Competition and the Financial Impact of the Proposed Tobacco Industry Settlement

Requested by the
Congressional Task Force
on Tobacco and Health.

Prepared by the
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This report has been prepared by staff members of the Bureaus of Economics, Competition, and Consumer Protection. The views expressed do not necessarily reflect those of the Commission or any individual Commissioner.

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The information contained in this report is taken from public sources. References to trial exhibits reflect information made public in the FTC v. B.A.T Industries p.l.c. 94 Civ 7849 (filed October 31, 1994, S.D.N.Y.)

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Executive Summary

This

One critical aspect of the proposed settlement is a provision that confers on the tobacco companies

The public sector would benefit through greater excess profit penalties under the terms of the settlement and greater revenues from federal corporate income taxes. In general, the examples suggest that the companies would keep about two-thirds of the financial benefits of more effective industry coordination, leaving one-third for the public sector.

- The public sector would gain financially from the settlement proposal, although the annual payments made by the cigarette companies will most likely be considerably less than the $368.5 billion "face value" of the proposed settlement. After taking into account the anticipated decrease in the volume of cigarettes sold (resulting from the likely increase in cigarette prices and a general decline in smoking in the U.S.), the public sector could realize revenues from taxes and the settlement payments of about $207 billion ($100 billion present value), assuming the settlement does not make coordination more effective.

- It is difficult to predict with confidence the price of cigarettes or profits to the cigarette manufacturers over 25 years because the nature of competition may be significantly affected by the proposed settlement. This report concludes that prices and profits could increase substantially, over and above what prices and profits would be in absence of any agreement -- particularly because of the present unduly broad

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[1] As the Supreme Court observed recently when commenting on the pre-1980s industry: "The cigarette industry . . . has long been one of America's most profitable, in part because for many (continued...)

Several structural factors support the industry's ability to raise prices above competitive levels. First, there are relatively few firms. Currently, there are only five significant firms and three (Philip Morris, R.J. Reynolds, and Brown & Williamson) account for about 90 percent of the market.

(...continued)
years there was no significant price competition among the rival firms. . . . List prices for cigarettes increased in lock-step twice a year, for a number of years, irrespective of the rate of inflation, changes in the cost of production, or shifts in consumer demand." Brooke Group, Ltd. v. Brown & Williamson Tobacco Corp., 509 U.S. 209, 213 (1993)(citation omitted).

Analysis of Specific Terms of the Settlement

The report analyzes the effects of various aspects of the settlement on prices and competition. One of the most important aspects of the settlement is an annual payment structure which specifies certain levels of payments, beginning at $8.5 billion in 1998, increasing to $15 billion in 2002, and remaining stable thereafter. The precise amount of the annual payments is linked to the volume of cigarettes sold each year and industry profits.

The report observes that there is reason to believe that cigarette prices will increase by more than is necessary simply to "pass through" the annual payments to consumers. First, many economic studies have demonstrated that the industry has effectively passed through to consumers the full amount of federal and state excise tax increases in the past. Based on this history, the report observes that at least 100 percent of the annual payments will likely be passed through. Second, the settlement has the potential to make future coordination between the firms simpler and this, in turn, would better facilitate the achievement of opportunities for price increases. These two factors suggest that the firms could raise price substantially more than the minimum necessary to pass through the settlement payments to consumers, and thus the overall "price-increase ratio" could be much higher than 100 percent.

Three aspects of the settlement have the potential to enhance the ability of firms to coordinate price levels, and thus to facilitate price increases. First, the settlement contains a broad antitrust exemption. Although this exemption is intended to enable the firms to coordinate activities to reduce youth smoking, it may also permit the industry members to discuss pricing arrangements or other agreements that will have the effect of increasing prices. The exemption, as written, may increase the likelihood that prices will move closer to what a monopolist would charge. An Appendix to the report provides more specific analysis of the exemption.

Second, the settlement imposes important restrictions on advertising and marketing intended to reduce the access and appeal of cigarettes to youth. The settlement imposes these and other restrictions as a means to achieve public health goals. Nevertheless, it should be recognized that advertising and marketing are important competitive tools. Advertising and promotion make it easier for new entrants or maverick firms with new products, lower priced products, or new brands to gain market share from the other firms in the market. As a result, restrictions on marketing could raise barriers to entry and expansion and ultimately lead to higher prices.

Third, the settlement could have a disproportionate effect on the small firms at the fringe of the market as well as potential entrants. For example, the settlement envisions that the non-participating firms will pay almost 50 percent higher annual payments over the life of the settlement than would be required if they had decided to participate in the settlement. These payments would be placed in an escrow account and could be reclaimed, with interest, 35 years later if not paid out in liability payments. Because of the difficulty of predicting the amount of future liability payments and the long delay before any money could be reclaimed, these payments will likely be viewed as non-refundable costs of doing business. As a result, they could substantially raise the marginal costs borne

by small firms and potential entrants, and may make it less likely they can effectively compete in the market.

Impact of the Settlement

To gauge the economic impact of the settlement on cigarette prices, quantity sold, retail sales revenues, cigarette manufacturing industry profits, and public sector revenues, the report provides several examples of possible outcomes. The report looks at several variables including (1) the extent to which cost increases have historically been "passed through" to consumers, (2) the level of competition and any change in that level of competition as a result of the settlement, (3) the reduction in advertising expenses and the reduction in litigation expenses, and (4) the consumer responsiveness to price increases. The examples are reported in Section III of the report.

The most critical factor is the ability of the firms to coordinate their actions as a result of the settlement. This factor is captured by the price-increase ratio. In the hypothetical examples analyzed below, industry operating profits decline if the firms are simply able to pass through 100 percent of the implicit tax increase, without achieving higher prices through a lessening of competition among the firms. Under such circumstances the price-increase ratio would be 100 percent. Operating profits increase, however, if coordination is made more effective and if, in consequence, the price-increase ratio is 125 or 200 percent. Assuming a 200 percent price-increase ratio, a possible but uncertain event, operating profit levels are over $123 billion higher ($56 billion in present value) than in the 100 percent price-increase ratio case. A 200 percent price-increase ratio augments public sector revenues by $73 billion ($33 billion in present value) in the example relative to the case in which the ratio is only 100 percent, reflecting the historical rate at which the industry passes through cost increases to consumers without any additional price increase resulting from improved coordination.

The hypothetical examples emphasize that as coordination is enhanced and the price-increase ratio rises, significant incremental profits and revenues are generated for industry and the public sector, respectively. The allocation of those additional monies between industry and the public sector, however, is quite unequal: about 2/3 of the resulting additional profits would be retained by the firms and 1/3 would go to the public sector in corporate taxes.

Finally, it is unlikely that the proposed settlement will generate the $368.5 billion "face value" that has been posited as the public sector's gain from the settlement payments. After taking into account the anticipated decrease in the volume of cigarettes sold resulting from the likely increase in cigarette prices and a general decline in smoking in the U.S., the examples indicate that public sector revenues, including taxes along with the new payments proposed by the settlement, could increase by about $207 billion ($100 billion present value) even if the settlement does not make coordination more effective.

Competition and the Financial Impact of the Proposed Tobacco Settlement

I. Overview of the U.S. Cigarette Industry

Since the early years of the 20th century, the U.S. cigarette industry has comprised four to six major firms. Currently, five major firms -- Philip Morris, Inc., R.J. Reynolds Tobacco Company, Brown & Williamson Tobacco Corporation (B.A.T Industries), Lorillard, Inc. (Loews), and Liggett Group, Inc. -- produce over 99 percent of cigarettes sold in the U.S.[1] Overviews of the industry indicate that U.S. cigarette firms may have been able to set price above the level consistent with fully competitive behavior. Nonetheless, the history of the industry reveals instances of relatively more intense price or product competition. The inability of the industry to achieve full coordination that would lead to pricing approaching the monopoly level is probably attributable primarily to the inability of the firms to harmonize fully their divergent interests.

A. Brief History of the Cigarette Industry

Since its beginnings in the early 1900s, the U.S. cigarette industry has exhibited the characteristics of an oligopoly -- an industry comprising relatively few firms, each of which recognizes the interdependence of its actions with those of other firms. When such an industry is largely free from the threat of new competition by entrants, economic theory predicts that prices likely will exceed competitive levels. These supracompetitive prices could reflect coordinated behavior among industry participants,[2] although -- given the small number of competitors in this market -- supracompetitive prices also could emerge even absent coordinated behavior among the

[1] The remainder of the market is divided among over 100 smaller manufacturers and importers.

[2] Coordination as discussed here does not require explicit agreements, and thus does not necessarily constitute a violation of the antitrust laws. As the Horizontal Merger Guidelines note (sec. 2.1, p. 18), "coordinated interaction includes tacit or express collusion, and may or may not be lawful in and of itself." U.S. Department of Justice and the Federal Trade Commission, Horizontal Merger Guidelines 18 (Apr. 2, 1992). Economic theory indicates that even without explicit coordination, the pricing that emerges from repeated oligopoly interaction can readily exceed the prices that firms would charge in settings where repeated interaction does not occur. See, e.g., J. Tirole, The Theory of Industrial Organization 239-276 (1988).

[3] See, e.g., J Tirole, supra note 2, ch. 5.

[4] Histories of the cigarette industry tend to support the possibility of supracompetitive pricing. D. Greer, Industrial Organization and Public Policy 278-279 (3rd ed., 1992); R. Kluger, Ashes to Ashes 43-53 (1996). The success of the Tobacco Trust was short circuited by an antitrust challenge and its subsequent dissolution into four separate firms. See F. M. Scherer and D. Ross, Industrial Market Structure and Economic Performance 250-251 (3rd ed., 1990) and R. Schmalensee, The Economics of Advertising 125-133 (1972).

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(...continued)
accepted that the industry was appropriately characterized as a tightly coordinated oligopoly prior to 1980 and that prices and profits apparently rose during the 1980s as the industry became further concentrated. Testimony of Dennis Carlton concerning industry history, FTC v. B.A.T Industries p.l.c., 94 Civ 7849 (filed Oct. 31, 1994, S.D.N.Y.) (Tr. 01086-01087, Dec. 1994).

[9] See Glenn Collins, Cigarette Makers Are Increasing Prices by Record Amount, New York Times, Sept. 3, 1997, at A1.

Several factors contribute to the ability of firms in the cigarette industry to reach and maintain an implicit consensus from which they tend not to deviate. First, most economic models of oligopoly behavior conclude that price-cost margins will be higher as the number of firms decreases. This relationship might arise, for example, if fewer firms tend to have similar interests and incentives and consequently are better able to orchestrate coordinated behavior. As noted above, the same few firms have dominated the cigarette industry for decades,[11] and, as indicated in Table 2, concentration has been high and rising for many years.[12]

Second, the overall demand by adults for cigarettes is inelastic, or relatively insensitive to

[11] One long-time industry participant, American Tobacco, was acquired by BAT, the owner of Brown & Williamson, in 1994.

