LITIGATION, SETTLEMENT, AND THE PUBLIC WELFARE: LESSONS FROM THE MASTER SETTLEMENT AGREEMENT

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ABSTRACT

The Master Settlement Agreement (MSA) reached between forty-six State Attorneys General and the four major cigarette manufacturers in November 1998 represents a milestone in tobacco control policy in terms of its potential impact on public health and is also perhaps the most far-reaching example of regulation by litigation in U.S. history. In return for the states dropping their suits against the four companies, the companies agreed to pay the states $206 billion over twenty-five years. Given that the MSA has been implemented for over a decade, there is a substantial amount of qualitative and quantitative evidence available for an evaluation of this landmark settlement. The MSA raised several constitutional issues which have, a decade later, largely been resolved. The MSA contains several troublesome features, however. The MSA puts the states' Attorneys General in the role of protecting the dominant cigarette manufacturers' market share from potential entry of competitors. These are the same public officials who are charged with enforcing state antitrust laws. Other deficiencies include the privacy of negotiations, continued costs of enforcing settlement terms, lack of empirical evidence supporting the claim of increased medical cost to the state attributable to smoking, and the appreciably higher cost of raising the price of cigarettes than would be achievable by a cigarette excise tax increase. It is for such reasons that this article concludes that the MSA is a bad precedent as a corrective public policy.

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Cigarette consumption is a major threat to personal health, measured in terms of both morbidity, with 8.6 million people in the U.S. estimated to have a serious smoking-related disease, and life years lost, estimated to result in 440,000 deaths in the U.S. annually.[1] Although measured in terms of cost per

1. Centers for Disease Control, *Cigarette Smoking-Attributable Morbidity—United States, 2000*, 52 MORBIDITY & MORTALITY WKLY. REP. 842, 842 (2003), *available at* http://www.cdc.gov/mmwr/PDF/wk/mm5235.pdf; Centers for Disease Control, *Annual Smoking-Attributable Mortality, Years of Potential Life Lost, and Economic Costs—United States, 1995-*

life year saved, smoking cessation tends to be among the more cost effective interventions.[2] Many more minor public health hazards and/or those for which interventions are far less cost effective have received far more public scrutiny. Despite its apparent adverse effect on public health in both absolute terms and relative to other hazards, regulation of cigarette consumption has been quite half-hearted.

The Master Settlement Agreement (MSA) reached between forty-six State Attorneys General and the four major cigarette manufacturers in November 1998 represents a milestone in tobacco control policy in terms of its potential impact on public health, and is also perhaps the most far-reaching example of regulation by litigation in U.S. history.[3] In return for the states dropping their suits against the four companies, the companies agreed to pay the states $206 billion over twenty-five years. Thereafter, payments were to continue to be based on the quantity of cigarette sales of each company. Payment was made as compensation for the additional cost that state Medicaid programs had allegedly incurred for treatment of Medicaid recipients with smoking-related diseases and as a penalty for deceptive trade practices of the companies. Since the MSA was a private settlement, these allegations were never proved in a court of law.[4] The MSA does not specify ways in which the revenue is to be allocated by the states, which gives them total discretion. In addition, the MSA created and provided funding for the American Legacy Foundation for public education and other tobacco control activities, dissolved the Tobacco Institute and other organizations promoting industry interests, prohibited advertising directed to youths, and provided for the release of industry documents that were previously inaccessible to the public.

Reducing cigarette consumption may have been a rationale for the MSA. From the vantage point of public health promotion, limiting advertising and direct promotions to youth is a positive feature. Most smoking is initiated during adolescence and young adulthood.[5] Thus, to the extent that fewer young persons start smoking, cigarette consumption is likely to decline overall in the long-run. Likewise, the substantial price increase that immediately

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1999, 51 MORBIDITY & MORTALITY WKLY. REP. 300, 300 (2002), *available at* http://www.cdc.gov/mmwr/PDF/wk/mm5114.pdf; Steven A. Schroeder, *Tobacco Control in the Wake of the 1998 Master Settlement Agreement*, 350 NEW ENG. J. MED. 293, 293 (2004).

2. Tammy O. Tengs et al., *Five-Hundred Life-Saving Interventions and Their Cost-Effectiveness*, 15 RISK ANALYSIS INT'L J. 369, 384 (1995).

3. *See generally* W. KIP VISCUSI, SMOKE-FILLED ROOMS: A POSTMORTEM ON THE TOBACCO DEAL (2002). *See also* ANDREW P. MORRISS ET AL., REGULATION BY LITIGATION 126-59 (2009).

4. We describe details of the MSA below. Several summaries of the MSA and the MSA experience have been published. *See generally* Schroeder, *supra* note 1; Seth M. Wood, Note, *The Master Settlement Agreement as Class Action: An Evaluative Framework for Settlements of Publicly Initiated Litigation*, 89 VA. L. REV. 597 (2003).

5. *See* Christine Jackson, *Cognitive Susceptibility to Smoking and Initiation of Smoking During Childhood: A Longitudinal Study*, 27 PREVENTIVE MED. 129, 129 (1998). *See, e.g.*, Henry Wechsler et al., *Increased Levels of Cigarette Use Among College Students: A Cause for National Concern*, 280 JAMA 1673, 1677 (1998).

followed implementation of the MSA is likely to have reduced cigarette consumption. However, there are more efficient mechanisms to raise prices of a product than those proposed in the MSA.

Even though outsiders can never be sure of the key motives for settlement, presumably a major factor influencing why the cigarette companies settled was to reduce the uncertainties inherent in continued litigation.[6] For the states' Attorneys General, settlement opened the door to a substantial payment to the state which would, at a minimum, have been deferred if the litigation had continued.

The MSA contains several troublesome features, however. It is for these reasons that this article concludes that the MSA is a poor precedent as a corrective public policy. It is one that should not be followed as society seeks to reduce other public health hazards, such as the obesity epidemic with fast food restaurants or food manufacturers as potential defendants or for lowering homicide rates with gun manufacturers as potential defendants. Yet in spite of our criticisms, the MSA represents a milestone in tobacco control policy. Although the MSA has important imperfections, in its defense, at the time it was implemented, the agreement was more politically feasible than other available options, e.g., a large increase in federal cigarette excise tax.[7] What we know about the MSA from previous literature pertains to its implementation and the first half decade following implementation. The MSA has now been implemented for over a decade, and there has been little systematic documentation of the MSA experience in the longer term.

This article begins in Part I with background on tobacco litigation and the events leading up to the signing of the MSA. Part I also explores the use of litigation to regulate tobacco. This part also discusses the defects in the design of the MSA, in particular, whether specific provisions precluded or stifled efforts by policy makers to make tobacco control a priority.

The rest of the article is broken down into four additional parts. Part II assesses the impact of the MSA on public health, specifically consumption levels post MSA. Part III discusses the issue of anti-competitive behavior. The MSA has had great influence, directly and indirectly, on competition among cigarette manufacturers, both small and large. Specific provisions are analyzed, including the rationale for imposing payment obligations on both participating and non-participating manufacturers. In Part IV, the role of the government in the MSA is examined. In particular, state government allocation of MSA monies on tobacco control and the securitization of MSA funds are important aspects to the policy and public health implications of the MSA. The popular decision by many states to securitize their MSA funding is also explored,

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6. *See* Anthony J. Sebok, *Pretext, Transparency and Motive in Mass Restitution Litigation*, 57 VAND. L. REV. 2177, 2205 (2004).

7. *See* Richard A. Daynard et al., *Implications for Tobacco Control of the Multistate Tobacco Settlement*, 91 AM. J. PUB. HEALTH 1967, 1968 (2001).

questioning the implications of asymmetric information for the performance of the market for MSA funded securities. The article concludes in Part V with a discussion of alternative policies to the MSA.

PART I. LEGAL ANALYSIS OF THE MSA

A. History of Tobacco Litigation

There were three distinct phases of tobacco litigation in the United States; the first began in the 1950s, the second in the 1980s, and the third in the 1990s.[8] Plaintiffs were largely unsuccessful during the first and second waves of litigation, leaving the tobacco companies with an unblemished string of wins.[9] The success of the tobacco companies during the first wave can be attributed to the lack of scientific evidence linking tobacco to diseases such as cancer.[10] The first wave of litigation during the 1950s was brought under several theories, including negligence and breach of warranty.[11] When these cases reached trial, juries held that smokers bore responsibility for any smoking related disease, even if there was a lack of scientific evidence linking tobacco to disease.[12]

By the time of the second wave, the link between tobacco and disease had been firmly established in the scientific literature.[13] In addition, the second wave of suits was brought during an era of extensive product liability litigation in the United States. With solid scientific evidence and an atmosphere of intense litigation, corporate liability arose as a new litigation theory. Other

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8. Bryce A. Jensen, Note, *From Tobacco to Health Care and Beyond–A Critique of Lawsuits Targeting Unpopular Industries*, 86 CORNELL L. REV. 1334, 1338-47 (2001). These three waves have been discussed at length in many articles and books. Since this is not the focus of our article, only a brief overview will be provided.

9. *See* Clifford E. Douglas et al., *Epidemiology of the Third Wave of Tobacco Litigation in the United States, 1994-2005*, 15 TOBACCO CONTROL 9, 9-10 (2006); Graham E. Kelder, Jr. & Richard A. Daynard, *Judicial Approaches to Tobacco Control: The Third Wave of Tobacco Litigation as a Tobacco Control Mechanism*, 53 J. SOC. ISSUES 169, 171-72 (1997). An exception to this string of wins is *Cipollone v. Liggett Group, Inc.*, 505 U.S. 504, 508-09 (1992). The second wave of litigation was initiated by *Cipollone v. Liggett Group, Inc.*, a suit against several manufacturers by a lung cancer victim who smoked for forty-two years. *Id.* at 508. Initially the case was successful, in large part because of the extent of discovery. Internal documents that had not previously been viewed by anyone outside the company were now part of the public domain. Nevertheless, the case was overturned on appeal, and the plaintiffs' attorneys did not have the resources to continue. *Id.* at 508-09.

10. *See* MORRISS ET AL., *supra* note 3, at 142-43. The first wave of litigation was initiated by the early research which had linked tobacco and cancer in mice. *Id.*

11. FRANK A. SLOAN & LINDSEY M. CHEPKE, THE LAW AND ECONOMICS OF PUBLIC HEALTH 82 (2007).

12. Peter D. Jacobson & Kenneth E. Warner, *Litigation and Public Health Policy Making: The Case of Tobacco Control*, 24 J. HEALTH POL. POL'Y & L. 769, 775 (1999). Others argue that the success of the tobacco industry during the first wave was the ability of the defense attorneys to outspend the plaintiff attorneys. MORRISS ET AL., *supra* note 3, at 143.

13. *See* WILLIAM HALTOM & MICHAEL MCCANN, DISTORTING THE LAW: POLITICS, MEDIA, AND THE LITIGATION CRISIS 231-32, 232 tbl.7, 234 (2004).

theories during the second wave included strict liability, "public deception, failure to warn, and fraud."[14] Claims that were brought under strict liability, however, required the plaintiff to show either that the product was inherently defective or that the warnings of the product's dangers were inadequate.[15] This litigation strategy was not effective for plaintiffs. The tobacco companies utilized the widely available and accepted medical evidence for assumption of risk and contributory negligence defenses. In fact, the tobacco industry lobbied many state legislatures to enact legislation creating a common-knowledge defense for products that are inherently unsafe.[16]

A by-product of the scientific literature linking tobacco to disease was that juries were unsympathetic to plaintiffs who knew the risks of smoking but continued to smoke. The tobacco industry was aware of this and for a period of over thirty-five years did not offer to settle even one case.[17] This was true both when there was no established evidence linking tobacco products to disease and when there was. Without established scientific evidence, the tobacco companies successfully proved that plaintiffs would have continued to smoke even if they had known the health risks.[18] With established scientific evidence, they were able to prove that plaintiffs knew the risks and smoked anyway.[19]

The third wave brought two new types of litigation strategy: class action suits and medical care cost recovery suits.[20] "During the third wave of litigation . . . [f]rom 1993 to 1998, 807 cases were pending against the tobacco industry. Of these, there were 55 class-action lawsuits, more than 600 individual claims, and claims from health care plans, governmental bodies, and Indian tribes."[21] *Broin v. Phillip Morris Cos.*, a class action suit filed by a group of non-smoking flight attendants, was a notable case brought early in the third

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14. SLOAN & CHEPKE, *supra* note 11, at 82.

15. Jacobson & Warner, *supra* note 12, at 775

16. Robert L. Rabin, *Institutional and Historical Perspectives on Tobacco Tort Liability*, *in* SMOKING POLICY: LAW, POLITICS, AND CULTURE 110, 125 (Robert L. Rabin & Stephen D. Sugarman eds.,1993). California enacted such legislation, specifically naming tobacco. *Id.*

17. *Id.* at 113. Typically in mass tort litigation, the defense will deem at least some suits worth settling outside of court. That the tobacco manufacturers did not offer settlement to any plaintiffs during three decades is worth noting. *Id.*

18. HALTOM & MCCANN, *supra* note 13, at 235.

19. *Id.*

20. Douglas et al., *supra* note 9, at 10; HALTOM & MCCANN, *supra* note 13, at 237. The many suits brought in the 1990s were instigated, in part, by the Food and Drug Administration (FDA) publicly revealing that American tobacco manufacturers had manipulated nicotine levels. David A. Kessler, *The Control and Manipulation of Nicotine in Cigarettes*, 3 TOBACCO CONTROL 362 (1994).

21. SLOAN & CHEPKE, *supra* note 11, at 83 (citation omitted). *See also* HALTOM & MCCANN, *supra* note 13, at 237.

wave.[22] The plaintiffs alleged that the tobacco companies were responsible for injuries resulting from environmental tobacco smoke to the 60,000 class members.[23] Before the case could reach trial, a $349 million settlement was reached; the settlement did not compensate any of the members of the class individually, but rather established a research fund.[24]

The majority of the medical care cost recovery suits were brought by State Attorneys General and proved to be the most successful suits against the tobacco industry.[25] Health care recovery suits have not been limited to the United States. Guatemala, Venezuela, Bolivia, and Nicaragua all have filed third party reimbursement suits against the tobacco industry in the United States.[26] Outside the U.S., a number of individual and national suits have been brought. British Columbia, Argentina, the government health insurance body of Saint-Nizaire, France, and Ireland all have suits filed or pending.[27] Foreign suits, for a multitude of reasons, have not seen the same success as the Attorney General suits in the U.S. For instance, suits in Britain do not have the prospect of large punitive damage awards, and the British system uses fee shifting.[28] Other reasons may include courts that are hostile to plaintiffs in tobacco cases and regulations preventing progress in civil tobacco suits. These reasons have helped prevent tobacco litigation from flourishing outside the United States.

The first medical care cost recovery suit in the United States was brought in Mississippi in 1994 by the State Attorney General, Michael Moore.[29] The case was brought under several theories not used in preceding tort cases: "restitution, unjust enrichment, indemnity, [and] common law public nuisance . . . to protect the interests of minors."[30] The unjust enrichment claim

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22. 641 So. 2d 888, 889 (Fla. Dist. Ct. App. 1994); Kelder & Daynard, *supra* note 9, at 172.

23. *Broin*, 641 So. 2d at 889; SLOAN & CHEPKE, *supra* note 11, at 78 n.2.

24. *See* SLOAN & CHEPKE, *supra* note 11, at 78 n.2. The settlement did provide concessions for future suits such as shifting the burden of proof for causation of several tobacco related illnesses and waiving the statute of limitations. Nevertheless, with a few exceptions, individual suits by flight attendants have been unsuccessful. *Id.*

25. *See* Douglas et al., *supra* note 9, at 12-14. In addition to those brought by the state Attorneys General, private organizations have filed suits to recover medical costs. This includes the United Seniors Associations which in 2005 sought $60 billion to be paid to the United States government to cover Medicare expenditures and an additional $60 billion for the members of the United Seniors Association. *Id.* at 14. The case was dismissed but has been appealed. *Id.* Blue Cross and Blue Cross and Blue Shield of New Jersey also filed suit in 2001 and won a settlement of $17.8 million, but it was reversed on appeal. *Id.* at 12.

26. Richard A. Daynard et al., *Tobacco Litigation Worldwide*, 320 BRIT. MED. J. 111, 112 (2000).

27. *Id.* at 112. Other countries with pending suits include Israel, Finland, France, Japan, Norway, Sri Lanka, Thailand, Turkey, and Australia. *Id.*

28. *Id.* at 113. The practical implication is that a loss for a plaintiff means he or she is responsible for the payment of all the defendant's legal fees, well exceeding the amount of any possible recovery. *Id.*

29. MARTHA A. DERTHICK, UP IN SMOKE: FROM LEGISLATION TO LITIGATION IN TOBACCO POLITICS 72 (2002).

30. PETER PRINGLE, CORNERED: BIG TOBACCO AT THE BAR OF JUSTICE 31 (1998).

stemmed from the fact that tobacco companies had not paid costs resulting from their products; instead the states had been forced to pay the bills that were a consequence of the tobacco industry's sale of cigarettes in the state.[31]

Furthermore, the state claimed to be an innocent third party, asking for indemnification for its medical expenditures on behalf of smokers.[32] The public nuisance theory had been used in the past to reclaim costs associated with cleaning up water pollution.[33] In this case, Moore argued that the state had to act to abate the public nuisance created by tobacco, providing health care to keep state citizens from becoming sicklier from smoking related diseases.[34]

Over the course of the next three years, the presiding judge made a series of rulings that favored the state. By July of 1997 the tobacco industry settled Mississippi's claim for $3.6 billion.[35] During this time, thirty-one other states had filed suit against the tobacco industry, following Mississippi's lead. Each state's suit was based on two goals: recouping state funds used to treat tobacco-related disease and enjoining the tobacco companies from engaging in any marketing or advertising appealing to youth.[36]

Florida was another state that filed a medical care cost recovery suit early on. Looking ahead, the Florida state legislature changed its Medicaid third-party liability act to abrogate defenses that would prevent recovery.[37] Shortly after the settlement in Mississippi, Florida settled its case in August 1997 for $11.3 billion.[38] Texas and Minnesota also settled their cases for $15.3 billion and $6.6 billion respectively.[39] These four states are now known as the previously settled states.

In addition to Medicaid recovery suits, the third wave also brought class action lawsuits filed on behalf of addicted smokers. Courts had been reluctant to certify large classes of plaintiffs because of the variations in state law affecting the requirements of the Federal Rules of Civil Procedure.[40] Concerns

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31. *Id.* at 30, 31.

