- The partial abatement -- under which firms could receive up to 75% abatement of the surcharge -- would significantly erode the economic incentive of the surcharge. Many believe that it would be very easy for firms to qualify for the abatement. If firms did qualify for this abatement, then the lookback surcharge would only be *one-eighth* as large as the profit stream from increasing youth smoking.

- An additional difficulty is the "free rider" problem. Because the targets are specified for use of non-brand-specific tobacco, individual firms have the incentive to keep their sales to teens while others would bear the surcharge cost from that use. As each firm has these same incentives, in practice it is less likely that the reduction targets would be met.

- A stronger approach would advocate that the goal should be to *eliminate* underage tobacco use, not merely reach the targets specified in the agreement. Six percent of high school teens would continue to smoke cigarettes on a *daily* basis even if the ultimate teen reduction target (60% reduction in 10 years) was fully met.

OPTIONS THAT MORE EFFECTIVELY REDUCE YOUTH SMOKING

While maintaining the broad structure of the deal, adjustments could be made to attempt to make the look-back actually work to provide the incentive to reduce underage tobacco use.

- **Eliminate the surcharge abatement:** As a first principle, the partial abatement of the surcharge should be eliminated.

  - The industry likely would strongly oppose any effort to eliminate the abatement -- the industry claims that it does not have direct control over whether teens smoke or not and therefore should not be held directly accountable for all of their use.

  - The Attorneys General accepted the abatement provision in part because they viewed it as a vehicle to assure that firms would actually pay the surcharge without first challenging it in court and thereby delaying their payment and also because the hearing process would provide the opportunity for an annual public relations campaign against smoking.

Option 1: Increase the size of the surcharge

As noted above, our calculations indicate that *the base surcharge amount should be increased to at least **$160 million** per percentage point.* An amount above this level would truly penalize the industry for not reducing youth smoking, and would as a result increase their incentives to do so.

- If youth smoking only falls through the price effect (that is, if even the increased penalty level does not impact youth smoking) the level of payments with a $160 million base surcharge would run in the range of about $200 million initially, and roughly $450 million when the steps down in the reduction targets occur.[2]

- If other settlement provisions or firm efforts succeed in reducing teen smoking below the levels shown in the chart, the level of surcharge payments would be lowered accordingly.

<u>Option 2: Eliminate the double counting provision</u> makes the penalty twice the profit stream.

- Under the agreement as negotiated, the surcharge is reduced to account for underage smokers on whom a surcharge was paid in earlier years.

- We see little justification for not repeatedly penalizing the companies for youths that do not quit. Under this so called "double counting" provision, once a youth has begun smoking (and the company has been fined), there is no remaining incentive for the industry to discourage continued smoking.

- Furthermore, given existing data constraints, the double counting provision is administratively unworkable. Without data that follows teens over time to assess whether they continue to smoke, the double counting adjustment will simply be a rough approximation based on the share of cohorts that do smoke.

- Our estimates indicate that by eliminating the double-counting provision, the current level of the surcharge ($80 million) would provide an effective incentive to firms to reduce underage smoking.

  - Initially, there is no change in effectiveness because the double counting provision would not be in effect. In succeeding years, however, the present value of profits generally would be about ½ the size of the surcharge payment (rather than twice the size, as we estimate for the current settlement parameters).

- Once again, if even this increased penalty has no effect, the estimated levels of annual surcharge payments would begin at roughly $250 million, and grow to $500 to $600 million annually.

  - But, as noted above, the level of payments would be lowered if there were greater success in reducing teen smoking.

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[2]These amounts would be the equivalent of about 1 or 2 cents per pack.

Option 3: Look-back penalty based on *all* underage smoking

- An alternative approach is to have a goal of *eliminating* underage smoking, not merely reaching the reduction targets specified in the agreement. With such a goal, the level of industry payments under the look-back could be determined relative to total underage tobacco use.[3]

- In this option, the look-back penalty would operate in a fashion similar to that of the agreement, except the reduction targets would be respecified for the ultimate goal of eliminating underage smoking; also, there would be *no double-counting provision and no abatement*. The ultimate target would be for a weighted survey response of 1 percent or less -- the 1 percent to allow for possible survey error.

- Because it may be unreasonable to expect to get current teens who smoke to stop, the reduction targets would be reduced on an annual basis to account for the turnover in the 13 to 17 year-old age group of the survey. Current estimates show a weighted average of 18 percent of underage daily smokers. A path with immediate reduction targets would therefore be as follows[4]:

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6 and after
16%	13%	10%	7%	4%	1%

- As in the no double-counting option presented above, a base surcharge level of about $40 million per percentage point would be required to make the look-back effective. Based on the currently projected use levels without further reduction efforts, the level of payments would start out at zero in the first year and then rise steadily until the payments continued at about $520 million each year.

  - Once again, the level of payments would be lowered if there were greater success in reducing teen smoking.

- Tobacco firms likely would strongly oppose this approach as being unnecessarily punishing and that they don't have that much control over underage users.

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[3]The settlement's targets were based on the earlier FDA rule analysis that had a generally stated goal of cutting teen smoking in half.

[4]A path with a delayed or more gradual decline -- as in the settlement -- could be used, but the stated goal is "dramatic and immediate" reductions.

THREE REMAINING ISSUES

1. **Free Rider Problem:** As noted above, there is a significant free rider problem.

- One option would be to expand the Michigan Survey to ask the underage tobacco users about their brand preferences and use. Additional funding -- albeit small relative to the size of the agreement -- might be required to make changes to the survey and perhaps increase the survey size.[5]

- If firm- or brand-specific reduction targets were to be specified, however, the problem of the double counting would become even more severe and all the more difficult to calculate.

2. **Reliance on Michigan Survey data**: The use of the University of Michigan's High School Drug Use survey as the basis for determining actual teen use and the surcharge payment presents a number of problems:

- To our knowledge, no Federal expenditure or tax policy is based on private survey data. This deal, depending on how it is ultimately implemented, could establish such a precedent and that may be undesirable. One option would be to have the Federal government take over the survey.

- Errors in measurement in the survey could have profound effects on the amounts paid by tobacco firms.

- High school teens may end up having the incentive to misrepresent their true use status and lie on the survey -- if it became known that the cost of cigarettes and other tobacco products were affected by responses to the survey, teen smokers may recognize that admitting use on the survey would lead to higher prices for their habit. Careful attention would have to be paid to the design of the survey to deal with this issue.

3. **How should the target be defined?** It isn't clear what the best measure of underage use is.

- Health care professionals argue that the daily users are already "hooked" and that the better measure for attempted reduction is to target the 30-day user numbers. However, the current reduction targets wouldn't be effective until the fifth year, meaning an entirely new cohort of teens would be in place. Also, it likely would be more difficult to get reductions in the number of daily users -- thereby establishing a more difficult and more meaningful target to hit.

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[5]At the current level of use, the survey would have to be about 5 times larger in order to be confident that the reported percentage use of a particular brand would be accurate to within plus or minus 1 percentage point.

- Another issue is whether the target measure should be in terms of the number of users -- as in the survey -- or in terms of number (volume) of cigarettes smoked by teens. The industry reportedly advocated using the volume rather than the number of smokers. The Attorneys General advocated the number of users under the pretext that they wanted to reduce the number of smokers and not just have the possibility of the same number of smokers but at, say, 1/4 a pack rather than ½ a pack a day.

August 6, 1997

An Economic Analysis of the Tobacco Settlement

I. Overview

The tobacco settlement marks an implicit acknowledgment by the major tobacco manufacturing companies that the tide of history has turned against them. *Nevertheless, they appear to have struck a quite favorable settlement.*

- They have been relieved of substantial financial uncertainty and potential financial ruin from an endless stream of individual and class action lawsuits—they no longer have to fear being "Johns-Manvilled".

- Although they are required to make substantial annual payments, they are expected to collect those payments from smokers in the form of higher prices—the payments do not come out of their bottom line. Indeed, they are encouraged to work together to achieve this goal. The small fixed payments mandated by the settlement amount to *only slightly more than one year's profits for the industry.*

- This and other collusion-facilitating aspects of the settlement, such as the ban on advertising and restrictions on entry, will probably lead to a consolidation of market power and will most likely make the major tobacco manufacturers far better off financially than they would be in the absence of a settlement.

- The benefits to the industry from this settlement are reflected in Wall Street's reaction, which has been very positive: tobacco companies, who had been expected to see a discount in their future prices of up to one-third, are now expected to perform as well as the market generally.

The settlement tries to achieve multiple, sometimes conflicting objectives, including discouraging smoking, punishing the tobacco industry for past behavior, and encouraging better behavior by the industry.

A key question for consideration is *whether the right balance has been struck among these objectives.*

- The current settlement offers very valuable insurance to the tobacco industry at what appears to be relatively little cost, allows them to collect their penalty payments through higher prices, and facilitates collusion.

- A restructuring of the settlement that shifted more of the financial burden onto the companies could also increase the public monies available to pursue desirable public health objectives.

- That is, if there are substantial rents to the tobacco industry from this settlement, they should be willing to agree to even steeper public health benefits than are currently envisioned in the parameters of the settlement.

II. Mechanics of the Settlement

The industry payment is structured to function like an excise tax on tobacco products.

- Apart from an initial payment of $10 billion, the actual industry payment will depend on industry sales. The settlement lays out a schedule of base payments, which begin at $8.5 billion in the first year, but quickly ramp up to $15 billion a year in perpetuity.

- This dependence on quantity sold makes the payment function like an excise tax. Applied to all tobacco products, the excise tax equivalent of a $15 billion payment is about 58 cents; applied just to cigarettes it is about 62 cents.

- The settlement calls for the payment to be reflected in the price of tobacco products but it does not prescribe a precise formula for how this should be done.

In addition to the quantity adjustment, the settlement calls for what amounts to an excess profits tax of 25 percent: the quantity adjustment is reduced by 25% of the increase in profits over the base year.

There is also a youth smoking "lookback" penalty. That penalty is considered in more detail in a separate memo prepared by Treasury.

III. Effects of the Settlement on Consumers, the Industry, and the Government

Statistical evidence suggests an elasticity of demand for cigarettes among adults of -0.4 in the short run, and -0.7 in the longer run

- Teenagers, which represent about 7 percent of smokers (but consume fewer packs than adults), appear to be more responsive to price than adults

If the volume adjusted payments were passed on to consumers on a 1-for-1 basis, the average price of cigarettes would rise from $1.85 to $2.43 per pack, and overall cigarette consumption would decline by about 22 percent within 5 years compared with what consumption would be under current law (smoking has been declining at about a half percent per year in recent years independent of price changes).

- The number of adult smokers would decline by 15%, and the number of teen smokers would fall by 22%, for a decline of almost one million teen smokers

- This would amount to a regressive tax increase on consumers, since smokers are disproportionately low income

At the same time, this settlement places *relatively little burden on the companies*

- The fixed payment of $10 billion represents only about 14 months of pre-tax profits of the tobacco industry

- The fact that the market for smoking is shrinking through this price increase does lower profits, but this is largely offset by reduced expenditures on advertising and legal fees.

Our analysis suggests that, overall, the reduction this settlement will imply *at most a 10% fall in the profits of tobacco companies* by the fifth year of the agreement

This computation assumes only a one-for-one pass through to prices. But antitrust experts have raised concerns that the settlement will strengthen the market power of the signers and *may lead to the price rising by more than the excise-tax equivalent of the industry payment.*

- To the extent that the settlement facilitates cooperative price fixing (it has language calling for an antitrust exemption), discourages entry, reduces advertising which largely leads to brand substitution and not new smoking, and raises the costs of output expansion, it could lead to price increases greater than the excise-tax equivalent of the industry payment.

- A greater-than-1-for-1 pass through of the industry payment could actually lead to a *rise in industry profits*, which will be incrementally taxed at only 25% by this settlement.

From the government's perspective, the revenues from this settlement are much lower than the statutory stream of payments, due to offsets to other (excise and income) taxes, revenue costs of a rise in the CPI, and payments for civil suits

- The OMB estimates that, by the fifth year of the settlement (2003), the federal government will only collect $5.8 billion of the $15 billion in statutory payments

Thus, the breakdown of payments in that year is **(FIX AMOUNTS)**:

Statutory:	$15 billion
Volume adjusted:	$11.3 billion
Share borne by tobacco companies:	$0.7 billion
Share borne by consumers:	$10.6 billion
Net Federal revenues:	$5.8 billion

This table highlights two key features of the settlement: it raises less money than envisioned, and it raises almost all of that money from consumers.

IV. Wall Street reaction

Wall Street financial analysts *generally view the settlement as quite favorable to the industry.* Major analysts expect tobacco stocks to perform well, primarily because the substantial reduction in uncertainty about litigation removes the heavy discount for risk.

- Over the past few ~~years~~ tobacco stocks have fluctuated in response to changes in the litigation outlook.

- When settlement talks were announced April 16, tobacco stocks jumped sharply.

- Since that time, 18 analysts have made announcements to confirm or raise recommendations to buy, one confirmed a fairly low rating, and 3 recommended cut.

The key to Wall Street analysts positive reception appears to be the *reduced risk of bankruptcy offered by the settlement in its present form.*

- For this reason they expect that the ratio of share price to earnings to rise from a discount of one-quarter to one-third off the average for the equity market to parity or near parity. Earnings per share are, however, expected to fall modestly as the initial payment is absorbed and the industry adjusts to rising prices.

To illustrate what might happen, consider the dominant firm Phillip Morris.

- It is currently trading at about 16 times earnings and has a market valuation of about $100 billion.

- If earnings fell 10 percent but the price-earnings ratio rose to 20 (a little below the current stock market average), the value of Phillip Morris stock would rise to $112.5 billion ($P_{new} = (20/16)*(9/10)*P_{old}$).

- Thus, *the value of Phillip Morris' stock would rise by $12.5 billion, more than the entire $10 billion initial payment due from the industry.*

V. Other incentive considerations

The settlement creates reduced incentives to develop "less hazardous" tobacco products

- The settlement hopes to encourage the development of less hazardous products by requiring full disclosure of such products and requiring manufacturers to license them to others at "commercially reasonable" fees.

- But a system of forced disclosure and mandatory licensing reduces the incentive to innovate compared with a patent system.

- To the extent that all the information needed to develop less hazardous products has already been developed, disclosure and licensing have the beneficial effect of encouraging rapid dissemination of that knowledge.

- But they can have a chilling effect on the development of new knowledge: if companies think they will have to disclose R&D results prematurely or will have to share most of the benefits of their R&D efforts with other companies, they will invest less than if they expected to be able to appropriate more of the benefits for themselves.

- This subject is discussed in more detail in a separate memo.

The settlement bans some but not all advertising and promotion, which means that advertising and promotion will probably be reduced, but not by less than the current spending on newly banned outlets.