[12] See generally Horizontal Merger Guidelines, supra note 2, at 15-25. The Merger Guidelines define highly concentrated markets as those with a Herfindahl-Hirschman Index ("HHI") of 1800 or above. As Table 2 indicates, the five major firms account for almost 100 percent of cigarette sales in the United States, with a HHI of 3260 in 1996.

[13] Record evidence in the FTC's 1994 challenge of BAT's acquisition of American Tobacco was also consistent with a relatively low demand elasticity. FTC v. B.A.T Industries p.l.c., 94 Civ 7849 (filed Oct. 31, 1994, S.D.N.Y.) (testimony of Lewis Tatem, economic expert for the FTC, Tr. 543-544.)

[14] For reviews of cigarette demand studies see F. Chaloupka and M. Grossman, Price, Tobacco Control Policies and Youth Smoking, (National Bureau of Economic Research, Working Paper No. 5740, 1996); and Surgeon General of the United States, U.S. Department of Health and Human Services, Center for Disease Control and Prevention, Preventing Tobacco Use Among Young People (1994).

[15] National Cancer Institute, National Institutes of Health, The Impact of Cigarette Excise Taxes on Smoking Among Children and Adults; Summary Report of a National Cancer Institute Expert Panel

to competitors. In addition, price cutting to distributors likely would be observed directly (to the extent distributors are shared) or indirectly (in the form of lower prices to consumers).[20] In either case, rivals would be able to respond quickly to any price reductions, making "hit-and-run" price cuts unattractive as a strategy for increasing firm profits.[21] Accordingly, short-term deviation from the terms of a coordinated understanding on price and other competitive dimensions can be expected to be quickly observed and quickly countered, and therefore to be unprofitable for the industry participants.[22]

A fourth structural feature of the market is that entry does not significantly constrain market power. That is, entry of additional firms into the market (or its prospect) is unlikely to upset the stability of a coordinated pricing strategy. Despite increasing prices and increasing profit margins, as discussed below, the new firms that have recently entered the cigarette market have failed to garner significant shares to date. Although the absence of significant entry does not definitively demonstrate that incumbent pricing is unconstrained by new competition from entrants, characteristics of the cigarette market make entry difficult. For example, current restrictions on advertising may fall particularly hard on entrants or other firms seeking to expand rapidly. To the extent firms are less able to inform consumers about the availability and the attributes of their products or brands, they likely will be less able to be successful in the marketplace and likely will place less of a constraint on the behavior of the established firms. Under the proposed settlement, restrictions on advertising will be substantially tightened, making entry still more difficult.

In addition, three decades of stagnant or declining industry demand have reduced the attractiveness of the cigarette industry to prospective entrants. Until the intensification of health

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[20] After Marlboro Friday, Philip Morris established a large scale "Master" program in which retailers submitted information to Philip Morris regarding other cigarette manufacturers' discount offers and volume in return for discounts from Philip Morris. FTC v. B.A.T Industries p.l.c., 94 Civ 7849 (filed Oct. 31, 1994, S.D.N.Y.) (testimony of Lewis Tatem, economic expert for the FTC, Tr. 548-49).

[21] Similarly, large buyers in some markets may be able to induce lower prices by reducing their own demand for a product, but this does not seem to be a factor in the U.S. cigarette industry. Retailing of cigarettes is extremely diverse with hundreds of thousands of outlets. With such ubiquitous distribution, it is unlikely that any buyers have large enough shares to make secret price-cutting profitable or otherwise exercise buyer power.

[22] Given that deviations from an implicit consensus would likely be unprofitable, the main impediment to more effective coordination among cigarette producers is likely the difficulty in harmonizing divergent interests to reach such a consensus in the first instance, as discussed below. This is not to say that alterations in the consensus will not occur over time, for example in response to exogenous shocks to the market or the development of innovations that cannot be quickly copied and that alter the long-term strategies of individual firms in divergent ways.

concerns in the 1960s,[23] cigarette smoking was a ubiquitous and growing feature of American culture during the 20th century. Since that time, the market for cigarettes in the U.S. has decreased significantly. U.S. cigarette consumption per capita declined from a peak of 4,345 cigarettes in 1963 to 2,505 in 1996 (Table 3). The proportion of smokers among adults has also dropped from peak of 42.6 percent in 1966 to 25.5 percent in 1994.[24] Even in the face of some media marketing restrictions and generalized demand declines, however, small firms have continued to enter niches of the cigarette industry. Although none of these firms has grown to the point that its market share is significant, they appear to be a permanent feature of the market.[25]

C. Evidence of Market Power from Industry Conduct

The Supreme Court has recognized a pattern of coordinated interaction in past cigarette industry practices.[26] Price and cost patterns during the post-1980 period also suggest that the cigarette oligopoly may not be performing competitively. The rise in prices during this period has been extensive, increasing at a much higher rate than the general price level. As shown in Table 4, inflation-adjusted prices rose from $1.20 per pack in 1980 to $1.85 per pack in 1996.[27] While

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[23] These concerns led to the report by the Surgeon General's advisory committee on January 11, 1964. Health concerns were also raised in the early 1950s. The introduction of filter cigarettes was closely related to these early expressions of concern about the health effects of cigarette smoking. Kluger, supra note 4, at 148-182, 258-262.

[24] Centers for Disease Control <www.cdc.gov/nccdphp/osh/prevail.htm>. The smoking rate among men reached 56.9 percent in the 1950s. The rate among women peaked at 33.9 percent in 1965 and 1966.

[25] However, as discussed below, some features of the settlement could harm this market segment, potentially causing it to disappear.

[26] The three major cases are Brooke Group, Ltd. v. Brown & Williamson Tobacco Corp., 509 U.S. 209 (1993), American Tobacco Co. v. United States, 328 U.S. 781 (1946), and United States v. American Tobacco Co., 221 U.S. 106 (1911). Discussing the pre-1980 market for cigarettes, the Supreme Court in Brooke Group stated that "the cigarette industry . . . has long been one of America's most profitable, in part because for many years there was no significant price competition among the rival firms. . . . List prices for cigarettes increased in lock-step twice a year, for a number of years, irrespective of the rate of inflation, changes in the cost of production, or shifts in consumer demand." Brooke Group, 509 U.S. at 213 (citation omitted).

[27] Since Marlboro became the clear leading brand in the late 1970s, Philip Morris has typically been the price leader for premium-priced cigarettes, and Philip Morris led the most recent price increase. Scherer and Ross, supra note 4, at 250-251; FTC v. B.A.T Industries p.l.c., 94 Civ 7849 (filed Oct. 31, 1994, S.D.N.Y.) (testimony of Lewis Tatem, economic expert for the FTC,

(continued...)

some of this price rise is a product of rising costs (including state and federal taxes), it appears that a significant portion may not be cost related. Comparing the rise in cigarette prices to costs for the 1980-94 period, one analysis concludes that "escalating prices for cigarettes cannot be attributed to higher input costs."[28] The tendency for price rises to consistently outpace cost increases is unlikely to be observed in a fully competitive market over a long-term period.[29]

Consistent with the price and cost data, the publicly available evidence suggests that the cigarette industry has been relatively profitable.[30] Also, profit margins for the industry based on Census data show a rising trend over the 1980-94 period -- even in the face of declining demand.[31] This upward trend in profit margins halted, however, due to price declines in the aftermath of Marlboro Friday in 1993. In addition to the evidence on prices, costs and profits, econometric studies of pricing behavior in the cigarette industry have produced results consistent

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(...continued)
Tr. 544-545); and Glenn Collins, Cigarette Makers Are Increasing Prices by Record Amount, New York Times, Sept. 3, 1997, at A1. While prices increased for all brands, price increases for the discount brands lagged behind those for established premium brands.

[28] C. Howell, F. Congelio, and R. Yatsko, Pricing Practices for Tobacco Products, 1980-94, 117:12 Monthly Lab. Rev. 3 (1994). The authors generated an input cost series from Census (material, labor and capital) and FTC (advertising and marketing) data. They did not specifically include state and federal taxes in their calculations, but the addition of these two components does not change the general result that prices rose at a much greater rate than costs. Thus on a per unit basis, input costs plus federal and state excise taxes rose 87 percent over the 1980-94 period compared to a corresponding increase of 179 percent in nominal prices.

[29] Scherer and Ross, supra note 4, at 339-347.

[30] Industry surveys based on SEC 10K submissions generally show the industry as displaying profit rates above the overall industry norm. See, e.g., the annual "Beverages and Tobacco" survey in Forbes Magazine. The exact translation between the concepts of accounting profits and economic profits is subject to considerable debate, however. Compare F. Fisher, and J. McGowan, On the Misuse of Accounting Rates of Return to Infer Monopoly Profits, 73 Am. Econ. Rev. 82-97 (1983) with W. Long and D. Ravenscraft, The Misuse of Accounting Rates of Return: Comment, 74 Am. Econ. Rev., 494-500 (1984).

[31] In this analysis, profit margins are gross margins as a percentage of value of shipments. Data came from the following sources: Federal Trade Commission, Report to Congress for 1994 Pursuant to the Federal Cigarettes Labeling and Advertising Act 15-18 (1996); U.S. Department of Commerce, Bureau of the Census, Tobacco Products, in 1992 Census of Manufacturers 21A-7 (1995). The Census figures include the value of shipments and costs involved in the production of cigarettes in domestic plants destined for export, while the FTC advertising and marketing data relate only to domestic operations.

with the view that the cigarette industry is not fully competitive, though also consistent with the view that the level of market-sharing coordination is not high.[32]

D. Imperfect Coordination and Divergent Firm Incentives

While the structural and behavioral evidence cited above is consistent with the possibility of coordination among the major cigarette producers, it is also clear that any such coordination is far from complete.[33] This is immediately evident from the econometric estimates of the industry demand elasticity, cited above, which suggest that adult demand is inelastic at prevailing prices. Because a monopolist facing inelastic demand would find it profitable to raise price until it reaches elastic portions of the industry demand curve and this has not occurred, we can infer that coordination is imperfect.[34] The occasional outbreaks of more intense price or product competition also suggest incomplete coordination.