32. DERTHICK, *supra* note 29, at 75.

33. PRINGLE, *supra* note 30, at 31-32.

34. *Id.* at 32.

35. Martha Derthick, *Federalism and the Politics of Tobacco*, PUBLIUS, Winter 2001, at 47, 52.

36. Wood, *supra* note 4, at 609-10.

37. Derthick, *supra* note 35, at 52. This law was not without controversy. It allowed the state to forgo identifying sick individuals in its case. *Id.* The law also allowed the state to prove causation through statistical analysis rather than a direct link to a smoker's illness and their use of tobacco. *Id.* After the bill was signed into law, the governor issued an executive order limiting application of the statute to the tobacco industry or sellers of illegal drugs. *Id.* Florida's Supreme Court upheld the law in a four to three decision. *Id.*

38. *Id.*

39. VISCUSI, *supra* note 3, at 37.

40. Jensen, *supra* note 8, at 1345 n.84. *See also* Robert L. Rabin, *The Tobacco Litigation: A Tentative Assessment*, 51 DEPAUL L. REV. 331, 334 (2001).

regarding the commonality of the class were also present.[41] Nevertheless, a tobacco related class action reached a jury in a Florida state court.[42] The class of 500,000 Florida smokers was awarded $145 billion in punitive damages; the jury cited the industry's blatant fraud and misrepresentation as the basis for liability.[43] As of 2005, Philip Morris has paid $115 million, including interest, after all possible appeals.[44]

Claims based on deceptive advertising have been another strategy used against tobacco manufacturers. Using state consumer protection laws, plaintiffs have brought cases against tobacco manufacturers alleging deceptive advertising strategies in the use of the terms "light" and "low tar" in the marketing of cigarettes. In December of 2008, the U.S. Supreme Court ruled that the Cigarette Labeling and Advertising Act did not preempt fraud claims brought under the Maine consumer protection statute.[45] The claim was brought by smokers in Maine alleging that manufacturers of light cigarettes used deceptive practices to promote their products, specifically, that light cigarettes had fewer health risks than normal cigarettes.[46] Altria, the parent company for Philip Morris, argued that the suit was prohibited by the Federal Cigarette Labeling and Advertising Act, which bans states from regulating advertisements, including those making claims about health.[47] They further argued that the company was immune from state fraud claims since it had met federal cigarette labeling standards.[48] In the majority opinion, the Court concluded that that the Federal Trade Commission's (FTC's) decisions with respect to statements on tar and nicotine content do not impliedly preempt respondents' claims.[49] This ruling is significant in that it opens the doors for future litigation against the tobacco industry. Just days after the ruling, a class action suit was filed in federal court in New York on behalf of New York

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41. Jensen, s*upra* note 8, at 1345 n.84. Variations in state law gave the courts pause, concerned that the theories of recovery would involve questions that were unique to each individual, not the entire class. *Id.* If true, this in effect would destroy the commonality required for formation of a class. *Id.*

42. R.J. Reynolds Tobacco Co. v. Engle, 672 So. 2d. 39 (Fla. Dist. Ct. App. 1996), *vacated*, 806 So. 2d 503 (Fla. Dist. Ct. App. 1999); Jensen, *supra* note 8, at 1345 (noting that the court, in allowing the case to be heard, had ignored the concerns of lack of commonality).

43. Jensen, s*upra* note 8, at 1345-46. *Engle* was reversed on appeal, and as of 2005, was still on appeal. At least four individual class members from *Engle* filed separate suits, all were awarded damages by a jury, and all are on appeal. Douglas et al., *supra* note 9, at 12.

44. Douglas et al., *supra* note 9, at 11.

45. Altria Group, Inc. v. Good, 129 S. Ct 538, 551 (2008); Editorial, *Big Loss for Big Tobacco*, N.Y. TIMES, Dec. 16, 2008, at A36; Adam Liptak, *Top Court Lets Smokers Sue for Fraud*, N.Y. TIMES, Dec. 16, 2008, at B1; Joan Biskupic, *Court Splits 5-4 on 'Light' Cigarettes; Case Targets Claims of Deceptive Marketing on Labels, not Health Issues*, USA TODAY, Dec. 16, 2008, at A3.

46. *Altria Group*, 129 S. Ct. at 541-42.

47. *See id.* at 542.

48. Biskupic, *supra* note 45, at A3.

49. *Altria Group*, 129 S. Ct. at 551. The court further stated that even with the statute, "[r]espondents still must prove that the petitioners' use of 'light' and 'lowered tar' descriptors in fact violated the state deceptive practice statute." *Id.*

smokers of Marlboro Lights.[50] In addition, the decision prompted the highest court in Massachusetts to rule that state consumer protection laws can be used by smokers to file suit against cigarette manufacturers, in that case, Philip Morris, based on deceptive marketing practice claims.[51] Aside from the wave of new litigation the decision will inevitably inspire, it also gave new life to the forty something cases pending in twenty-two states, many of which were on hold pending the outcome of the Supreme Court case.[52]

B. Legislation Preceding the MSA

In June of 1997, several State Attorneys General and the tobacco industry filed a proposal to Congress for legislation granting the Food and Drug Administration (FDA) authority to regulate tobacco as an addictive drug.[53] This proposal, called the Proposed Resolution, was a precursor to the Master Settlement Agreement. It offered $368.5 billion over twenty-five years to settle the state Medicaid reimbursement suits.[54] Perhaps most important, however, was the fact that the Proposed Resolution would have ended all present and future actions by State Attorneys General in addition to all future addiction or dependence claims, all class actions, and all punitive damage claims.[55] The Proposed Resolution did not garner adequate support, and alternative legislation was introduced by several different Congressmen. Senator Ted Kennedy introduced legislation that would have removed the protections granted by the Proposed Resolution and increased federal excise taxes on cigarettes by $1.50 over a three year period.[56] Senators Jeffords of Vermont and Conrad of North Dakota also developed bills.[57]

Arizona Senator John McCain also introduced proposed legislation.[58] As chairman of the Commerce Committee, Senator McCain was chosen to oversee the legislation. Upon the urging of former Surgeon General C. Everett Cooper, anti-tobacco activists, and former FDA Commissioner David A. Kessler, the proposed legislation was revised.[59] After substantial revision, in March of 1998, McCain introduced a bipartisan bill that had much harsher terms than either the MSA or the Proposed Resolution.[60] For instance, the

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50. Brent Kendall, *Corporate News: Altria Ruling Ignites Legal Moves—Effort to Reopen Multibillion-Dollar Case Promises to Gain Fresh Life*, WALL ST. J., Dec. 22, 2008, at B3.

51. Aspinall v. Philip Morris, Inc., 902 N.E.2d 421, 424 (Mass. 2009).

52. Kendall, *supra* note 50, at B3.

53. Derthick, *supra* note 35, at 53.

54. VISCUSI, *supra* note 3, at 15.

55. *Id.* at 25.

56. *Id.* at 27.

57. *Id.* at 28.

58. Universal Tobacco Settlement Act, S. 1415, 105th Cong. (1997).

59. Derthick, s*upra* note 35, at 53.

60. VISCUSI, *supra* note 3, at 28.

McCain bill called for a $1.10 per pack cost increase over five years—roughly double what the Proposed Resolution had set as the tax.[61] However, the term that caused the most objections from the tobacco industry, and led them to lobby strongly against the bill, was the lack of immunity provisions to protect the companies from further suits by the FDA and health interest groups at the federal level.[62] Having decided that the proposal was not generous enough, the tobacco companies used vast resources to lodge a successful campaign against the McCain bill. Another blow to the success of the proposed legislation was the addition of a marriage penalty tax cut and the rejection of an amendment to the bill that would have limited attorneys' fees resulting from the settlement.[63] The bill did not pass the Senate in June 1998.[64]

While the tobacco industry was lodging its campaign against the McCain federal legislation, it was also meeting with the Attorneys General to reach a settlement. Nine Attorneys General whose states were in various stages of litigation, in different parts of the country, and with different degrees of hostility towards the industry, were put on a working committee.[65] The end result, presented in the fall of 1998, was considerably more lenient than either the original draft submitted to Congress or any of the proposed federal legislation. The agreement was less costly than the original proposal, but also gave fewer protections against future liability.[66] In comparison, the Proposed Resolution provided for $122.5 billion more in payments over twenty-five years compared to the MSA.[67]

C. Political Compromises of the MSA

The MSA is a long and complex document, carefully drafted to the benefit of both parties. It governs how much money will be given over what amount of time. Normally, plaintiffs would estimate the amount of damages incurred as a result of the defendant's action or inaction, which may be challenged by the opposing party. Any settlement of the litigation would reflect, in part, compensation anticipated by the opposing parties if the case were tried to verdict. Thus, in the litigation brought by the state Attorneys General, one would expect that payments would be apportioned based on estimates of the excess Medicaid expenditures incurred by various states as a consequence of smoking that occurred historically within their state borders. Although we challenge the claim that such excess Medicaid expenditures actually existed in

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61. *Id.*

62. MORRISS ET AL., *supra* note 3, at 152. Ironically enough, it was beyond the power of the Attorneys General to grant immunity provisions to the tobacco companies and were not included in the MSA. *Id.*

63. VISCUSI, *supra* note 3, at 30.

64. *Id.*

65. Derthick, *supra* note 35, at 53.

66. *Id.*

67. *Compare* VISCUSI, *supra* note 3, at 15 (stating that the Proposed Resolution was $368.5 billion), *with* Derthick, *supra* note 35, at 62 (stating that the MSA total is $246 billion).

more than small amounts, in a counterfactual situation in which substantial amounts of additional Medicaid expenditures were incurred, there would be interstate variation because of differences among states in smoking rates and in Medicaid program parameters.[68] This includes eligibility criteria and program benefit structure, as well as the medical cost of treating persons with smoking-related illnesses due to differences in input prices as treatment approaches.

However, when the agreement was being written, it was not a given that each state's share would equal its relative portion of excess Medicaid expenditures or any other index of medical costs. In fact, its writing was a very political process wherein the State Attorneys General had to lobby for their states to receive larger portions of the settlement.[69] Evidence of this is in the comparison of each state's proportional share of medical costs and their share of the MSA. For example, while the state of Washington's share of the medical cost was 1.498, their share of the MSA was 2.091.[70] On the other hand, North Carolina, a major tobacco producer, had a medical share cost of 3.491 compared to its MSA share, 2.375.[71] Also, payments from the settling companies were not made on the basis of damages caused by each company; the initial payment by the companies was allocated among companies based on an estimate of the firms' relative stock market values.[72] Payments were also based on 1998 cigarette sales of each company and were fixed in perpetuity.[73]

As a general matter, litigation for damages is backward-looking. That is, plaintiffs sue for damages that have occurred in the past. The underlying theory is that injury will be deterred in the future because past negligence is punished. An important compromise agreed to by plaintiffs that led to the MSA was to extract funds from cigarette manufacturers which were not parties to suits filed by the State Attorneys General. In fact, some of the companies did not exist in full or at all before the MSA was reached.

The MSA establishes three categories of tobacco companies. The Original Participating Manufacturers (OPMs) were the manufacturers that originally entered into the Master Settlement Agreement on November 23, 1998—Philip Morris USA, RJ Reynolds, Brown & Williamson, and Lorillard.[74] The OPMs were the defendants in the litigation brought by the State Attorneys General. The remaining categories were Subsequent Participating Manufacturers (SPMs), subsequent signatories who joined the MSA after this date, and Non-

68. *See infra* Part II.A.

69. VISCUSI, *supra* note 3, at 45.

70. *Id.* at 47. Viscusi calculated these shares by dividing each state's medical costs by the total medical costs for the country. *See id.* For what it is worth, the state Attorney General for Washington played a key role in designing the settlement proposal.

71. *Id.* at 46.

72. *Id.* at 41-45.

73. *See id.*

74. VISCUSI, *supra* note 3, at 40.

Participating Manufacturers (NPMs), which are all other manufacturers selling tobacco products in the U.S. that have not joined the MSA.[75] The OPMs and SPMs are sometimes referred to as Participating Manufacturers (PMs). Some payment obligations are applicable to all PMs. Initial payments have only been imposed on OPMs.[76] NPMs almost exclusively market discount brand cigarettes. PMs market such cigarettes, but for the OPMs in particular, the focus historically has been on what are now termed "premium" brands. Despite not joining the MSA, the NPMs nevertheless are adversely affected by the MSA.

To encourage cigarette manufacturers other than the OPMs to join the MSA, these firms were granted a "grandfather share" exemption if they became SPMs within ninety days of the date the MSA was reached.[77] This provision meant that SPMs were not charged by the MSA for cigarette sales up to either 125 percent of their 1997 or 100 percent of their 1998 market share.[78] This provision provided a major financial incentive for companies to participate as SPMs. Profit maximizing firms set price at the output level at which marginal cost equals marginal revenue. At the margin, marginal cost is increased by the per unit assessment by the MSA. Thus, the SPM would be expected to find the output at which the new marginal cost equals marginal revenue and would set price at a point on the demand curve facing the company corresponding to this output level. Price would rise by more than marginal cost rises. Since most infra marginal units are not taxed (the units at and below the "grandfather share"), the company earns additional profit on these units. By contrast, with an excise tax in the absence of the MSA, there is no per-firm grandfathering.[79]

In order to avoid allowing the NPMs to enjoy a competitive advantage in a market in which PMs would have payment obligations which the NPMs would not, the MSA required the states to enact model escrow statutes mandating that NPMs contribute funds as security for possible future suits against them.[80] The NPMs were often companies that were not in the U.S. market in 1998. Thus, they could not possibly be the objects of litigation for damages caused prior to the MSA settlement date, but conceivably could be sued at a date after they entered the U.S. market.

NPMs found a loophole in the escrow statute that allowed them to receive a refund of a portion of their escrow funds provided they limit their sales to

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75. Jeremy Bulow, The Tobacco Master Settlement Agreement and Antitrust 1-2 (unpublished manuscript) (on file with authors).

76. Master Settlement Agreement § IX(b) (1999), *available at* http://www.ag.ca.gov /tobacco/pdf /1msa.pdf.

77. Complaint at 12, A.B. Coker Co. v. Foti, 2006 U.S. Dist. LEXIS 82537 (W.D. La. Nov. 9, 2006) (No. 05-1372). *See also* Master Settlement Agreement § IX(b), *supra* note 76.

78. Master Settlement Agreement § IX(b), *supra* note 76.

79. Bulow, *supra* note 75, at 25; Jeremy Bulow, Director, Bureau of Econ., Fed. Trade Comm'n, The State Tobacco Settlements and Antitrust (Apr. 1999), http://www.ftc.gov/ speeches/other/abatobacco.shtm.

80. Grand River Enters. Six Nations v. Pryor, 481 F.3d 60, 63 (2d Cir. 2007).

that state. In the annual assessment of market share and allocation of funds to the states, the OPMs claimed that they had lost market share to the NPMs due to the escrow fund loophole.[81] As a result, they argued they were entitled to a reduction in their payments. The OPMs pointed to a provision of the MSA that required the states to provide adequate enforcement of the escrow statutes.[82] In response to the argument from the OPMs, forty-five of the forty-six states enacted allocable share amendments by 2006.[83] These amendments effectively prevent the refund of escrow funds to NPMs.

We argue, as others have, that the participating cigarette manufacturers, in concert with the forty-six State Attorneys General, created a collusive national agreement that had the effect of raising the prices of cigarettes sold by the PMs, to the mutual financial advantage of the PMs and the states. [84] And, in agreeing to the MSA, the Attorneys General made other concessions that are financially advantageous to the PMs. For example, the states have enacted appeal bond cap statutes. Appeal bonds are used for two main purposes: to stay the collection of a judgment while appeals are pursued and to guarantee a plaintiff's ability to collect a judgment after appeal.[85] They can be mandatory or discretionary, and the bond may be for more or less than the actual damage award.[86] In federal courts, and in some states, appeal bonds are discretionary.[87] This means that given a show of good cause by the judgment debtor, a judge may reduce the amount of the bond or change the form of security, i.e. letters of credit, escrow agreement, certificate of deposit.[88] Mandatory appeal bonds require a defendant to post a bond equal to, or more than, the amount of the judgment in order to stay the enforcement of the judgment.[89] As the court in *Price v. Phillip Morris, Inc.* pointed out, the right to an appeal and the obligation of furnishing an appeal bond are separate.[90] In

81. *See id.* at 64 ("The Allocable Share Release provision permitted the immediate release of funds from escrow whenever an NPM's deposits in a particular state exceeded the amount of monies the state would have received from the NPM as its allocable share, had the NPM been a party to the MSA."). The economic implications of escrow statutes carry great significance. *See infra* Part III.

82. Master Settlement Agreement § VIII, *supra* note 76.

83. *Grand River Enters. Six Nations*, 481 F.3d at 64.

84. *See, e.g.*, MORRISS ET AL., *supra* note 3, at 127, 155; Bulow, *supra* note 75, at 3.

85. The intricacies of the appeal bond process are beyond the scope of this discussion. For a more thorough discussion, see Doug Rendleman, *A Cap on the Defendant's Appeal Bond?: Punitive Damages Tort Reform*, 39 AKRON L. REV. 1089 (2006).

86. *Id.* at 1099-1101.

87. *Id.* at 1100.

88. *Id.*

89. *Id.* at 1101.

90. Price v. Philip Morris, Inc., 793 N.E.2d 942, 946 (Ill. App. Ct. 2003).

cases with extraordinary punitive damage awards, issues of due process arguably arise when an appeal bond is required.[91]

Mandatory appeal bonds are misleading since a defendant can file an appeal at any time without an appeal bond.[92] However, unless the defendant also files an appeal bond, the judgment will not be stayed.[93] Should a defendant choose to forego an appeal bond, the plaintiff may begin collecting the judgment immediately.[94] This is not a desirable option for a defendant. Should the decision be overturned on appeal, this puts the defendant in the position of having to collect restitution. In situations where the defendant's assets have been seized to pay for the judgment, this is a far cry from actual restitution.[95]

For the settling states, however, a more pressing concern, given the states' need to preserve the PMs' ability to make MSA payments currently and in the future is the adverse effects appeal bonds might have on the companies' financial status. In an attempt to rectify these concerns about PMs' ability to make regular MSA payments, many states have enacted statutes that limit the amount of an appeal bond. While appeal bond caps are not unique to tobacco litigation,[96] the large punitive damage awards in tobacco suits were the catalyst for much of the tort reform leading to appeal bond cap legislation.[97] As of 2006, thirty-three states had appeal bond cap statutes, eleven of which applied only to tobacco litigation.[98] California's statute takes the protection a step further by only capping bonds for tobacco companies that participated in the MSA.[99] Most recently, after a slew of lawsuits by Florida smokers, Florida's House Finance and Tax Council and the Senate Judiciary Committee passed bills that limit appeal bonds to $100 million.[100] Yet, under current state law, defendants must post a bond for the entire amount of a judgment in order to stay the enforcement of the judgment pending appeal.[101]

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91. However, the United States Supreme Court has repeatedly held that the Constitution does not require the states to provide open access to appellate courts in either civil or criminal cases. Elaine A. Carlson, *Mandatory Supersedeas Bond Requirements – A Denial of Due Process Rights?*, 39 BAYLOR L. REV. 29, 30-31 (1987); Rendleman, *supra* note 85, at 1105.