The settlement embodies some perverse incentives with respect to lawsuits

- The Agreement would eliminate class-action suits and punitive damages for past harm. Individuals could still sue for damages (just not punitive damages), and 80 percent of any awards in these suits would be paid from the Settlement Fund (subject to an annual limit, excess claims are carried over to the next year).

- This means that the industry has little incentive to fight these cases and that the States and the Federal government— who are the residual claimants to the Settlement Fund—would be in the peculiar position of not necessarily wanting to see the funds exhausted by private suits.

Lawyers may receive a disproportionate share of the settlement funds

- We do not know specifically what agreements attorneys have with States for payment, but many may have contingency agreements which could give them up to a third of the settlement (how this would work in practice is not clear).

- Similarly, under Medicaid statute, the States are allowed to deduct reasonable costs of litigation up to 50 percent of the settlement before splitting it with the Federal government.

VI. Macroeconomic and sectoral impacts

Employment in the tobacco manufacturing industry accounts for less than 50,000 jobs, which is less than one-half of the monthly job growth generated by the U.S. economy over the past year

What happens to tobacco manufacturing does, however, affect both upstream (tobacco growers) and downstream (wholesalers and retailers) industries.

- About 125,000 farms grow tobacco, but many engage in the production of other products as well. Lost sales due to a 60 cent increase in the price of cigarettes would amount to about $885 per farm, on a tobacco crop worth an average of $18,000 per farm.

- Any employment effects of changes in the tobacco industry would be concentrated in the Southeast tobacco region of the country.

- One study estimates that this industry was responsible, directly or indirectly, for about 300,000 jobs in 1993. This settlement will, at most, reduce the firms' domestic market by less than one-quarter, and leave unaffected their growing international market. Moreover, there will be job growth elsewhere in response, for example in the development of alternative nicotine delivery systems.

So the effects on jobs, both in industry and on farms, will be very small.

VII. Policy Options

The financial centerpiece of the tobacco settlement is the $368.5 billion (over 25 years) industry payment. But a number of considerations suggest that *this payment is inadequate*:

- The $10 billion lump sum payment to be paid when the statute is signed is substantially smaller than the expected gain in the stock market value of the companies once the threat of bankrupting litigation is removed.

- Industry profits will <u>increase</u> as a result of the settlement to the extent that the already tight oligopoly structure of the industry is strengthened and the actual price increases exceed those required to pass the annual payments through to prices.

- The actual annual payments will be substantially <u>smaller</u> than their $15 billion face value, to the extent that price increases and an underlying declining trend lead to less smoking, which in turn will reduce the payment through the quantity adjustment mechanism. This reduction will be larger if companies raise prices more than the required pass-through.

- Even the volume adjusted payments are much larger than the net receipts to the government, due to offsets to other excise and income tax receipts and the costs to the government of a rise in the CPI.

- Although the annual payments are adjusted for general price inflation, many of the programs that may be funded are health and entitlement programs that have traditionally experienced rates of cost growth far in excess of overall inflation rates. Even non-entitlement spending can be expected to grow in real terms. As a result, the ability of the industry payments to fund entitlement programs will shrink due to reduced purchasing power.

- The just-completed balanced budget legislation contains a provision that allows companies to credit the increase in the Federal excise tax on cigarettes against any required payments from the tobacco settlement.

Moreover, not only does the settlement raise less money than initially promised, it *raises this money primarily from continuing smokers rather than from the tobacco companies.*

This discussion suggests that the settlement should be changed to increase the amount of money collected, and to change the distribution of impacts among consumers, the industry, and government. We consider below several options for doing so. These options assume that it is not politically realistic to consider replacing the basic structure of the settlement with a Federal excise tax in the 50 cents to a dollar per pack range, the proceeds of which would be distributed along the same lines as what is contemplated for the industry payments.

Option 1: Accept the industry payment as currently structured but restore the budget agreement excise tax

This option would call for an increase the base payment by the real value of the Federal excise tax enacted in the budget agreement in order to restore the $368.5 billion face value. In effect this would undo the effect of the credit provision included at the last minute in the budget agreement.

Pros: 1) This restores the situation to the status quo before the budget deal amendment.

2) This option allows us to take the high road on public health issues and not appear to be trying to be punitive toward the industry.

Cons: 1) We can probably do better. This is the least aggressive bargaining option. To the extent that we believe the settlement is a good deal financially for the industry, it leaves money on the table and takes away a potentially valuable bargaining chip (the threat of requiring a larger payment). It may be a place to end up with respect to the industry payment—in return for other things we want—but it is not the place to start.

Option 2: Increase the payment expected from the companies and their shareholders.

The settlement calls for an up-front lump-sum cash payment of $10 billion. But this is substantially smaller than the expected gain to the shareholders in the tobacco companies from this settlement.

- A rough calculation of those gains, based on the discussions of the Wall Street reaction above is about $50 billion.
- An alternative calculation is based on the rise in tobacco company market value of about $16 billion on April 16th, when settlement talks were announced.

Either approach suggests that we could substantially increase the fixed payment and still leave the companies much better off than they would have been in the absence of the deal.

Pros: 1) This explicitly recognizes the gains to companies and their shareholders from removing the risk of bankruptcy and does not allow them to profit from a jump in the value of stock

2) This increases the amount of money available from the settlement without raising the burden on continuing smokers (because it is a lump sum payment).

Cons: 1) May be hard to sell, because stock market prices have returned to pre-deal levels (most likely due to uncertainty about the actual prospects of a deal), so that it involves comparing company value to a projected and uncertain future.

Option 3: Preserve the quantity adjustment of annual payments but increase their face value over time to provide a more constant funding stream.

The settlement calls for annual payments that quickly rise to a face value of $15 billion per year but do not go higher (except for the inflation adjustment). Because quantity is expected to fall, however, the actual amount collected will be less than the face value. Moreover, the purchasing power of the payments may be smaller still for the contemplated uses, the demands for which will grow at the rate of GDP or faster.

As a result, the schedule of payments could be adjusted in two ways:

- Payments could rise over time in a proscribed manner to offset the expected decline in volume. That is, the deal would announce that payments will rise steadily in real terms so that they are ... **(fill in some OMB numbers here on volume adjustment)**. This would not undo the volume adjustment, since the rise would be determined initially, so that actual changes in volume would still affect payments on the margin. Thus, the payments would still be reflected in prices, and therefore lead to lower smoking. But it would at least make the payments more constant into the future.

- The schedule of payments could be adjusted to rise at the rate of growth of nominal GDP, or the rate of growth of health care costs.

Pros: 1) This would increase the funds available for public health and other purposes

2) This would make the funding stream more constant over time, making it more feasible to finance entitlement programs from this source.

3) This could shift excess profits from companies to government (To the extent that the settlement facilitates industry collusion that results in higher prices and higher profits, a gradually rising annual payment could recapture these excess profits.)

Cons: 1) This could put an increasing burden on continuing smokers because the per-pack excise-tax equivalent payment would go up in real terms over time.

2) The price could rise so high as to be counterproductive (past a certain point a higher payment per pack results in a lower total payment), but we do not know how much the payment could be increased before this would happen.

3) Would increase the burden on and reduce the competition from non-participating companies, who are required to post a bond equal to 150 percent of their share of the industry annual payment against potential liability payments (these escrowed funds cannot be reclaimed by the companies for 35 years).

Option 4: Increase the Rate and apply the excess profits tax on a company-by-company basis

The settlement currently contains what is, in effect, an excess profits tax equal to 25 percent of any increase in net operating profits (above base year levels) from domestic sale of tobacco products. But it is structured to apply to the industry annual payment. This excess profits tax could be increased to 75 or even 90 percent, and applied to individual company profits.

Pros: 1) Prevents companies from appearing to profit from the settlement--increased profits from non-competitive behavior are mostly recaptured by government

2) Applies only if the industry behaves collusively and raises prices more than is justified by the pass-through of the annual payment

Cons: 1) Will be exceedingly complex to design and administer, given that it applies only to domestic tobacco profits of companies diversified both across products and nations. Companies should be readily able to divert activities to hide any excess profits in the domestic tobacco line.

2) To the extent that companies can't hide potential profits, confiscatory tax rates provide incentives to undertake wasteful activities that lower profits, such as excessive employee amenities.

3) Including this option at all may lower the political will to undertake the more serious options laid out above, which may more realistically capture the surplus of the tobacco companies that we know exists, relative to their uncertain future. We should not be excessively focused on profits relative to today's baseline; we should focus on the profits that they earn relative to the future of endless class-action suits. This comparison can only be addressed by increases in payments of the types described above.

CEA/Treasury Draft, July 29, 1997

An Economic Analysis of the Tobacco Settlement

I. Overview

The tobacco settlement marks an implicit acknowledgment by the major tobacco manufacturing companies that the tide of history has turned against them. Nevertheless, they appear to have struck a quite favorable deal. They have been relieved of substantial financial uncertainty and potential financial ruin from an endless stream of individual and class action lawsuits—they no longer have to fear being "Johns-Manvilled". Although they are required to make substantial annual payments, they are expected to collect those payments from smokers in the form of higher prices—the payments do not come out of their bottom line. Indeed, they are encouraged to work together to achieve this goal. This and other collusion-facilitating aspects of the deal will probably lead to a consolidation of market power and will most likely make the major tobacco manufacturers far better off financially than they would be in the absence of a settlement.

The settlement tries to achieve multiple, sometimes conflicting objectives, including discouraging smoking, punishing the tobacco industry for past behavior, and encouraging better behavior by the industry. To discourage smoking, for example, the settlement requires an increase in the price of cigarettes, but this lets the companies off the hook for paying any of the penalty. The initial payment, by contrast, punishes shareholders but does not discourage smoking. A key question for consideration is whether the right balance has been struck among these objectives. The current deal offers very valuable insurance to the tobacco industry at what appears to be relatively little cost, allowing them to collect their penalty payments through higher prices, and facilitating collusion in the industry through mechanisms such as an advertising ban. A restructuring of the settlement that shifted more of the financial burden onto the companies could also increase the public monies available to pursue desirable public health objectives. That is, if there are substantial rents to the tobacco industry from this settlement, they should be willing to agree to even steeper public health benefits than are currently envisioned in the parameters of the settlement.

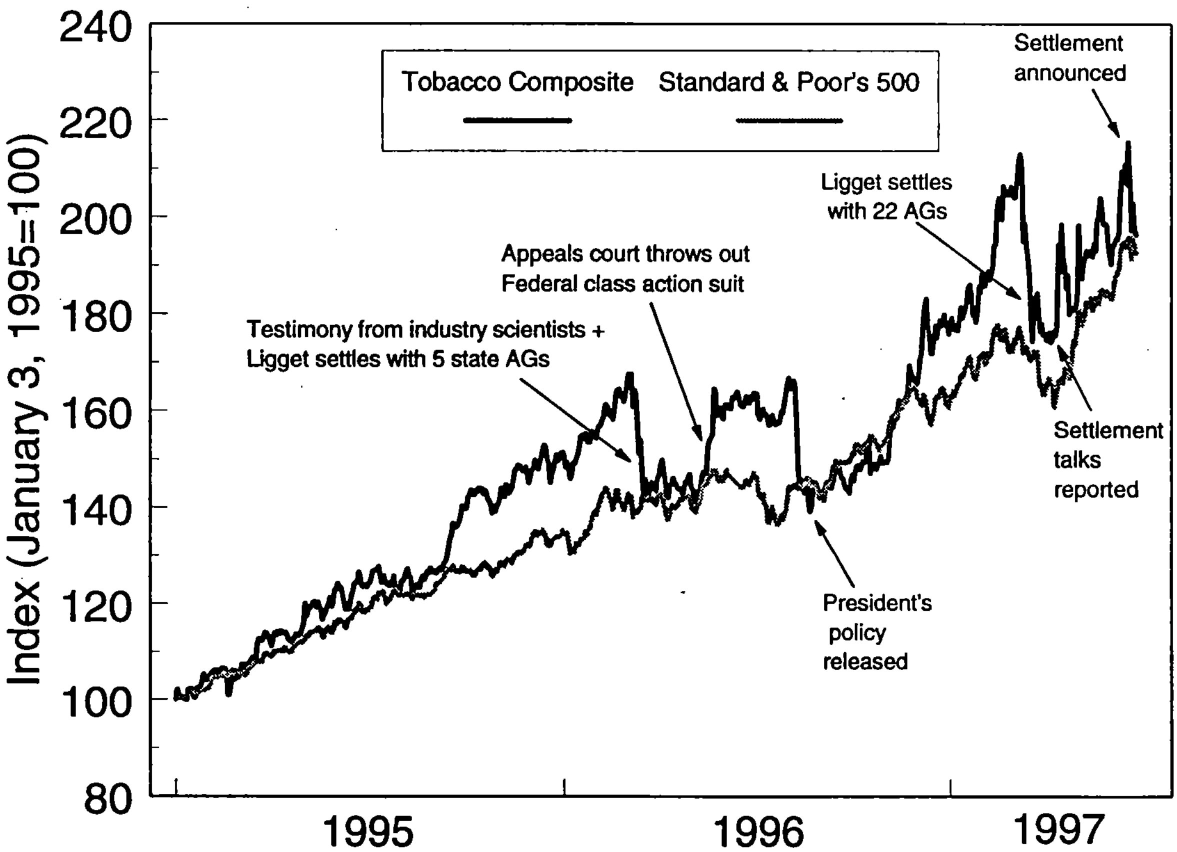
This memo does not consider the structure of the youth smoking "lookback" penalties. This issue is the subject of a separate memo prepared by Treasury.

II. Wall Street reaction

Wall Street financial analysts generally view the settlement as quite favorable to the industry. Major analysts expect tobacco stocks to perform well, primarily because the substantial reduction in uncertainty about litigation removes the heavy discount for risk.

Over the past few years tobacco stocks have fluctuated in response to changes in the litigation outlook (see chart on next page). When settlement talks were announced April 16, tobacco stocks jumped sharply. Since that time, 18 analysts have made announcements to confirm or raise recommendations to buy, one confirmed a fairly low rating, and 3 recommended cut. The strong buy signal from analysts has not yet been translated into a substantial jump in actual share prices (which, apart from fluctuations, have risen roughly in line with the broader market). The major reasons appear to be uncertainty about whether the deal will survive the political process without further regulatory or financial hits to the industry and whether state and local governments or foreign governments will also try to take a bite out of this apple.

The key to Wall Street analysts positive reception appears to be the reduced risk of bankruptcy offered by the deal in its present form. For this reason they expect that the ratio of share price to earnings to rise from a discount of one-quarter to one-third off the average for the equity market to parity or near parity. Earnings per share are, however, expected to fall modestly as the initial payment is absorbed and the industry adjusts to rising prices. To illustrate what might happen, consider the dominant firm Phillip Morris. It is currently trading at about 16 times earnings and has a market valuation of about $100 billion. If earnings fell 10 percent but the price-earnings ratio rose to 20 (a little below the current stock market average), the value of Phillip Morris stock would rise to $112.5 billion ($P_{new} = (20/16)*(9/10)*P_{old}$). Thus, the value of Phillip Morris' stock would rise by $12.5 billion, more than the entire $10 billion initial payment due from the industry.