Other evidence of incomplete coordination comes from the long-term shifts in market share that have occurred in the cigarette industry. Market shares covering the period from 1947 to 1996 are displayed in Table 5. Philip Morris, now the leading firm with the leading brand, has

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[32] D. Sullivan, Testing Hypotheses about Firm Behavior in the Cigarette Industry, 93 J. Pol. Econ. 586 (1985); O. Ashenfelter and D. Sullivan, Nonparametric Tests of Market Structure: An Application to the Cigarette Industry, 35 J. Indus. Econ. 483-498 (1987); P. Barnett et al., Oligopoly Structure and the Incidence of Cigarette Excise Taxes, 57 J. Pub. Econ. 457-470 (1995).

[33] Incomplete coordination is discussed in the Horizontal Merger Guidelines, supra note 2, at section 2.11, p. 20. That section discusses the ability of firms to reach terms of coordination and factors that might make reaching a coordinated outcome more or less likely.

[34] That is, the fact that relatively low demand elasticity estimates are found even using prevailing prices is consistent with the view that cigarette firms are not pricing near the monopoly level. Scherer and Ross, supra note 4, at 250-251. In addition, one estimate of the full-blown monopoly price in cigarettes in 1995 was in the $4.00 range. Prices of cigarettes today are at about half that level. See J. Harris, American Cigarette Manufacturers' Ability to Pay Damages: Overview and a Rough Calculation, 5 Tobacco Control 292-294 (1966).

First, product innovation may affect some firms more than others. Product competition has historically taken the form of innovations in product design, such as the addition of filters during the 1950s.[35] More recently, low-tar cigarettes were developed during the early 1970s,[36] and unbranded generic cigarettes were reintroduced in the early 1980s.[37] These innovations generally favored some firms more than others, and in consequence tended to lead to a more competitive period during which the firms, in effect, identified a new oligopolistic consensus.[38]

Second, as with most products that are not homogeneous, demand for some brands is more price sensitive than is demand for other brands.[39] Similarly, the sales of certain brands may be more sensitive than other brands to variations in the prices of specific rival brands. Moreover, industry participants recognize that the demand for individual brands often has a well-defined "life cycle" -- an initial period of growth in market acceptance, followed by a share plateau, followed by an extended period of share decline. The rise and fall of Lucky Strike, Pall Mall, and later Winston, as Marlboro became the largest brand in the late 1970s, provide examples. A firm with most of its brands in extended decline may have different views about industry pricing than a firm with more brands earlier in the life cycle.[40] As the end of a brand's life cycle approaches, brand demand elasticity may increase above the norm, making a price increase more problematic for firms with declining brands.[41] Since a general price increase will accelerate the decline of the "aged" brands, leading firms with predominantly "aged" brands will likely prefer a lower industry price. The current major brands and the shares of these brands grouped by the five major companies are presented in Table 6.

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[35] Kluger, supra note 4, at 141-182.

[36] Id. at 190, 273-275, 379-382

[37] Id. at 516.

[38] For example, the introduction of generic brands led to tiered pricing. Premium brands, both established and new, are typically priced well above the discount segment consisting of generic and private label cigarettes and branded discount cigarettes. The extent of the gap between discount and premium brands has varied over time.

[39] Differences in brand elasticities were an important consideration in the FTC's challenge of the 1994 proposal of BAT to acquire American Tobacco.

[40] Differences in brand mix across the life cycle may be responsible, in part, for the major shifts in market share among three of the leading firms over the past forty years.

[41] The differences in pricing incentives based on differences in rates of decline in premium brands were a theme of the FTC presentation in its challenge of BAT's acquisition of American Tobacco. FTC v. B.A.T Industries p.l.c., 94 Civ 7849 (filed Oct. 31, 1994, S.D.N.Y.) (testimony of Lewis Tatem, economic expert for the FTC, Tr. 534-535).

Third, the most important recent divergence of interest comes from differences in product mix across the firms. Premium brands are the mainstay of four of the five leading manufacturers. In contrast, generic and non-premium brands today account for a far greater fraction of Liggett's sales and profits. Furthermore, there are significant differences among the major firms in their commitment to discount segments.

This commitment is indicated in Table 7, which quantifies the shares of each firm in the various pricing tiers. Philip Morris and Reynolds, the two largest firms in the industry, have approximately 16 percent and 37 percent respectively of their sales in the discount segment, and each does less than a quarter of that in private label and generics. Brown & Williamson, the third largest firm, ranks second in terms of its involvement in the discount segment. A little less than 60 percent of its sales are in the discount segment; however, only about 10 percent of that is due to generic or private label sales. Lorillard, the fourth largest firm, has approximately 5 percent of its sales in the discount segment and none of that is private label. Liggett, the smallest major U.S. cigarette manufacturer, is by far the most intensely involved in the discount segment and most of its discount business is in the low-end generic and private label components. No other major firm comes close to this degree of involvement in the discount segment and the generic/private label subcomponents. These product mix differences across the firms are likely to be an important factor causing divergence of interests among the firms.

E. Current Limits on Coordination

The divergence of interests among cigarette industry participants makes it likely that the firms will differ as to their preferred coordinated price. In particular, firms with a relatively low commitment to the market today (e.g., low share of current sales) but with a relatively high ability to expand (e.g., higher capacity share or other ability to expand output) can be expected to prefer an industry price well below the monopoly price.[42]

In this setting, the seller with the lowest preferred price acts as a constraint on increases in the industry price (so long as that firm can significantly expand output if price exceeds its preferred level).[43] Its rivals recognize that efforts to raise prices above what the constraining firm

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[42] See J. Baker, Two Sherman Act Section 1 Dilemmas: Parallel Pricing, the Oligopoly Problem, and Contemporary Economic Theory, 38 Antitrust Bull. 143, 202-207 (1993); and J. Baker, supra note 7, at 585-606, particularly at 599-602. The discussion in the text assumes that side payments are unavailable, and adopts the view that the threat of a reversion to competition is sufficient punishment to support high prices.

[43] For decades the cigarette industry has contained many tiny firms, though none has grown to garner any noticeable market share. Currently the non-majors account for less than one-tenth of one percent of industry output. These firms may have an ability to expand output that is comparable to that of a de novo entrant.

[44] Such a firm has been called a "maverick." Horizontal Merger Guidelines, supra note 2, at 21-22. The use of the term "maverick" in the Merger Guidelines is broader than the way the term is often employed elsewhere, because the seller with the lowest preferred price need not necessarily engage in price-cutting behavior in order to constrain the prices charged by its competitors.

[45] Rivals might induce the constraining firm to prefer a higher price by developing a scheme to compensate the maverick or by finding a way to raise the maverick's marginal costs, for example.

[46] As discussed further in Section II, the antitrust immunity envisioned in the settlement might allow firms to devise compensation schemes and the extra payments required of non-participating firms might increase the marginal cost of the firms that now constrain industry pricing. The proposed tobacco settlement may contain provisions that will alter the price preferences of the firm that currently prefers the lowest price.

[47] Liggett's older premium brands include L&M, Chesterfield, and Lark. American's older

selling discount brands as well[50] and later by lowering the relative price of premium brands on

[50] This response led to the Brooke Group litigation, where Brown & Williamson was the primary defendant. At the time of the alleged predatory behavior, evidence suggested that Brown & Williamson was the only other cigarette manufacturer with a substantial presence in the discount segment. See J. Baker, supra note 7, at 595.

[51] Philip Morris led the "Marlboro Friday" pricing move. Within a short time, most of the other firms raised discount prices and lowered premium prices to narrow the gap between the pricing tiers, as Philip Morris had done. American failed to follow the leader for an extended period of time. R. Margulis, The War of `93, Apr. 1994 Tobacco Rep. 22-24. Liggett was already viewed as outside the cooperative group with respect to the generic segment.

Table 1
U.S. Cigarette Company
Domestic Shares and Volume, and Exports
1996

Firm	Domestic Share of Cigarettes Sold 1996	Domestic Volume in 1996 (billions of cigarettes)	Export Volume in 1996 (billions of cigarettes)
Philip Morris	47.8%	230.84	173.59
Reynolds	24.6%	119.08	43.90
Brown & Williamson	17.2%	83.35	41.79
Lorillard	8.4%	40.40	--
Liggett	1.9%	8.95	.48
Others	0.1%	.68	--
Industry Total	100.0%	483.30	269.76

Source: John C. Maxwell, Market Up, Apr. 1997 Tobacco Rep. 22.

Table 2
Concentration Trends

Year	HHI	Number of Major Firms
1930	2682	5
1950	2249	6
1970	2066	6
1980	2421	6
1990	2880	6
1993	2939	6
1994	2964	6
1995 (American + B&W)	3179	5
1996	3260	5

Sources and Notes: Data for 1930 to 1993 are taken from Exhibits PX345 and PX336-E used during the cross examination of Dr. Dennis Carlton in FTC v. B.A.T Industries p.l.c. et al., 94 Civ 7849 (filed Oct. 31, 1994, S.D.N.Y.), Tr. 1086-1087. BAT is now the owner of both Brown & Williamson Tobacco (B&W) and American Tobacco. Data for 1994 to 1996 are calculated from market share data in Maxwell, Market Up, Apr. 1997 Tobacco Rep. 22. HHI is an index of market concentration calculated by squaring the market share of each firm and adding the resulting products together across all firms. Market shares are measured in terms of units sold in the U.S. Markets with HHI statistics above 1800 are classified as highly concentrated under the April 1992 joint DOJ/FTC Horizontal Merger Guidelines.

Table 3
U.S. Per Capita
Cigarette Consumption
1935-1996

Year(s)	Number of Cigarettes Per Capita
1935-1939	1,779
1940-1944	2,558
1945	3,449
1950	3,522
1955	3,597
1960	4,171
1965	4,259*
1970	3,985
1975	4,123
1980	3,849
1985	3,370
1990	2,826
1994	2,524
1995	2,505
1996	2,482

Notes: Economic Research Service, U.S. Department of Agriculture, Tobacco Situation and Outlook Report, various issues.
* The peak year was 1963, with average per capita consumption of 4,345.

Table 4
Inflation-Adjusted Price
per Package of Cigarettes
1980 to 1996

Year	Price Per Pack in 1996 dollars
1980	$1.20
1981	$1.20
1982	$1.33
1983	$1.49
1984	$1.48
1985	$1.52
1986	$1.58
1987	$1.64
1988	$1.72
1989	$1.82
1990	$1.84
1991	$2.00
1992	$2.05
1993	$1.84
1994	$1.86
1995	$1.85
1996	$1.85

Source: Tobacco Institute, The Tax Burden on Tobacco (1996).