92. Rendleman, *supra* note 85, at 1099.

93. *Id.* at 1101.

94. *Id.* at 1099.

95. *Id.* at 1099. As Rendleman so aptly put it, "[r]estitution may be a scant comfort, however, to a defendant whose home was sold under execution following an incorrect judgment that is later reversed." *Id.*

96. *Id.* at 1089-91 (identifying cases stemming from "a corporate takeover gone awry," failed contracts, and the Exxon-Valdez oil spill).

97. *Id.* at 1109-11 (examining appeal bond caps stemming from tobacco litigation).

98. Douglas et al., *supra* note 9, at 14.

99. Rendleman, *supra* note 85, at 1119-20; CAL. HEALTH & SAFETY CODE § 104558 (West 2006).

100. Mary Ellen Klas, *2 Bills Offer Relief to Big Tobacco When Smokers Sue*, MIAMI HERALD, Apr. 22, 2009, at B4.

101. FLA. STAT. ANN. § 59.13 (West 2006).

D. The MSA: The Appropriate Level of Government Involvement and the Constitution

Perhaps the most apparent legal flaw of the MSA, identified by scholars, anti-tobacco advocates, and NPMs alike, is the amount of state government involvement in creating regulations that are national in their effect. Questions have been raised about the constitutionality of an agreement between Attorneys General of the states and a private industry. Specifically, can the MSA be reconciled with the principles of federalism in the U.S. constitution? Litigation challenging the constitutionality of the MSA is most often based on violations of the Compact Clause, the Commerce Clause, and the Tenth Amendment.[102]

The Compact Clause was written with the intent to protect the power of the federal government.[103] Compacts are formed when states create an agreement that addresses an interstate problem or issue.[104] Though similar to a statute, a compact is more like a binding contract.[105] Literal reading of the text of the Constitution suggests that any compact states form requires congressional consent. This was the standard interpretation during most of the eighteenth and nineteenth centuries.[106] At the end of the nineteenth century, the Supreme Court in *Virginia v. Tennessee* concluded that compacts require congressional consent only when the compact intrudes on the power of the federal government or alters the political balance between states and the national government.[107] While interpretation of the Compact Clause is still subject to debate, the prevailing interpretation has been that states can enter into agreements together. However, agreements between states that create national binding policy are forbidden.[108] The Supreme Court reiterated the reasoning of *Virginia v. Tennessee* in *United States Steel Corp. v. Multistate Tax*

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102. Other constitutional provisions used in MSA litigation include, for example, the Due Process Clause and the First Amendment.

103. *See* U.S. CONST. art. I, § 10, cl. 3. "No State shall, without the consent of Congress . . . enter into any Agreement or Compact with another State . . . ." *Id.*

104. Michael S. Smith, Note, *Murky Precedent Meets Hazy Air: The Compact Clause and the Regional Greenhouse Gas Initiative*, 34 B.C. ENVTL. AFF. L. REV. 387, 390 (2007). A good example of an interstate compact formed to deal with the issue of interstate transportation is the Port Authority of New York and New Jersey. *Id.* at 393. The Port Authority of New York and New Jersey was created by interstate compact in 1921 to coordinate the operation of major transportation facilities in the two states. *Id.*

105. Jill Elaine Hasday, *Interstate Compacts in a Democratic Society: The Problem of Permanency*, 49 FLA. L. REV. 1, 2-3 (1997). Compacts bind not only the state, but also the citizens. *Id.* An interstate compact also supersedes prior law. *Id.* Because elements of both contracts and statutes exist, contract laws apply as well as the legal principles used for statutory interpretation. *See* Smith, *supra* note 104, at 391 (stating that enforcement of the compact is in Federal Court with specific performance as a remedy).

106. CAROLINE N. BROUN ET AL., THE EVOLVING USE AND THE CHANGING ROLE OF INTERSTATE COMPACTS: A PRACTITIONER'S GUIDE 9 (2007).

107. 148 U.S. 503, 519-520 (1893).

108. Smith, *supra* note 104, at 388-89.

Comm'n, and adopted the standard that congressional consent is only necessary when an interstate compact strengthens the political power of the member States in relation to the federal government.[109]

The Commerce Clause grants Congress the power to regulate commerce among the states.[110] Litigation based on this theory alleges that the MSA violates the Commerce Clause by its regulation of interstate transactions, a power delegated to the federal government, and by imposing an unjustifiable burden on interstate commerce.[111] A governing case on the limitations to the Commerce Clause is *Parker v. Brown*.[112] The Supreme Court reiterated its previous holdings that the grant of power to Congress by the Commerce Clause does not completely remove states' authority to regulate commerce with respect to matters of local concern where Congress has not previously spoken.[113] Situations in which states retain the power to legislate interstate dealings include those when regulation is imposed before any operation of interstate commerce occurs or when an accommodation can be made between existing federal and state concerns.[114]

In contrast to the Compact Clause and the Commerce Clause, the Tenth Amendment ensures that the states retain control over matters that are not specifically delegated to the federal government.[115] Plaintiffs challenging the

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109. 434 U.S. 452, 471 (1978); Smith, *supra* note 104, at 389. The Court in *United States Steel Corp.* iterates a three part test in dicta. According to the Court, an agreement called into question by the Compact Clause does not require congressional consent so long as the compact does not purport to authorize member states to exercise any powers they could not in its absence; there is no delegation of sovereign power to the administrative body created by the compact; and each state is free to withdraw from the Compact at any time. *United States Steel Corp.*, 434 U.S. at 472-73. Not all constitutional scholars agree that such a loose interpretation of the compact clause is warranted. *See generally* Michael S. Greve, *Compacts, Cartels, and Congressional Consent*, 68 MO. L. REV. 285 (2003).

110. "[The Congress shall have the power t]o regulate commerce with foreign nations, and among the several states . . . ." U.S. CONST. art. 1, § 8, cl. 3.

111. *See, e.g.*, Plaintiff's Memorandum in Opposition to Motion to Dismiss at 27 A.B. Coker Co. v. Foti, No. 05-1372, 2006 U.S. Dist. LEXIS 82537 (W.D. La. Nov. 9, 2006).

112. 317 U.S. 341 (1943).

113. *Id.* at 360.

114. *Id.* at 362-63. The former example was described by the Court as a "mechanical test" due to its formulaic nature. *Id.* at 360. The latter, the accommodation test, has been expanded into five situations where state regulation does not overstep constitutionally mandated limitations: (1) when "Congress has not exerted its power under the Commerce Clause;" (2) the state regulations apply to "matters of local concern;" (3) the matter regulated "is one which may appropriately be regulated in the interest of safety, health and well-being of local communities, and which, because of its local character, and the practical difficulties involved, may never be adequately dealt with by Congress;" (4) state regulation can operate "without substantially impairing the national interest in the regulation of commerce by a single authority;" and (5) the regulations involved are "local regulations whose effect upon the national commerce is such as not to conflict but to coincide with a policy which Congress has established with respect to it." *Id.* at 362-63. *See also* Thomas C. O'Brien, *Constitutional and Antitrust Violations of the Multistate Tobacco Settlement*, POL'Y ANALYSIS, May 18, 2000, at 1, 7-8.

115. The text of the Tenth Amendment reads: "The powers not delegated to the United States by the Constitution, nor prohibited by it to the States, are reserved to the States respectively, or to the people." U.S. CONST. amend. X.

MSA based on the Tenth Amendment argue that it is unconstitutional for states to delegate their inherent power to non-governmental bodies such as the National Association of Attorneys General (NAAG).[116] Specifically, it has been argued that the MSA delegated fundamental state powers by giving NAAG and an outside firm the power to enforce the MSA through administration of tax appropriations and law enforcement functions properly reserved for the state.[117] Should states not follow MSA provisions by enacting model statutes or enforcing provisions, the outside agency has the power to reduce the amount of funds a state receives.[118]

While a few cases are still being litigated, several constitutional challenges have already been unsuccessful.[119] Early on, cases against the OPMs were dismissed because the court determined that the defendants were entitled to immunity from anti-trust claims.[120] As a result of these early cases, State Attorneys General were targeted as defendants in future suits instead of OPMs. Changing the defendant did not create more successful constitutional cases, however. Many cases failed to survive motions to dismiss; those cases that did survive have not fared well. For example, in 2002, the U.S. Court of Appeals for the Fourth Circuit held that the MSA did not violate the Compact Clause.[121] The case, *Star Scientific, Inc. v. Beales*, is the only case to have directly addressed the Compact Clause issue.[122] The court reasoned that states party to the MSA were exercising powers they could have exercised independently, and consequently the MSA did not increase the power of the states at the expense of federal supremacy.[123] The court was careful to point out that the MSA may increase the states' bargaining power with the tobacco manufacturers, but the test is not whether a compact enhances state power in general but rather,

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116. *See, e.g.*, Plaintiff's Memorandum in Opposition to Motion to Dismiss at 32 A.B. Coker Co. v. Foti, No. 05-1372, 2006 U.S. Dist. LEXIS 82537 (W.D. La. Nov. 9, 2006).

117. *Id.* at 33-34. The Plaintiffs pointed out in their brief that the outside firm appointed to monitor compliance has the authority to determine whether a state has complied with the MSA and fix penalties to impose on non-compliant states. *Id.* at 34. Their decisions are "conclusive and binding," and "final and non-appealable." *Id.* The Plaintiffs argue the MSA in effect delegates "inherent state powers to an extra-constitutional supra-state agency." *Id.*

118. *Id.* at 34.

119. A financial report compiled by the state of Louisiana offers a small summary of cases alleging constitutional violations. "This is just the most recent in a string of constitutional challenges to the MSA and related statutes, every one of which has been rejected." STEVE J. THERIOT, FINANCIAL STATEMENT AUDIT 22 (2009), *available at* http://app1.lla.state.la.us/PublicReports.nsf /CCACE073E2B841298625757D006754BC/$FILE/0000B961.pdf.

120. *See, e.g.*, A.D. Bedell Wholesale Co. v. Philip Morris Inc., 263 F.3d 239, 241 (3d Cir. 2001); Hise v. Philip Morris, Inc., No. 99-5113, 2000 U.S. App. LEXIS 2497, at *7, 15 (10th Cir. 2000), *aff'd*, 208 F.3d 226 (10th Cir. 2000).

121. Star Scientific, Inc. v. Beales, 278 F.3d 339, 360, 362 (4th Cir. 2002).

122. Greve, *supra* note 109, at 360.

123. *Star Scientific, Inc.*, 278 F.3d at 360 (noting that the MSA anticipated that Congress may pass laws regulating tobacco in the future, and as such, it provided for adjustments in the language of the MSA should that occur).

whether it enhances state power against the federal government.[124] Furthermore, the MSA left open the possibility for Congress to further regulate tobacco.[125]

Another federal court recently rejected a plaintiff's Compact Clause argument on the grounds that there was no showing that the mandatory escrow payments by NPMs in New York affect the retail prices of cigarettes in other states.[126] The court in *Freedom Holdings, Inc. v. Cuomo* found that the plaintiffs failed to show injury, actual or threatened, to their business or property.[127] Furthermore, the court held that the MSA, its implementing legislation, and New York's allocable share release amendment did not violate the Commerce Clause of the Constitution.[128]

Often, courts will not even address the constitutional challenges, ruling that other issues are dispositive before reaching the questions of constitutionality.[129] For example, in Pennsylvania, a federal district court in *Mariana v. Fisher*[130] relied on the Fourth Circuit's ruling in *Star Scientific* in its dismissal of a factually similar case.[131] The plaintiffs in *Mariana* challenged the MSA based on violations of the Compact Clause, Commerce Clause, and federal antitrust law.[132] The court never reached the merits of the constitutional claims, holding that the plaintiffs lacked standing to bring constitutional challenges.[133] In another MSA case, *Grand River Enterprises Six Nations, Ltd. v. Pryor*, the Second Circuit ruled that the plaintiff, a Canadian incorporated NPM, failed to prove irreparable harm, thus the court did not deem it necessary to review the merits of *Grand River*'s federal anti-trust and

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124. *Id.* at 360.

125. Rahul Rajkumar et al., *Is the Tobacco Settlement Constitutional?*, 34 J.L. MED. & ETHICS 748, 749 (2006).

126. Freedom Holdings, Inc. v. Cuomo, 592 F. Supp. 2d 684, 707 (S.D.N.Y. 2009).

127. *Id.*

128. *Id.* at 687.

129. *See, e.g.*, S&M Brands, Inc. v. Summers, No. 06-5148, 2007 U.S. App. LEXIS 9218, at *9 (6th Cir. Apr. 19, 2007) (refusing to hear plaintiff's Commerce Clause claim because it was first being argued on appeal).

130. 338 F.3d 189, 204 (3d Cir. 2003).

131. Rajkumar et al., *supra* note 125, at 749.

132. *Mariana*, 338 F.3d at 193.

133. *Id.* at 206. Like most other cases, the anti-trust claims were dismissed on the grounds of immunity under Noerr-Pennington. This immunity stems from two U.S. Supreme Court cases, *E. R.R. Presidents Conf. v. Noerr Motor Freight, Inc.*, 365 U.S. 127 (1961) and *United Mine Workers of Am. v. Pennington*, 381 U.S. 657 (1965). *Noerr* and *Pennington* conferred "antitrust immunity with regard to actions to petition the government to take a certain course of action, even if the action has anticompetitive results." Angela Gomes, Note, *Noerr-Pennington: UNOCAL's Savior - Or is It?*, 11 B.U. J. SCI. & TECH. L. 102, 111 (2005). The *Parker* doctrine arouse in another Supreme Court case that outlined the need for state action immunity. Parker v. Brown, 317 U.S. 341 (1943). *Parker* very generally outlined the need for national competition policy to be subordinate to a state's regulatory autonomy. Hillary Greene, *Articulating Trade-Offs: The Political Economy of State Action Immunity*, 2006 UTAH L. REV. 827, 828 (2006). *See infra* Part I.E.

dormant Commerce Clause claims.[134] However, the Second Circuit set precedent when it held that New York could exercise personal jurisdiction over thirty-one Attorneys General from other states based on their negotiations in New York for the MSA.[135]

A case that has garnered a lot of attention is the suit brought by the Competitive Enterprise Institute (CEI) in 2005, which challenged the validity of the MSA by characterizing it as a gross abuse of power by the states' Attorneys General.[136] This suit challenged the validity of the MSA based on a myriad of claims, including violations of the Compact Clause, the Tenth Amendment, federal preemption, and federal antitrust law.[137] The plaintiffs in *A.B. Coker Co.* argued that the MSA creates a national regulatory regime to oversee the tobacco industry.[138] This regime collects, in effect, a national tax on cigarettes, and restricts federally legislated cigarette advertising.[139] The plaintiffs' Tenth Amendment claim was dismissed on a 12(b)(6) motion in November 2006.[140] The court stated that without federal involvement, the Tenth Amendment did not apply.[141] The rest of the constitutional issues survived the motion to dismiss, and oral arguments for both sides were heard in February 2009.[142]

Given the low rate of success of constitutional challenges to the MSA, as evidenced above, it is unlikely that the MSA will be declared unconstitutional. However, even assuming the constitutionality of the MSA, the Agreement, without a doubt, has ignored the long honored checks and balances present on state government.[143] Nevertheless, if public health and tobacco cessation truly are the goals, we may be past the point of declaring the MSA invalid in furtherance of those goals. As much as the lack of earmarking of MSA funds

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134. Grand River Enters. Six Nations v. Pryor, 481 F.3d 60, 63, 68 (2d Cir. 2007). The plaintiffs in *Grand River* sought to enjoin thirty-one state AGs from enforcing their state's allocable share amendments. *Id.* at 65.

135. Tracy O. Appleton, Note, *The Line Between Liberty and Union: Exercising Personal Jurisdiction Over Officials from Other States*, 107 COLUM. L. REV. 1944, 1945 (2007). The court reasoned that the MSA was not unlike "an ordinary commercial contract," and "because these negotiations were carried on in New York, it was foreseeable that appellants would be subject to suit in the state." *Id.* at 1978 n.195 (citing Grand River Enters. Six Nations v. Prior, 425 F.3d 158, 167 (2d Cir. 2005)).

136. Rajkumar et al., *supra* note 125, at 748.

137. *Id.* at 748-49.

138. *See* Plaintiff's Memorandum in Opposition to Motion to Dismiss at 21 A.B. Coker Co. v. Foti, No. 05-1372, 2006 U.S. Dist. LEXIS 82537 (W.D. La. Nov. 9, 2006).

139. *Id.*

140. *A.B. Coker Co.*, 2006 U.S. Dist. LEXIS 82537, at *3-5.

141. *Id.* at *3.

142. John O'Brien, *Constitutionality of Historic Tobacco Settlement Debated*, SOUTHEAST TEX. REC., Feb. 10, 2009, *available at* http://www.setexasrecord.com/news/217306-constitutionality-of-historic-tobacco-settlement-debated.

143. MORRISS ET AL., *supra* note 3, at 172.

to the states stymies tobacco control efforts, "dismantling the MSA will not improve health outcomes."[144]

The judicial system has shielded companies from public scrutiny. For instance, proceedings are kept private through use of binding arbitration. Additionally, annual reports analyzing the impact of the MSA on market share are kept private, with the exception of the Brattle Group report for 2006, which was released to the public after litigation ended in finding the material to be public record.[145]

E. Violation of Antitrust Law

Another set of cases have alleged violation of antitrust law. Antitrust cases are not exclusive to post-MSA tobacco. A case as early as 1890 was brought alleging price fixing,[146] and one of the most significant antitrust cases was brought in 1911.[147] However, regarding post-MSA tobacco, a court in *Brooke Group Ltd. v. Brown & Williamson Tobacco Corp*. held that below cost pricing in and of itself is "not alone sufficient to permit an inference of probable recoupment and injury to competition."[148]

A recent suit by General Tobacco alleged anticompetitive behavior by the OPMs under the Sherman Act.[149] The Sherman Act, enacted in 1890, forbids "contract[s], combination[s] . . . or conspirac[ies] in restraint of trade."[150] The judge stated that tobacco companies are immune from Sherman Act liability under the Noerr-Pennington doctrine for their role in creating the MSA.[151] This immunity stems from two U.S. Supreme Court cases, *Noerr* and *Pennington*, which conferred "antitrust immunity with regard to actions to petition the government to take a certain course of action, even if the action has anticompetitive results."[152] So far, the courts that have addressed

144. Rajkumar et al., *supra* note 125, at 751.

145. Christine Hall, *Secret Tobacco Settlement Ruling Pried from State Attorneys General*(Jun. 21, 2006), http://cei.org/news-releases/secret-tobacco-settlement-ruling-pried-state-attorneys-general.