III. How the industry payment works

The industry payment is structured to function like an excise tax on tobacco products. Apart from an initial payment of $10 billion, the actual industry payment will depend on industry sales. The settlement lays out a schedule of base payments (which begin at $8.5 billion in the first year, but quickly ramp up to $15 billion a year in perpetuity). The base payment is to be adjusted for inflation (by the greater of 3 percent or the annual increase in the CPI). What makes the payment like an excise tax is that it is adjusted to reflect changes in the quantity sold. The quantity adjustment is equal to the ratio of sales in the payment year to sales in the base year (the actual formula uses sales to adults in the case of declining quantity and total sales in the less likely case of increasing quantity). This quantity adjustment is equivalent to a per-unit payment equal to the inflation-adjusted base payment divided by the base quantity. Applied to all tobacco products, the excise tax equivalent of a $15 billion payment is about 58 cents; applied just to cigarettes it is about 62 cents. The settlement calls for the payment to be reflected in the price of tobacco products but it does not prescribe a precise formula for how this should be done.

In addition to the quantity adjustment, the settlement calls for what amounts to an excess profits tax of 25 percent. In particular, the agreement specifies that any reduction in the industry payment associated with the quantity adjustment is to be reduced by 25 percent of incremental profits, if industry operating profits are higher than they were in the base year.

IV. Price and quantity effects: incidence and industrial organization considerations

Statistical evidence suggests that consumers would reduce purchases of cigarettes by about 4 percent in response to a 10 percent increase in price. Over time, however, consumers would probably demonstrate a greater responsiveness to price (6 or 7 percent reduction in quantity) as fewer people take up smoking and more people quit. Teenagers, which represent about 7 percent of smokers (but consume fewer packs than adults), appear to be more responsive to price than adults. Treasury estimates that the excise-tax-equivalent of the industry payment is 58 cents per pack for cigarettes. If this were passed on to consumers on a 1-for-1 basis, the average price of cigarettes would rise from $1.85 to $2.43 per pack, and overall cigarette consumption would decline by about 22 percent within 5 years compared with what consumption would be under current law (smoking has been declining at about a half percent per year in recent years independent of price changes).

Antitrust experts have raised concerns that the settlement will strengthen the market power of the signers and may lead to the price rising by more than the excise-tax equivalent of the industry payment. Although the tobacco industry is highly concentrated and enjoys relatively high profit margins, a mix of rivalry and antitrust prohibition of outright collusion have kept the market price well below the monopoly profit-maximizing level (but above what it would be in a strongly competitive market). Faced with "inelastic" demand, the industry could increase profits by raising the price: The gain in profits on the cigarettes it continued to sell would more than offset the loss in profits resulting from selling fewer cigarettes. One economist has estimated that the profit-maximizing price is at least $4.00 per pack, but it could be considerably higher. To the extent that the settlement facilitates cooperative price fixing (it has language calling for an antitrust exemption), discourages entry, reduces advertising which largely leads to brand substitution and not new smoking, and raises the costs of output expansion, it could lead to price increases greater than the excise-tax equivalent of the industry payment. A greater-than-1-for-1 pass through of the industry payment will lead to increased industry profits even as the volume of cigarette consumption goes down.

Individual companies, especially non-signers, worry a lot about how the payments will be allocated among companies. In the cigarette industry, Liggett argues that they may be driven out of business by the settlement. But Liggett's survival prospects were suspect before the settlement. In the smokeless tobacco market, a number of smaller companies that were not parties to the settlement worry that the settlement will be much more financially burdensome to them than it will be to the dominant firm (UST, with two-thirds of the market) and that it may provide UST with the ability to raise their costs and drive them out of business. These issues are not central to an evaluation of the economic effects of the settlement, but are indicative of how the settlement strengthens the market position of the companies that are party to the settlement.

V. Other incentive considerations

Besides the industry payment and the youth "lookback" provisions, three other aspects of the settlement may merit attention:

A. Incentives to develop "less hazardous" tobacco products

In the past, the tobacco industry has not developed many innovative, safer products— in large measure because to develop and promote safer products would have been to acknowledge the harm done by existing products. But some innovations, like filters and reduced-tar cigarettes, do appear to have followed the release of adverse health news about smoking. In the current environment, in which are companies admitting that their products are harmful and consumer awareness of smoking's risks is heightened, individual companies may be more likely to view the development of safer products as a profitable endeavor. The settlement hopes to encourage the development of less hazardous products by requiring full disclosure of such products and requiring manufacturers to license them to others at "commercially reasonable" fees.

A system of forced disclosure and mandatory licensing reduces the incentive to innovate compared with a patent system. To the extent that all the information needed to develop less hazardous products has already been developed, disclosure and licensing have the beneficial effect of encouraging rapid dissemination of that knowledge. But they can have a chilling effect on the development of new knowledge. If companies think they will have to disclose R&D results prematurely or will have to share most of the benefits of their R&D efforts with other companies, they will invest less than if they expected to be able to appropriate more of the benefits for themselves. This subject is discussed in more detail in a separate memo.

B. Incentives with respect to lawsuits

The Settlement limits industry's incentive to fight lawsuits and could encourage the government to limit lawsuits even more than the Settlement. The Agreement would eliminate class-action suits and punitive damages for past harm. Individuals could still sue for damages (just not punitive damages), and 80 percent of any awards in these suits would be paid from the Settlement Fund (subject to an annual limit, excess claims are carried over to the next year). This means that the industry has little incentive to fight these cases and that the States and the Federal government— who are the residual claimants to the Settlement Fund—would be in the peculiar position of not necessarily wanting to see the funds exhausted by private suits.

C. Incentives for lawyers

What lawyers would get from the settlement is not specified in the Agreement. We do not know specifically what agreements attorneys have with States for payment, but many may have contingency agreements which could give them up to a third of the settlement. (How this would work in practice is not clear.) Similarly, under Medicaid statute, the States are allowed to deduct reasonable costs of litigation up to 50 percent of the settlement before splitting it with the Federal government.

VI. Macroeconomic and sectoral impacts

Employment in the tobacco manufacturing industry accounts for less than 50,000 jobs (over the past year, the economy has generated far more than 100,000 jobs per month). What happens to tobacco manufacturing does, however, affect both upstream (tobacco growers) and downstream (wholesalers and retailers) industries. About 125,000 farms grow tobacco, but many engage in the production of other products as well. Lost sales due to a 60 cent increase in the price of cigarettes would amount to about $885 per farm, on a tobacco crop worth an average of $18,000 per farm.

Any employment effects of changes in the tobacco industry would be concentrated in the Southeast tobacco region of the country. One study estimates that this industry was responsible, directly or indirectly, for about 300,000 jobs in 1993. This deal will, at most, reduce the firms' domestic market by less than one-quarter, and leave unaffected their growing international market. Moreover, there will be job growth elsewhere in response, for example in the development of alternative nicotine delivery systems. So the effects here will be very small.

VII. Policy options

It seems likely that the settlement will achieve its goal of raising the prices of cigarettes and other tobacco products, but at the same time the industry may profit unduly from the settlement, relative to their alternative future of legal uncertainty. The following options address ways of capturing more of the industry "surplus" generated by the settlement, providing more funds that can be used to finance our public health objectives:

A. Increase the size of the industry payment

The current settlement calls for an initial payment of $10 billion, annual payments that quickly escalate to $15 billion, and an excess profits tax of 25 percent. Each of these could be increased.

1. Increase the initial payment

The settlement greatly reduces the risk of bankruptcy from litigation and is expected to confer a large stock market gain on shareholders. Increasing the initial payment from $10 billion to $20 or $30 billion would increase the "price" to shareholders of reducing litigation risk. This is one way of increasing the present discounted value of the industry payments. To the extent that the payment is a one-time charge, it will not necessarily be translated into an increase in the price of cigarettes and it will hit shareholders directly rather than smokers.

2. Increase the annual payment

The annual payment is determined by applying the quantity adjustment to a base payment ($15 billion). The quantity adjustment is what makes this a per-pack payment.

Raising the amount of the annual payment but retaining the quantity adjustment would increase the excise-tax-equivalent impact of the payment on the price of cigarettes. The price of cigarettes would go up and smoking would be reduced accordingly, but the burden on continuing smokers would increase. With a large enough increase, the monopoly profit-maximizing price would be achieved. The domestic cigarette industry will have been turned into the equivalent of a state-owned monopoly with the companies serving as the producers and tax collectors and earning a normal profit for their efforts.

Removing the quantity adjustment entirely would turn the industry payments into a fixed cost and eliminate the excise-tax equivalence feature. The impact on pricing decisions would depend on the way the costs were allocated. If the allocation were based on future sales or market shares, firms' decisions would be affected at the margin; this would act just like a volume adjustment. If firms' payments were fixed in advance, perhaps proportionally to historical market share, marginal decisions (other than whether or not to stay in business) would be unaffected. More thought needs to go into whether this is more like a recurring fixed cost or an increase in the per-pack excise-tax equivalent.

Another possibility is to make part of the annual payment fixed and part variable. For example, companies could have a fixed obligation determined by base-period market share and a per pack payment based on current sales.

3. Increase the "excess profits tax"

Under the agreement, the industry payment is increased if profits go up. The rate of this "excess profits tax" could be increased to 50 percent or 75 percent. However, the major firms are large multinational enterprises with some discretion about how and where they report accounting profits. Thus, it might be difficult to detect and collect any excess profits tax.

B. Set targets for product sales and auction quantity licenses

This option would set quantity targets for tobacco products and require that sellers have a permit for each unit sold. Auctioning off the permits would give government the surplus over normal operating profits and the quantity of product would be fixed. Price would rise to the market clearing level. Relative to raising the annual payment in a volume adjusted fashion, this approach would also greatly reduce smoking but let the government capture the surplus.

C. Establish payments that penalize deviations from desired quantity targets

This option would set annual (company-specific?) product quantity targets. There would be a base payment that would be increased (perhaps on an increasing basis) according to how far from the target actual sales turn out to be. This option might be difficult to design and administer but it could provide substantial incentives to companies to reduce their sales to meet the targets. (This parallels an option in the youth-smoking discussion paper.)

D. Replace the industry payments with a Federal excise tax

Rough estimates indicate that a $1 per pack increase in the excise tax on cigarettes would generate about $15 billion in additional revenue each year, while at the same time generating a 38 percent decline in overall cigarette sales and a 38 percent decline in the number of teen smokers. The current structure, by contrast, leads to a loss of Federal excise tax revenue because it reduces the quantity of cigarettes sold.

Potential Budgetary Impacts of Tobacco Agreement -- Assuming Industry Payments Are Classified As Voluntary (Offsetting) Payments and Youth Targets are Not Met
(in billions of dollars)

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	1998	1999	2000	2001	2002	2003	04-08	98-03	98-08
Federal revenues:									
Industry payments:									
Up-front payment	10.0	0.0	0.0	0.0	0.0	0.0	0.0	10.0	10.0
Public health trust funds in bill	0.0	2.5	2.5	3.5	4.0	5.0	7.5	17.5	25.0
Base amounts in bill	0.0	6.0	7.0	8.0	10.0	10.0	67.5	41.0	108.5
Adult sales volume adjustments	0.0	(1.1)	(2.0)	(3.0)	(4.2)	(4.6)	(23.6)	(14.9)	(38.5)
Credits for civil suits at cap	0.0	(1.4)	(1.5)	(1.6)	(1.9)	(1.8)	(12.2)	(8.1)	(20.3) attorneys 1/3rd
Inflation adjustments on above	0.0	0.0	0.2	0.4	0.7	1.1	9.0	2.4	15 ~~11.4~~
Credit for BBA97 excise tax increase	0.0	0.0	(1.9)	(1.8)	(2.6)	(2.5)	(12.5)	(8.8)	(21.3)
Additional Payments to offset BBA97 Credits	0.0	0.0	1.9	1.8	2.6	2.5	12.5	8.8	21.3
Look-back surcharge	0.0	0.0	0.0	0.0	0.0	1.7	8.6	1.7	10.4
~~User fees for nonparticipants~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~
~~Net penalties~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~	~~0.0~~
Subtotal, industry payments	10.0	6.0	6.2	7.3	8.7	11.4	56.8	49.7	106.5 169
Reduction in tobacco excise taxes (non-PAYGO)	(0.4)	(0.5)	(0.9)	(1.2)	(1.5)	(1.5)	(7.4)	(6.1)	(13.4)
Total, Federal revenues	**9.6**	**5.5**	**5.3**	**6.1**	**7.2**	**9.9**	**49.4**	**43.6**	**93.0**
Federal outlays:									
Public health trust funds in bill	0.0	2.5	2.6	3.7	4.4	5.6	9.0	18.8	27.7
HHS direct programs and grants to States	0.0	0.1	0.1	0.1	0.2	0.3	1.4	0.9	2.3
FDA direct enforcement and grants to States	0.0	0.3	0.3	0.3	0.3	0.3	1.8	1.6	3.4
Grants to States for ASSIST-type programs	0.0	0.1	0.1	0.1	0.1	0.1	0.8	0.5	1.3
Direct Federal R&D to discourage tobacco use	0.0	0.1	0.1	0.1	0.1	0.1	0.6	0.5	1.1
Payments to tobacco-sponsored events/teams	0.0	0.0	0.1	0.1	0.1	0.1	0.5	0.3	0.8
Public educ. campaign run by non-profit board	0.0	0.5	0.5	0.5	0.5	0.6	3.1	2.7	5.7
HHS payments for tobacco use cessation programs	0.0	1.0	1.0	1.1	1.1	1.7	9.2	5.9	15.1
Spending of look-back surcharge (90% grants)	0.0	0.0	0.0	0.0	0.0	1.7	8.6	1.7	10.4
Subtotal, specified spending in bill	0.0	4.6	4.8	6.0	6.9	10.5	35.0	32.9	67.9
Unspecified residual to reach total payments	**10.0**	**1.4**	**1.4**	**1.3**	**1.8**	**0.9**	**21.8**	**16.8**	**38.6**
Total, Federal outlays, excl. debt Service	**10.0**	**6.0**	**6.2**	**7.3**	**8.7**	**11.4**	**56.8**	**49.7**	**106.5**
Federal deficit:									
Revenues (deficit effect)	(9.6)	(5.5)	(5.3)	(6.1)	(7.2)	(9.9)	(49.4)	(43.6)	(93.0)
Programmatic outlays	10.0	6.0	6.2	7.3	8.7	11.4	56.8	49.7	106.5
Debt service	0.0	0.0	0.1	0.1	0.2	0.3	2.7	0.7	3.4
Federal deficit	**0.4**	**0.6**	**1.0**	**1.4**	**1.7**	**1.8**	**10.1**	**6.8**	**16.9**
MEMORANDUM: PAYGO budget effects:									
Revenues (deficit effect)	(10.0)	(6.0)	(6.2)	(7.3)	(8.7)	(11.4)	(56.8)	(49.7)	(106.5)
Outlays	10.0	6.0	6.2	7.3	8.7	11.4	56.8	49.7	106.5
Total PAYGO deficit effect	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
ADDENDA:									
Available (residual) spending if held to PAYGO neutrality	10.0	1.4	1.4	1.3	1.8	0.9	21.8	16.8	38.6
Available (residual) spending if held to budget neutrality	9.6	0.9	0.5	0.1	0.3	(0.6)	14.4	10.7	25.1
Deficit impact of higher CPI (COLAs and indexation)	0.0	0.5	1.5	2.5	3.4	3.9	22.3	11.9	34.3
Potential increase in Federal matching grants(lower end)	0.8	0.7	0.7	0.6	0.9	0.4	10.9	4.1	15.0
Potential increase in Federal matching grants(upper end)	1.0	1.5	1.6	1.8	2.2	2.9	14.2	10.9	25.1