Table 5
Cigarette Company
Market Shares
(percent)
1947-1996

Year	Philip Morris					

Table 7
1996 U.S. Cigarette Industry: Participation by Segment

Firm	Firm's Share of U.S. Cigarette Unit Sales	Proportion of Firm's Sales in the Premium Price Segment	Proportion of Firm's Sales in the Discount Price Segment	Proportion of Firm's Sales in the Discount Segment Due to Generic and Private Label Sales
Philip Morris	47.8%	84.4%	15.6%	12.2%

II. Competition and the Expected Effects of the Proposed Settlement

The proposed settlement has the potential to affect almost all aspects of cigarette industry behavior and performance. This section focuses on the provisions in the settlement with the greatest potential to affect competition in the industry and the effects that these competitive changes might be expected to have on market prices.[52]

A. Selected Settlement Terms and Their Potential Effect on Competition

1. Annual Payment Structure. An important element of the settlement is the annual payment structure.[53] The settlement specifies "Annual Payments" that increase in face value to a maximum of $15 billion in 2002 and following years (Title VI, pp. 34-35). Unlike the initial payment due at signing, these payments are not fixed in value, but instead vary according to the volume of cigarettes sold each year and industry profits.[54] Specifically, if the volume of cigarettes sold is less than the volume of sales in the base year, then the

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[52] This report does not analyze the consequences of the proposed settlement for other domestic industries using tobacco products such as smokeless tobacco. Nor does it examine the impact of the settlement on tobacco farming.

[53] The proposed settlement also requires a fixed $10 billion payment from the industry due at signing (Title VI.A, pp. 34-35). The settlement does not specify how this payment will be apportioned among firms in the industry, but if it is shared by all, it could weaken the smallest or more marginal firms in the industry disproportionately. If, in consequence, the firms that help constrain the major producers are led to exit the industry, the result would be to relax the competitive constraints faced by the major firms. Alternatively, if the initial payment is paid entirely by the largest tobacco firms, then concerns about competitive effects from this provision would be mitigated.

[54] The payments are also adjusted for inflation.

[55] Similarly, if cigarette sales should rise relative to the base year, the annual payments will proportionately increase. This outcome is less likely to occur, however, since the settlement will cause cigarette prices to rise and demand is expected to fall.

[56] The settlement specifies that "adult" sales volumes will be used in calculating any proportional reductions in the payment and that total sales volumes, including both adult and youth volumes, will be used in calculating any proportional increases. This distinction is not empirically relevant since sales to adult smokers, defined as ages 18 and over, account for approximately 98 percent of all cigarettes sold domestically. J. Harris, Comments on Proposed
(continued...)

(...continued)
Tobacco Industry-Wide Resolution, Commissioned by the American Cancer Society 5 (June 26, 1997) (unpublished manuscript). For this and other reasons, the analysis infra does not address anticipated effects of the proposed settlement on youth smoking.

[57] For example, when the $15 billion payment is divided by the approximately 24.2 billion

As discussed below, the competitive conditions in the industry together with the low elasticity of cigarette demand are likely to enable cigarette companies to "pass through" to consumers the full amount of this implicit tax. In addition, other aspects of the settlement have the potential to increase the ability of the major firms to coordinate their behavior, so that the ultimate increase in consumer prices could be substantially higher than that required by the annual payment itself. The additional revenue would be expected to increase both corporate profits and public sector revenues.

2. **Broad Antitrust Immunity.** The settlement gives antitrust immunity to the tobacco companies to coordinate their activities taken "in order to achieve the goals of this Agreement and the Act relating to tobacco use by children and adolescents." (App. IV.C.2, p. 50). The Department of Justice would have review rights subject to this standard. However, the breadth of this language, as currently drafted, may permit the industry members to discuss pricing arrangements that reach beyond the amount of a 100 percent "pass-through" to consumers of the cost of the annual payments.[60] Also, the current language may permit a range of anticompetitive conduct involving non-price restrictions. Thus, the exemption increases the likelihood that prices will move closer to what a monopolist would charge.

As discussed in the previous section, the ability of firms to charge monopoly level prices is constrained by their inability to meet to discuss differences in preferred prices and to put into place mechanisms to compensate those firms that would lose market share at a higher price.[61] Such an agreement could make a firm like Liggett prefer a much higher industry price than it does today, loosening or removing a significant constraint on more effective coordination. In this way, antitrust immunity might allow the participating firms to agree to choose prices to maximize their total profits and then to allocate these profits in a manner that makes the agreement on prices acceptable even to the mavericks.

3. **Advertising and Marketing Restrictions.** The settlement includes a variety of advertising and marketing restrictions that are intended to reduce sales, especially to youth. These restrictions may also lead to reduced expenditures on advertising and other marketing activities, reducing industry costs and prices accordingly (Title I.A, pp. 8-11). The magnitude of these effects will depend in part upon the extent to which firms substitute toward the permitted non-price modes of marketing competition (such as direct mail advertising to smokers). In the opposite direction, the settlement would restrict advertising that can help new entrants or maverick firms with new products, lower priced products, or new brands to gain market share from the other firms in the market. As a result, restrictions on advertising could reduce competition in the industry and thus lead to higher prices.

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[60] The ramifications of the proposed antitrust immunity are addressed in greater depth in an Appendix to this Report.

[61] Compensation could take many forms, such as one firm making annual payments on behalf of another firm.

4. Non-Participating Companies Could Face Added Costs . Firms not signing the settlement (including Liggett and potential entrants not currently in the U.S. market) would be bound by the legislated regulatory rules envisioned by the agreement but not the other voluntary aspects of the agreement (Title III.C, p. 28). Thus, for instance, these firms would not receive the civil liability protections of the settlement. Similarly, wholesalers and retailers dealing with those firms would not receive protection.

Moreover, the legislation envisioned by the settlement would require the non-participating firms to pay higher annual payments than would be required if they had joined the agreement.[62] These payments would be made into an escrow account and could be reclaimed, with interest, 35 years later if not paid out in liability payments. Due to the difficulty of predicting the amount of future liability payments and the long delay before any money could be reclaimed, these payments are likely to be viewed as non-refundable costs of doing business. Thus, from the year 2002 onward, non-participating firms would have a cost disadvantage of nearly 23.5 cents per pack (half of the 47 cent implicit "excise tax") relative to participating firms.[63]

These provisions have the potential to raise the marginal costs borne by Liggett, which now appears to help constrain industry pricing. They may also discourage entry, another factor increasing the likelihood that the industry will move closer to a monopoly pricing level after the settlement. In addition, the provisions may force many of the current small firms out of business, eliminating the possibility that they could expand enough to affect pricing decisions by the major manufacturers.

5. R&D Incentives. The settlement requires that any safer cigarette technology developed by a firm in the agreement must be cross-licensed to all other firms in the industry at "reasonable" prices (Title I.E, pp. 14-15). This provision reduces each firm's incentive to develop safer cigarettes, since such R&D becomes less profitable to the firm, and thus helps to discourage the emergence of additional rivalry from a firm with a new product that is attractive to smokers.

In sum, all of these settlement terms, particularly the broad antitrust exemption, have the potential to increase the ability of the major industry members to coordinate their behavior so as to raise prices. The settlement terms also tend to discourage entry and innovation, including the

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[62] The settlement specifies that a non-participating firm will pay an amount equal to 150 percent of its share of annual payments had it participated, other than the portion allocated to public health programs and law enforcement. The settlement does not discuss the terms under which non-participants might later join the agreement. If such membership is not limited, and if it entails no lump-sum up-front payments, then concerns about anticompetitive effects on non-participating firms would be mitigated because they would have the option of joining the agreement on non-discriminatory terms.

[63] This cost disadvantage would be nearly 31 cents if the excise tax credit discussed above is rescinded.

[64] The more elastic the supply and less elastic the demand, the greater the extent to which a tax increase will be borne by consumers in a competitive market. The limiting situation in which all the tax is shifted to consumers (100 percent pass-through) occurs in the case of either perfectly inelastic demand or perfectly elastic supply. See J. Stiglitz, The Economics of the Public Sector 346-67 (1986).

[65] Id. at 359; J. Bulow and P. Pfleiderer, A Note on the Effect of Cost Changes on Prices, 91 J. Pol. Econ. 182-185 (1983).

[66] P. Barnett et al., Oligopoly Structure and the Incidence of Cigarette Excise Taxes, 57 J. Public Econ. 457-470 (1995).

[67] J. Harris,

(...continued)
into account the future consequences of their current actions, then firms are induced to further increase prices now because of the tax's deflation of future demand. See G. Becker et al., supra note 18, at 413.

[68] Barnett, Keeler, and Hu, supra note 67, take a skeptical view of the literature focusing on state pass-through experiences, arguing that those studies are measuring pass-throughs by distributors rather than manufacturers because arbitrage prevents manufacturers from charging different wholesale prices in different states. Under such circumstances, an excise tax increase in a single state would not be expected to have much effect on the wholesale price, but simultaneous changes in excise taxes in many states would raise manufacturers' distribution costs, and these increases would be treated no differently than an increase in input costs by the manufacturing sector in determining the retail price.

[69] H. Sung et al., Cigarette Taxation and Demand: An Empirical Model, 12 Contemp. Econ. Pol. 91-100 (1994).

[70] D. Sumner, A Measurement of Monopoly Behavior: An Application to the Cigarette Industry, 89 J. Pol. Econ. 1010-19 (1981).

[71] D. Merriman, Do Cigarette Excise Tax Rates Maximize Revenue?, 32 Econ. Inquiry 419-428 (1994). In both the Sumner and Merriman studies, the estimated pass-through rates are statistically above one.

[72] In maximizing profits, manufacturers seek an efficient distribution system that passes forward to consumers no more costs than are necessary to obtain competitive distribution services. Any excess price passed through to the ultimate consumer only reduces potential manufacturer profits. Prior to the settlement, the cigarette producers, wholesalers, and retailers would have reached agreements on reimbursement terms that were acceptable to all parties and
(continued...)

The above evidence suggests that the cigarette companies are likely to raise prices by an amount equal to 100 percent or more of the implicit excise tax imposed by the settlement. Therefore, the examples in the next section assume as a lower bound baseline that prices will increase by an amount equal to the implicit excise tax imposed by the settlement .[73]

As explained in the beginning of this section, the settlement will have various effects on competition in the cigarette industry that may result in substantial price increases beyond those that can be accounted for by changes in costs. For example, suppose that prices rise by 60 cents per pack due to the pass-through of costs, and that prices rise by an additional 60 cents per pack due to the enhanced coordination among industry members. Then prices will increase by $1.20 in total, or 200 percent of the per-pack cost increase. In the next section, this possibility will be described as a "price-increase ratio" of 200 percent. For purposes of the illustrative examples, this ratio of 200 percent will be employed as an upper bound. Even this upper bound scenario would probably leave prices significantly below the monopoly price level.[74]

III. Examples of the Effect of the Settlement on Prices, Profits, and Public Sector Revenues

This section presents hypothetical numerical examples illustrating the potential financial effects of the proposed settlement. The discussion highlights the potential effects of differing degrees of industry coordination on cigarette prices, cigarette manufacturing industry operating

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(...continued)
that provided a competitive return to the distributors. Only if the settlement raised the costs of wholesaling or retailing would one expect distributors to be able to increase the increments they receive for providing distribution services. The settlement does not, however, appear to raise distribution costs in any significant way. Without observing alterations in payments along the vertical chain that occur in reaction to excise tax increases (e.g., changes in promotional allowances, payments for shelving, wholesale price variations, etc.), it is impossible to verify empirically which level in the vertical chain retains any additional revenue associated with a tax change. The literature indicates that after a tax increase, retail prices may rise somewhat more than the tax. Because the wholesale and retail distribution sectors are competitive, any revenue increases that accrue after a tax increase must benefit the manufacturing sector, where, as discussed in section I, a fully competitive outcome is less likely.