146. Eichel v. Sawyer, 44 F. 845 (D. Ky. 1890).

147. United States v. American Tobacco Co., 221 U.S. 106 (1911) (resulting in the division of American Tobacco into fourteen different companies). *See* Brian Dean Abramson, *Let Them Eat Smoke: The Case for Exempting the Tobacco Industry from Antitrust*, 6 CARDOZO PUB. L. POL'Y & ETHICS J. 345, 359, 363, 365 (2008). The Sixth Circuit in *American Tobacco Co. v. United States*, 147 F.2d 93, 100, 120 (6th Cir. 1945), found through circumstantial evidence that the parties raised prices in concert with one another.

148. 509 U.S. 209, 226 (1993).

149. VIBO Corp. v. Conway, 594 F. Supp. 2d 758, 772 (W.D. Ky. 2009).

150. Sherman Act, 15 U.S.C. § 1 (2006). *See generally* LAWRENCE ANTHONY SULLIVAN, HANDBOOK OF THE LAW OF ANTITRUST (1977).

151. *VIBO Corp.*, 594 F. Supp. 2d at 773. Like most other antitrust claims, the case was dismissed on the grounds of immunity under Noerr-Pennington. The *Parker* doctrine comes from a Supreme Court case that outlined the need for state action immunity. Parker v. Brown, 317 U.S. 341 (1943). *Parker* very generally outlined the need for national competition policy to be subordinate to a state's regulatory autonomy. Greene, *supra* note 133, at 828.

152. Gomes, *supra* note 133, at 111.

arguments such as those made by General Tobacco have agreed that the tobacco companies' actions were petitions to the government within the meaning of the Noerr-Pennington doctrine.[153]

PART II. PUBLIC HEALTH IMPLICATIONS OF THE MASTER SETTLEMENT AGREEMENT

A. Rationale for the MSA

The theory underlying the MSA was that as a result of high rates of smoking, state Medicaid programs had incurred extra expense in treating tobacco-related diseases of persons in their states. However, the amounts received by individual states were based on a political settlement and did not reflect compensation for medical costs previously incurred by individual states.[154]

Even so, the method used by the public health community, including the U.S. Centers for Disease Control, to compute the cost of smoking to a public program such as Medicaid differs substantially from the method an economist would use in computing damages in a civil liability proceeding. The method widely used in the public health field is a cross sectional approach, which is based on the population alive in a given year and the fractions of the population by smoking status. The cost of smoking is then evaluated based on the population's use of personal health services by smoking status. The burden of any additional use and its associated cost is attributed to various insurers, including Medicaid, based on the distribution of source of payment by smoking status.

By contrast, the longitudinal or life cycle approach for measuring the social cost of smoking, one favored by many economists, measures the present value of the cost of personal health services or other cost incurred when another smoker is added to the population.[155] Similar to the cross-sectional approach, such cost borne by a particular insurer, such as Medicaid, can be estimated from information on sources of payment by smoking status. The approach recognizes that when a person begins smoking, there are downstream implications for the use of resources by the individual, the individual's family, and by society more generally. The calculation of cost involves the net present value of all future costs for all individuals who initiate the habit in a particular year. Not all future costs are positive. In particular, if a person dies prematurely, there are savings in some public subsidy programs and some private programs, e.g., in defined benefit pension programs, as well. This does

153. MORRISS ET AL., *supra* note 3, at 154-55.
154. VISCUSI, *supra* note 3, at 45-47.
155. *Id.* at 67-68.

not mean that there is no value to life. Values of life years gained or lost can be part of the calculation. Sloan and coauthors, in calculating the cost of smoking using a longitudinal approach, assumed that a life year is valued at $100,000 per year.[156]

Although the cross sectional approach is more easily implemented, overall, the argument for the longitudinal approach is more compelling on balance. Individuals, families, and societies make decisions in a multiperiod context. Even if they do not realize the subsequent effects of their current decisions, such decisions often have long-term implications. The decision to initiate or quit smoking is inherently a multiperiod choice. Some costs are incurred currently, but many costs are incurred by the individual, the individual's family, and society at large in later periods. Because smoking affects health and survival, the smoking decision affects many household decisions over the life cycle. For example, people contribute to Social Security and Medicare during their working lives. Many personal investment decisions, such as the decision to have a knee replacement, depend in part on the person's expected longevity. If people die earlier in retirement because they were lifelong smokers, this improves the overall financial status of the Social Security and Medicare programs. Personal saving is potentially affected by the length of time one expects to spend in retirement. Further, revenue and expenditures for public entitlement programs are linked over time.

Sloan and coauthors quantified the cost of smoking in three separate categories: (1) internal cost, or the cost to the individual; (2) quasi external cost, or the cost to the individual's family; and (3) external cost, or the cost to parties other than the individual or the individual's family.[157] In general, economists do not distinguish among family members, but rather consider households as single decision making units. Second-hand smoke can have negative health effects on other family members, which accrue over a number of years. The external costs include both external health and financial costs, which are partially offset by excise taxes smokers pay on tobacco products.

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156. FRANK A. SLOAN ET AL., THE PRICE OF SMOKING 89 (2004). Artificial knees only last a particular number of years on average. Persons who receive a knee replacement in mid-life can expect to have additional operations in the future. A person with a short life expectancy may not choose to have a knee replaced because the period over which benefits accrue may likely be short. Others have assumed that a life year is valued at $100,000 per year. *See* David M. Cutler et al., *The Economic Impacts of the Tobacco Settlement*, 21 J. POL'Y ANALYSIS & MGMT. 1, 13 (2002); David M. Cutler & Elizabeth Richardson, *The Value of Health: 1970-1990*, 88 AM. ECON. REV. 97, 97 (1998).

157. SLOAN ET AL., *supra* note 156, at 249-58. Other published studies have assessed the cost of smoking. Using a longitudinal approach, one study estimated the external medical cost per pack at $0.26, but also provided high and low estimates of such cost at $0.15 and $0.36 per pack, respectively (in 1986 dollars). *See* WILLARD G. MANNING ET AL., THE COSTS OF POOR HEALTH HABITS 81 (1991). For a discussion on estimating the societal financial costs, see VISCUSI, *supra* note 3, at 67-77.

They assumed that a life year is worth $100,000 and used a discount rate of three percent.[158]

Table 1. Cost of Smoking Per Pack of Cigarettes

	Internal	Quasi-External	External	Total
Cost of cigarettes	3.12			3.12
Mortality cost (own, spouse)	20.28	5.20		25.48
Disability cost (own, spouse)	3.44	0.25		3.69
Medical care cost	0.24	0.14	0.49	0.87
Social Security	1.01	-0.17	-0.84	0.00
Social Security taxable earnings	5.10			5.1
Income taxes on Social Security taxable earnings			1.02	1.02
Defined benefit private pension outlays	1.36	-0.12	-1.24	0.00
Life insurance outlays	-1.78		1.78	0.00
Infant deaths		0.14		0.14
Work loss/sick leave			0.76	0.76
Productivity loses			0.24	0.24
Total Cost	$32.78	$5.44	$2.20	$40.42

Table 1 shows their estimates of cost of smoking per pack, separately for internal, quasi-external, and external costs as of the year 2000.[159] The estimate of total medical cost per pack attributable to smoking was $0.87 per pack, but the more relevant statistic is the external cost, which was $0.49 per pack. To place the $0.49 estimate in perspective, Viscusi estimated the per pack payment from the MSA to the states to be $0.40, and Viscusi regarded his per

158. *See* Cutler & Richardson, *supra* note 156, at 97. The $100,000 estimate of a life year is the same that has been used by others, which is based on the value of life literature. For a general discussion of the value of a life, see W. Kip Viscusi, *The Value of Risks to Life and Health*, 31 J. ECON. LITERATURE 1912 (1993). In 2008, the interest rate on thirty-year U.S. Treasury bonds was 2.8 percent per year. *See Budget Assumptions*, WHITEHOUSE.GOV (Nov. 18, 2009), http://www.whitehouse.gov/sites/default/files/omb/assets/a94/dischist.pdf.

A more recent analysis by Viscusi and Hersch used estimates of values of statistical life by age group rather than a constant estimate of the value of a life year, such as others have done. They only estimated the mortality cost of smoking, not the other costs described *infra* Table 1. They obtained a much higher estimate of the per pack mortality cost of smoking than have others—$222 per pack for men and $94 per pack for women. W. Kip Viscusi & Joni Hersch, *The Mortality Cost to Smokers*, 27 J. HEALTH ECON. 943, 943-58 (2008).

159. SLOAN ET AL., *supra* note 156, at 252.

pack estimate as conservative since it excluded costs generated by attorney's fees, wholesaler markup, and related expenses.[160]

A more serious issue is that the $0.49 estimate is for total medical expense, not for increased costs to the states for their Medicaid programs. As a result, payments per pack of cigarettes under the MSA were much higher than needed to compensate states for their excess Medicaid cost of smoking. The discrepancy is even higher when one considers that the federal government subsidizes over half of Medicaid expense. In effect, the MSA paid states over five times what would be required to compensate them for their excess Medicaid outlays.

The Sloan et al. estimates of external medical cost attributable to smoking are far higher than those reported by Viscusi, which if anything strengthens the conclusion that the MSA is overpaying states for their Medicaid expense.[161] Cutler et al. estimated that the savings in Medicaid cost from projected reductions in cigarette consumption in Massachusetts is "perhaps one-fortieth of the direct payments to the state and less than a tenth of a percent of the present value of future direct spending by the state."[162] They estimate that the MSA will have reduced Medicaid spending in Massachusetts $29 million through 2025.[163] By contrast, assuming a $100,000 for a life year, the MSA in Massachusetts will yield savings in mortality cost of $37.5 billion through 2010 and of $43.3 billion through 2025.[164]

A further consideration, which adds strength to our argument, is that federal and state governments have imposed excise taxes on cigarettes, which in the year 2000, the year for which the Table 1 estimates apply, amounted to $0.76 per pack. Subtracting excise taxes per pack from the total external cost per pack yields a net cost of $1.44 per pack for the year 2000 (Table 2).[165]

Table 2. Excise Tax Per Pack of Cigarettes

Total external cost	$2.20
Federal excise taxes	-0.36
State excise taxes	-0.40
	$1.44

160. VISCUSI, *supra* note 3, at 41. *See also* Cutler et al., *supra* note 156, at 4 (estimating MSA payments at $0.32 per pack in 2000 rising to $0.37 per pack by 2010). Although the estimates are slightly lower than those by Viscusi, they do not change the basic argument in the text.

161. *Compare* SLOAN ET AL., *supra* note 156, at 257, 262 *with* VISCUSI, *supra* note 3, at 94.

162. Cutler et al., *supra* note 156, at 2.

163. *See id.* at 3.

164. *Id.* at 14.

165. SLOAN ET AL., *supra* note 156, at 255.

While the states apparently employed an effective legal strategy in basing the settlement on the cost of their Medicaid programs, it is clear that there was little emphasis on obtaining accurate estimates of the impact of cigarette use on Medicaid expenditures, which at a minimum is flawed public policy—similar to finding no weapons of mass destruction in Iraq. Before the war, there was ample documentation of human rights violations and politically-motivated murder, as there was for smoking-related deaths prior to the MSA. The cost to state Medicaid programs, however, remains more questionable and is in fact, empirically unsupported.

B. Smoking Rates Since Implementation of the MSA

The overall objective of tobacco control, of which the MSA is an example, is to reduce the use of tobacco products, particularly cigarettes, which are the most consumed tobacco product by far. Since cigarette consumption typically begins in youth and such consumption peaks at ages twenty-one to twenty-five, the target of tobacco control programs is often younger persons.[166] Three related issues are pertinent. First, did the MSA reduce cigarette consumption? Second, if so, to what extent was tobacco consumption reduced as a consequence of cigarette price increases? Third, did various nonprice measures, such as advertising restrictions, reduce cigarette consumption over and above the impacts of the price increases? The first question will be addressed in this section, while the second and third questions will be addressed in Section C.

Cigarette consumption per capita in the U.S. has declined since the MSA was implemented.[167] Since such consumption was declining before the MSA was reached, some further decline would have been expected even if the MSA had not been implemented. However, the rate of decline in cigarette consumption following implementation of the MSA through 2008 was no different from the rate of decline from 1990-98.[168] Interestingly, based on the annual publications of *Tax Burdens on Tobacco*, results of a comparison of the consumption decline before and after the MSA are highly sensitive to the termination year selected. If 2006 or 2007 had been selected as the termination year, one would conclude that the rate of decline was higher in the post-MSA period. Any decrease in consumption might be attributable to other factors in addition to the MSA. What makes the assessment difficult is that other factors, e.g., federal and state cigarette excise tax changes, may have themselves been

166. Jonathan Gruber & Jonathan Zinman, *Youth Smoking in the United States: Evidence and Implications*, *in* RISKY BEHAVIOR AMONG YOUTHS: AN ECONOMIC ANALYSIS 108 (Jonathan Gruber ed., 2001).

167. ORZECHOWSKI & WALKER, THE TAX BURDEN ON TOBACCO: HISTORICAL COMPILATION 3 (2008).

168. *Id.*

influenced by the existence of the MSA. Still, the MSA was arguably the single-most important policy intervention during this period.

Adding even greater complexity is the fact that changes in smoking behavior differ by demographic group. As a first cut at analysis of the role of the MSA in curbing tobacco use, Table 3 presents rates of percentage change in the share of adults (persons aged eighteen and over) who were current smokers in a given year as opposed to being former or never smokers.[169] During 1987-97, the share of current smokers of all adults declined at an annual rate of 1.5%. Between 1997 and 2006, the latest year for which these data are currently published, by contrast, this share declined by 2.0% per year. Thus, there was an increase in the rate of decline of 0.5% per year in the decade that includes the year of MSA implementation and the seven years that followed. This result on smoking rates of U.S. adults is consistent with data on aggregate cigarette consumption described above if 2006 is taken as the terminal year.

Table 3. Annual Percentage Rates of Change in Share of Total Adult Population Who Were Current Smokers

	All	**Ages 18-24**	**Education 9-11 years**	**Education 16+ years**
1987-97	-1.5	0.6	-2.1	-3.6
1997-2006	-2.0	-2.1	-0.6	-3.6
Difference	0.5	2.7	-1.5	0.0

As seen in Table 3, however, the changes in smoker shares were not uniform among demographic groups. The decline in share of smokers was appreciably higher in 1997-2006 among persons aged eighteen through twenty-four. Among adults with nine to eleven years educational attainment, the decline was much lower than in the decade immediately preceding implementation of the MSA, and for adults with sixteen or more years of education, there was no change in the rate of the decline in the share of smokers.

Changes in other determinants of cigarette consumption could have also accounted for some of the decline in consumption since the MSA was implemented. To ascertain whether or not there was a statistically significant decline in cigarette consumption among youths and adults after the MSA was implemented, we analyzed data from three surveys: (1) the National Longitudinal Survey of Youth 1997 (NLSY97); (2) the Young Adult Sample, a survey of children of women who responded to the National Longitudinal Survey of Youth 1979; and (3) the Behavioral Risk Factor Survey Surveillance

169. Centers for Disease Control, *Cigarette Smoking Among Adults – United States, 2006*, 56 MORBIDITY AND MORTALITY WKLY. REP. 1158, 1161 (2007), *available at* http://www.cdc.gov/mmwr/pdf/wk/mm5644.pdf.

System (BRFSS) from 1990 to 2007.[170] The MSA effect was assessed using variables for before and after it was implemented. We determined whether the MSA affected smoking with or without inclusion of an explanatory variable for cigarette prices. With price included, the MSA variables measured effects of MSA non-price policies such as those affective advertising practices. Without price, the MSA variables measured the total effect of the MSA on smoking.

Unlike the other analyses which focused on younger persons, our analysis with BRFSS included individuals aged eighteen and over. Both the NLSY97 and the Young Adult Sample are longitudinal surveys; the BRFSS, although conducted annually, is cross sectional. Our analysis of BRFSS data was an update of a previous study of MSA effects of cigarette consumption by Sloan and Trogdon.[171]

The NLSY97 has been conducted annually since baseline interviews were conducted in 1997. The survey is of persons twelve to eighteen years old as of December 31, 1996. Our analysis included longitudinal data from the NLSY97 from 1997-2006. In the analysis of the probability of being a current smoker at the interview date, the sample consisted of 5753 individuals. In our analysis of average number of cigarettes per day among persons who were current smokers, the sample was 2959. In both analyses, to gauge the contribution of the MSA to smoking among youths, we included explanatory variables for demographic characteristics (age, gender, race-ethnicity, marital status), income, and employment status, whether the person was enrolled in school, whether the person dropped out of high school, whether the sample person lived with two parents, highest grade completed by either parent and also for health, health insurance, whether the sample person lived in an urban area, and state policy variables (clean air policies, licensing policies for cigarette sales, restrictions on advertising, and preemption laws for advertising, youth access, and indoor air). We included a variable from the price of cigarettes per pack from annual publications of *Tax Burden on Tobacco.*[172] Cigarette price was defined at the state level and deflated to be expressed in real terms. The price was a consumption weighed average of prices of premium and generic brands.

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170. The analyses account for changes in demographic factors, implementation of state tobacco laws to discourage smoking in public places, advertising, sales of cigarettes to minors, increases in cigarette prices attributable to the MSA and federal and state excise tax increases. The BRFSS, NLSY97, and the Young Adult Sample are available online. *See* Centers for Disease Control and Prevention, *Behavioral Risk Factor Survey Surveillance System (BRFSS)* http://www.cdc.gov/brfss/ (last visited Oct. 23, 2010); Bureau of Labor Statistics, *National Longitudinal Survey of Youth 1997*, http://www.bls.gov/nls/nlsy97.htm (last visited Oct. 23, 2010); Bureau of Labor Statistics, *National Longitudinal Survey of Youth 1979 Children and Young Adults*, http://www.bls.gov/nls/nlsy79ch.htm (last visited Oct. 23, 2010).