1. Reduction in tobacco volume is assumed to result solely from price increases due to passthrough of industry payments. Access restrictions, public education, and cessation programs are assumed to have no additional effect.
2. Civil liability settlements are assumed to be at cap (33% of industry basic payments). Cap is assumed to be a single 33% cap for suits based on past and future conduct.
3. Surcharge double count adjustment is estimated as 80/60/40/20% of surcharge payments made 1/2/3/4 years prior.
4. No manufacturers are assumed to qualify for 75% good faith surcharge abatement.
5. All manufacturers are assumed to participate in the settlement.
6. All manufacturers are assumed to meet compliance plan and corporate culture requirements.
7. Amounts are assumed to increase for inflation as follows: (a) industry payments increase for inflation beginning in 2000; (b) outlays increase for inflation beginning in 2000; (c) surcharge amount and cap increase for inflation beginning in 1997.
8. All industry payments are assumed to score as Voluntary Payments (scored in Federal budget as offsetting receipts). As Voluntary Payments (offsetting receipts), industry payments are not subject to a 25% income offset as would Indirect Business Taxes.
9. All payments are assumed to be spent as Federal outlays.
10. Industry payments are reduced to provide a credit for excise tax increases enacted as part of BBA '97.
11. States could, through income or substitution effects, increase medicaid spending, thereby generating a 57% Federal match.
12. CPI effects shown as memorandum only because they at least partially overlap with the 25% income offset.

SUMMARY OF DISPOSITION OF SETTLEMENT FUNDS
(1998-2008, nominal dollars)

8-6-97

	Indirect Business Tax		Voluntary Payment	
	Target Met	Target Not Met	Target Met	Target Not Met
Gross Industry Payment		106.5		106.5
Potential Offsets				
Federal Indirect Business Tax Offset		26.6	N.A.	N.A.
Increased Federal Indexation Costs	N.A.	N.A.	34.3	34.3
Decreased Federal Excise Taxes		13.4		13.4
Decreased State Excise Taxes	0.0	18.2	0.0	18.2
Subtotal	0.0	58.2	34.3	65.9
Net Industry Payment	0.0	48.3	(34.3)	40.6
Specified Uses of Funds				
Explicitly Federal	43.9	43.9	43.9	43.9
Federal Share of Grantable Uses	2.9	3.9	2.9	3.9
Explicitly State	1.3	1.3	1.3	1.3
State Share of Grantable Uses	2.9	12.2	2.9	12.2
Private	6.5	6.5	6.5	6.5
Subtotal	57.4	67.8	57.4	67.8
Remaining Net Funds	(57.4)	(19.5)	(91.7)	(27.2)
Percent of Gross Industry Payment	ERR	-18.3%	ERR	-25.5%

Memorandum:				
Gross Payment Less Specified Uses	-57.4	38.7	-57.4	38.7

THE WHITE HOUSE

WASHINGTON

98	99	02	5	10
1		5	Year	
125		225		
300		300		
75		100		
100		100		
75		75		
500		500		
1,000		1,500		
2,175		-2,800	2,800	2.8
$6B		10 B	12.5 B	15 B
	-33%	6.7 B $-\frac{2.8}{4}$	8 B $\frac{2.8}{5}$	10 B $\frac{2.8}{7}$

SUMMARY OF BUDGETARY EFFECTS OF PROPOSED SETTLEMENT

(Billions $. Assumes youth consumption reduction targets are not met)

	1998	1999 ...	2002	1998-03	1998-08
RECEIPTS					
Base Payment (inc. trust and up-front payment)	**10**	**9**	**14**	**69**	**144**
Adult Sales Volume Adjustment		(1)	(4)	(15)	(39)
Credit for Personal Compensation Claims		(1)	(2)	(8)	(20)
Inflation Adjustment			1	2	11
Credit for BBA 1997 Excise Tax Increase			(3)	(9)	(21)
Look-Back Surcharge for Youth Consumption				2	10
Net Industry Settlement Payments	**10**	**6**	**6**	**41**	**85**
Tax Offsets					
Indirect Business Tax Offset	(3)	(2)	(2)	(12)	(27)
Reduction in Federal Excise Taxes	(0)	(1)	(2)	(6)	(13)
Total Federal Tax Offsets	(3)	(2)	(4)	(18)	(41)
Net Additional Receipts to US Government	**7**	**4**	**3**	**22**	**45**
POTENTIAL USES/CHANGES					
State Attorneys General Proposals, Total		5	7	33	68
Offset Reduction in State Excise Taxes	1	1	2	8	16
Eliminate Credit for BBA Excise Taxes to Companies			(3)	(9)	(21)
Potential Increase in Federal Medicaid Match	1	1	2	11	25
Total Potential Uses	**2**	**7**	**8**	**43**	**87**

DRAFT

July 30, 1997

An Economic Analysis of the Tobacco Settlement

I. Overview

The tobacco settlement marks an implicit acknowledgment by the major tobacco manufacturing companies that the tide of history has turned against them. *Nevertheless, they appear to have struck a quite favorable settlement.*

- They have been relieved of substantial financial uncertainty and potential financial ruin from an endless stream of individual and class action lawsuits—they no longer have to fear being "Johns-Manvilled".

- Although they are required to make substantial annual payments, they are expected to collect those payments from smokers in the form of higher prices—the payments do not come out of their bottom line. Indeed, they are encouraged to work together to achieve this goal. The small fixed payments mandated by the settlement amount to *only slightly more than one year's profits for the industry.*

- This and other collusion-facilitating aspects of the settlement, such as the ban on advertising and restrictions on entry, will probably lead to a consolidation of market power and will most likely make the major tobacco manufacturers far better off financially than they would be in the absence of a settlement.

- The benefits to the industry from this settlement are reflected in Wall Street's reaction, which has been very positive: tobacco companies, who had been expected to see a discount in their future prices of up to one-third, are now expected to perform as well as the market generally.

The settlement tries to achieve multiple, sometimes conflicting objectives, including discouraging smoking, punishing the tobacco industry for past behavior, and encouraging better behavior by the industry.

A key question for consideration is *whether the right balance has been struck among these objectives.*

- The current settlement offers very valuable insurance to the tobacco industry at what appears to be relatively little cost, allows them to collect their penalty payments through higher prices, and facilitates collusion.

- A restructuring of the settlement that shifted more of the financial burden onto the companies could also increase the public monies available to pursue desirable public health objectives.

- That is, if there are substantial rents to the tobacco industry from this settlement, they should be willing to agree to even steeper public health benefits than are currently envisioned in the parameters of the settlement.

II. Mechanics of the Settlement

The industry payment is structured to function like an excise tax on tobacco products.

- Apart from an initial payment of $10 billion, the actual industry payment will depend on industry sales. The settlement lays out a schedule of base payments, which begin at $8.5 billion in the first year, but quickly ramp up to $15 billion a year in perpetuity.

- This dependence on quantity sold makes the payment function like an excise tax. Applied to all tobacco products, the excise tax equivalent of a $15 billion payment is about 58 cents; applied just to cigarettes it is about 62 cents.

- The settlement calls for the payment to be reflected in the price of tobacco products but it does not prescribe a precise formula for how this should be done.

In addition to the quantity adjustment, the settlement calls for what amounts to an excess profits tax of 25 percent: the quantity adjustment is reduced by 25% of the increase in profits over the base year.

There is also a youth smoking "lookback" penalty. That penalty is considered in more detail in a separate memo prepared by Treasury.

III. Effects of the Settlement on Consumers, the Industry, and the Government

Statistical evidence suggests an elasticity of demand for cigarettes among adults of -0.4 in the short run, and -0.7 in the longer run

- Teenagers, which represent about 7 percent of smokers (but consume fewer packs than adults), appear to be more responsive to price than adults

If the volume adjusted payments were passed on to consumers on a 1-for-1 basis, the average price of cigarettes would rise from $1.85 to $2.43 per pack, and overall cigarette consumption would decline by about 22 percent within 5 years compared with what consumption would be under current law (smoking has been declining at about a half percent per year in recent years independent of price changes).

- The number of adult smokers would decline by 15%, and the number of teen smokers would fall by 22%, for a decline of almost one million teen smokers

- This would amount to a regressive tax increase on consumers, since smokers are disproportionately low income

At the same time, this settlement places *relatively little burden on the companies*

- The fixed payment of $10 billion represents only about 14 months of pre-tax profits of the tobacco industry

- The fact that the market for smoking is shrinking through this price increase does lower profits, but this is largely offset by reduced expenditures on advertising and legal fees.

Our analysis suggests that, overall, the reduction this settlement will imply *at most a 10% fall in the profits of tobacco companies* by the fifth year of the agreement

This computation assumes only a one-for-one pass through to prices. But antitrust experts have raised concerns that the settlement will strengthen the market power of the signers and *may lead to the price rising by more than the excise-tax equivalent of the industry payment.*

- To the extent that the settlement facilitates cooperative price fixing (it has language calling for an antitrust exemption), discourages entry, reduces advertising which largely leads to brand substitution and not new smoking, and raises the costs of output expansion, it could lead to price increases greater than the excise-tax equivalent of the industry payment.

- A greater-than-1-for-1 pass through of the industry payment could actually lead to a *rise in industry profits*, which will be incrementally taxed at only 25% by this settlement.

From the government's perspective, the revenues from this settlement are much lower than the statutory stream of payments, due to offsets to other (excise and income) taxes, revenue costs of a rise in the CPI, and payments for civil suits

- The OMB estimates that, by the fifth year of the settlement (2003), the federal government will only collect $5.8 billion of the $15 billion in statutory payments

Thus, the breakdown of payments in that year is:

Statutory:	$15 billion
Volume adjusted:	$11.3 billion
Share borne by tobacco companies:	$0.7 billion
Share borne by consumers:	$10.6 billion
Net Federal revenues:	$5.8 billion

This table highlights two key features of the settlement: it raises less money than envisioned, and it raises almost all of that money from consumers.

IV. Wall Street reaction

Wall Street financial analysts *generally view the settlement as quite favorable to the industry.* Major analysts expect tobacco stocks to perform well, primarily because the substantial reduction in uncertainty about litigation removes the heavy discount for risk.

- Over the past few years tobacco stocks have fluctuated in response to changes in the litigation outlook.

- When settlement talks were announced April 16, tobacco stocks jumped sharply.

- Since that time, 18 analysts have made announcements to confirm or raise recommendations to buy, one confirmed a fairly low rating, and 3 recommended cut.

The key to Wall Street analysts positive reception appears to be the *reduced risk of bankruptcy offered by the settlement in its present form.*

- For this reason they expect that the ratio of share price to earnings to rise from a discount of one-quarter to one-third off the average for the equity market to parity or near parity. Earnings per share are, however, expected to fall modestly as the initial payment is absorbed and the industry adjusts to rising prices.

To illustrate what might happen, consider the dominant firm Phillip Morris.

- It is currently trading at about 16 times earnings and has a market valuation of about $100 billion.

- If earnings fell 10 percent but the price-earnings ratio rose to 20 (a little below the current stock market average), the value of Phillip Morris stock would rise to $112.5 billion ($P_{new} = (20/16)*(9/10)*P_{old}$).

- Thus, *the value of Phillip Morris' stock would rise by $12.5 billion, more than the entire $10 billion initial payment due from the industry.*

V. Other incentive considerations

The settlement creates reduced incentives to develop "less hazardous" tobacco products

- The settlement hopes to encourage the development of less hazardous products by requiring full disclosure of such products and requiring manufacturers to license them to others at "commercially reasonable" fees.

- But a system of forced disclosure and mandatory licensing reduces the incentive to innovate compared with a patent system.

- To the extent that all the information needed to develop less hazardous products has already been developed, disclosure and licensing have the beneficial effect of encouraging rapid dissemination of that knowledge.

- But they can have a chilling effect on the development of new knowledge: if companies think they will have to disclose R&D results prematurely or will have to share most of the benefits of their R&D efforts with other companies, they will invest less than if they expected to be able to appropriate more of the benefits for themselves.

- This subject is discussed in more detail in a separate memo.

The settlement embodies some perverse incentives with respect to lawsuits

- The Agreement would eliminate class-action suits and punitive damages for past harm. Individuals could still sue for damages (just not punitive damages), and 80 percent of any awards in these suits would be paid from the Settlement Fund (subject to an annual limit, excess claims are carried over to the next year).

- This means that the industry has little incentive to fight these cases and that the States and the Federal government— who are the residual claimants to the Settlement Fund—would be in the peculiar position of not necessarily wanting to see the funds exhausted by private suits.

Lawyers may receive a disproportionate share of the settlement funds

- We do not know specifically what agreements attorneys have with States for payment, but many may have contingency agreements which could give them up to a third of the settlement (how this would work in practice is not clear).

- Similarly, under Medicaid statute, the States are allowed to deduct reasonable costs of litigation up to 50 percent of the settlement before splitting it with the Federal government.

VI. Macroeconomic and sectoral impacts

Employment in the tobacco manufacturing industry accounts for less than 50,000 jobs, which is less than one-half of the monthly job growth generated by the U.S. economy over the past year

What happens to tobacco manufacturing does, however, affect both upstream (tobacco growers) and downstream (wholesalers and retailers) industries.

- About 125,000 farms grow tobacco, but many engage in the production of other products as well. Lost sales due to a 60 cent increase in the price of cigarettes would amount to about $885 per farm, on a tobacco crop worth an average of $18,000 per farm.

- Any employment effects of changes in the tobacco industry would be concentrated in the Southeast tobacco region of the country.

- One study estimates that this industry was responsible, directly or indirectly, for about 300,000 jobs in 1993. This settlement will, at most, reduce the firms' domestic market by less than one-quarter, and leave unaffected their growing international market. Moreover, there will be job growth elsewhere in response, for example in the development of alternative nicotine delivery systems.

So the effects on jobs, both in industry and on farms, will be very small.

VII. Policy options

It is clear that the settlement raises less money than initially promised, and that it raises this money primarily from consumers. This suggests the value of changing the structure of the payment schedule to capture more industry "surplus".