[73] The baseline example also assumes a 100 percent pass-through of the excise tax that will be assessed beginning in the year 2000. In addition, the example assumes a 100 percent pass-through of cost savings due to anticipated reductions in advertising and legal costs.

[74] Under the 200 percent price-cost ratio assumption, prices rise to about $3.04 per pack. Current prices in some European countries are substantially higher than this figure. Based on 1995 data, Harris estimates that the monopoly price for cigarettes in the U.S. is approximately $4.08 per pack. See J. Harris, supra note 34, at 292-294.

profits, and public sector revenues. The baseline scenario assumes that the cigarette industry

[75] A price-increase ratio of 125 percent corresponds to a long-term increase in the price of cigarettes of about 14 cents in addition to increases accounted for by the pass-through of costs. A price-increase ratio of 200 percent corresponds to a similar long-term price increase of 57 cents.

[76] Public sector revenues from the settlement will not reach the "face value" levels due to reductions in cigarette unit sales as prices rise and the continuation of the current U.S. trend toward reduced smoking. In addition, adjusting for the fact that the payments are made over a long time period rather than up front by discounting the future payments results in a lower present value of the settlement.

[77] The pattern of demand for cigarettes in the U.S. has shown a steady downward time trend that is unrelated to price changes. This trend is referred to as the secular trend in cigarette demand.

[78] As discussed in section II.A.1, the annual payment amount is determined by first proportionally adjusting the “face value” amount specified in the settlement by any changes in

penalty portion of the annual payment and the initial "up-front commitment" of $10 billion is not passed through in higher prices.

In the example, the price-increase ratio relates the increase in price from the baseline price to all net cost changes under the settlement. Therefore, price changes also reflect the settlement-induced advertising and legal cost savings, assumed to be five cents per pack.[79]

The quantity of cigarettes sold in each year is calculated by adjusting the 1997 quantity for the secular downward trend in demand, assumed to be -0.6 percent per year,[80] and for the

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(...continued)
proportional adjustment will lower the total amount of the payment but will always result in same per-pack amount, as in an excise tax.

[79] Cigarette industry advertising expenditures in media such as magazines, newspapers, billboards, and point of sale promotion totals about $1.5 to $2 billion a year, or about 6 to 8 cents per pack of cigarettes sold. The industry also spends another $3 to $3.5 billion per year in cents-off coupons and other promotional expenditures that would not be directly restricted by the settlement. See FTC Report to Congress for 1995 Pursuant to the Federal Cigarette Labeling and Advertising Act. The industry will likely reduce overall advertising expenditures under the settlement but continue some advertising in permitted media such as direct mail, adult-only magazines, and point of sale promotion in adult-only establishments. Cigarette industry legal costs appear to be around 2.5 cents a pack. The assumption of a five cent per pack reduction in advertising and legal costs is consistent with a reduction of 50 percent to 60 percent in those cost categories. No reduction is assumed in the other cents-off coupons or other promotional categories.

[80] J. Harris, supra note 56, at 5.

[81] The consequences of alternative assumptions about the functional form of industry demand are considered in Section III. D below.

[82] The profit levels are approximations at best and are used mainly to examine the potential incremental profits arising from an increase in the ability of the industry to coordinate pricing due
(continued...)

subtracting from operating profits the "up-front commitment" paid at the start of the settlement and any annual payment profit penalties. Operating profits net of income tax are calculated by subtracting corporate income taxes,[83] which are calculated by multiplying pre-tax operating profits by the current marginal corporate income tax rate of 35 percent. The calculations of industry profits do not include estimates of the value of the limitations on civil liability, although this likely constitutes a major component of the financial benefits of the settlement to the industry.[84]

Federal and state excise tax revenues are calculated by multiplying the pre-existing excise tax rates by the quantity of cigarettes sold in each year. Settlement payments are the sum of the initial "up-front commitment" payment and the annual payment, including any adjustments of the annual payment for volume changes and excess profits. Public sector revenues are from federal and state excise taxes, settlement payments, and corporate income tax revenue. Corporate income tax revenues are calculated by multiplying pre-tax operating profits by the corporate income tax rate. And finally, present value calculations use a discount rate of 7 percent.[85]

B. Prices, Industry Profits, and Public Sector Revenues in the Baseline Scenario

Table 9 presents the figures obtained for prices, quantities, sales revenues, and manufacturer domestic operating profits in the baseline scenario. Table 10 presents the figures obtained for public sector revenues. In both Tables 9 and 10, the main comparison presented for each quantity is what it would be without and with the proposed settlement. In each “without settlement” case, the example assumes that the existing state and federal excise taxes (including the recently passed federal excise tax) are in effect. In each “with settlement” case, the example

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(...continued)
to certain features of the settlement.

[83] The calculation assumes that payments under the settlement are tax-deductible.

[84] One Wall Street research firm has estimated that the value of a comprehensive tobacco settlement to Philip Morris is on the order of $75 to $100 billion. G. Black and J. Rooney, Tobacco: As Third Wave Draws to a Close, Revaluations Likely to Mirror 1987 4 (Bernstein Research, Aug. 6, 1997). Considering that Philip Morris is close to half of the cigarette industry, the liability reduction due to the settlement might be worth as much as $150 to $200 billion to the industry prior to consideration of any anticompetitive gains due to enhanced industry coordination fostered by the settlement.

[85] The Office of Management and Budget recommends a 7 percent real discount rate for present value calculations involving government programs. See Office of Management and Budget, Economic Analysis of Federal Regulations Under Executive Order 12866 9 (Jan. 11, 1996).

[86] Under the Balanced Budget Act of 1997, Pub. L. No. 105-33, 111 Stat. 251 (1997), Federal

discounted present value of $118.1 billion in the baseline scenario. This is in contrast to the $368.5 billion "face value" sum stated in the settlement. The sum of the settlement payments is reduced below the face value because of the decrease in smoking associated with the secular decline in cigarette demand and by the reduction in consumption that occurs due to the higher prices.

Table 10 also shows that under the baseline scenario the discounted present value of the sum of excise tax and settlement payments collected over the first 25 years is $105.9 billion higher in the baseline scenario than the present value of the excise taxes that would be collected over this period in the absence of the settlement. With the settlement, the sum of excise tax revenues, settlement payments, and corporate income tax revenues is $207.3 billion ($100.4 billion in present value) higher than without the settlement.[89, 90]

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[89] The increase in overall public sector revenues is smaller than the settlement payment figures noted in the preceding paragraph because the settlement payments (and the increased corporate income tax revenues) are partially offset by the decrease in excise tax revenues.

[90] If the law crediting the ten to fifteen cent per pack excise tax passed in August 1997 against the settlement payments is rescinded, the implicit settlement-related excise tax will increase by the amount of this credit. If, as in the baseline scenario, this increase is passed on to consumers, it will have little effect on industry operating profits but will increase public sector revenues. The resulting higher price of cigarettes would be expected to further reduce cigarette consumption.

[91] As noted in Section II, estimates of the monopoly price for cigarettes calculated by Harris imply that the pass-through rate could extend beyond the 200 percent level. See J. Harris, supra note 34, at 292-294.

[92] With the 100 percent price-increase ratio, the full $0.57 cost increase (the $0.62 minus the

industry profits, for each demand elasticity assumption. Using the assumptions i q.0ncqu

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(...continued)
would result in a larger fall in quantity.

[94] As with all the industry profit figures discussed in this section, these profits would accrue mainly to the major cigarette companies, the firms with significant market shares.

[95] In contrast, when demand is more elastic, the consumer response to the price increase is larger and the resulting larger drop in quantity causes a larger drop in excise tax revenues, offsetting the income tax and profit-penalty gains and causing the higher price-increase ratio to generate a small decrease in public sector revenues. In all cases involving a change from a 100
(continued...)

Table 12 illustrates how the increased revenue from improved industry coordination would be shared between the public sector and the tobacco industry under the proposed settlement. When increased industry coordination occurs, industry profits rise because prices rise and demand does not fall off enough to offset the price rise. Public sector revenues tend to rise because, under the assumed corporate income tax, the manufacturers pay 35 percent of their increased profits to the public sector. However, the increase in income tax revenues is offset somewhat by a reduction in revenues from excise taxes as the quantity demanded falls.

As the entries in Table 12 show, in the illustrative calculations the industry receives approximately two-thirds of the gains from the increases in industry coordination. These incremental gains represent a market power premium received by the industry due to the enhanced

(...continued)
percent to a 200 percent price-increase ratio, corporate income tax revenues rise because the government obtains a 35 percent share of the higher profits obtained by the firms as price increases much more than the cost of the excise tax increase.

[96] In this context, the term "surplus" refers to the total of excise tax revenues, settlement payments, income tax revenues, and manufacturers' operating profits net of income tax related to cigarette sales. The dollar amounts presented in Table 12 are the present discounted values of the 25-year streams of payments.

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income constraint on their expenditures.[100] A higher elasticity would imply that the price increases caused by the settlement will lead to proportionally larger decreases in demand in the youth market than in the adult market. The youth access restrictions required by the settlement also may contribute to a larger impact on the youth market. While both of these factors are important in any analysis of the effect of the settlement on youth smoking, they do not have much of an effect on the overall sales, profits, and public sector revenue figures calculated in the example. Youth smoking has been estimated to account for only about 2.1 percent of total cigarette sales.[101] Even a relatively large reduction in demand in the youth market would thus have only a minor effect on overall market demand, at least in the short term.