171. *See* Frank A. Sloan & Justin G. Trogdon, *The Impact of the Master Settlement Agreement on Cigarette Consumption*, 23 J. POL'Y ANALYSIS & MGMT. 843 (2004).

172. ORZECHOWSKI & WALKER, *supra* note 167, at iv.

Since cigarette prices are endogenous to the MSA, we conducted separate analyses with and without the explanatory variable for state cigarette prices. We included a binary variable to indicate the interview was conducted before the MSA was implemented, a continuous variable for the number years since the MSA was implemented, and binary variables for the year the person entered the sample. People were only included in the analysis after they became sixteen or seventeen and if they lived in one of the forty-six MSA states at entry into the sample.[173]

None of the results imply that the MSA decreased the probability of being a current smoker except through its effects on cigarette prices. Using the average number of cigarettes smoked per day for current smokers, there was generally no evidence that the MSA reduced daily cigarette consumption either. The parameter on the binary variable for pre-MSA was either negative and statistically significant or insignificant. The parameter estimate on the count of years since the MSA was implemented was never statistically significant at conventional levels.[174]

We conducted a similar analysis on a slightly older cohort of youth using data from the Young Adult Sample of the NLSY79. The sample selection process for analysis was similar, as was the equation specification. Sample sizes for being a current smoker were 2283 and for average daily cigarette consumption 1015. The years covered by our longitudinal analysis were 1994-2006. We again found no statistically significant results other than through price on the probability of being a current smoker or on daily consumption of cigarettes conditional on being a current smoker.

We analyzed data from the Behavioral Risk Factor Surveillance System (BRFSS) for the years 1990-2007. The BRFSS is a nationally representative annual survey of U.S. adults aged eighteen and older. The sample was divided into five age categories: eighteen to twenty (N=90,773), twenty-one to twenty-four (N=153,724), twenty-five to forty-four (N=1,233,019), forty-five to sixty-four (N=1,177,828), and sixty-five and older (N=765,051). Explanatory variables were demographic characteristics, health-related variables, cigarette prices, state level tobacco policies, and state and year fixed effects.[175] Data on states' tobacco-related policies were taken from the State Tobacco Activities and Evaluation (STATE) System and the State Cancer Legislative Database

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173. We included person-fixed effects in some specifications.

174. We used a linear probability model since we included individual fixed effects. With available software, the versions of probit and logit analysis allowed computation of individual fixed effects take too long to converge. We used a negative binomial model with, alternatively, fixed and random effects since the average number of cigarettes was a count variable.

175. Demographic characteristics included: gender, race, educational attainment, marital status, number of adults in the household, and household income. Health-related variables plausibly related to the decision to smoke were: any health insurance coverage, current pregnancy, and any regular exercise. State level tobacco policies were indicators for any advertising restrictions, licensure requirements for over-the-counter tobacco sales, licensure requirements for cigarette vending machines, clean air regulations, and smoker protection laws.

Program (SCLD).[176] State level data on cigarette prices were obtained from *Tax Burden on Tobacco*.[177]

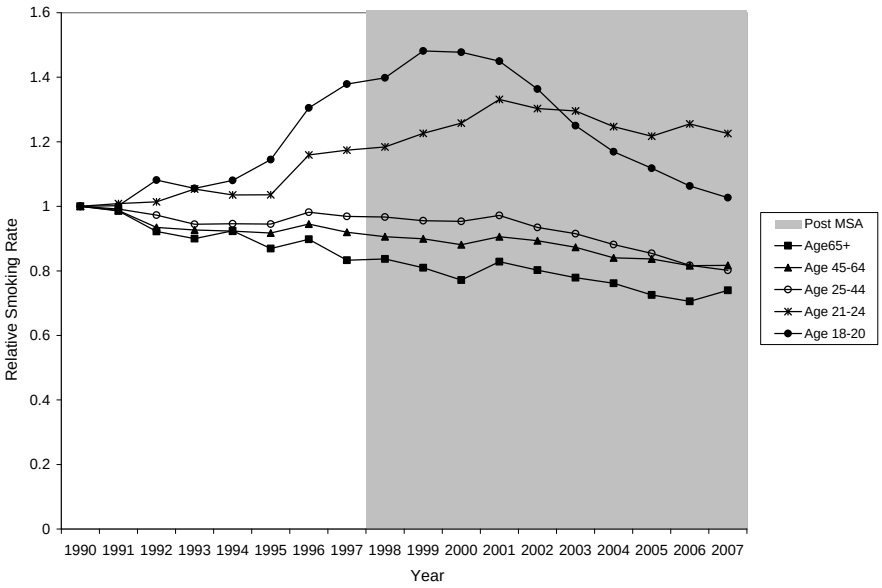
From 1990 to 2007, there was a general downward trend in shares of persons who were current smokers among all adults age eighteen and older (Figure 1).[178] However, trends were very different among age groups. While smoking rates declined among persons over age twenty-five, rates among persons aged eighteen to twenty increased after 1990 and began to decrease in 1999, the year after the MSA was reached, with the share of current smokers among eighteen to twenty year olds being slightly higher in 2007 than in 1990. Smoking rates for these persons peaked in 1999, the year after the MSA was implemented and fell considerably thereafter. For the twenty-one to twenty-four age group, shares of current smokers of total population in the age group increased until 2001 and decreased somewhat after this year, but in 2007, were well above smoking rates in 1990. The peak in smoking occurred three to four years later for the twenty-one to twenty-four age group than for the eighteen to twenty age group. We cannot know what the smoking rates were for the persons whose smoking was measured at age eighteen to twenty, three or four years previously. Perhaps their smoking rates declined as well. However, based on examination of trends in current smoker share alone, it is difficult to see any major improvements in smoking rates except possibly for the eighteen to twenty age group.

176. Centers for Disease Control and Prevention, *State Tobacco Activities and Evaluation (STATE) System*, http://apps.nccd.cdc.gov/statesystem/Default/Default.aspx (last visited Oct. 7, 2010).

177. ORZECHOWSKI & WALKER, *supra* note 167, at 136-71. The decision to smoke was estimated using a probit model with robust standard errors (based on individuals who reported smoking "everyday" or "some days").

178. We created Figure 1, *infra*, using data from the Behavioral Risk Factor Surveillance System (BRFSS).

Figure 1. Smoking Rates Before and After the Relative to 1990



In multivariate analysis of BRFSS data, when controlling demographic, health factors, and state, but not for cigarette prices and state policies, the probability of being a current smoker was lower in the years prior to MSA implementation, particularly for individuals aged eighteen to twenty-four. Effects of the MSA on smoking rates were gauged by included binary variables for year with 1998, the year of MSA implementation, the omitted reference group. When prices and tobacco policies were added as explanatory variables, these effects generally increased in magnitude. The probability of smoking was ten percent lower for eighteen to twenty year olds, six percent lower ($p<0.001$) for twenty-one to twenty-four year olds, four percent lower ($p<0.001$) for twenty-five to sixty-four year olds, and one percent lower ($p<0.01$) for individuals ages sixty-five and over in 1993 versus 1998. The differences between pre-MSA years and 1998 were largest for 1993.

In the years following MSA implementation, smoking rates increased substantially from 1998 for individuals aged twenty-one to twenty-four. Starting in 2001, increases ranged from six to nine percent for ages twenty-one to twenty-four, and from six to eight percent for ages twenty-four to forty-four. For the twenty-one to twenty-five age group, increases in smoking rates continued throughout the later 2000s. Judging from the parameter estimates on the year variables, there were few statistically significant changes for the youngest and oldest age groups in the early 2000s, with three to seven percent declines in smoking rates from 2005-2007. When price and policy variables were added to the analysis, these differences in smoking rates become lower but generally remained statistically significant at conventional analysis, which is not surprising given the large sample sizes. These results are consistent with

Sloan and Trogdon's analysis, which concluded that most of any effect produced by the MSA on decreasing consumption was through increased cigarette prices.[179]

C. Empirical Evidence from the Literature on Causal Effects of the MSA on Cigarette Consumption, Demand for Other Addictive Goods, and Product Advertising

1. Impact of Price of Cigarettes on Cigarette Consumption

Until recently, the consensus estimate of the price elasticity of demand for cigarettes was -0.3 to -0.5 with -0.4 a mid-point, even though higher price elasticities have been obtained.[180] Using the mid-point, this implies that the twenty percent increase in price charged by the participating manufacturers immediately on implementation of the MSA would have decreased cigarette demand by about eight percent.[181] In fact, the decrease in cigarette sales the following year was 6.5%.[182] Economists distinguish between the extensive, whether or not any units of the good or service are consumed or not, and the intensive margin, or the amount consumed conditional on any units being consumed.[183] For the extensive margin, in a study of youth smoking, Gilleskie and Strumpf reported price elasticity for cigarettes of -0.48.[184] For the intensive margin, they reported a much higher price elasticity of -1.92, which was based on the difference between being a heavy smoker (eleven-plus cigarettes consumed daily) versus being a light smoker.[185] The latter elasticity implies a far higher response than actually occurred for smokers of all ages immediately following implementation of the MSA. Using data from a 1996 cross sectional survey of youth with a mean age of sixteen, Powell et al. focused on the effects of peer influences on cigarette consumption and obtained price elasticities for the extensive margin ranging from -0.49 to

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179. Sloan & Trogdon, *supra* note 171, at 852.

180. *See* Frank J. Chaloupka & Kenneth E. Warner, *The Economics of Smoking* 5-6 (Nat'l Bureau of Econ. Research, Working Paper No. 7047, 1999); Cutler et al., *supra* note 156, at 6-16; Lan Liang et al., *Prices, Policies and Youth Smoking*, 98 ADDICTION 105, 112-14 (2003); William N. Evans et al., *Tobacco Taxes and Public Policy to Discourage Smoking*, *in* 13 TAX POL'Y & ECON. 1, 4, 19-27 (1999), *available at* http://www.nber.org/chapters/c10920.pdf.

181. *See* Douglas E. Levy & Ellen Meara, *The Effect of the 1998 Master Settlement Agreement on Prenatal Smoking*, 25 J. HEALTH ECON. 276, 276-77 (2006).

182. Cutler et al., *supra* note 156, at 6.

183. John Cawley, Reefer Madness*, Frank the Tank, or* Pretty Woman*: To What Extent Do Addictive Behaviors Respond to Incentives?*, *in* INCENTIVES AND CHOICE IN HEALTH CARE 176-86 (Frank A. Sloan and Hirschel Kasper eds., 2008).

184. Donna B. Gilleskie & Koleman S. Strumpf, *The Behavioral Dynamics of Youth Smoking*, 40 J. HUM. RESOURCES 822, 824 (2005).

185. *Id.* at 836.

-0.18.[186] Gospodinov and Irvine estimated price elasticities for total cigarette consumption by educational attainment of the individual. Using data from Canada where cigarette prices are much higher than in the U.S.,[187] they did not find differences in price elasticities by educational attainment as price elasticities ranged from -0.22 to -0.34.[188]

Sloan and Trogdon used data from BRFSS to assess the effect of the settlements on demand for cigarettes at the extensive margin.[189] Using a nationwide sample from 1990 to 2002, the authors estimated a model of the decision to smoke cigarettes. The settlements affected smoking primarily through price increases for cigarettes, although there was evidence that other policy instruments influenced smoking rates for younger smokers.[190] By 2002, the settlements had reduced overall smoking rates by thirteen percent for persons aged eighteen to twenty and over age sixty-five, and five percent for persons aged twenty-one to sixty-four.[191] They obtained a U-shaped pattern with age for price elasticities at the extensive margin of (standard errors): -0.27 (0.14) for ages eighteen to twenty, -0.12 (0.08) for twenty-one to twenty-four, -0.10 (0.05) for twenty-five to forty-four, -0.10 (0.07) for forty-five to sixty-four and -0.25 (0.08) for persons aged sixty-five and over.[192]

Using quarterly time series data through 2002 for California, Sung et al. documented a decrease in cigarette sales of 2.4 packs per capita per quarter, which they attributed to the MSA-generated cigarette price increase in combination with an excise tax that nearly coincided with the MSA price increase.[193]

Levy and Meara focused on the cigarette demand response to the MSA price increase on the part of pregnant women. Again, they obtained price elasticities lower than had been estimated in the previous literature, but specifically for pregnant women: -0.12 overall; -0.40 for teenagers, and -0.35 for mothers aged thirty-five through forty-four. [194] The difference between the overall estimate and the estimates for teenagers and older pregnant women reflects a relatively low response to price changes of pregnant women in the middle age group.

The authors offered three reasons for the apparent decrease in price responsiveness relative to previous studies. First, given widespread publicity of

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186. Lisa M. Powell et al., *The Importance of Peer Effects, Cigarette Prices and Tobacco Control Policies for Youth Smoking Behavior*, 24 J. HEALTH ECON. 950, 963 (2005).

187. *See* Nikolay Gospodinov & Ian Irvine, *Tobacco Taxes and Regressivity*, 28 J. HEALTH ECON. 375, 375 (2009).

188. *Id.* at 380.

189. Sloan & Trogdon, *supra* note 171, at 844-45.

190. *Id.* at 843-44.

191. *Id.* at 852.

192. *Id.* at 848.

193. Hai-Yen Sung et al., *A Major State Tobacco Tax Increase, the Master Settlement Agreement, and Cigarette Consumption: The California Experience*, 95 AM. J. PUB. HEALTH 1030, 1031 (2005).

194. Levy & Meara, *supra* note 181, at 286.

the potential harms of smoking during pregnancy in 1998 relative to the publicity in previous decades, women who continued to smoke during pregnancy may have been relatively intransigent.[195] Second, they argued that state excise tax increases may be endogenous to cigarette consumption in the states.[196] That is, increases in excise taxes may follow increases in cigarette consumption. If so, causality runs from consumption to tax rates rather than the reverse, from tax rates to consumption. This would impart a negative bias (make the estimated effect more negative than it truly is). Third, most of the previous studies estimated cigarette demand responsiveness to excise price changes that were relatively small.[197] It may be inappropriate to extrapolate evidence on demand responsiveness to price from small price changes to the large price changes that occurred immediately following implementation of the MSA.

Results from another economic study are consistent with Levy and Meara's findings. Franks et al. used BRFSS data from 1984-2004 to estimate the probability that an individual was a smoker, again at the extensive margin.[198] They obtained separate estimates of price responsiveness for persons in the lowest quartile of the income distribution versus all other quartiles, separately for 1984-96 and 1997-2004.[199] The elasticities for the lowest income quartile group were -0.45 and -0.14 for the former and latter periods, respectively.[200] For the two highest quartiles, the price elasticities were -0.22 and -0.07, respectively.[201] The price elasticities were higher for low income persons, which implies that the MSA should have had a greater impact on consumption by the poor than the non-poor. However, the price elasticities appear to have declined over time for both income groups, which would reduce the price impacts of the MSA on smoking rates. A weighted average of the two elasticities for participation is -0.10, which is one-forth of the estimate that Cutler et al. used for their estimates of the savings in mortality cost attributable to the MSA.[202] A secular decline in the price elasticity of demand is plausible

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195. *Id.* at 290.

196. *Id.*

197. *Id.*

198. Peter Franks et al., *Cigarette Prices, Smoking, and the Poor: Implications of Recent Trends*, 97 AM. J. PUB. HEALTH 1873, 1873-74 (2007).

199. *Id.* at 875.

200. *Id.* Tests of statistical significance between parameter estimates for the high and low income groups and for the time periods are not presented. However, judging from the confidence intervals, the between group and time differences in the price elasticities of demand at the extensive margin are not statistically significant at conventional levels. However, the magnitudes of effect are quite different.

201. *Id.*

202. Cutler et al., *supra* note 156, at 11 n.23. *See also* Gregory J. Colman & Dahlia K. Remler, *Vertical Equity Consequences of Very High Cigarette Tax Increases: If the Poor are the Ones Smoking, How Could Cigarette Tax Increases be Progressive?*, 27 J. POL'Y ANALYSIS & MGMT. 376, 376, 383 (2008). Using data from the Current Population Survey Tobacco and March supplements

in that as smoking rates decline overall, more addicted individuals remain in the pool of smokers. Cigarette consumption by these individuals is plausibly less sensitive to price.

2. Impact of the MSA-Induced Cigarette Price Increases on Demand for Other Addictive Substances

The MSA plausibly has had an effect on demand for addictive substances other than tobacco products. Picone et al. used data from the first six waves of the Health and Retirement Survey (HRS) to analyze the effects of smoking bans and cigarette prices on alcohol consumption.[203] They found a positive effect of cigarette prices on alcohol consumption.[204] Hence, although the MSA reduced cigarette consumption to varying degrees through its effect on cigarette retail prices, the MSA increased alcohol consumption through its effect on cigarette prices.

3. Effects of the MSA on Advertising of Tobacco Products

One of the accomplishments of the MSA was to establish rules designed to curb some types of advertising of tobacco products, especially those aimed at youth, including the use of cartoon characters such as "Joe Camel," and billboard advertising. Initially, there was little or no change in magazine advertising of tobacco products aimed at either youth or adults.[205] Subsequently, there was a reduction in magazine advertising.[206] One major brand, Marlboro, stopped national magazine advertising entirely by 2003.[207] However, in 2006, Marlboro, Camel, and Newport cigarettes accounted for eighty-five percent of young smokers (ages twelve to seventeen), brands that are less popular among older smokers (ages eighteen and over).[208] In spite of some reductions in magazine advertising, there was no statistically significant reduction in consumption of the three top selling brands among youth between 2002 and 2006.[209]

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for 1993, 1996, 1999, 2001, 2002, and 2003, Colman and Remler obtained price elasticities of demand for cigarettes of -0.37, -0.35, and -0.20 for persons in low, middle, and high-income groups, respectively. *Id.* Even though Colman and Remler's data span both of the periods in the study by Franks et al., *supra* note 198, their price elasticity estimates are closer to those that Franks and coauthors obtained for the earlier period rather than for the latter period.

203. Gabriel A. Picone et al., *The Effect of the Tobacco Settlement and Smoking Bans on Alcohol Consumption*, 13 HEALTH ECON. 1063, 1064 (2004).

204. *Id.*

205. Charles King III & Michael Siegel, *The Master Settlement Agreement with the Tobacco Industry and Cigarette Advertising in Magazines*, 345 NEW ENG. J. MED. 504, 506 (2001).

206. Hillel R. Alpert et al., *After the Master Settlement Agreement: Targeting and Exposure of Youth to Magazine Tobacco Advertising*, 27 HEALTH AFF. w503, w503 (2008).