- This would increase burden-sharing between tobacco companies and consumers

- It would also raise more funds to meet our public health goals.

We see four directions for changing the structure of the payments:

A. Increase the annual payment amount

To raise, on net, the gross amount of money envisioned by the settlement would require that the *payments by the companies more than double.*

- Increases in the annual payments would further the policy goal of reducing smoking, as prices would rise even higher, and would provide more funds to promote our public health agenda.

B. Increase the fixed payments by tobacco companies

The settlement greatly reduces the risk of bankruptcy from litigation and is expected to confer a large stock market gain on shareholders. It seems reasonable to expect shareholders to pay more for this "insurance". This could be accomplished in at least two ways:

- Increase the initial payment from its current level of $10 billion, to $20 or $30 billion

- In addition to the path of volume adjusted payments, add a string of payments which are based on historical market share. This would penalize tobacco companies for past behavior, through a fixed cost which is borne by shareholders and not current smokers

C. Increase the "excess profits tax"

Under the agreement, the industry payment is increased if profits rise from the base year, but only by 25% of the incremental profits. If the goal of this settlement is to penalize the tobacco companies, this tax rate should be increased to a much higher level, say 75%.

D. Replace the industry payments with a Federal excise tax

Rough estimates indicate that a $1 per pack increase in the excise tax on cigarettes would generate about $15 billion in additional revenue each year, while at the same time generating a 38 percent decline in overall cigarette sales and a 38 percent decline in the number of teen smokers. The current structure, by contrast, leads to a loss of Federal excise tax revenue because it reduces the quantity of cigarettes sold.

July 18, 1997

OTHER ALTERNATIVES

Moving beyond the structure of the settlement, several other alternatives exist that could be used and that would boost government receipts:

1. Higher excise tax

One way to boost prices, reduce use, and capture additional government revenues is to impose a higher excise tax on cigarettes. It is widely accepted that teen smoking (and overall smoking as well) declines as the price increases -- yet total revenues would actually increase.

- Rough estimates indicate that a $1 increase in the excise tax on cigarettes would generate about $15 billion in additional tax revenue each year -- and at the same time generating a 38% decline in overall cigarette sales, and a 38 % decline in the number of teen smokers.

2. No volume adjustment

- The current settlement uses a volume adjustment to adjust the size of the annual penalties paid by firms -- ultimately $25 billion per year before the volume adjustment. The volume adjustment would reduce the size of the penalty because of the decline in sales -- roughly 22% over ten years -- that will occur under current trends and with the price increases associated with the penalty payments.

- Eliminating the volume adjustment would guarantee a higher stream of payments that would not be eroded in the event that firms raise prices and the quantity of sales declines. In fact, under the current agreement, firms may have the incentive to boost prices in the effort to capture greater profits. This would occur because the penalty payments would decline with volume but firms would only have to pay 25% of any excess profits.

- While the existing structure of the settlement would raise $197 billion over 25 years, with no volume adjustment, $252 billion would be raised.

3. Auction quantity licences

A final alternative would be to target overall tobacco use and establish quantity restrictions (with reduced quantity over time) for tobacco sales. Such an approach could be implemented by auctioning the rights to sell a given quantity of tobacco products (perhaps defined in terms of tar and nicotine in the product).

- This approach has the desirable feature that it would guarantee the decline in tobacco use over time.

- The auction approach would rely on the private market to solve the rationing problem that accompanied the declining quantity.

Table 1
Net Payments to all Governments from the Tobacco Settlement
Payment Reflected in Price of All Products
100% Pass Through
(1996 $'s Millions)

		PDV
Base Payment	368,500	231,910
Gross Volume Adjusted Payment	293,566	187,547
Federal Excise Tax Leakage	(13,397)	(9,025)
State Excise Tax Leakage	(18,151)	(12,227)
Total Gross Excise Tax Leakage	(31,548)	(21,252)
Net Volume Adjusted Payment (Pre-offset)	262,018	166,296
Income Tax Offset	(65,504)	(41,574)
Individual	(55,679)	(35,338)
Corporate	(9,826)	(6,236)
Net Volume Adjusted Payment (including offset)	196,513	124,722

Department of the Treasury
Office of Tax Analysis

Table 2
Sources of Net Yearly Payments to all Governments from the Tobacco Settlement
Payment Reflected in Price of All Products
100% Pass Through
(1996 $'s Millions)

Year	Base Payment	Gross Volume Adjusted Payment	Net Volume Adjusted Payment	Net Payment Fixed GDP
1998	10,000	10,000	8,665	6,498
1999	8,500	7,601	6,497	4,873
2000	9,500	8,365	7,179	5,384
2001	11,500	9,867	8,495	6,372
2002	14,000	11,656	10,062	7,547
2003	15,000	12,298	10,657	7,993
2004	15,000	12,247	10,661	7,995
2005	15,000	12,198	10,664	7,998
2006	15,000	12,137	10,655	7,991
2007	15,000	12,072	10,641	7,981
2008	15,000	12,012	10,629	7,972
2009	15,000	11,951	10,616	7,962
2010	15,000	11,891	10,601	7,951
2011	15,000	11,832	10,586	7,939
2012	15,000	11,772	10,569	7,926
2013	15,000	11,713	10,550	7,913
2014	15,000	11,655	10,531	7,898
2015	15,000	11,596	10,511	7,883
2016	15,000	11,538	10,490	7,867
2017	15,000	11,480	10,468	7,851
2018	15,000	11,423	10,444	7,833
2019	15,000	11,365	10,421	7,815
2020	15,000	11,309	10,396	7,797
2021	15,000	11,252	10,370	7,778
2022	15,000	11,196	10,344	7,758
2023	15,000	11,140	10,317	7,738
Total	368,500	293,566	262,018	196,513

Department of the Treasury
Office of Tax Analysis

Table 3
PDV of Sources of Net Yearly Payments to all Governments from the Tobacco Settlement
Paymeht Reflected in Price of All Products
100% Pass Through
(1996 $'s Millions)

Year	PDV Base Payment	PDV Gross Volume Adjusted Payment	PDV Net Volume Adjusted Payment	PDV Net Payment Fixed GDP
1998	10,000	10,000	8,665	6,498
1999	8,182	7,317	6,254	4,691
2000	8,803	7,751	6,652	4,989
2001	10,258	8,801	7,578	5,683
2002	12,021	10,008	8,640	6,480
2003	12,398	10,165	8,809	6,607
2004	11,935	9,744	8,482	6,362
2005	11,489	9,342	8,167	6,126
2006	11,059	8,948	7,855	5,892
2007	10,646	8,568	7,552	5,664
2008	10,248	8,206	7,262	5,446
2009	9,865	7,860	6,981	5,236
2010	9,496	7,528	6,711	5,033
2011	9,141	7,210	6,451	4,838
2012	8,799	6,906	6,200	4,650
2013	8,470	6,614	5,958	4,468
2014	8,154	6,335	5,724	4,293
2015	7,849	6,068	5,500	4,125
2016	7,555	5,812	5,284	3,963
2017	7,273	5,566	5,075	3,806
2018	7,001	5,331	4,875	3,656
2019	6,739	5,106	4,682	3,511
2020	6,487	4,891	4,496	3,372
2021	6,245	4,684	4,317	3,238
2022	6,011	4,487	4,145	3,109
2023	5,787	4,297	3,980	2,985
Total	231,910	187,547	166,296	124,722

690-6343

Venue
Speakers
time

guest list
- health
- gov't officials
- legislative

Paper
EO —
Fact Sheet —
Q&A —
Speech. —

Questions —
National parks / museum.

Cost / Diff from GSA regulation

G7+1 recognized that EB

- # people
- change from current law
→ cost agencies $
→ experience of agencies w/ smoking bans

- collective bargaining

Sara Gegenheimer

- science Q&A. -

From Richard Kluger's Ashes to Ashes

ll was much higher, citing a seven-
·f of all fire deaths to cigarette smok-
tality, the industry was reluctant to
ıe that would remind consumers of
human life. The tobacco companies
ough sizable contributions to such
ıncil, which stood with the industry
, not a new cigarette design, in the
:d in and granted the additional de-
ponse to the safety need well into

matter of serious strictures on the
he tobacco industry was the benefi-
by the executive branch during the
ılism prevailed at the Reagan-Bush
nger to encourage smoking control
:achments of the Surgeon Generals
s they were understood to be merely
not a call for action by government.
ıe two administrations on smoking
White House were still offered cig-
bara Bush did not extend that ques-

ı about the tobacco issue abounded.
the laboratory it had run for twenty
of most cigarette brands, ostensibly
ɔvide the public with the only re-
es. The task was handed over to an
assigning the fox to guard the hen
a government inspector. The FDA
:ir policing of tobacco products. In
l swiftly and jointly to order Perrier
s when it was discovered that each
benzene. Cigarette packs, mean-
:eport stated had up to 2,000 times
ained exempt from such preventive
l nine rules and OSHA had put out
rcinogenic substances believed to
/ear, but neither agency had formu-
bacco smoke, which public-health
00 lives annually by lung cancer
/s to determine if ETS could in fact

be lethal, but would not declare its findings until literally the final hours of the Bush administration. The only Cabinet member who registered concern about smoking in those years was Bush's HHS Secretary, Dr. Louis Sullivan, an African-American, who would manage an outburst now and then about how unscrupulous cigarette makers were targeting minorities with their advertising and promotion, but he publicly proposed no federal legislation to modify these or any other practices by the industry. When Sullivan did grow bold enough to fashion a government-wide executive order that would have made all federal office buildings smoke-free except for certain designated areas, his proposal sat in the White House awaiting presidential implementation that never came.

The closest the Reagan-Bush executive branch did come to an antismoking initiative was its countenancing a program at the National Cancer Institute, under the leadership of a skilled and passionate bureaucrat, veteran public-health officer Joseph Cullen, who guided a series of sixty studies on why smokers take up the habit and how best to help them stop it. Based on the results, NCI in 1991 launched the costliest ever federal antismoking effort, a seven-year, seventeen-state, $135 million drive aimed at cutting the adult smoking population from around 28 percent to 15 by the century's end. It was a project that somehow fell between the cracks, escaping congressional ire largely because it was aimed at modifying the behavior of smokers and not the conduct of the cigarette business. And it was abundantly compensated for, to the extent that it menaced the tobacco companies' fortunes, by the highly active role played by Reagan-Bush federal trade officials in prying open large, lucrative, and previously impenetrable Asian markets for U.S. brands.

Even as U.S. cigarette consumption ebbed by one or two percentage points a year over the last two decades of the twentieth century, the industry ever more hungrily scouted and infiltrated markets abroad. Pacesetting Philip Morris sold two cigarettes overseas for every one that it peddled domestically. Some 70 percent of PM's foreign sales were in Western Europe, where by the mid-'Eighties it had become the continent's leading cigarette purveyor. But it was fast becoming a saturated market, fiercely contested by international and domestic manufacturers; the future lay elsewhere.

American cigarette makers were doing well enough in the open markets of the Philippines, Hong Kong, Malaysia, and Singapore, but the rest of the Pacific Rim nations remained out of their reach, practically speaking, due to high tariff barriers and punitive excise taxes on imported brands. These East Asian countries—Japan, Taiwan, South Korea, and Thailand—with a combined population larger than the U.S., were prosperous, smoked cigarettes heavily, and, thanks in large part to the cheapness of their labor, were flooding American shores with quality goods that contributed to an ever-widening unfavorable balance of U.S. trade and helped transform America into a debtor nation.

By Reagan's second term, his economic masterminds were receptive to any mended Koop in writing for his "aggressive efforts to sensitize the American people to the health dangers of this troublesome habit" and said that he himself believed addiction to smoking to be "a terrible human tragedy." The USTR then concluded his patronizing moral instruction to Koop, "However, what we are about in our trade relationships is something entirely different." Yeutter had apparently meant that addiction to smoking *by Americans* was "a terrible human tragedy"—or he was a shameless hypocrite—for two years later, during a press conference while he was Secretary of Agriculture, he commented about one of his apparently favorite crops, "I just saw the figures on tobacco exports a few days ago, and, my, have they turned out to be a marvelous success story."

Bush's top health officials proved craven and impotent in the face of such boosterism. Koop's successor as Surgeon General, Antonia Novello, occasionally flayed the tobacco companies for pursuing the youth market, but her priorities were apparent when she stated, in answer to press inquiries about why she had not opposed the USTR efforts to spread the sale of U.S. cigarettes to previously restricted markets, that such intrusiveness by the nation's ranking public-health officer would have been "disrespectful to my party." Traveling to Perth, Australia, in 1990 for the triennial World Conference on Tobacco and Health, Assistant HHS Secretary James O. Mason delivered a rousing keynote address, charging U.S. cigarette makers with playing "our free-trade laws and export policies like a Stradivarius violin" and calling it "unconscionable" for them "to be peddling their poison abroad." But when summoned by Congressman Waxman to repeat the charge before his House health subcommittee, Mason canceled his appearance and a departmental letter arrived instead, explaining that it was not appropriate for a health official to discuss trade matters. When Mason's boss, HHS Secretary Sullivan, who had approved his subordinate's speech in Perth, was asked on "Meet the Press" to explain the apparent policy reversal, he said that the issue was "one of equity in trade. What Dr. Mason has said in Australia is entirely consistent with what I have said."

More truthfully reflecting the smoking policies of the Bush presidency, Vice President Dan Quayle told a North Carolina audience in July 1990 that "Tobacco exports should be expanded aggressively because Americans are smoking less. . . . We're not going to back away from what public health officials say and what reports say. But on the other hand, we're not going to deny a country an export from our country because of that policy." Thus was a generation of findings that smoking was destructive of human health degraded by two American Presidents while actively carrying the banner of U.S. tobacco companies into foreign parts when ample humanitarian grounds existed for pressing their cause less fervently, if at all.

This unseemly overseas initiative by the government compounded the in-

jury then being dealt to the antis
eral indifference. The most hurı
departure of Surgeon General K
lievable voice to the issue. Only
rable, if less audible, role in the
throughout the 'Eighties. But fo
able or unwilling to persuade th
Eighteen months after Koop'
ing advocate in the federal admi
on Smoking and Health, ended
held the ranking public-health p
Davis had nonetheless bridled
mission, typified by a budget th
into the possible dangers of the
according to lists it provided tc
law. His role was limited to cros
tismoking organizations—ASH,
cacy Institute, the American C
Health Foundation, and the Coal
ers, which formed a movement
plicative—and urging state and
more vigorously with smoking,
was doing next to nothing about
federal legislation was tossed ou
him. "It was a pass-the-buck app
tions to the states than to Congre
Practically speaking, there wa
movement, only a lot of groups
newsletters, fund drives, and eg
din, orchestrated only occasionall
but mostly they were in disarray.
by now relatively well funded bu
approach; younger, poorer antis
real leadership by turning ASH in
ment—or get out of the way. Am
in skill and reach but lacked fund
After nearly ten years of existenc
taries remained "a case of arreste
cacy Institute's Michael Pertschu
tobacco control movement but nc
three parents had proven unwillin
own, kept its operating budget tc

Jon Gruber - Treasury

Issues for Tobacco Group on Industry Analysis - Domestic Issues

I) Background on the economics of the tobacco industry   2nd Analysis

CEA

- Evidence on elasticities of demand for tobacco products, by age group
- Evidence on the substitutability across tobacco products that are differentially taxed
- Evidence on pricing behavior by this industry, and resultant implications for pricing from the structure of the settlement
- Evidence on the response of smoking behavior to other interventions, such as advertising, by age group
- The incidence of cigarette price increases

who bears burden consumers? which?