The impact of any reduction in youth smoking would have a larger impact on overall market demand in the long term, however, because fewer youth smokers would grow into adult smokers. If the settlement substantially reduces youth smoking, which in turn substantially reduces adult smoking in the future, then the long-term demand-reduction effect of the settlement would be larger than indicated in the example, and long-term sales revenues, industry profits, and public sector revenues would be lower.[102]

The example also does not explicitly account for the potential reduction in demand caused by the advertising restrictions specified in the settlement. Any effect of the advertising restrictions is likely to be larger in the long term rather than short term. The biggest potential impact may be in the youth market of the future, where children may go through their teen and pre-teen years without seeing the number and variety of advertisements for cigarettes that exist today. The potential effect of the advertising restrictions is likely to be less on the current youth market because current teens have already been exposed to years of cigarette ads. The restrictions are also less likely to have a significant effect on adult smokers, who have already formed the smoking habit. An effect of advertising restrictions on the future youth market might be similar to the possible impact of higher prices and access restrictions on youth smoking noted above. With such an effect, the settlement likely would cause a larger decrease in cigarette sales than estimated in the example, and sales revenues, industry profits, and public sector revenues would be lower. The intended effects of the advertising restrictions on aggregate youth smoking are suggested by

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[100] See, for example, F. Chaloupka and M. Grossman, supra note 14.

[101] J. Harris, supra note 56, at 4.

[102] If future industry sales and profits drop far enough, public sector revenues could actually fall below pre-settlement levels, because excise and corporate income tax revenues would fall and would not be offset by settlement payments, which could be substantially reduced due to the volume decrease.

the sensitivity analysis presented in the bottom half of Table 11, which assumes a faster secular decline in demand with the settlement than in the baseline case.[103]

The example uses a 7 percent discount rate to calculate the present values of the 25-year streams of payments and revenues. This rate is used by the Office of Management and Budget in evaluating federal projects. If 4 percent, the approximate real interest rate for long-term U.S. Treasury bonds,[104] is used instead of the 7 percent used in the example, the present values of the profit and public sector revenues would be approximately one-third greater than reported in Tables 10-12. Specifically, under a 4 percent discount rate, the present value of the industry's operating profits net of income tax in the baseline scenario would be $65.4 billion rather than the $48.9 billion shown in Table 9, and the present value of the public sector's excise tax plus settlement payments plus income tax revenue would be $423.6 billion rather than the $322.0 shown in Table 10. The pattern of amounts and changes in Tables 10-12 would otherwise be unchanged.

Another factor not included in the example is the possibility that the excise tax credit may be removed. As noted earlier, the U.S. Senate and House of Representatives both recently approved legislation that would eliminate the credit of the new excise taxes toward settlement payments. Eliminating the credit will increase the volume-adjusted annual payment under the settlement by 15 cents per pack, bringing the per-pack payment back to the original 62 cents provided for in the settlement. In the baseline scenario, the elimination of the credit makes little difference to industry operating profits while adding to industry settlement payments and public sector revenues.[105] More effective coordination continues to benefit both the cigarette industry and the public sector, in about the same amounts as were reported in Table 12b under the prior

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[103] The assumption of a 2 percent annual decline in the demand for cigarettes under the settlement is not intended to be an estimate of the likely effect of the settlement's advertising and marketing restrictions, but is used only to illustrate the effect of a larger annual decline in smoking on industry profits and government revenues. The financial effects on firms due to changes in the Food and Drug Administration jurisdiction or regulations or due to reductions in sales due to enhanced public health campaigns are also not included in the calculations provided here, but any negative effects on firm profits from such changes might be suggested by the scenario with the faster secular decline.

[104] A real interest rate is the nominal interest rate adjusted for the estimated rate of price inflation.

[105] Without the credit, industry operating profits net of income taxes over the first twenty-five years of the settlement in the baseline scenario will decrease slightly to $101.8 billion ($48.0 billion in present value), industry settlement payments will increase to $302.5 billion ($143.9 billion in present value), and total public sector revenues will increase to $714.3 billion ($344.2 billion in present value).

assumption that the excise tax credit remained in force, with the industry still retaining about two-thirds of the resulting gains.[106]

Several additional factors not incorporated in the example could result in lower public sector revenues. There is a possibility that the higher cigarette prices caused by the settlement payments could lead to a larger black market in cigarettes.[107] The black market may circumvent annual payments and excise taxes and act to reduce public sector revenues.[108] It is also possible that cigarette companies could adopt accounting strategies to reduce book profits, and so limit their payments of the profit-penalty and any increased corporate income taxes. This could also reduce public sector revenues below the levels estimated in the example. In addition, higher cigarette taxes could reduce the demand for other tobacco-related products and services and thereby indirectly affect public sector revenues derived from these related markets.[109]

Public sector revenues also may be reduced by awards in private suits against the industry. While the settlement (if enacted into law) would prohibit class action suits and punitive damage awards in private suits, it allows compensatory damage awards in private suits. The settlement specifies that the annual amount of compensatory damage awards will be limited to 33 percent of that year's annual payment, and that any award payments will reduce that year's annual payment

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[106] If the industry is able to coordinate somewhat more effectively under the settlement (as in the 125 percent price-increase ratio case), industry operating profits net of income taxes will increase to $137.8 billion ($64.1 billion in present value), industry settlement payments will increase to $303.4 billion ($144.8 billion in present value), and total public sector revenues will increase to $727.7 billion ($350.6 billion). If the industry is able to coordinate substantially more effectively (as in the 200 percent price-increase ratio case), industry operating profits net of income taxes will increase to $223.2 billion ($103.3 billion in present value), industry settlement payments will increase to $330.4 billion ($156.9 billion in present value), and total public sector revenues will increase to $782.4 billion ($375.5 billion).

[107] The higher prices could induce the smuggling of cigarettes from foreign countries and the diversion of U.S. produced cigarettes to a black market.

[108] An extensive black market would also lower the price-increase ratio, since it would be the equivalent of additional competitors in the market.

[109] The example also does not take into account any indirect effects of the settlement on overall U.S. economic activity and public sector revenue derived from this activity.

[110] The 33 percent limit applies to the combined amount of judgments and settlements. Amounts in excess of the limit are carried over to be paid in the following year, or in the next year below the limit.

[111] For instance, if the market share of generics grew, it would pull down the average price of

increased profits under the settlement and that any additional surplus resulting from the increased coordination would likely disproportionately benefit industry, not the public sector.

Table 8

Assumptions Used in the Baseline Scenario

1997 Price (per pack)	$1.90
1997 Quantity (billions of packs)	24.2
Current Excise Taxes (per pack):	
Federal	$0.24
State (national average)	$0.32
Advertising and Marketing Costs (per pack)	$0.23
Legal Costs (per pack)	$0.025
Initial Average Profit Margin from Operations (per pack)	$0.32
Corporate Income Tax Rate on Incremental Industry Profits	35%
Present Value Discount Rate	7%
Cost Change Price-increase ratio	100%
Demand Trend Growth Rate	-0.6%
Demand Elasticity	-0.4
Settlement Induced Advertising and Legal Cost Savings (per pack)	$0.05

New Budget Bill Excise Tax (per pack):

Year:	1997	1998	1999	2000	2001	2002+
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Settlement Payments ($billion):

Year:	1997	1998	1999	2000	2001	2002+
Up Front Commitment	10.0	----	----	----	----	----
Annual Payment	----	8.5	9.5	11.5	14.0	15.0
Lookback Surcharge	----	----	----	----	----	0
Private Suit Award Credit	0	0	0	0	0	0
Annual Payment as Excise Tax per Pack ($)	0	.352	.393	.476	.579	.621

New Budget Bill Tax Credit (per pack):

Year:	1997	1998	1999	2000	2001	2002+
	----	----	----	0.10	0.10	0.15

Sources for assumptions: (listed on the following page)

NOTES TO TABLE 8: Sources for Assumptions

1. price:

Base price of $1.85 per pack comes from Tobacco Institute, The Tax Burden on Tobacco (1996), p. vii. This is the weighted average price of cigarettes for the U.S. as of November 1, 1996. This price was converted to a 1997 estimate by adjusting it by the rate of change in the BLS Tobacco and Smoking Products CPI index for the October 1996-Jum4

Table 9

Prices, Quantities, Sales Revenues, and Profits in the Baseline Scenario

	(Year 0) 1997	(Year 1) 1997	(Year 5) 2002	(Year 10) 2007	(Year 25) 2022	Year 0 through 25: Sum	Year 0 through 25: Present Value
Price ($ per pack):							
Without Settlement	1.90	1.90	2.05	2.05	2.05	---	---
With Settlement	1.90	2.20	2.47	2.47	2.47	---	---
Change	0.00	0.30	0.42	0.42	0.42	---	---
Quantity (billions of packs):							
Without Settlement	24.2	24.1	22.8	22.1	20.2	569.3	---
With Settlement	24.2	22.7	21.1	20.5	18.7	531.0	---
Change	0.0	-1.4	-1.6	-1.6	-1.5	-38.4	---
Retail Sales Revenues ($billions):							
Without Settlement	46.0	45.7	46.7	45.3	41.4	1154.0	570.7
With Settlement	46.0	49.9	52.2	50.7	46.3	1282.4	630.4
Change	0.0	4.2	5.5	5.4	4.9	128.4	59.7
Manufacturer Profits, Exclusive of Value of Liability Limitations ($billions):							
Operating Profits Before Income Tax:							
Without Settlement	7.7	7.7	7.3	7.1	6.5	182.2	91.0
With Settlement	-2.3	7.3	6.8	6.6	6.0	159.9	75.2
Change	-10.0	-0.4	-0.5	-0.5	-0.5	-22.3	-15.8
Operating Profits Net of Income Tax:							
Without Settlement	5.0	5.0	4.7	4.6	4.2	118.4	59.1
With Settlement	-1.5	4.7	4.4	4.3	3.9	103.9	48.9
Change	-6.5	-0.3	-0.3	-0.3	-0.3	-14.5	-10.2

Note: All dollar figures are 1997 dollars.