207. *Id.* at w505.

208. *Id.* at w506.

209. *Id.*

Although certain advertising practices were curbed by the MSA, U.S. cigarette companies actually increased advertising in the years immediately preceding and following the MSA.[210] Keeler and coauthors estimated that the immediate increase in cigarette prices following MSA implementation reduced cigarette consumption by 8.3%.[211] However, increased advertising partially offset this reduction, blunting the effect of the price increase by between thirty-three and fifty-seven percent.[212] However, a more recent review of the literature on effects of cigarette advertising on consumption of cigarettes concluded that overall effects of cigarette advertising in the U.S. on consumption of cigarettes are small and statistically insignificant.[213]

PART III. ECONOMIC IMPACT OF THE MSA ON THE PRODUCT MARKET FOR CIGARETTES

A. Overview

The U.S. cigarette industry historically provides an excellent textbook case of oligopoly. Before the MSA was implemented, in 1996, the top four firms in terms of sales had a combined ninety-eight percent market share.[214] There are substantial barriers to entry in the premium cigarette market.[215] Except for generic and discount brands, there has been no significant entry into the U.S. cigarette product market since World War II.[216] Factors impeding entry into this market are (1) brand loyalty of smokers, (2) the wholesale and retail distribution networks, which a market entrant would have to establish, and (3) the secular decline in demand for cigarettes in the U.S. coupled with the threat of tort liability.[217] It has been persuasively argued that by partnering with the State Attorneys General, these four cigarette manufacturers achieved an anticompetitive result that they could not have otherwise achieved without being prosecuted for violating federal antitrust law.[218] In particular, price was increased without the same loss of market share to competitors that would have occurred without MSA provisions being in place.

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210. *See* George A. Hay, *The Cigarette Industry*, *in* THE STRUCTURE OF AMERICAN INDUSTRY 122 (James W. Brock ed., 12th ed. 2009).

211. Theodore E. Keeler et al., *The US National Tobacco Settlement: The Effects of Advertising and Price Changes on Cigarette Consumption*, 36 APPLIED ECON. 1623, 1625 (2004).

212. *Id.* at 1628-29.

213. Jon P. Nelson, *Cigarette Advertising Regulation: A Meta-Analysis*, 26 INT'L REV. L. & ECON. 195, 217 (2006).

214. Hay, *supra* note 210, at 104.

215. *Id.* at 105.

216. *Id.*

217. *Id.*

218. *E.g.*, *id.* at 124.

B. Retail Pricing

Retail cigarette prices increased by more than per pack payments required by the MSA.[219] This is evident by the magnitude of MSA payments after 1998 with the total changes.[220] The largest increase was immediately after the MSA was implemented.[221] There was a spike in the real cigarette price, net of price discounts, immediately after the MSA was implemented.[222] Real net prices continued to increase after the first year post MSA, but at lower percentage rates.[223]

C. Profitability of U.S. Cigarette Manufacturers

At least at first glance, it would appear that imposing additional costs on U.S. cigarette manufacturers would cause their profits to decrease. However, as just discussed, real net prices of cigarettes increased by more than the cost increase immediately after the settlement was reached. Further, to protect market shares following the dramatic price increase, the MSA sought to level the playing field between participating and non-participating manufacturers, and, as a result, tobacco manufacturer profitability increased.

Sloan et al. assessed effects of the MSA and the four individual state settlements on tobacco company decisions and performance.[224] The authors used 10-K reports from the five major U.S. cigarette manufacturers

> filed with the US Securities and Exchange Commission, firm and daily data from the Center for Research in Security Prices, stock price indices, market share and advertising data, cigarette export and domestic consumption data, and newspaper articles . . . to assess changes before (1990-98) and after (1999-2002) the MSA was implemented.[225]

The main outcome measures were "[s]tockholder returns, operating performance of defendant companies, exports, market share of the original participants in the MSA, and advertising/promotion expenditures."[226] The analysis revealed that returns from investments in equity of cigarette manufacturers "exceeded returns from investments in securities of other companies, using each of four indexes as comparators. Domestic tobacco revenues increased during 1999-2002 from pre-MSA levels. Profits from domestic sales rose from levels prevailing immediately before the MSA."[227]

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219. *Id.* at 121-22.
220. Hay, *supra* note 210, at 122.
221. *Id.*
222. *See id.* at 111.
223. *See id.*
224. Frank A. Sloan et al., *Impacts of the Master Settlement Agreement on the Tobacco Industry*, 13 TOBACCO CONTROL 356 (2004).
225. *Id.* at 356.
226. *Id.*
227. *Id.*

The total market share of the OPMs decreased following MSA implementation.[228] "Total advertising expenditures by the tobacco companies increased at a higher rate than the 1990-98 trend during 1999-2002, but total advertising expenditures net of spending on coupons and promotions decreased."[229] The authors concluded that "[t]he experience during the post-MSA period demonstrates that the MSA did no major harm to the companies. Some features of the MSA appear to have increased company value and profitability."[230]

More recently published data suggest that U.S. cigarette company profitability declined between 2002 and 2005 although the trade margin (reflecting the difference between per pack price received by the manufacturers and the net retail price) increased.[231] These data show a decrease in both trade margins and manufacturer operating profit between 1997 and 2002.[232] During both 1997-2002 and 2002-2005, there were appreciable increases in advertising and marketing expenses as well as in federal and state excise taxes.[233] Although national magazine advertising decreased, this was not true for marketing and advertising overall. One likely source of the decline in profitability during the early 2000s was the growth in market share of discount brands.[234] As discussed in detail elsewhere, settling states enacted new statutory provisions to compel NPMs to make payments similar to the ones the PMs were subject to, which in turn served to protect PMs' market shares.[235]

D. Cost of Equity Capital to U.S. Cigarette Manufacturers

Another effect of the MSA was to reduce the cost of equity capital to U.S. cigarette manufacturers. Sloan et al. studied how the recent wave of tobacco litigation (including the lawsuits leading to the MSA) affected stock returns and systematic risk in the cigarette industry.[236] The authors tested for changes in stock prices coinciding with litigation announcements using a difference-in-difference event study methodology. Unfavorable information concerning litigation reduced returns on cigarette manufacturer quality. However, the major cigarette manufacturers benefited from a decline in systematic risk as measured by the covariance between industry returns and returns to a

228. *Id.*
229. *Id.*
230. Sloan et al., *supra* note 224, at 356.
231. Hay, *supra* note 210, at 121-22.
232. *Id.* at 122.
233. *Id.*
234. *Id.*
235. *Id.* at 124.
236. Sloan et al., *supra* note 224, at 356. Systematic risk is sometimes termed systemic or nondiversiable risk.

diversified (efficient) portfolio. From the vantage point of advocates for tobacco control, this was an unintended consequence. This decline in systematic risk implied a substantial decline in the cost of equity capital to U.S. domestic cigarette manufacturers.[237]

E. The MSA's Influence of on Competition Among Cigarette Manufacturers

In 1997, the year before the MSA was implemented, the four OPMs had a 98.2 percent market share in the U.S.[238] By 2003, their combined share had declined to 86.1 percent.[239] Their combined market share fell between 2003 through 2006 and recovered slightly in 2007.[240] The tobacco manufacturing industry then, and for years previously, was oliogopolistic.[241] Potential entry of other manufacturers may have provided some price discipline, but for all practical purposes, such entry had not yet occurred. The key anticompetitive feature of MSA was the imposition of payment obligations on NPMs which would have the effect of deterring entry. Without potential competition, the OPMs have greater market power than they otherwise would have had.

F. Rationale for Imposing Payment Obligations on Both Participating and Non-Participating Manufacturers

There is a rationale for imposing costs on NPMs as well as PMs. To the extent that smokers generate externalities, either health or financial, there is a case for imposing the same per unit tax on all cigarettes sold in the country, no matter which company produced them. Some experts have argued for taxation based on the argument that smokers require a self-control device to reduce smoking.[242] High prices on cigarettes serve as a self-control device. But this justification for higher product prices does not give a reason for taxing cigarettes from different manufacturers differently.

G. Provisions of the MSA Affecting Competition Among Cigarette Manufacturers

MSA provisions affect both fixed and variable costs of manufacturers. Payments that are unrelated to volume are fixed costs, which only can be

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237. *Id.* at 360.

238. John A. Tauras et al., *The Role of Retail Prices and Promotions in Determining Cigarette Brand Market Shares*, 28 REV. INDUS. ORG. 253, 255 (2006).

239. *Id.*

240. National Association of Attorneys General, *Tobacco Product Manufacturers' Market Shares and Potential NPM Adjustment Amounts, Sales Years 2003–2009*, http://www.naag.org/backpages/naag/tobacco/msa-payment-info/2010-0427_Tobacco_Product_Manufacturers_Market_Shares_ and_Potential_NPM_Adjustment_Amounts.pdf (last visited Oct. 31, 2010).

241. *See, e.g.*, LEONARD W. WEISS, ECONOMICS AND AMERICAN INDUSTRY 18-20 (1961) ("The term *oligopoly* is used to describe an industry where price and production decisions are dominated by a few firms instead of just one.").

242. *See, e.g.*, Jonathan Gruber & Botond Köszegi, *Tax Incidence When Individuals are Time-Inconsistent: The Case of Cigarette Excise Taxes*, 88 J. PUB. ECON. 1959 (2004).

eliminated by exiting the industry. At some point, a sufficiently high annual fixed cost could cause a firm to exit. A high fixed cost may deter entry to the extent that it makes anticipated economic profit negative. By contrast, those that vary according to volume are variable, thus affecting the marginal cost of producing a cigarette and output of firms in the industry as well as the exit-entry decision.

The largest single categories of MSA payments are Initial Payments and Annual Payments. In addition, there are base foundation,[243] education fund,[244] NAAG activity,[245] and attorneys' fees payments.[246] Only OPMs make Initial Payments.[247] The first such payment was based on OPMs' market capitalizations rather than on OPMs' market shares.[248] Subsequent Initial Payments were made in January of each calendar year.[249]

The MSA set an aggregate base payment for OPMs, the Initial Payment,[250] which was allocated among the OPMs based on each OPM's *relative* market share (an individual OPM's share in total sales of all OPMs) measured in terms of cigarettes sold in the U.S. during the previous calendar year.[251] The MSA defines categories of payments. Initial Payments are fixed;[252] however, Subsequent Initial Payments are subject to a volume adjustment.[253] Thus, any OPM lost sales translates into lower Subsequent Initial Payments. The payment obligation of SPMs is based on the ratio of their aggregate market share to the OPMs' market share.[254] The MSA contains a financial incentive for manufacturers to become SPMs within ninety days of the execution date of the MSA.[255] These payments, as well as Annual Payments and education fund payments, are subject to a volume adjustment.[256]

All PMs pay Annual Payments in perpetuity starting on April 15, 2000.[257] These payments began at $4.5 billion in 2000 and will rise to $9 billion in 2018 and remain constant at this level thereafter.[258] By contrast, the first Initial Payment was $2.4 billion.[259] In 2000, the Subsequent Initial Payment was

243. Master Settlement Agreement, *supra* note 76, at § VI(b).
244. *Id.* § VI(c).
245. *Id.* § VIII(b).
246. *Id.* § XVII.
247. *Id.* § IX(b).
248. *Id.*
249. Master Settlement Agreement, *supra* note 76, at § IX(b).
250. *Id.*
251. *Id.* § II(mm).
252. *Id.* § IX(b).
253. *Id.*
254. *Id.* § IX(i).
255. Master Settlement Agreement, *supra* note 76, at § IX(i).
256. *Id.*
257. *Id.* § IX(c).
258. *Id.*
259. *Id.* § IX(b).

roughly $2.5 billion.[260] Annual Payments are subject to several adjustments including the adjustments for inflation, volume (based on data from the prior year), a Previously Settled States Reduction, and an NPM Adjustment.[261] The inflation adjustment specifies updating all measures expressible in pecuniary terms by the greater of either three percent or the increase in the Consumer Price Index.[262] The MSA provides a credit for some payments made previously to the states that settled independently prior to implementation of the MSA.[263]

The most controversial feature of the MSA payment provisions, at least as far as its implications for competition is concerned, is the NPM Adjustment, which applies to Annual Payments made by the PMs in 2000 and subsequently.[264] For the NPM Adjustment to apply, the following conditions must be satisfied: (1) the PMs' market share in the year in question must have declined by more than two percentage points relative to their combined market share in 1997; (2) the volume of cigarette sales of the PMs must not have increased from 1997 to the year in question; and (3) a causal link between competitive disadvantages resulting from provisions of the MSA and the loss of PM market share must be established.[265] If an NPM Adjustment applies, then Annual Payments are reduced by a percentage.[266]

A state can avoid this penalty by enacting and diligently enforcing a Qualifying Statute for the entire year in question.[267] A Model Statute was drafted by the National Association of Attorneys General (NAAG) to serve as a guide to states.[268] As of 2003, all states had enacted a version of the Model Statute.[269] States adopting laws containing key features of the Model Statute do not suffer a payment penalty. Rather, the reduction is to be allocated among states that do not qualify according to their allocable shares.[270] This provision gives states a financial incentive to enact a Qualifying Statute.

A Qualifying Statute must neutralize the competitive advantage that an NPM would have vis-à-vis PMs absent the statutory provisions.[271] The MSA thus specifies that states will establish reserve funds from which compensation would be paid in the event that NPMs are successfully sued. Under the Model

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260. *Id.*

261. Master Settlement Agreement, *supra* note 76, § IX(b).

262. *How the MSA Volume Adjustment is Calculated*, CAMPAIGN FOR TOBACCO-FREE KIDS 4, http://tobaccofreekids.org/research/factsheets/pdf/0131.pdf.

263. Master Settlement Agreement, *supra* note 76, § XII.

264. *Id.* § IX(c).

265. *Id.* § IX(d).

266. *Id.*

267. *Id.* § IX(d)(2)(B).

268. Master Settlement Agreement, Exhibit T, Model Statute, http://ag.ca.gov/tobacco/pdf/toc_exhibits.pdf [hereinafter Model Statute].

269. *See* Eric Lindblom, *Cigarette Company MSA Payment Withholdings: The NPM Adjustment Threat & How States Can Fight Back*, CAMPAIGN FOR TOBACCO-FREE KIDS (Apr. 24, 2008), http://www.tobaccofreekids.org/research/factsheets/pdf/0293.pdf.

270. Master Settlement Agreement, *supra* note 76, § IX(d)(2)(C).

271. *Id.* § IX(d)(2)(E).

Statute, NPMs are to contribute an amount per cigarette sold in the state and year into an escrow account.[272] Initially, NPMs had up to sixteen months to place funds into an escrow account.[273] These amounts are to be at levels equal to the per cigarette payments owed by the SPMs as Annual Payments.[274] Escrow payments are held for twenty-five years and then returned to the NPM unless they were used to pay a tort claim against the NPM.[275] Further interest on the NPM accounts is returned to the NPM as it is earned. Thus, even if payments into the escrow accounts are roughly equivalent to payments that SPMs make, the present value of the cash payments is likely to be quite different.

The Model Statute contains a provision for immediate release of funds placed in the escrow account in excess of a certain threshold with the threshold defined as the dollar amount that the NPM would pay the state if the NPM were a PM ("Allocable Share Release" or ASR).[276] Thus, if the share of total payments from the company to a state were three percent, the NPM would be entitled to a return of ninety-seven percent of the monies in the escrow account to the NPM. This provision is particularly beneficial to those NPMs whose sales are concentrated in one or a few states, as many NPMs' sales are. The Model Statute also contains a provision requiring that sixteen months elapse until the state can bring action to enforce the statute's provisions.[277] These features and others provided important incentives for companies to retain NPM status.

H. How a MSA-derived Competitive Advantage Accruing to NPMS Could Affect Market Shares

Total unadjusted OPM payments reached a peak in 2002, when they amounted to roughly $10.3 billion (Table 4).[278] Such payments fell somewhat after 2002 because there were no additional obligations for Initial Payments or payments into the public education fund. By 2004, OPMs' total unadjusted

272. Model Statute, *supra* note 268.
273. *Id.*
274. *Id.*
275. *Id.*
276. *Id.*
277. Tauras et al., *supra* note 238, at 260.
278. The payments are unadjusted for the penalty for states' failure to impose equal costs on PMs and NPMs. THE BRATTLE GROUP, FINAL DETERMINATION PURSUANT TO NPM PROCEDURES AGREEMENT § 19 IN THE 2003 NPM ADJUSTMENT PROCEEDING PURSUANT TO MASTER SETTLEMENT AGREEMENT § IX(d)(1)(C) 32 (2006), *available at* http://www.effwa.org/pdfs/msa1.pdf [hereinafter THE BRATTLE GROUP].

payments were $8.5 billion.[279] In the same year, total payments by SPMs, also unadjusted for volume, were almost as high ($8.0 billion, Panel B).[280]

Table 4. PM Unadjusted Payments by Year Obligation Was Incurred (mil. $)[281]

	1998	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**
Panel A: Original Participating Manufacturers							
Base Foundation	25	25	25	25	25	25	25
Public Education Fund	250	300	300	300	300	0	0
Initial	2,400	2,472	2,546	2,623	2,701	0	0
Annual	0	4,500	5,000	6,500	6,500	8,000	8,000
NAAG Activities	a	50	a	a	a	a	A
Cap on attorneys' fees	0	750	750	750	750	500	500
Total	2,675	8,097	8,621	10,198	10,276	8,525	8,525
Panel B: Subsequent Participating Manufacturers							
Public Education Fund	0	300	300	300	300	0	0
Annual	0	4,500	5,000	6,500	6,500	8,000	8,000
Other	0	0	0	0	0	0	0
Total	0	4,800	5,300	6,800	6,800	8,000	8,000
a= $150,000							

One set of experts calculated marginal costs per pack for OPMs, SPMs, and NPM state escrow accounts as well as OPM average cost per pack (Table 5).[282] In 2004, the OPM average cost per pack was $0.37.[283] Meanwhile, the mean retail price of a pack of cigarettes was $4.07 in that year.[284] Marginal cost was highest for SPMs at $0.41, followed by OPMs' marginal cost at $0.34.[285] By contrast, marginal cost to NPMs was only $0.05.[286] Thus, the competitive advantage in marginal cost was almost $0.30 more for the NPMs than for other cigarette manufacturers. The marginal costs do not take into account Initial Payments made by the OPMs, which after 2002 were sunk costs. After they were paid, these costs affected the companies' balance sheets but had no influence on the income statements.