II) Effects on the tobacco sector

- Computation of after-tax profit stream pre vs. post settlement
- Incorporate behavioral responses along a number of dimensions
    - shifting structure of products to avoid taxation
    - shifting sales abroad to avoid taxation
    - etc.
- Effects on labor demand in this sector
- Event study of stock market response

III) Spillover effects on other industries in terms of labor demand and profits

- Other sectors affected:
    - advertising
    - vending
    - sporting events
    - retail
    - hospitality
    - medical/insurance
- Particular focus on farmers
- Incorporate benefits to smoking cessation sector

Adjacent vices. -

IV) Effects on government revenues and expenditures

Treasury

- Projected net payments
- Reduction through corporate tax deductibility
- Reduction through excise tax "leakage"

Treasury/HHS. / OMB

- Effect on government expenditure programs
    - Social Security
    - Medicare
    - Medicaid

Effect on CPI?

V) Evaluating "lookback" provisions for teen smoking

- Compare penalties to profit stream from continued youth smoking

VI) Collect and synthesize expert opinion on these issues — Hold off — until we have questions

VII) Long Run/Normative Issues

- Interaction of settlement with politics of tobacco taxation
  - Does the settlement "crowd out" tobacco taxes?
- Implication for future litigation - this is implicit "tax" on settlement monies
- To what units should payments be tied
  - unit sales
  - revenues
  - total tar or nicotine
- Should payments be on industry or company-by-company basis?
- Should we induce price increase or replace this with a quota, auctioned over companies?

Memorandum

July 3, 1997

From: Chad Stone, CEA
Jon Gruber, Treasury
To: Elizabeth Drye, DPC
Subject: Progress Report on Economics Task Force, Domestic Issues

Attached are several undigested pieces of material that are part of what will feed into a draft report we hope to complete next week:

1. An outline/progress report of the tasks being undertaken
2. Preliminary fact sheets on the domestic industry (foreign stuff to come)
3. Preliminary set of working assumptions feeding into the analysi
4. Preliminary bibliography of key economic articles, etc. for estimating elasticities and other effects.
5. Memorandum from DOJ antitrust division assessing the settlement
6. Memorandum from USDA on effects on tobacco farmers.
7. Preliminary Treasury assessment of "lookback"

All of these are preliminary and many are undigested and not integrated into the analysis.

Outline/Progress Report - Industry and Financial Issues

The domestic industry task force is gathering information to describe the likely impact of the settlement on the domestic tobacco industry. How will economic and financial incentives be changed by the settlement and how will the evolution of the industry and other affected sectors be different from what would have happened in the absence of a settlement? The policy framework informing this assessment of the facts assumes the objective of the settlement is to reduce smoking by raising the price of cigarettes and other tobacco products, with special attention paid to reducing youth smoking. An additional objective is to prevent the tobacco industry from profiting unduly from the settlement in order that the "profits" from raising cigarette prices can be diverted to specificed public health and other purposes.

Outline of tasks:

A) Fact Sheet on industry structure and performance

- Domestic
- International

B) Effect of settlement on prices

- Can view this as an excise tax
- How are excise taxes passed through to prices in the tobacco industry?

C) Effect of settlement on smoking

- Incorporate effect on prices and advertising restrictions
  - -- effect overall, and by age group
  - -- cohort projections

D) Impact on the industry

- Effects on prices and labor demand
- Two methods
  - -- primary analysis (back of the envelope calculations), based on FDA research
  - -- summary of market analysis, including stock price response
- Overall, and company-by-company

E) Spillover Effects

- Rough magnitudes of effects on other sectors, from FDA research
- USDA is computing specific effects on farmers

F) Health Effects

- FDA and CDC are computing mortality by group and cohort

G) Government revenue effects

- Treasury's Tax Policy group is computing revenue effects of settlement
    - -- how much is collected through this implicit excise tax
    - -- corporate tax receipt effects, accounting for deductibility
    - -- excise tax spillovers
- Estimate incidence of this implicit excise tax increase
- Compare properties to traditional excise tax change

H) Government spending effects

- Treasury's Economic Policy group is computing effects on
    - -- Social Security/SSI/DI
    - -- Medicare
    - -- Medicaid
- Effects on PBGC through bankruptcies of smaller tobacco firms - DoL
- Effects on other government spending - OMB

I) Incentive Effects

- Industry
    - -- product substitution
    - -- youth smoking incentives through lookback provisions
        - - is the penalty set at an appropriate level?
- Consumers
    - -- product substitution
- Government/Legal system
    - -- legal incentives through structure of punitive damage pools
    - -- distribution of initial $10 billion across parties

Progress Report - Industry Issues

A) Fact Sheet on industry structure and performance

- Domestic
- International

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DRAFT,
July 3, 1997

FACT SHEET
ON THE U.S. TOBACCO INDUSTRY

Production

- **The United States was the world's second largest tobacco producer** in 1994, accounting for about 9 percent of the estimated 6.44 million metric tons that were produced worldwide.

Top 10 Leaf Tobacco Producers		
		Metric Tons
1.	China	2,559,700
2.	**United States**	**575,389**
3.	India	524,500
4.	Brazil	398,000
5.	Turkey	219,983
6.	Zimbabwe	209,042
7.	Indonesia	171,400
8.	Greece	131,875
9.	Malawi	130,686
10.	Italy	130,400

- The U.S. **tobacco crop** in 1995 was worth almost $2.3 billion, making it the seventh largest cash crop for the nation and representing approximately 2.7 percent of the total for all cash crops and farm commodities.

- The **manufacture of tobacco products** accounted for $16.6 billion or 0.2 percent of gross domestic product in 1994, down from 0.6 percent in the early 1960's.

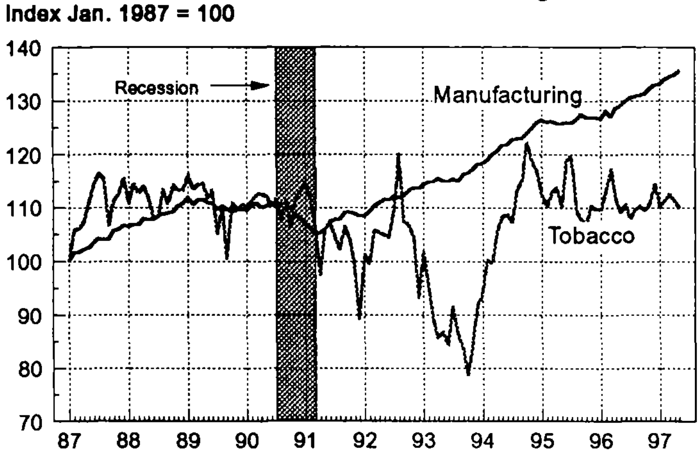
- **U.S. factories produced** 760 billion cigarettes in 1995, of which 234 billion (nearly one-third) were shipped abroad for foreign consumption.

- The manufacture of tobacco products **accounts for 1.2 percent of U.S. industrial output.**

- **Production slid from early 1991 through most of 1993** ... [will find out what was going on], but by mid-1994 returned to levels that prevailed in the late 1980's. (See chart on the next page.)

TOBACCO PRODUCTION

Relative to All Manufacturing



Consumption

- **Per-capita cigarette consumption has been on a long-term decline** in the United States from a record high of 4,345 in 1963 (based on the population 18 years and over) to 2,515 in 1995 -- a drop of 42 percent. [Will try to get time series. Chart might be interesting.]

  -- About **25 percent of all adults currently smoke.**

  -- **Shares** are generally **even higher for older adolescents**: 30.4 percent of 10th graders, 34.0 percent of 12th graders report that they have smoked in the past 30 days, according to the Michigan survey. Smoking is much more highly concentrated among white than black teens (38.1 vs. 14.2 percent for 12th graders).

- **Consumers spent** $47.2 billion on tobacco products in 1995, or 1.0 percent of all consumer expenditures.

- **93 percent of the money was spent on cigarettes**. U.S. consumption was divided as follows:

  -- 487 billion cigarettes
  -- 2.5 billion cigars and cigarillos
  -- 14.2 million pounds of pipe and roll-your-own tobacco
  -- 63.3 million pounds of chewing tobacco
  -- 60 million pounds of snuff

- The **1995 consumer expenditure survey** shows that the average household spent $269 that year on tobacco products and smoking supplies, with **households in the lowest income quintiles spending more of their budget on tobacco.**

Tobacco Expenditures by Income Quintile in 1995					
	Lowest 20%	Second 20%	Third 20%	Fourth 20%	Highest 20%
Tobacco	$204	$242	$327	$307	$278
Share of total expenditures	1.4%	1.1%	1.1%	0.8%	0.4%

Employment and Wages

- **Tobacco manufacturing's contribution to payroll employment is minuscule.** In 1996, 41,000 workers were employed in the tobacco manufacturing industry (which includes processing of tobacco, as well as production of cigarettes, cigars, etc.), or only 0.03 percent of the 119.5 million workers on nonfarm payrolls. More than 100,000 workers (0.23 percent of nonfarm employment) had been employed in the industry in the early 1950's.

  -- [Employment in major states to be added]

- **Production workers in the tobacco industry earned $19.44 an hour** last year, 52 percent more than the average worker in manufacturing. Tobacco industry wages have climbed steadily from less than 75 percent of the average factory wage in the early 1950's. Few other industries can boast comparable wages (coal mining, steel, petroleum and coal product manufacturing also have earnings that top $19 an hour).

Average Hourly Earnings in 1996	
Private nonfarm	$11.81
Manufacturing	12.77
Tobacco	19.44

- Of course, **agricultural jobs** are also provided in the cultivation of tobacco, which tends to be exceptionally labor-intensive, requiring 250 work hours per acre harvested compared to 3 hours for wheat. In 1995, 124,270 farms raised tobacco, harvesting 674,300 acres. A rough estimate would suggest that some 80,000 full-time equivalent jobs might be tied to raising tobacco.

Prices

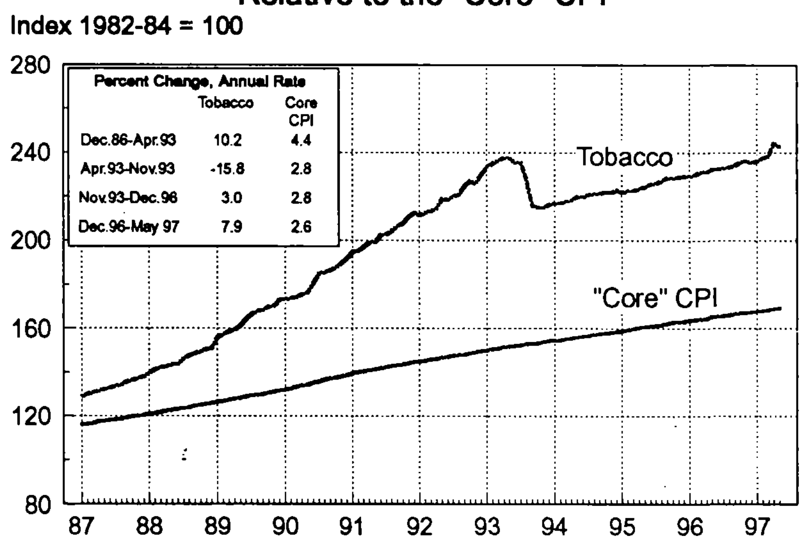
- **Tobacco products have a weight of only 1.6 percent in the CPI.** Thus, it would take a change of 6.25 percent in tobacco prices to move the CPI by 0.1 percent.

- **Over the past decade, tobacco prices have risen at a 6.3 percent annual rate, compared to 3.7 percent for "core" consumer prices** (excluding food and energy). Faster growth was mainly the result of a sharp uptrend prior to 1993. (See chart below.)

  -- **In 1993, there was a steep downward adjustment in prices** ...[am getting clarification on the reason], after which tobacco prices grew at about the same pace as the core.

  -- **This year, tobacco prices have sped up again**, increasing at nearly an 8 percent annual rate through May.

CONSUMER TOBACCO PRICES
Relative to the "Core" CPI



Industry Composition

- **The market is dominated by Philip Morris**, which accounts for half of cigarette sales in the United States. (See table on the next page [need to find out from Jeremy Bulow just what these sales numbers represent].)

The Cigarette Market in 1996		
	Sales (Mil.$[?])	Market Share (%)
Philip Morris	230.8	47.8
RJR Nabisco	119.1	24.6
BAT	83.9	17.3
Lorillard	40.4	8.4
Liggitt	9.0	1.9
TOTAL	**483.2**	**100.0**

Advertising Expenditures

- **Magazine advertising** for tobacco and related smoking materials accounted for $285 million, or 3.4 percent, of the $8.5 billion spent by all industries in 1994.

Prepared by
Treas./Econ.Policy/K.Hendershot

Parameters and Assumptions for Tobacco Settlement Calculations

Per Pack Cost of Cigarettes

Retail Price	1.85
Federal Tax	0.24
Average State Tax	0.32 (0.025 to 0.815)
Distributors	0.44
Wholesale	0.83
Marketing	0.23
Legal	0.025
Other	0.25
Profits	0.33

Cigarettes per pack: 20

Total **packs of cigarettes sold** in 1996 (U.S.): 24.4 billion
(Not surprisingly, multiplying the number of smokers by the average packs smoked give a lower total of 18.8 million. This is probably due to under reporting and perhaps a few "nonsmokers" who bought a few packs.)

Total large **cigars and cigarillos** sold in 1996 (U.S.): 2.5 billion
(This is the total, I don't know how many per pack.)

Total pounds of **pipe and roll-your-own tobacco** sold in 1996 (U.S.): 14.2 million

Total Number of **Adult Smokers**: about 50.5 million
(based on 1987, 1991 rates)

Total Number of **Underage Smokers**: about 3.1 million (1994 Surgeon General's Report)

New Underage Smokers: about 1 million per year (FDA Analysis)
If about 25% of 17 year-olds smoke, about 925,000 smokers turn 18 every year. If the FDA's 1 million number is correct, these smokers who become adults are being more than replenished by new young smokers.