Table 10

Public Sector Revenues in the Baseline Scenario

	(Year 0) 1997	(Year 1) 1997	(Year 5) 2002	(Year 10) 2007	(Year 25) 2022	Year 0 through 25 Sum	Present Value
Federal & State Excise Tax ($billions):							
Without Settlement	13.6	13.5	16.2	15.7	14.3		

Table 11

The Effect of Increased Industry Coordination on Industry Profits and Public Sector Revenues Under Various Assumptions About Demand Elasticity and Annual Decline Rate of Demand

Scenario Assumptions		Settlement Payments Years 0 through 25 ($billions)		The Present Value of Industry Profits and Gov't Revenues Over Years 0 Through 25 ($billions)			
					Public Sector Revenues		
Demand Elasticity	Price-Increase Ratio	Sum	Present Value	Industry Operating Profits Net of Income Tax	Excise Taxes	Excise Taxes and Settlement Payments	Excise Tax, Settlement Pmts, and Corporate Income Tax
Secular Annual Rate of Decline in Demand Under the Settlement = 0.6%:							
-0.2	100%	254	124	51	186	309	337
-0.2	125%	263	128	68	184	312	349
-0.2	200%	295	140	117	179	320	383
-0.4	100%	242	118	49	178	296	322
-0.4	125%	245	120	65	174	294	329
-0.4	200%	275	133	105	165	299	355
-0.8	100%	220	108	44	163	271	295
-0.8	125%	213	105	59	156	262	294
-0.8	200%	224	111	90	141	252	300
Secular Annual Rate of Decline in Demand Under the Settlement = 2.0%:							
-0.2	100%	214	109	45	164	274	298
-0.2	125%	216	111	61	163	274	307
-0.2	200%	247	125	102	159	284	339
-0.4	100%	204	105	43	157	262	285
-0.4	125%	202	104	58	154	259	290
-0.4	200%	224	116	93	147	262	312
-0.8	100%	186	96	39	144	240	261
-0.8	125%	178	93	52	139	232	260
-0.8	200%	182	96	80	126	221	264

Notes: (1) Baseline scenario underlined. (2) All dollar figures are 1997 dollars.

Table 12a

Financial Flows Under Four Scenarios
(billions of 1997 dollars)

Scenario	Price-Increase Ratio	Operating Profits Net of Income Tax		Public Sector Revenue	
		Sum	Present Value	Sum	Present Value
Without Settlement	-------	118	59	455	222
Settlement Baseline Scenario	100%	104	49	662	322
Settlement With More Effective Coordination	125%	140	65	677	329
	200%	227	105	735	355

Table 12b

Financial Implications of More Effective Coordination
(billions of 1997 dollars)

Comparison of Settlement Scenarios	Additional Operating Profits Net of Income Tax		Additional Public Sector Revenue		Industry Share of Additional Surplus
	Sum	Present Value	Sum	Present Value	
125% Price-Increase Ratio vs. Baseline (100%)	36	16	15	7	70%
200% Price-Increase Ratio vs. Baseline (100%)	123	56	73	33	63%

Notes: (1) The size of the Additional Industry Operating Profits Net of Income Tax can be viewed as the industry's market-power premium. (2) Industry share of additional surplus is calculated by dividing additional industry operating profits by the sum of additional profits and additional public sector revenues, using the present value amounts.

Appendix

An Analysis of the Proposed Antitrust Immunity For Tobacco Product Manufacturers

The proposed Tobacco Settlement contemplates enabling legislation that, among other things, would grant antitrust immunity for collaboration and joint conduct by the cigarette manufacturers for the purpose of achieving the goals of the settlement. This Appendix will assess the possible need for immunity and the degree to which the proposed language is tailored to that need. The discussion takes as given that the goals of the settlement are legitimate and that the intent of the parties in proposing an exemption is simply to accomplish those goals without undue antitrust risk.

Antitrust Implications of the Proposed Settlement

The proposed tobacco settlement has, as a major goal, the reduction of tobacco usage by adolescents. To that end, the proposed settlement calls for a number of restrictions on marketing and advertising activities of cigarette manufacturers, including a ban on all outdoor tobacco product advertising, a ban on tobacco advertising on the Internet that would be accessible within the United States, restrictions on point-of-sale advertising in retail establishments that are accessible to minors, and a number of other restrictions.[112] In addition, the settlement would require the manufacturers to make annual payments (denominated in the proposed settlement as "Industry Payments" or "Annual Payments"), part of which would fund various federal and state programs relating to tobacco usage; the settlement contemplates that these payments would be passed on to consumers through higher cigarette prices to discourage smoking by minors.[113] These and other provisions of the proposed settlement would be implemented through federal legislation, consent agreements between the manufacturers and individual States, and an industry "Protocol" that would bind the manufacturers to the requirements.

Whether the proposed settlement might require some form of antitrust immunity depends in large measure on whether agreement among the manufacturers on price or other sensitive elements of competition is necessary to achieve the settlement's goals. There are two principal classes of conduct contemplated by the settlement that might have antitrust implications if implemented by agreement among the manufacturers: the pass-through of Annual Payment amounts and the restrictions on marketing and advertising activities. In addition, it has been suggested that manufacturers may find it necessary to join forces to deal with retailers that undermine efforts to reduce smoking by adolescents — for example, by terminating sales to such retailers.

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[112] See Title I, Part A.

[113] See Title VI, Part B.7.

An agreement concerning pass-through amounts likely would be viewed as a restraint on price competition, one of the most serious of antitrust violations. An agreement on price is per se unlawful (i.e., without consideration of actual effects or possible justifications) unless it is a reasonably necessary aspect of some cooperative relationship that may result in efficiencies and

[114] Appendix IV, part C.2.

The Asserted Need for, and Appropriate Scope of, Antitrust Immunity

The desire for an antitrust immunity appears to focus on three hypothetical situations: (1) manufacturers may have to discuss and agree on issues relating to the pass-through of Annual Payments amounts; (2) manufacturers may have to agree on implementation of the proposed marketing and advertising restrictions; and (3) manufacturers may find it necessary to join forces to deal with retailers that undermine efforts to reduce smoking by adolescents. The following discussion considers whether any of these situations is realistic and warrants a grant of immunity and, if so, how that immunity might be framed to avoid unintended harm to competition.

(1) Collaboration on the Pass-Through of Annual Payment Amounts

The proposed settlement contemplates that "[i]n order to promote maximum reduction in youth smoking, the statute would provide for the Annual Payments to be reflected in the prices manufacturers charge for tobacco products."[115] The proposal for antitrust immunity raises two issues in that regard. First, is collaboration by the manufacturers on the pass-through amounts necessary to give effect to this goal? Second, what unintended consequences — beyond achievement of this goal — could antitrust immunity have?

On the first issue, no antitrust exemption would be needed for firms individually to comply with a legal requirement that they pass on the Annual Payments. Even without such a requirement, the historical record and economic logic demonstrate that firms would be able to pass on the Annual Payments required by the settlement without an antitrust exemption. This is because the Annual Payments would be treated as an added (marginal) cost of business and would be taken into account in setting price. In fact, as discussed in section II of this report, cigarette manufacturers, even without express collaboration, could increase prices by at least the amount of the Annual Payments, and might well be able to increase prices by more than that amount.

On the second issue, unintended consequences, it should first be recognized that the proposed regime for implementing immunity is somewhat unusual. Statutory grants of immunity for joint action of competitors more typically exclude specific classes of commerce from the antitrust laws[116] or exempt a specific transaction[117] or agreement[118] that has been approved by a

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[115] Title VI, part B.7.

[116] Examples include the Webb-Pomerene Act, 15 U.S.C. §§ 61-66 (1994), which provides a limited exemption from the Sherman Act for associations formed solely for the purpose of engaging in export trade; Section 6 of the Clayton Act, 15 U.S.C. § 17 (1994), and the Capper-Volstead Act, 7 U.S.C. §§ 291-292 (1994), which grant broad immunity to agricultural cooperatives engaged in the processing and marketing of certain products; the McCarran-Ferguson Act, 15 U.S.C. §§ 1011-15 (1994), which excludes the "business of insurance" from the reach of the antitrust laws (with the exception of boycotts) to the extent that the business is (continued...)

federal agency, usually in the context of a regulated industry.[119] Prior approval of an agreement by a federal agency has not been required where the scope of the immunity was very limited,[120]

(...continued)
regulated by state law; and the Shipping Act of 1984, 46 U.S.C. app. §§ 1701-1721 (1994), which immunizes the activities of ocean common carriers in the foreign commerce of the United States, so long as the activity is undertaken pursuant to an agreement filed with the Federal Maritime Commission, or an agreement that is not required to be filed. The statute describes the specific kinds of agreements that are subject to the filing requirement. See 15 U.S.C. app. § 1708.

[117] Examples include the Interstate Commerce Commission Termination Act (ICCTA), which exempts from the antitrust laws railroad mergers approved or exempted by the ICC (now the Surface Transportation Board), see 49 U.S.C.A. § 11321(a) (West 1996); a provision of the Sports Broadcasting Act that permitted the merger of two professional football leagues, 15 U.S.C. § 1291 (1994); the Newspaper Preservation Act, which exempts, subject to approval by the Attorney General of the United States, joint operating agreements between newspapers in economic distress, 15 U.S.C. § 1803; and a provision of the ICCTA which exempts a merger of motor carriers of passengers if approved by the Surface Transportation Board, 49 U.S.C. §1403.

[118] Examples include the Federal Aviation Act, 15 U.S.C. §§ 41308-41309 (1994), which authorizes the Department of Transportation to approve and exempt from the antitrust laws code sharing and other marketing agreements between U.S. and foreign air carriers; the approval of motor carrier rate bureau agreements by the Surface Transportation Board, see 15 U.S.C.A. §§ 13703-13704 (West 1997); the approval of motor carrier service pooling agreements by the STB, see 49 U.S.C.A. §14302; the approval of rail carrier rate agreements by the STB, see 49 U.S.C.A. § 10706; and the Sports Broadcasting Act, 15 U.S.C. §§ 1291-1295 (1994), which exempts certain agreements by the members of professional baseball, basketball, football or hockey leagues to pool their television broadcast rights for sale in a package to purchasers such as television networks.

[119] In addition, there has been a trend to deregulate industries and remove antitrust immunities. For example, section 601(b)(2) of the Telecommunications Act of 1996 repealed the FCC's ability to confer immunity to telephone company mergers that were submitted to the FCC for review, and DOT's authority to approve domestic airline mergers expired in 1989 pursuant to 49 U.S.C. app. § 1551 (1988); such mergers are now subject to ordinary application of the antitrust laws. Similarly, there has been substantial reduction of rate regulation of motor and rail carriers under the Interstate Commerce Act.

[120] For example, the Television Program Improvement Act of 1990, Pub. L. No. 101-650, § 501, 104 Stat. 5089 (1990), granted an antitrust exemption for agreements among participants in the television industry for the purpose of "developing and disseminating voluntary guidelines
(continued...)

but broader grants of immunity have been accompanied by strict controls on the development and implementation of agreements.[121] In contrast, the immunity proposed in the tobacco settlement does not seek to exempt defined categories of transactions or agreements, and the scope of its application is left for future determination.[122] For example, the broad language of the proposed immunity provision could be construed to permit manufacturers to agree on the actual prices of their cigarettes, not simply on the amount of their Annual Payments. The result could well be a price increase that would exceed substantially the Annual Payment amounts and would substantially increase the manufacturers' profits.[123]

Even if the immunity provision were read as authorizing agreement only to the extent of ensuring a 100 percent pass-through of costs, immunity, once granted, could have effects not contemplated by the statute. Not only would it be difficult to monitor and control the manufacturers' collaborations to ensure that the prescribed boundaries are not exceeded,[124] but the back-and-forth communications, even on "permissible" pass-through of costs, could well affect the firms' pricing behavior on subjects that were not the subject of explicit agreements. For example, during the course of such discussions firms could signal an intention to pass through more than 100 percent of their costs, or even signal an intention regarding price. Such "signaling"

(...continued)
designed to alleviate the negative impact of violence in telecast material." The exemption was limited to a three-year period following enactment of the law, and did not apply to any joint action that resulted in a boycott of any person.