279. *Id.*
280. *Id.* at 33.
281. This table is derived from *id.* at 32-33.
282. *Id.* at 35-36.
283. *Id.* at 36.
284. ORZECHOWSKI & WALKER, *supra* note 167, at 162.
285. THE BRATTLE GROUP, *supra* note 278, at 36.
286. *Id.*

Table 5. Marginal cost Per Cigarette Pack ($)

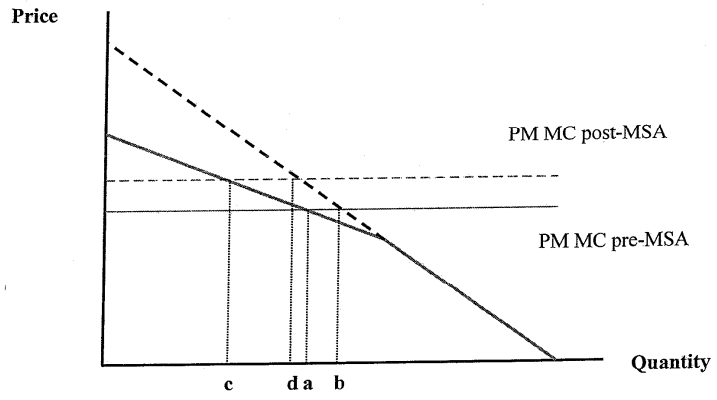
	Year Payment Obligation was Incurred					
	1999	**2000**	**2001**	**2002**	**2003**	**2004**
OPM	0.271	0.296	0.372	0.386	0.333	0.342
SPM	0.207	0.242	0.318	0.333	0.402	0.407
NPM State Escrow	0.021	0.04	0.052	0.048	0.066	0.047
OPM average cost	0.300	0.319	0.395	0.411	0.356	0.366

The discount share of the product market for cigarettes has grown since late 1998. The market share of NPMs and SPMs has also grown, although the latter has not increased as much as the former.[287]

To see the effects of the competitive advantage enjoyed by the NPMs graphically, assume the following effects are limited to the discount market: cigarette products in the discount market are undifferentiated; the concentration of output in the U.S. cigarette industry can be ignored; and PMs are treated as a single manufacturer—both PMs and NPMs are assumed to be price-takers. Also, the PMs are able to sell output that is not supplied by the NPMs. In other words, they face a "residual demand," which is total demand for the product less the amount supplied by the NPMs (Fig. 2). [288] At a certain price, NPMs enter the U.S. market. The more NPM cigarettes are sold in the U.S. market at higher cigarette prices, the more NPM output is sold at higher prices. This entry point reflects costs of production in the countries where the NPMs are domiciled, transportation costs to the U.S., U.S. tariffs, and other factors. At prices above the NPM entry price, the residual demand curve facing the PMs lies below the market demand curve (which is shown as a dotted line). The increasing distance between the two demand curves reflects the increasing supply forthcoming from NPMs at higher prices. Prior to implementation of the MSA, marginal (=average) cost is given by PM MC pre-MSA. After the MSA is implemented, but with a competitive advantage enjoyed by the NPMs, marginal cost rises to PM MC post-MSA. Before implementation of the MSA, PMs sell 0a units and NPMs sell the rest, ab units. With the PMs facing a higher marginal cost and NPMs facing marginal cost less than this, its cost is unchanged after the MSA, OPMs sell 0d units and NPM sales increase from ab to cd units.

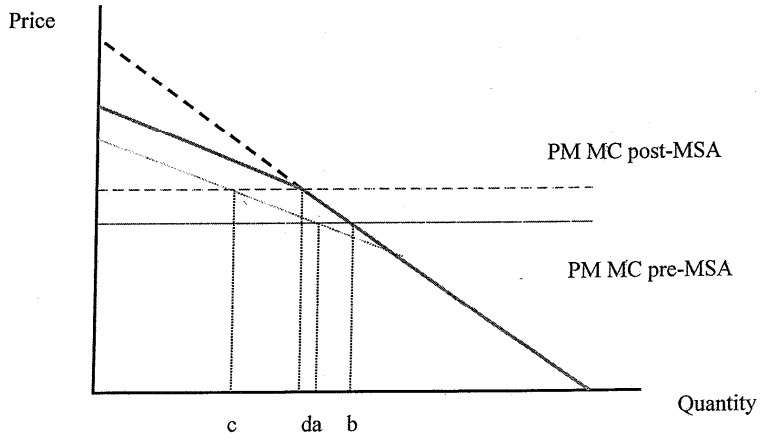
287. *Id.* at 38, 39, 41.
288. *Id.* at 113.

Figure 2. Discount Cigarette Market: Pre-MSA and Post-MSA with NPM Cost Advantage



Now suppose that the cost disadvantage is eliminated (Fig. 3).[289] The NPMs now face a marginal cost curve of MC_1. Now they enter the market at a higher price $p_{e'}$. The PMs still sell 0d units. However, the NPMs have been eliminated from the market, because NPMs' sales are reduced and represent less of a competitive threat since eliminating the cost differential serves as an added barrier to NPM entry.

Figure 3. Discount Cigarette Market: Post-MSA with NPM Cost Advantage Neutralized



289. *Id.* at 114.

I. Parallels Between MSA Provision for NPM Adjustment and the Application of the Negligence Rule

The process for determining whether or not the NPM Adjustment applies has parallels to the negligence rule. First, there is a determination of whether or not PMs were injured. The PMs must demonstrate loss of market share above a threshold of two percent. A loss of less than two percent between the year in question and 1997 was apparently considered to be too small to merit consideration of the other criteria. Second, there is causation. Did a competitive advantage accruing to NPMs cause the reduction in market share? Third, were the states negligent in enforcing their legal obligations under the MSA? States are considered not negligent if they passed a Qualifying Statute neutralizing sources of competitive advantages accruing to NPMs in its absence. The injury is easily established and is not in dispute. There is considerable room for disagreement on causation and breach.

J. Empirical Evidence on State Enforcement of NPM-related Provisions of the MSA

1. Context

The OPMs are participating in proceedings that may result in downward adjustments to the amounts paid by the OPMs and other PMs for the years 2003-2005. An independent consulting firm, the Brattle Group, was charged with making an interpretation as to whether the competitive disadvantages of the MSA to PMs were a "significant factor" in the loss of PM market share.[290] We discuss these proceedings in considerable detail here because they illustrate the substantial cost of administering the MSA. We focus on this example because the Brattle Report was made public pursuant to the freedom of information laws.[291] Subsequent proceedings remain secret, but the report is just the type of independent economic analysis, described in this section, that the parties apparently seek to avoid.

Each state can avoid the downward adjustment by demonstrating that it diligently enforced a qualifying escrow statute during the entire year. There is a dispute between the companies and the states about whether the MSA's arbitration clause requires a state to submit its claim that it has diligently enforced a qualifying escrow stature to an arbitrator. Some states have taken the position that this matter should be decided by a state court.[292]

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290. THE BRATTLE GROUP, *supra* note 278, at 5. The Brattle Group has been replaced. Its successor has not been publicly announced. This is an example of the secrecy of MSA administration.

291. Hall, *supra* note 145.

292. ALTRIA GROUP, INC., 2007 ANNUAL REPORT 83 (2008).

Enforcement is discussed first because there are issues in dispute. Further, there is less information on enforcement than on causation—or, the "significant factor" determination.[293] The firm responsible for adjudicating disputes among the parties, the Brattle Group, took the position that compliance with the MSA was only to be ascertained after a finding of causation; the states opposed this position.[294]

The National Association of Attorneys General (NAAG) proposed an Allocable Share Amendment by early 2003, which prohibited release of escrow funds unless the payments placed in escrow were greater than the amount the NPM would have paid on a national basis if it were an SPM. The Amendment effectively repealed the Allocable Share Release (ASR).[295] Between 2003 and 2006, all but a few states, including the four previously settled states, enacted this model legislation.[296] By 2007, forty-five of the forty-six signatory states enacted laws amending the ASR provision to eliminate the loophole that allowed for early release of escrow monies.[297] In addition, states have required that NPMs must certify that they are in compliance with the state's Model Statute.[298] States also prohibit affixing a tax stamp on tobacco products of manufacturers not in compliance with the law.[299] Although there is some descriptive evidence that the repeal of the ASR led to a decrease in the NPMs' market share starting in the year following repeal, tests of statistical significance are lacking. The marginal cost estimates in Table 5 do not increase even though fourteen states repealed this provision in 2003 and twenty repealed it in 2004. The 2004-enacted laws may have been late to have affected the 2004 marginal cost estimates for the NPMs.

As of 2007, four states also imposed special taxes on NPMs to reduce their competitive advantages. Labeled as an "equity assessment," the tax is imposed on NPMs in addition to escrow payments required by all but one signatory state. Alaska, Michigan, Minnesota, and Utah, have enacted "equity

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293. THE BRATTLE GROUP, *supra* note 278, at 52-54. For instance, at issue is whether the states failed to exercise diligence in enforcing provisions of the MSA that would reduce or eliminate any competitive advantage the NPMs had (that the NPMs' competitive advantage actually led to an increase in NPM's market share).

294. *Id.* at 52.

295. National Association of Attorneys General, Amendment Number 21 to the Master Settlement Agreement, *available at* http://www.naag.org/backpages/naag/tobacco/msa/amendments/CommonwealthBrandsAmendment21.pdf. *See* Philip Morris USA, *Legislative & Other Issues*, PM USA MSA DESK REFERENCE GUIDE at 2, 4 (Oct. 2007), http://www.tobaccoissues.com/pdf/tobacco_settlements/6_LegOther.pdf.

296. Philip Morris USA, *supra* note 295, at 2, 4.

297. *Id.* at 4. As of 2009, Missouri was the only signatory state to not have enacted the ASR amendment. *See* MO. ANN. STAT. § 196.1003 (West 2009).

298. Tauras et al., *supra* note 238, at 260.

299. *Id.*

assessments" on NPMs' products.[300] Other states, such as Tennessee, have introduced bills without success.[301]

2. The Threshold on Causation Specified in the MSA and Its Implications for Empirical Analysis of Causation

The MSA requires that the competitive advantage enjoyed by the NPMs be a significant factor in the change in the actual market shares. The companies asserted that a "significant factor" must be more than negligible but need not be "major" or "large."[302] By contrast, the states argued that "significant" means "major, substantial, and important."[303]

Further, there were disputes between the parties about (1) whether a two percentage point threshold for the loss should be considered in determining the importance of the NPM competitive advantage in contributing to loss of market share or only as a threshold for determining whether the loss should be calculated, (2) its use for purposes of calculating the adjustment, and (3) the extent of the loss attributable to the MSA which is to be considered to be "significant."[304]

3. Analytic Approach for Establishing Causation

To establish causation, it is necessary to estimate market shares in a counterfactual world in which everything is identical, except for the failure to enforce a provision that led to the NPMs' alleged competitive advantage. To accomplish this, one should estimate market shares in a baseline case in which the relevant provisions do not exist. This in turn should be compared to the actual market shares as they evolved over time. The difference between the actual market shares and the counterfactual shares represents the change in shares attributable (or lack of enforcement) to the provisions. The *actual* change in market shares represents the total change in shares. The measure of relative importance of the effect of provisions in the total change is the change attributable to the competitive advantage, divided by the total change in shares.

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300. REYNOLDS AM. INC., ANNUAL REPORT (FORM 10-K) 96 (Feb. 27, 2007), *available at* http://www.reynoldsamerican.com/secfiling.cfm?filingID=950144-07-1653. It is important to note that Minnesota is one of the four previously settled states.

301. Tennessee Governor Bredesen vetoed proposed legislation that would have assessed a fifty cent per pack fee on NPMs. *See* Press Release, Gov. Bredesen Vetoes R.J. Reynolds Sponsored Equity Fee Legislation That Hurt Small Cos. and Endangered State MSA Tobacco Money (June 20, 2005) (on file with authors).

302. THE BRATTLE GROUP, *supra* note 278, at 67.

303. *Id.* "Significant" is not defined in the MSA in operational terms.

304. *Id.* at 58-59.

While the above generalization is not controversial, in a dispute about whether or not a reduction in company payments' to be made under terms of the NPM Adjustment was appropriate, the states contended that the valid counterfactual was market shares without the MSA, not the competitive disadvantages experienced by the PMs after the MSA was implemented. The companies argued that the valid counterfactual was market shares in a world with the MSA in which the OPMs suffered no competitive disadvantage vis-à-vis the NPMs.[305] The original intent of the NPM adjustment and related MSA provisions was presumably to eliminate any competitive disadvantage to PMs that might otherwise result from implementation of the MSA.

It is possible that even if the OPMs had suffered no competitive disadvantage under the MSA, as it was actually administered, the OPMs, or even all PMs, would have lost market share. An increase in the price of cigarettes would have reduced smokers' real incomes. This may have not only adversely affected cigarette consumption overall because of the usual income and substitution effects, but the loss of purchasing power (the income effect) could have led some consumers to switch from brand to discount cigarettes, the latter more likely to be sold by NPMs. For this reason, a control group in which the competitive advantage of the NPMs was eliminated by subtracting the difference of OPM and NPM payments from OPM payments would not provide a valid approach either. Further, since the NPM market share is small, increasing their costs would not have as much of an effect on overall demand for cigarettes in the U.S. market as decreasing the costs of OPMs or PMs more generally would.[306]

The next analytic step is to determine whether or not the fraction of market share lost by OPMs reflects a "significant factor." The MSA's language on "significance" is imprecise. Empirical researchers typically use the term "significant" to refer to statistical significance. When statistical significance is lacking, the convention is to accept the null hypothesis of no relationship. Another concept is whether the change is sufficiently large to be meaningful or important, e.g., "economically significant" (economics) or "clinically significant" (medicine). Application of this latter concept is inherently subjective. Plausibly, this is what the drafters of the MSA intended to say, with the details to be crafted later.

After deciding on the relevant comparison group, a decision must be made on how to quantify the cost disadvantage. In measuring the cost disadvantage, the states distinguished between direct and indirect cost disadvantages. The companies argued that all competitive disadvantages should be considered.[307] The companies' argument is more compelling. It is not clear how one could operationally and consistently distinguish between "direct" and "indirect"

305. *See id* at 73-74.
306. *Id.* at 48.
307. *Id.* at 51-52.

disadvantages, and whether a consensus could be developed around the distinction between direct and indirect.

Market share is a function of retail prices paid by consumers, not factoring in costs incurred in the manufacture of cigarettes. The fact that retail prices have risen by more than the per cigarette cost of the MSA implies that at least part of the loss in market share may have been due to overshifting rather than the competitive advantages accruing to NPMs.[308] Overshifting is a likely response to an increase in factor costs incurred, such as in an excise tax, when all firms in a product market face the same increase in an input price simultaneously. Overshifting has been documented in response to cigarette excise tax increases as well as in other contexts.[309] Some companies argued that nothing in the MSA requires the companies to deviate from profit-maximizing behavior.[310] So, the additional price mark-up should be counted as part of the competitive disadvantage PMs faced.[311] This is a rather bizarre argument, especially because one reason that overpricing may have been profitable is that it would lead to a loss of PMs' market share, and hence provide a rationale for a reduction in MSA payments by the PMs. We agree with the Brattle Group's view that PMs' cost disadvantage is the relevant measure for purposes of assessing causes of PMs' loss of market share.[312]

4. Burden of Proof

The parties to the dispute about the appropriateness of an NPM Adjustment also disagreed about which party should bear the burden of proof.[313] Ordinarily, in a legal proceeding the burden of proof would fall on the party seeking affirmative relief, e.g., compensation. This was the position of the states, which argued that the PMs had the burden of proof in seeking reductions in their MSA payment obligations.[314] Conversely, the companies argued that in the case of the MSA, an erroneous determination would be more costly if there was a mistake in favor of the states than the reverse, but the states argued that a mistake in favor of the manufacturers would be more costly to society.[315] Further, the MSA assigned no burden of persuasion, and the Procedures Agreement does not refer to a party which bears the burden of

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308. *See* Timothy J. Besley & Harvey S. Rosen, *Sales Taxes and Prices: An Empirical Analysis*, 52 NAT'L TAX J. 157, 166 (1999) (explaining overshifting).

309. Paul G. Barnett et al., *Oligopoly Structure and the Incidence of Cigarette Excise Taxes*, 57 J. PUB. ECON. 457, 467-68 (1995) (discussing the impacts of federal and state excise taxes on the price of cigarettes).

310. THE BRATTLE GROUP, *supra* note 278, at 55.

311. *Id.*

312. *Id.* at 62, 65.

313. *Id.* at 70-73.

314. *Id.* at 70-71.

315. *Id.* at 70-73.

proof.[316] Brattle concluded that the MSA does not place the burden of proof on any specific party to the dispute.[317]

5. Opinions of Economic Experts About Causation in the NPM Adjustment Proceeding

Between 1997 and 2003 the share of the six largest U.S. cigarette manufacturers in the U.S. cigarette market, including all large PMs, declined from 98.2 percent to 86.1 percent.[318] At issue was whether the competitive advantages enjoyed by NPMs, until the ASR provision was revoked by states starting in 2003, were significant factors in the reduction in observed PMs' market share.[319] After 2003, market shares stabilized.

Experts for both the states and the companies were appointed and performed separate analyses of the loss in PMs' market share. Experts prepared at least two reports. The latter reports permitted the experts to adjust the empirical methodology to responses from previous criticisms of the other experts. After the experts had submitted their final reports, the firm, which initially was the Brattle Group, performed its own analysis in an attempt to reconcile the conflicting findings of the various experts.[320]

The states, through their experts Jonathan Gruber and Robert Pindyck, argued in their initial comments that many factors other than the MSA influenced market share changes after the MSA was implemented.[321] These other factors included: a trend toward the purchase of discounted goods in general, not limited to tobacco products that the OPMs had intentionally ceded the discount market by not setting competitive prices for their premium products during 1993-1998; changes in exchange rates and tariffs, and demographic changes including the aging of the U.S. population—older smokers more likely to smoke discount brands than others; increased cigarette excise taxes; and increased internet purchasing and use rates of smuggled and counterfeit cigarettes.[322] Gruber and Pindyck argued that although none of these factors was important individually, collectively they were of importance and should be considered in analyzing determinants of market share changes that occurred in the post MSA-implementation period.[323]

In their initial analysis, Bresnehan, Farber, and Ashenfelter, using a difference-in-difference analysis, found a per store reduction of 2.7 percentage points in the NPM market share in states that repealed the ASR provision and

316. THE BRATTLE GROUP, *supra* note 278, at 73.

317. *Id.*

318. Tauras et al., *supra* note 238, at 255.

319. The majority of participating states enacted an allocable share amendment eliminating the loophole by 2003. *See* Lindblom, *supra* note 269, at 4-5.