Average number of **Packs Smoked** (Adults): about 1 pack per day (18.2 cigarettes)
Distribution of packs smoked: 36.6% <15, 41.9% 15-24, and 21.5% 25+

Average Number of **Packs Smoked** (Underage): about ½ pack per day (For 1991, "teenage" cigarette consumption is estimated at about 516 million packs. Assuming that there are about 3.1

million teenage smokers -- these are from different studies so they may not really be comparable -- that translates to about ½ pack per day per smoker.)

Kids per Age Cohort: About 3.8 million

Youth Smoking Rates ("Daily" is used for the Lookback provisions)

Age	30-day	**Daily**	½ pack+/day	# of Daily
8th graders	21.0	10.4	4.3	395 thousand
10th graders	30.4	18.3	9.4	695 thousand
12th graders	34.0	22.3	13.0	847 thousand

Adult Smoking Rates

	Current	Former	Never
Adults 18+	25.7	24.1	50.2
18-24	22.9	7.7	69.3
25-44	30.4	19.4	50.2
45-64	26.9	32.9	40.2
65+	13.3	36.4	50.3

(Adult population is about 190 million.)

Adult "Quit" Rates
(percent of eversmokers who are former smokers)

Adults 18+	48.5
18-24	25.2
25-44	38.9
45-64	55.1
65+	73.3

Spending on Tobacco by Income Level (CBO 1990)

Quintile	1990 Adj. Post-Tax Income	Average Expenditure	% of After-Tax Income	% of Expenditure
1st	8,228	327	4.0	1.6
2nd	18,101	380	2.1	1.5
3rd	27,314	426	1.6	1.4
4th	37,581	427	1.1	1.1
5th	77,622	383	0.5	0.7

Demand Elasticities: A consensus estimate for overall demand elasticity is -0.4. The following table from the Surgeon General's report gives elasticities by age (and is consistent with the literature):

Age Group	Total	Participation	Quantity per Smoker
12-17	-1.40	-1.20	-0.25
20-25	-0.89	-0.74	-0.20
26-35	-0.47	-0.44	-0.04
36-74	-0.45	-0.15	-0.15
All Adults (20-74)	-0.42	-0.26	-0.10
All Ages (12-74)	-0.47	-0.31	-0.11

Industrial Organization and prices: For now we are assuming a 1 to 1 pass through of any "tax" to prices, but a number of people are looking into the validity of this assumption. More to come soon.

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FROM: Ken Heyer, Antitrust Division

Comments: Here's the memo Doug Melamed had promised you.

Total Pages Transmitted: 12 (Including Transmittal Sheet)
If you do not receive all pages, please call (202) 307-6665.

I. The settlement has 5 major goals:

(A) Prevent youth smoking;
-highest priority because most smokers start before they are legal age

(B) Get current smokers to quit or reduce smoking;

(C) Make tobacco less hazardous for those that continue to smoke;

(D) Avoid protracted litigation;
-it is expensive for all parties

(E) Reduce involuntary exposure to smoking.

II. This memorandum focusses primarily on the key portions of the proposed Act that are designed to implement the first three goals.

III. A general observation about the settlement:

A slight familiarity with the details of the settlement would lead one to believe that the cigarette companies will be paying large sums of money out of their own pockets. In reality a large portion of the settlement will be borne by consumers. To the extent that one believes that the purpose of the settlement should be to punish the cigarette manufacturers, one would be disappointed to learn that consumers will be paying a large amount of the settlement. However, to the extent that one believes the most important objective of the settlement should be to reduce youth smoking, then having consumers pay for settlement, through higher prices, is preferable to having the money come from the tobacco companies.

IV. In this section we describe the two major economic proposals of the settlement.

(A) The Base Annual Payments
-there are annual payments specified for a period of 25 years
-there is an inflation factor applied to the payments
-when tobacco sales increase, the payment increases proportionately. When tobacco sales decrease, the payment declines if adult tobacco sales have declined relative to the base year. Under these circumstances, the payment declines proportionately to adult sales.

-if there is a reduction in the base payment, if industry profits increase above the industry's base year net operating profits, then the annual payment reduction will be reduced by 25%.

(B) The Surcharge
-is a penalty if the industry fails to meet certain targets for reducing youth smoking.
-the surcharge is $80 million per percentage point the industry fails to meet the target. There is a $2 Billion cap per year for the industry.
-the $80 million may be reduced by up to 75% (the abatement) if firms meet youth marketing and other restrictions
-the $80 million number will be adjusted proportionately for percentage increases or decreases compared to base year profit.
-Each tobacco firm pays its portion of the surcharge on the basis of its market share.

V. *Problems with the Actual Settlement Terms*

(A) Here's how the base payment scheme would actually work:

(1) If total volume of smoking increases, the settlement increases proportionately. In other words, for increases in total volume the payment scheme is equivalent to an excise tax per pack.[1] [While not strictly an excise tax (in the sense that a per pack tax is not tacked on at the sales register), tobacco companies will recognize that their total payment, when they come due, will be dependent on how many packs are sold. Thus, the economic effect is as if they were faced with an excise tax].

(2) If youth smoking declines and adult volume is

---

[1]Here's an example: Suppose that total base volume is 200, 100 each for adult and youth, and the base payment is $10. This can be thought of as a 5% excise tax. If total volume increases 25% to 250, the payment increases 25%, since the formula is

(total volume/total base volume) x $10 = (250/200)x $10 = $12.50

Therefore, for increases in volume, the payment is a stable tax per pack.

unchanged, the "excise tax" per pack increases.[2]

(3) If adult smoking declines and youth smoking is unchanged, the "excise tax" per pack decreases.[3]

(4) If youth and adult smoking decline proportionately, the "excise tax" per pack is unchanged.[4]

---

[2]Here's an example that illustrates this point. Suppose that adult volume and youth volume are initially 100 each and that the base payment is \$10. Suppose that youth smoking declines to 70 while adult smoking stays at 100. Using the formula for the payment in case of a decline in total volume

(actual adult volume/actual adult base volume) x \$10 =

(100/100) x \$10 = \$10

However, since the payment is made over a smaller total volume, 170, the excise tax rate is

\$10/170 = 5.9%.

That is, the excise tax increases.

[3]Here's an example that illustrates this point. Suppose as before adult and youth volume are 100 each and the payment is \$10. Now suppose that youth smoking is unchanged, but that adult smoking declines to 70. Using the formula for the new payment, we have

(70/100) x \$10 = \$7

To convert to an excise tax rate we divide the payment by total volume

\$7/170 = 4.1%

Thus, when adult smoking declines and youth smoking is unchanged, the excise tax declines.

[4]Suppose the base numbers are as before. Now, suppose both adult and youth volume decline to 70. Using the formula for the new payment, we have

(70/100) x \$10 = \$7

To convert to an excise tax, we divide the payment by total volume

(B) Comments on the base payment scheme:

(1) Why the asymmetry of (2) and (3) above? It's not clear from the language of the Settlement itself, however, as noted below, this could easily be rectified by having the actual payment be made equal to the base payment times actual volume over base volume.

(2) To the extent that Act is trying to reduce smoking, the fact that the base payment scheme operates as an excise tax rather than a lump sum payment is good. Excise taxes are a proven method of reducing smoking, especially for young smokers. Although true lump sum taxes penalize the tobacco companies, they do nothing to reduce smoking.

(3) Although the base payment scheme is basically an excise tax, which is good, there is an open question as to what is the correct level of the excise tax. While excise taxes can be an efficient method of forcing individuals to internalize any negative externalities produced by their behavior, a cursory view of the empirical literature on the subject is mixed on whether current cigarette prices (which already include substantial excise taxes) are high enough fully to internalize externalities from smoking.

(4) Higher taxes to reduce consumption, even if not justifiable on standard "externality" grounds, could perhaps be justified on grounds of paternalism towards addicted adults.

(C) Here's how the surcharge will actually work:

From the tobacco companies' perspective, the surcharge over and above "Base payments" due is essentially a tax per youth smoker. This is because every youth that keeps smoking costs the industry. How much? Assume there are 18 million people from ages 13 to 17 (the age groups in Apendix V, section A), of which 14.5% smoke on a daily basis [a rough, though not completely accurate, estimate taken from "Monitoring the Future"]--that's 2,520,000 teenage smokers. 1% of this number is 25,200. The tobacco companies pay 80 million for every 25,200 teenagers that do not quit - that's

---

$7/140 = 5%

The excise tax rate is unchanged.

$3,175 per youth smoker.

From the smoker's perspective the surcharge will work as an excise tax. Suppose that the industry has to pay the maximum tax: $2 Billion. Sales of cigarettes approximate 25 Billion. That's 8 cents per pack.

However, the tax per youth smoker and the excise tax due to youth smoking are likely to be appreciably smaller:

First, it is plausible that the cigarette companies will work hard to do whatever it takes to meet the "no marketing to youth" and other restrictions in order to qualify for the 75% abatement from the maximum $2 billion in surcharges. If this happens, then the tax per youth smoker drops to $794, and the excise tax due to the surcharge drops to 2 cents a pack. Second, if profits in the cigarette industry fall, then the abatement falls proportionately. Experience shows that if companies are regulated on the basis of their profits in a particular line of business, they will find ways of lowering profits, such as taking profits in other lines of business and incurring higher costs. Suppose that due to the new incentives, industry profits drop by ½. Then the per youth smoker drops to $397 and the excise tax drops to 1 cent a pack.

We do not wish to suggest that these numbers above are highly accurate estimates. However, the above rough estimates do suggest that the youth surcharge may not have much economic punch, with the exception of incentivizing the tobacco companies to comply with the minimum specified restrictions on youth marketing, etc. that would enable them to qualify for the abatement.

(D) Problems with the Surcharge

(1) The Free Rider Problem with respect to the penalty
-Recall that each firm pays for its share of the surcharge according to its market share. This allocation lead to a free rider problem because a firm that recruits an underage smoker gets the full benefit of that smoker patronage, but the surcharge is split among its competitors based on their total market share, so a firm still has an incentive to attract underage smokers.
-This may be a situation where antitrust immunity could enable the industry to overcome the free rider problem, however there are more direct ways

of dealing with this particular problem. In particular, basing each firm's surcharge on the change in its sales of cigarettes to youth

(2) Problems with using profits
-As mentioned above, there is a strong reason to suspect that if the industry payment is tied to profits, that the tobacco companies will have an incentive to allocate profits to other non-tobacco lines of business and deviate from cost minimization by converting profits to higher salaries and waste.
-The free rider problem may also be relevant here, since the Act uses industry average profit

(3) Problem with using the abatement
-rewards meeting minimum standards rather than results (but note that there is no free rider issue here, since the abatement process looks at individual firm effort)
-could be counterproductive, if all it does is encourage youth smoking by increasing the "forbidden fruit" aspect of smoking (almost certainly there must be public health studies that look at cross-state and cross-national variations of the effects of implementing laws making cigarettes more difficult for teenagers to buy and banning certain types of advertising. (Note: To the extent that cigarette advertising and marketing are simply a fight among firms for one another's existing customers, requirements to reduce these activities (and thereby qualify for the abatement) are profit-enhancing for tobacco companies, especially those that have relatively ineffective campaigns. In effect, banning certain of these activities may enhance industry profitability without much affecting total demand for their products.)

VI. Other Potential Problems with the Settlement

A. Disincentives for Desirable Innovations

--Mandatory cross-licensing could lessen the incentives of participating companies' to innovate reduced risk tobacco products.

One goal of the proposed legislation is to foster production of reduced risk tobacco products. The proposed legislation contains several elements designed to prompt such innovation by the participating companies. We strongly suspect, however, that at least some of these claimed incentives to innovate may end up having precisely the opposite result. In particular,

Title I (E)(4) provides that:

The manufacturers will be required to notify FDA of any technology that they develop or acquire and that reduces the risk from tobacco products and, for a commercially reasonable fee, to cross license all such technology, but only to those companies also covered by the same obligations.

Title I (E)(4), Proposal at 14. Requiring cross-licensing of this technology may reduce research and development competition among tobacco companies because a firm with leading technology would not be able to benefit from its innovations to the exclusion of other firms with less valuable innovations. A rough, but useful, analogy might be to proposing a repeal of the patent laws (or property rights generally) and requiring mandatory licensing by firms or individuals that develop valuable innovations. The primary economic rationale for patent protection is, however, that rights to one's innovation provide the prospect of economic reward to the innovator, without which investment and innovation are far less likely to occur in the first place. If the participating tobacco companies are, in fact, the most likely source for new reduced risk technology, this cross-licensing mandate would seem to lessen the likelihood that the companies will allocate the research and development funds necessary to develop these reduced risk tobacco products, and therefore that they will not be developed at all. It therefore seems likely that incentives to innovate reduced risk tobacco technology would be increased--and the public heath better served--if this provision were deleted from the proposed legislation.

B. Unclear Scope of Antitrust Exemption

Beyond the proposal to, in effect, raise cigarette prices through imposition of what would essentially be an additional "excise tax," the agreement goes further by proposing an exemption to the antitrust laws. The proposed antitrust exemption broadly states:

In order to achieve the goals of this agreement and the Act relating to tobacco use by children and adolescents, the tobacco product manufacturers may, notwithstanding the provisions of the Sherman Act, the Clayton Act, or any other federal or state antitrust law, act unilaterally, or may jointly confer, coordinate or act in concert, for this limited purpose.

Appendix IV (C)(2), Proposal at 50.

The agreement goes on to provide that the Department must approve any such "process or plan" that is to be exempt from the antitrust laws:

> **Manufacturers must obtain prior approval from the Department of Justice of any plan or process for taking action pursuant to this section; however, no approval shall be required for specific actions taken in accordance with an approved plan.**

Appendix IV (C)(2), Proposal at 50. This draft provision provides no procedural guidance to the Department or to the participating companies regarding such approvals. The draft provision sets no standard for granting such approvals; it does not set a time limit for Departmental approval; and it does not provide for any remedy if companies act before the Department approves proposed activity. Most fundamentally, this proposal raises policy questions regarding the extent to whether tobacco companies ought to be permitted to act in concert to raise prices. If (as seems likely) the monopoly price for cigarettes is above the price that would be produced by the annual payments-generated "excise tax," antitrust immunity would lead to a) higher prices (largely, one would expect, to already addicted (i.e., inelastic) smokers), b) reduced cigarette consumption (the precise reduction would depend on the demand elasticity for cigarettes in the relevant range), and c) higher profits to the cigarette companies.