[121] For example, the Defense Production Act of 1950, 50 U.S.C. App. § 2158, and the International Energy Program, 42 U.S.C. § 6272, provide broad grants of antitrust immunity for voluntary agreements to accomplish specific national objectives, but both statutes contain detailed provisions for monitoring the formation and execution of such agreements, including rulemaking for the establishment of standards and procedures for such agreements, public notice of meetings to discuss the development of such agreements, and participation in such meetings by representatives of the Federal Trade Commission and the Department of Justice.

[122] Manufacturers are left to determine on their own, in the first instance, what joint activity may be appropriate to carry out the purposes of the statute. Although those determinations are subject to review, the resolution may require costly litigation.

[123] See Section II of this report.

[124] There are many examples in antitrust law where a meeting of competitors for otherwise legitimate purposes resulted in law violations when their discussions crossed permissible boundaries. For example, members of a trade or professional organization may adopt a code of conduct that in most respects is perfectly acceptable under the antitrust laws, but some provisions may unreasonably restrict competition.

behavior can raise serious concerns under antitrust law because it can enable firms to coordinate their actions without reaching explicit agreements.

The generality of the immunity provision forces great reliance on the provision requiring prior approval by the Department of Justice of "any plan or process for taking action pursuant to this section."[125] That provision, however, may not be effective in preventing a number of anticompetitive agreements because the Department would not be able to require prior approval of "specific actions taken in accordance with an approved plan."[126] This provision is vaguely worded and may permit the manufacturers to engage in activities that are not fully disclosed to the Department. For example, the plan submitted for Department approval might be an industry resolution committing its members to operate in accordance with the purposes of the legislation, and the undisclosed "specific action" undertaken pursuant to that plan could be a price-fixing agreement or an agreement on other aspects of business conduct that could result in higher prices and industry profits. Issues will arise as to the scope of an "approved plan," what actions may reasonably be taken "in accordance" with an approved plan, and whether those actions are reasonably necessary to carry out the purposes of the statute. While the Department might be able to mitigate some of these problems by requesting additional disclosures before approving a plan (as it does in reviewing a request for a Business Review Letter) and by conditioning immunity on adherence to the factual representations made in seeking approval, it is unlikely that it would be able to anticipate all contingencies. And in contrast to a Business Review Letter, the purpose of immunity might be to *change* the legal standard that antitrust law would apply, not merely to clarify it. Consequently, the extensive set of doctrines that have developed to interpret the antitrust laws might not be available to aid in interpretation.

In short, it appears that immunity is not necessary to assure the pass-through of the Annual Payments, and that the proposed immunity could have substantial unintended consequences that would not be cured by the broad requirement that a plan for taking action be reviewed by the Department of Justice.

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[125] The provision assigns oversight responsibilities solely to the Department of Justice. Both the Federal Trade Commission and the Department of Justice, however, have jurisdiction in most industries that are generally subject to the antitrust laws, which would still be true of the cigarette industry apart from the special immunity provision proposed by the settlement, and the responsibility for handling a particular matter is decided through an inter-agency liaison process. In recent years a substantial amount of antitrust work involving the tobacco industry has been handled by the FTC, including the 1994 litigation challenging the acquisition of American Tobacco by B.A.T Industries p.l.c. The FTC also has major responsibilities involving marketing and advertising practices of the tobacco industry under Section 5 of the Federal Trade Commission Act, 15 U.S.C. § 45, and the Federal Cigarette Labeling and Advertising Act, 15 U.S.C. § 1331.

[126] See Appendix IV, part C.2.

The foregoing discussion focuses on assuring the pass-through of costs once they are paid by the individual manufacturers. A related issue is whether immunity is required so that the manufacturers can discuss and agree among themselves as to what portion of the Annual Payments each will bear. Such discussion does not appear to be a necessary part of implementing the proposed settlement. Although the proposed settlement does not specify precisely how the Annual Payments are to be allocated, if it contemplates allocation by each manufacturer's share of sales or some similar allocation method, some mechanism would be needed to determine periodically what that share is. However, there would be no need for direct discussion among the manufacturers in order to do so. The statute could simply direct the companies to transmit sales information to a neutral third party that would make the appropriate adjustments. No immunity would be needed beyond that statutory directive.

(2) Collaboration on Marketing Restraints Due to First Amendment Concerns

Another argument that has been raised as a reason for providing antitrust immunity is that certain marketing or advertising restrictions may have to be implemented by agreement among the manufacturers. At first blush, it is not clear why such agreement would be necessary, since no antitrust issue would be raised if the legislation embodied the restrictions and each manufacturer simply complied unilaterally with the statutory requirements. Although each manufacturer would be expected to conform to the same standards of conduct, that would be achieved through operation of the statute, and collaboration with competitors would be unnecessary. The argument has been made, however, that legislation imposing such restrictions might be challenged by a nonparticipant in the settlement as a violation of the First Amendment guarantee of freedom of expression. If such a challenge were successful, and were to result in complete invalidation of the provision (as opposed to its unenforceability against any company that had not waived its First Amendment rights by entering into the settlement), the participant companies would no longer be under a legal obligation to refrain from the specified types of advertising and marketing.[127] They might nonetheless have some incentive to refrain from such advertising and marketing in order to help meet the targets for reducing youth smoking and thus avoid the penalties for failing to meet

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[127] This assumes that their obligation to refrain from such advertising and marketing as embodied in their consent decrees with the states (III.B. of the settlement) would fall along with the parallel requirement in the federal statute. If not, reasonable arguments could be made that activities undertaken in compliance with a consent decree issued by a state court would not violate the antitrust laws. Actions in compliance with the order could be viewed as unilateral conduct, notwithstanding the manufacturer's agreement to accept such an order, because the court's order becomes a separate, enforceable command. Cf. Fisher v. City of Berkeley, 475 U.S. 260 (1986). Alternatively, to the extent that compliance with the order is viewed as joint conduct, it may be exempt from the antitrust laws under the "state action" doctrine enunciated by the Supreme Court in Parker v. Brown, 317 U.S. 338 (1943) (holding that the antitrust laws were not intended to apply to the actions of a state). If greater certainty is desired, however, one could provide authorization for a limited grant of immunity on a contingent basis, as discussed in the text.

that target, so long as they could be assured that most other companies would similarly refrain from such advertising and marketing.[128]

[128] In all likelihood, they could not count on universal compliance, since, at a minimum, the company that had taken the trouble to mount a First Amendment challenge would likely seek to achieve a competitive advantage by engaging in the specified forms of advertising and marketing at a time when most of its competitors did not. Given this likelihood, it may be that the other companies would be unable to reach an agreement to refrain from such advertising and marketing. For purposes of this discussion, however, we assume that the participants would wish to reach such an agreement and that such an agreement would be desirable. The question we address, therefore, is whether antitrust immunity might be necessary for such an agreement to be reached.

[129] For one thing, a First Amendment challenge has already been brought against similar (but in some ways less restrictive) cigarette marketing provisions adopted by the Food and Drug Administration. The case is pending before the United States Court of Appeals for the Fourth Circuit. Coyne Beahm, Inc. v. FDA, 966 F. Supp. 1374 (M.D.N.C. 1997), appeal pending. The merits of such a case could be complex. Courts have held that advertising constitutes "commercial speech" that is entitled to qualified protection under the First Amendment, e.g., 44 Liquormart, Inc. v. Rhode Island, 116 S. Ct. 1495 (1996); Central Hudson Gas & Elec. Corp. v. Public Serv. Comm'n, 447 U.S. 557 (1980), but that the Constitution affords lesser protection to commercial speech than to other constitutionally guaranteed expression, Central Hudson, 447 U.S. at 562-63.

[130] See note 16, supra.

given to the antitrust enforcement agencies to grant a specific exemption if that prospect were realized.

(3) Joint action to address problems associated with uncooperative retailers

The third concern is that the sales practices of some retailers may frustrate the manufacturers' efforts to reduce adolescent smoking at the target rates specified in the settlement and proposed legislation. Failure to meet the target rates would result in monetary penalties for the manufacturers, and a state could lose part of its allocation of funds from the manufacturers' Annual Payments. The argument is that joint action may be needed to respond to demands by a state to reduce sales to such retailers.

The hypothetical (and, at this point, speculative) situation would not seem to warrant antitrust immunity for private enforcement against non-complying retailers because there are other ways to address those concerns. First, the proposed legislation already contains sufficient incentives for the manufacturers to respond individually to non-complying retailers. There are strong penalties for not meeting target reductions in underage smoking, but the proposed legislation provides for abatement of the penalty if a manufacturer has acted in good faith and taken all reasonable steps to achieve the required reductions.[131] A unilateral decision to reduce or stop dealing with a non-complying retailer would be evidence of good faith, and hence a manufacturer would have a strong incentive to do so. No antitrust immunity would be required to achieve this result.

Second, there would be mechanisms for enforcement by the state if a retailer fails adequately to control sales to minors. For example, the state could suspend or revoke the retailer's license to sell cigarettes, or assess other penalties.[132] Similarly, if there is a problem with legal-age persons buying for minors, that also could be addressed through state enforcement.

In sum, based on our understanding of the possible factual situations as presented thus far, it is unnecessary to authorize antitrust immunity for boycott activities against uncooperative retailers.

Conclusion

In summary, the proposed immunity provision appears to be unnecessary to achieve the contemplated pass-through of Annual Payment amounts or to deal with retailers that fail to curtail

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[131] See Title II and Appendix IV. Failure to take steps that may violate the antitrust laws (such as a boycott) presumably would not be evidence of bad faith or failure to take reasonable steps. The proposed legislation could provide assurances to that effect. A state could avoid a reduction of its allocation of funds on similar grounds.

[132] See Title I, part D, and Appendix II.

sales to minors, and to be far broader than necessary to allow adherence to the marketing restrictions in the event of a First Amendment challenge. Moreover, passage of an unnecessary or overly broad immunity runs the risk of facilitating price increases greater than that required simply to pass through the per-unit cost of their Annual Payments.