One could make an economic case for raising prices and cutting cigarette consumption by the amounts implied by this proposal if there is good reason to believe that, at pre-collusion prices, cigarette smoking produces a combination of a) strong negative externalities (an issue on which, as noted below, the evidence seems to be mixed), and/or b) still too much smoking by youths who are probably too immature to make intelligent decisions about whether or not to smoke, c) paternalistic motives towards those who are already hooked[5]. Otherwise, the usual deadweight loss arguments for antitrust scrutiny of collusive behavior would seem to apply. If one were to expressly authorize monopoly pricing, there is an additional issue of who gets to keep the monopoly profits. The large

[5]It is worth noting an obvious tension between, on the one hand, seeking to help addicted smokers by getting them to cut back on cigarettes while at the same time charging them more money in the process. Insofar as a smoker quits, you may have done him a favor. Insofar as a smoker remains hooked, he is now not only suffering from cigarettes, he is poorer as well.

transfer of consumer surplus to tobacco companies could, if society wishes, be taxed away in some lump-sum fashion. One possibility might be to estimate in advance the profitability to the tobacco companies of colluding under the provisions of this settlement and impose a lump-sum tax of that size up front. Alternatively, one might adjust the terms of the settlement so as to raise the "excise tax" closer to that which would generate closer to monopoly pricing in the industry. This way more (though not necessarily all) of the monopoly rents would be handed back to the government.

VII. What might an "Ideal" settlement look like?

The answer depends on just what goals we are trying to achieve. The following identifies some of the goals implicit (or explicit) in the settlement, and describes very briefly proposed ways of achieving them most efficiently.

Goal(A): Reduce smoking generally

(1) insofar as smokers do not consider the costs of secondhand smoke and the higher expected health care costs they impose on society (assuming those costs exceed the pension benefits they lose due to their early deaths), they tend to smoke too much (i.e., the full cost of smoking includes those costs that smokers don't pay for, inosfar as their smoking decisions do not take them fully into account, they smoke too much)

(2) solved by excise tax = costs they impose on society (with such a tax, a decision to smoke based only on the price of cigarettes and factors internal to the smoker would reflect the full costs of smoking)

(3) recent externality estimates range from 19 cents a pack to $4.80 a pack (a range that's too broad to be of much use since it runs from a fraction of the current excise tax to a multiple of it and thus leaves us uncertain as to whether smokers impose costs on society or subsidize non-smokers)

(4) paternalism could be yet another appropriate motive for raising excise taxes by more than estimated negative externalities

Goal(B): reduce underage smoking

(1) underage smokers seem to act relatively myopically (Chaloupka JPE 1991 pp. 722-42 finds that smoking by older smokers supports the Becker-Murphy model for rational consumption of addictive goods, but smoking by younger smokers

does not)

(2) solved by an excise tax on underage smoking with each firm's tax based on number of kids smoking its brands

Goal(C): punish tobacco firms for fraud/deception

optimal fines are lump sum (otherwise cost passes through)

Goal(D): Get companies to accept settlement. This may require not punishing them severely.

VIII. Practical improvements in the settlement

(A) Have the base payment adjustment be more purely an excise tax. Instead of the formula described and critiqued above, make the payment equal to sales times a constant tax rate (i.e., make it simple and straightforward with incentives pointing in the right direction)

(B) Calculate each firm's surcharge on the basis of the change in *its* sales to kids to eliminate the free rider problem

(C) Base adjustments in the surcharge not on profits (which are hard to observe and easy to distort) but on revenue. This would help ensure that the surcharge is not avoided by accounting gimmicks and tobacco firms would have every incentive to minimize their costs.

(D) The 75% surcharge abatement makes the settlement for underage smoking 75% regulatory command and control and only 25% market incentives. Consider reducing the extent to which companies can get around the full surcharge by meeting criteria other than performance targets (i.e., reductions in number of kids hooked).

(E) If the externality evidence for adult smokers is weak, consider trading off some of the base payment for more surcharge

(F) Greater guidance needed on just what types of "industry cooperation" the antitrust authorities are to be approving. One possibility would be to have antitrust immunity attach only in certain limited circumstances; for example where, in the view of the antitrust authorities, the joint conduct of the participating companies will be primarily to reduce the sale to children and adolescents in the United States of tobacco products produced by the parties. No blanket exemption for cartel behavior across the board.

Finally, consider fixing certain drafting problems in the proposed resolution. For example,

1) change p. 8 to a ban on tobacco companies distributing non-tobacco merchandise (rather than a ban on possession of such merchandise).
(2) p. 19 should exempt cigarette papers from the ban on use of non-tobacco ingredients (since otherwise it would likely ban all manufacture of cigarettes).
(3) p. 30 should exempt homes and private apartments from the ban on smoking (i.e., 10 people can be a big family or a weekly party).

Effects of the Tobacco Settlement on Tobacco Farmers and the USDA Price Support Program

The Tobacco Settlement between numerous States' Attorneys General and the Tobacco Industry on Friday June 20 is aimed at resolving issues relating to underage smoking and reimbursements to States for Medicaid expenditures related to tobacco-related illnesses. The Settlement also sets national standards controlling the manufacture of tobacco products, restricts advertising alternatives, and mandates a nationwide smoking cessation program. There are no immediate and direct implications for tobacco farmers or the USDA price support program. Nonetheless, there will be indirect effects resulting from the Settlement as the industry restructures in compliance with the 9 titles included in the Settlement.

Agriculture as Addressed by the Settlement

Direct mention of the USDA or tobacco farming occur in two instances within the agreement. The first simply states that tobacco farmers will not be subject to additional regulations over and above those existing for other producers of raw products. "Tobacco farmers will face no greater regulatory burden than the producers of other raw products regulated by the federal government." [Title I, Subtitle E. (See appendix)]

The second mention of agriculture addresses the issue of limitations on FDA regulatory jurisdiction and states: "-- Grower Limitation: FDA jurisdiction does not extend to the growing, cultivation or curing of raw tobacco (USDA has exclusive authority)." [Title V, Subtitle A. (See appendix)]

Indirect Implications of the Settlement for farmers

The primary implication of the Settlement for tobacco growers is added impetus to discourage consumption of tobacco products, reducing the demand for leaf tobacco used in domestic manufacturing.

Declining consumption due to reduced underage smoking

Currently, the proportion of total consumption attributable to underage smokers is not known with certainty. Estimates range from 3 to 5 percent. U.S. consumption in 1996 was 487 billion cigarettes of which between 15 to 24 billion could have been consumed by underage smokers. The Settlement seeks to reduce underage smoking significantly over the next decade and maintain the reduction thereafter:

> Underage use of cigarette products must decline by at least 30% from estimated levels over the last decade by the fifth year after the legislation takes effect, by at least 50% from estimated levels over the last decade by the seventh year after the legislation

takes effect, by at least 60% from estimated levels over the last decade by the tenth year after the legislation takes effect, and remain at such reduced levels or below thereafter. [Title II]

If the Settlement reduces underage consumption by 30 percent by the fifth year, consumption will decline between 5 to 8 billion pieces, assuming underage consumption of 15 to 24 billion cigarettes annually. This is the equivalent of 5.7 to 9.2 million pounds of tobacco (farm sales weight), based on current domestic leaf use per cigarette. U.S. tobacco production in 1996 was 1,517 million pounds.

The Settlement also covers smokless tobacco products in much the same terms as cigarettes. This increases the number of leaf types that may be affected.

Declining adult consumption may result if prices rise because of the Settlement.

At this point, it is difficult to tell how the Settlement will affect retail cigarette prices. Cigarette companies are liable for huge payments under the agreement, beginning with an up-front payment of $10 billion at signing and $8.5 billion due at the end of the first full calendar year following signing. The up-front penalty equals approximately 41 cents per pack (20 cigarettes) based on 1996 U.S. consumption and 26 cents per pack based on total output (including exports). Adding the first annual payment raises the amount to 76 cents per pack for domestic sales and 49 cents for total output. Retail cigarette prices averaged $1.91 nationwide in 1996. Wholesale prices were 99 cents per pack for premium cigarettes, which make up about 72 percent of total output.

Given the imperfectly competitive structure of the cigarette industry and inelastic consumer demand, we would expect much of the additional costs to be transferred to consumers. However, in the past, the cigarette industry has reduced wholesale prices, such as in 1993 when the prices for premium cigarettes were slashed to regain market share from discount brands.

Some respected Wall Street analysts are forecasting a 50-cent per pack increase at the wholesale level, combined with a consumption decline of about 11-percent.

Using a commonly accepted price elasticity of demand for cigarettes, the following table illustrates potential changes in cigarette consumption with 4 levels of retail price increases. The change in cigarette consumption is converted to change in domestic leaf use for each price change. These estimates assume no change in the proportion of imported tobacco leaf used in U.S. manufactured cigarettes. A $1.00 increase in the retail price of a pack of cigarettes results in a 20.9 percent decrease in cigarette consumption and a 116.7 million pound decrease in domestic leaf use, about 8 percent of U.S. production in 1996. Likewise, a 25 cent increase in the retail price results in a 5.2 percent decline in cigarette consumption and a 29.2 million pound decline in domestic tobacco use, about 2 percent of 1996 U.S. production.

Estimated effects of cigarette price increases

1996 average price per pack ($)	1.91
1996 total U.S. consumption (billion cigarettes)	487
Price elasticity of demand	-0.40

price change cents	pct chng price percent	pct chng vol percent	quantity billions	domestic use per 1,000 cigarettes lbs.	domestic use mil. lbs.	pct chng	est chng mil. lbs.
25	13.1	-5.2	462	1.144	528	-5.2	-29.2
50	26.2	-10.5	436	1.144	499	-10.5	-58.3
75	39.3	-15.7	411	1.144	470	-15.7	-87.5
100	52.4	-20.9	385	1.144	440	-20.9	-116.7

The cigarette industry uses both domestically grown and imported tobacco leaf to manufacture cigarettes. In 1995, the most recent data available, U.S.-manufactured cigarettes contained about 35 percent foreign tobacco leaf. U.S. tobacco growers likewise supply both domestic cigarette manufacturers and the export market. In 1996, leaf exports accounted for about 33 percent of U.S. production. U.S.-manufactured cigarettes are consumed domestically and exported. In 1996, 32 percent of the cigarettes manufactured in the United States were shipped overseas.

The effects of changes in domestic consumption of cigarettes on tobacco growers are tempered by prospects for foreign demand for U.S. cigarettes and the proportion of foreign tobacco used by U.S. cigarette manufacturers. The impact of the Settlement and associated price changes on the mix of domestic and foreign leaf used by manufacturers, and the level of leaf imports, is difficult to determine. As manufacturers attempt to cut costs, use of lower-priced imported leaf may rise, accentuating downward price pressures on U.S. tobacco leaf. If, however, facing declining domestic consumption, manufacturers export more cigarettes, that could temper any downward price pressure on U.S. tobacco leaf. Currently tobacco leaf imports are limited by a tariff rate quota; however, in the past year, only about 68 percent of the quota was utilized. In addition, imported leaf which is used to manufacture cigarettes subsequently exported is subject to a duty drawback. If domestic consumption is relatively stable, manufacturers will likely continue using the same proportions of domestic and foreign leaf.

The increase in retail cigarette prices may be less than indicated by the size of the penalties to be paid by the manufacturers. The Settlement contains a provision [Title VI B. 5. (See appendix)] which rebates part of the penalty paid by manufacturers if adult consumption falls below the 1996 level. This provision should negate some of the price effect of the penalty by enabling manufacturers to use the rebate to lower prices and thus regain sales. In addition, the penalties are paid using pre-tax dollars, further lessening the financial burden of cigarette manufacturers and reducing amount prices might be increased. Advertising expenditures, which total about $6 billion annually for the industry, are likely to decline also.

Indirect Implications for the USDA Tobacco Program

The indirect implications for the USDA program are mainly political in nature. Congressional attention focused on the Settlement has already spawned tangential tobacco-related legislative proposals, such as the bill introduced by Senator Mitch McConnell to have cigarette manufacturers cover the costs of the Tobacco Program. In recent sessions of Congress, the Tobacco Program has come under attack and narrowly survived.

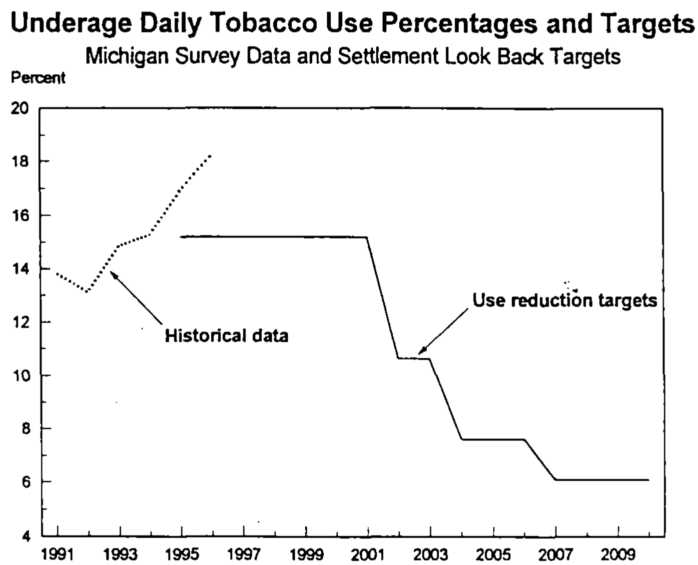
(Preliminary – NOT final)

THE "LOOK BACK" SURCHARGE

The settlement attempts to provide economic incentives to promote "dramatic and immediate reductions in the number of underage consumers of tobacco products." Manufacturers would face surcharges if the tobacco-use reduction targets are not met. Surcharges will be imposed on the basis of a "look back" comparing actual teen tobacco use percentages to the targeted reduction percentages.

Will the surcharge be effective? No.

Our initial calculations indicate that the present value of the stream of profits from a higher percentage of teen tobacco use exceeds the cost of the surcharge by a factor in the range of 3 to 6 -- hence, the economic incentive to firms to reduce teen smoking will not be effective.



- The daily tobacco use percentage for underage teens in 1996 was 18.2 % -- well above the target base of 15.2 % (calculated from data over the past 11 years).

- The surcharge would be imposed beginning in the 5th year after enactment and every year thereafter based on the difference in the actual and targeted percentage reductions in underage use -- at the rate of $80 million for each percentage point (adjusted for changes in the size of the relevant population and industry profits).

- For the case of no change in the level of teen daily use (staying at 18.2 %), the surcharge for the fifth year would be about $660 million (in 1997 dollars). The present value of the future profit stream from the additional smokers above the target would be much higher at about $3.6 billion -- *5-1/2 times greater than the cost of the surcharge*. (After-tax comparisons would yield the same ratio under the assumption that the profits tax rate remains unchanged through time.) Similar ratios apply to the surcharges in other years.

- If we assume that teen use declines because of higher cigarette prices from higher excise taxes, the use percentage falls to about 13-1/2 percent and the surcharge in the fifth year would be about $400 billion and the present value of profits would be about $1.4 billion for a ratio of about 3-1/2.

These results indicate that to be effective, the surcharge would have to be increased by a factor of about 3-1/2 to 5-1/2, or somewhere in the range of $280 million to $440 million per percentage point.

<u>Some Assumptions:</u>

Discount rate:	4.0 %	
Profit per pack:	$0.30	
Intensity of use:	1 pack a day	
Survival probability:	taken from FDA rule in Federal Register	
Teen population:	Census middle series	
Teen price elasticity:	-1.0	(second scenario assumes that % decline in use translates in to % decline in users)