320. THE BRATTLE GROUP, *supra* note 278, at 115. Brattle Group's successor is not public information.

321. *Id.* at 75.

322. *Id.* at 75-83.

323. *Id.*

enacted other laws reducing the NPM advantage.[324] When only discount cigarette products were considered, the change in NPM market share was much larger at 9.1 percentage points.[325] The difference-in-difference analysis should have eliminated time invariant factors influencing demand not related to the competitive advantage, but some pertinent factors, such as those listed by Gruber-Pinkyck, are time-varying. To account for these changes, additional analysis with respect to the time-varying factors was needed.

K. Empirical Analyses by the Parties' Economic Experts

The dependent variables of direct interest were measures of market share. Key explanatory variables were measures of prices, both PM and NPM, and for branded and discount cigarettes. However, market shares and prices are likely to be simultaneously determined. That is, not only do prices affect market shares of individual companies, which are what the effect analysts want to measure, but market shares also affect prices. Prices reflect payment obligations under the MSA and other factors. A change in price charged by a particular company affects demand for that company's product as well as the demand for all other sellers in the same product market. Discount products are plausibly very close substitutes to one another, branded products presumably less so. In any case, one expects cross elasticities of demand among individual cigarette products to be non-trivial.

In addition to measuring effects of competitive advantage operating through product prices on market shares, it was essential to consider other factors potentially affecting demand and market shares. The experts did not include specific variables for such factors as tariffs and transportation costs. Rather, they included variables for identifying particular years relative to implementation of the MSA and, in some cases, area or store fixed effects (binary variables identifying particular geographic areas or individual retailers). The fixed effects presumably were correlated with tariffs and transportation costs and other relevant factors.

Most studies appear to have used the same databases, but details on the sources of data were redacted in the public version of the report, with one exception which probably was an oversight.[326] The observational unit was a period of four weeks or longer. The observational period extended through

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324. *Id.* at 101.

325. *Id.* at 101-02.

326. THE BRATTLE GROUP, *supra* note 278, at 7-9 (details of databases eliminated from public release version), 88 (portion of Kevin Murphy's testimony eliminated), 87, 95, 100 (portions of Jon Gruber and Robert Pindyck's testimony eliminated), 135 (the Brattle Group's assessment of Murphy's and Tim Bresneban's analysis eliminated), 109, 138, 140, 142-45 (further discussion of the Brattle Group's analysis eliminated), 110 (summary of instrumental variables used by the parties eliminated).

2005. The studies differed in the functional form of the equations as well as in their estimation methods.

One contested issue involved the choice of instrumental variables that experts generally argued were needed to account for endogeneity of cigarette prices.[327] Gruber and Pindyck, whose clients were the states, argued that no appropriate instrumental variables were available.[328] This view was rejected by the experts for the companies as well as by the Brattle Group.[329] Another disagreement was whether market shares should be measured in terms of quantities of cigarettes sold or in expenditures on various products. Expenditures were more appropriate for one of the analyses and were used by the Brattle Group in an attempt to reconcile the divergent findings of the experts. The precise details of each expert's analyses are not important here. Rather, the details serve to emphasize the complexity of showing that failure to enforce the NPM escrow provisions caused the PMs to lose market share and to quantify the extent of such loss attributable to such inaction on the part of the states.

L. Brattle Group's Attempt to Reconcile the Experts' Findings and its Conclusion

The Brattle Group estimated several models to reconcile the conflicting findings of the experts. Based on its reanalyses, it concluded:

> [H]ad NPMs uniformly experienced MSA-related marginal costs equal to those of grandfathered SPMs, there would have been a reduction in the NPM share gain of from 3.5 to 4.0 percentage points. A reasonable economist would view a factor that explained 3.5 to 4.0 percentage points of a 7.95 percent impact as having significant explanatory power . . . . The Firm therefore concludes that MSA disadvantages were a significant factor in the Market Share Loss.[330]

The fact that the NPMs' market share increased markedly after 1998 and decreased after 2003, when the escrow provisions began to be enforced, is consistent with these findings.[331]

In March 2006, the Brattle Group determined that the disadvantages of the MSA were a significant factor in causing the PMs' collective loss of market share in 2003.[332] In February 2007, the same firm reached the same conclusion about 2004.[333] As of late 2007, a decision about 2005 was pending.[334] Following Brattle's conclusion, thirty-eight states filed declaratory judgment

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327. That is, cigarette prices, a determinant of market share, is also affected by market share.

328. THE BRATTLE GROUP, *supra* note 278, at 100, 110.

329. *Id.* 110-11.

330. THE BRATTLE GROUP, *supra* note 278, at 156.

331. National Association of Attorneys General, *supra* note 240.

332. THE BRATTLE GROUP, *supra* note 278, at 156.

333. ALTRIA GROUP, INC., *supra* note 299, at 83.

334. *Id.* at 84.

actions in state courts seeking a declaration that the states diligently enforce the escrow statute during 2003. The PMs responded by filing motions to compel arbitration in eleven MSA states and territories that have not filed declaratory judgment actions. Courts in over forty-five states have ruled in favor of the PMs' position.[335] A New York court ruled against arbitration. However, a later court reversed the judgment, and the case was denied further appeal.[336] In a pair of holdings, another New York court ruled that New York State is compelled to arbitrate, but also entitled to a separate arbitration hearing.[337] In addition, Ohio filed a declaratory judgment action in state court regarding enforcement, but the court granted the tobacco company's motion to compel arbitration and further appeal was denied by the states highest court.[338] These disputes are unlikely to be resolved for several years.[339]

The Brattle Group's findings supported a one-time adjustment of 18.74% to the PMs' annual payment to the states in 2003, but only if the states failed to diligently enforce their model statutes.[340] Philip Morris did not apply a reduction to its 2006 annual payment, instead waiting for a determination of whether or not the provision requiring escrow payments from the NPMs was diligently enforced.[341] Other companies including R.J. Reynolds, Lorillard, and other PMs applied the 2003 reduction even though there had been no finding that states had failed to diligently enforce these statutes.[342] Similarly, these companies reduced their payments in 2007 and 2008, albeit by a smaller amount than in 2006. The failure to pay the full amount has led to lawsuits to resolve this issue.[343]

M. Lessons Learned from the First Decade's Experience

The overriding purpose of antitrust laws is to promote competition and consequently reduce the welfare loss to consumers from firms' exercise of market power. While competitive-like prices are clearly welfare-enhancing in most contexts, the case in the context of cigarettes is somewhat less clear. At a minimum, prices should reflect negative externalities in consumption. Some

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335. For instance, the Court of Appeals in Indiana upheld a ruling ordering binding arbitration in a dispute with the tobacco companies. State *ex rel.* Carter v. Philip Morris Tobacco Co., 879 N.E.2d 1212, 1214 (Ind. Ct. App. 2008).

336. State v. Philip Morris, Inc., 869 N.E.2d 636, 639, 640 (N.Y. 2007).

337. State v. Philip Morris, Inc., 2008 N.Y. Misc. LEXIS 1400 (2008); State v. Philip Morris, Inc., 2008 N.Y. Misc. LEXIS 1411 (2008).

338. State *ex rel.* Rogers v. Philip Morris, Inc., 2008 Ohio 3690 (Ohio Ct. App. July 24, 2008), *appeal denied,* State *ex rel.* Rogers v. Philip Morris, Inc., 898 N.E.2d 969 (Ohio 2008).

339. *See* ALTRIA GROUP, INC., *supra* note 299, at 84.

340. Lindblom, *supra* note 269, at 2.

341. *Id.*

342. *Id.*

343. *Id.*

economists argue that because smokers lack self control and higher prices of cigarettes serve as a self-control device, cigarette prices should reflect internal as well as external costs of cigarette consumption.[344] But even advocates of this position would not argue that such pricing should result from anticompetitive practices. An objectionable feature of the MSA is that it gives a role to states in enforcing entry barriers. In addition, given that payment obligations vary directly with volume, manufacturers face a financial incentive to raise prices and thereby reduce the volume of sales. Essentially, state action permits the participating manufacturers to obtain profits that they could not obtain absent the Agreement.

Although welfare losses from state enforcement of cigarette manufacturer market power are one problem, there are other sources of welfare loss. For one, not only were litigation costs incurred at the front end, but substantial costs were incurred in ascertaining whether or not and the extent to which failure of states to enforce entry barriers led to PM loss of market share. Moreover, there are substantial delays in reaching definitive conclusions. The MSA established a $50 million enforcement fund for use by the states' Attorneys General to threaten NPMs or to defend challenges to the MSA itself.[345] As of late 2008, 2003 payments were still being disputed.

Another major issue with the dispute resolution process is its lack of transparency. While economic experts for the parties could challenge each other, predictably, experts' opinions always favored the position of their clients. Since the proceedings were held in secret, the experts did not face a threat of external peer review, which might have tempered some positions. The report on the proceedings was eventually released under the Freedom of Information Act, but sections of the report, including those describing data sources, were almost fully redacted (apparently not fully due to an oversight).[346] Thus, replication of results by an unbiased investigator is next to impossible.

PART IV. GOVERNMENT RESPONSE TO THE MSA

A. Allocation of MSA Funds by the States

An important feature of the MSA was that states were not restricted in any way in how they allocated funds from the MSA or from borrowing against future cash flows by securitizing. In principle, the civil liability notion of compensating the injury victim to make the victim as well off as before the

344. *See, e.g.*, Gruber & Köszegi, *supra* note 242.

345. O'Brien, *supra* note 114, at 5.

346. THE BRATTLE GROUP, *supra* note 278, at 7-9 (details of databases eliminated from public release version), 88 (portion of Kevin Murphy's testimony eliminated), 87, 95, 100 (portions of Jon Gruber and Robert Pindyck's testimony eliminated), 135 (the Brattle Group's assessment of Murphy's and Tim Bresneban's analysis eliminated), 109, 138, 140, 142-45 (further discussion of the Brattle Group's analysis eliminated), 110 (summary of instrumental variables used by the parties eliminated).

injury does not require that compensation be allocated in a particular way. However, imprudent use of compensation received by plaintiffs has led some states to implement periodic payment reforms in part to constrain how compensation is spent.[347]

Nevertheless, since the states' suits against the cigarette manufacturers were ostensibly to recover losses incurred by state Medicaid programs due to smoking, one might have expected that guidelines or even more specific methods for allocating payments received by the states from the PMs would have been included in the MSA. At a minimum, states would have favored tobacco control and state medical programs in their allocations even if guidelines or allocation formulas had not been explicitly included in the Agreement. Many commentators, particularly from the public health community, have criticized states for failing to allocate more MSA payments than it has to tobacco control and government health expenditures.[348] One argument of such advocates, now supported by empirical evidence, is that state expenditures on tobacco control programs are productive, on average, in reducing tobacco use.[349]

Table 6 shows allocations by the states to broad expenditure categories in 2002, 2005, and 2006.[350] During these periods, on average states allocated between three to five percent of MSA to public tobacco control programs.[351] Health spending constituted another thirty-two to thirty-seven percent. There was appreciable variation in spending on budget shortfalls in 2002 but not in 2005 and 2006.

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347. *See* Amy B. Blumenberg, *Medical Monitoring Funds: The Periodic Payment of Future Medical Surveillance Expenses in Toxic Exposure Litigation*, 43 HASTINGS L.J. 661, 665-67 (1992).

348. S*ee, e.g.*, Jade L. Dell et al., *Smoking in 6 Diverse Chicago Communities—A Population Study*, 95 AM. J. PUB. HEALTH 1036, 1041 (2005).

349. Matthew C. Farrelly et al., *The Impact of Tobacco Control Program Expenditures on Aggregate Cigarette Sales: 1981-2000*, 22 J. HEALTH ECON. 843, 857 (2003).

350. U.S. GOVERNMENT ACCOUNTABILITY OFFICE, STATES' ALLOCATIONS OF PAYMENTS FROM TOBACCO COMPANIES FOR FISCAL YEARS 2000 THROUGH 2005 1, 3, 6, 8, 10-11, 28-29 (2007) [hereinafter GAO]. Figures for 2006 are estimated.

351. The percentage allocations differ somewhat among studies, but the essential conclusion remains the same. For example, Gross and coauthors reported that states allocated six percent to tobacco control in 2001. This could reflect variation from year to year or different data sources or definitions of categories or a combination of the three. Cary P. Gross et al., *State Expenditures for Tobacco-Control Programs and the Tobacco Settlement*, 347 NEW ENG. J. MED. 1080, 1081 (2002).

Table 6. Allocations (%) of MSA Payments by 46 Participating States

	Year		
Category	**2002**	**2005**	**2006**
Tobacco control	3	5	5
Health	37	32	32
Education and social services	16	8	9
Budget shortfalls	36	4	2
Other	8	51	52
Total	100	100	100
Total MSA Payments	$6,238,393,496	$5,453,132,303	$5,441,567,020

Schroeder described the failure of the states to use payments from the MSA to fund tobacco control programs.[352] Sloan et al. assessed how six states allocated funds received from MSA, using information from newspaper articles and other public sources.[353] State allocation decisions have been diverse; substantial shares have been allocated to areas other than tobacco control and health, including capital projects and budget shortfalls, and the allocations did not reflect the stated goals of the lawsuits leading to the settlements.[354] The budget allocations reflected a lack of strong advocacy from public health interest groups, an unreliable public constituency for tobacco control, and inconsistent support from state executive and legislative branches.[355] These combined with sizable budget deficits provided competing uses for settlement funds.[356]

The goal of the Sloan et al. study was to determine which factors influenced states' allocation of funds from the MSA.[357] The study investigated the roles of voter characteristics, political parties, interest groups, prior spending on public tobacco control programs, and state fiscal health on per capita settlement funds allocated to tobacco-control, health, and other programs.[358] Tobacco-producing states and those with high proportions of conservative Democrats, elderly, black, Hispanic, and/or wealthy people, tended to spend less on tobacco control.[359] States with more teachers and a measure for the strength of the medical lobby in the state led to higher allocations of MSA revenues for tobacco-control and health-related programs.[360] State fiscal crises affected

352. Schroeder, *supra* note 1, at 294-95.

353. Frank A. Sloan et al., *States' Allocations of Funds from the Tobacco Master Settlement Agreement*, 24 HEALTH AFF. 220, 220-21 (2005).

354. *See id.* at 221-25.

355. *Id.* at 225.

356. *See id.* at 226.

357. Frank A. Sloan et al., *Determinants of States' Allocations of the Master Settlement Agreement Payments*, 30 J. HEALTH POL. POL'Y & L. 643, 645 (2005).

358. *Id.*

359. *Id.* at 667-68.

360. *Id.* at 668.

states' allocations and the probability of securitizing future cash flows from the settlements.[361]

Using data from the General Accounting Office (GAO), we updated the analysis through 2006.[362] We found that holding factors constant, states' spending from MSA proceeds on health and on tobacco control declined as shares of total spending from this source decreased, more so for tobacco control spending than for health.

B. Effects of the MSA on States' Cigarette Excise Tax Policy

One of the strongest arguments favoring the MSA is that it altered the political equilibrium in the states. Historically, cigarette manufacturers have had strong lobbies in states, especially in states with larger number of tobacco growers and a large tobacco product manufacturing sector.[363] The release of private documents by the cigarette manufacturers, a key provision of the MSA, has demonstrated motives and activities of the companies in promoting their products. Such information has made the public and its elected representatives more amenable to legislation aimed at reducing consumption of tobacco products.[364]

Trogdon and Sloan hypothesized that implementation of the MSA following years of litigation by the states and others against the major U.S. cigarette manufacturers, was a determinant of state cigarette excise tax increases.[365] Mean cigarette excise taxes rose substantially, nearly ninety percent, between 1998 and 2002.[366] Based on a panel data difference-in-difference approach, the evidence suggests that litigation increased excise taxes.[367] The effect of the MSA on state cigarette excise taxes was inferred from the parameter estimates on binary variables for years.

The parameter estimate on a binary variable for the years 1993-97, the immediate MSA pre-period, indicated no change in mean state excise tax rates. By contrast, the parameter estimate on the binary variable for 1998 implied a mean increase of 5.6 cents per pack, after accounting for a number of other

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361. *Id.* at 662-63.

362. GAO, *supra* note 350, at 4-6.

363. *See* Michael S. Givel & Stanton A. Glantz, *Tobacco Lobby Political Influence on US State Legislatures in the 1990s*, 10 TOBACCO CONTROL 124, 125-27 (2001).

364. For a more general discussion of public sentiment and tobacco, see generally Sei-Hill Kim & James Shanahan, *Stigmatizing Smokers: Public Sentiment Toward Cigarette Smoking and Its Relationship to Smoking Behaviors*, 8 J. HEALTH COMM. 343, 343 (2003).

365. Justin G. Trogdon & Frank A. Sloan, *Cigarette Taxes and the Master Settlement Agreement*, 44 ECON. INQUIRY 729, 729-30 (2006).

366. *Id.*

367. *Id.* at 734-36. We find the average difference in taxes before and after the settlement for both situations, and then subtract the individual settlement difference from the difference for our treatment group.

potential determinants of excise tax rates.[368] The parameter estimate for 1999-2002 implied a 6.5 cent per pack increase during this period.[369] Since the MSA was implemented late in 1998, if the MSA affected excise taxes in that year, it would have to be through publicity about settlement negotiations and possibly an impending settlement. The 1999-2002 result is for a period entirely in the post-MSA era. MSA payments per capita did not have an independent effect on state excise tax rates; thus, although there was variation in payments per capita among states, just the presence of a national MSA affected state cigarette excise tax rates.

Using a different model specification, Goel and Nelson also studied determinants of cigarette excise taxes.[370] They too found that per capita MSA payments increased state cigarette excise taxes.[371] Like Trogdon and Sloan, Goel and Nelson attributed the excise tax increases to reduced political opposition to raising taxes on cigarettes in state legislatures in the period immediately following implementation of the MSA.[372] Wood asked whether implementation of the MSA could be regarded as a "tipping event," using a concept publicized by Malcolm Gladwell in *The Tipping Point.*[373] The analogy fit state cigarette excise tax increases, but as Wood admits, is less apt for state allocation of MSA payments to tobacco control as opposed to other uses of such funds.[374]

C. Has the MSA Prevented Passage of Federal Legislation to Regulate Tobacco Products?

Before the MSA, there was the failed McCain bill.[375] Whether new legislation would have been introduced and passed into law had the MSA not been reached requires development of a counterfactual about which there is room for considerable disagreement. Although, as discussed immediately above, the MSA seems to have facilitated passage of statutes raising state excise taxes on cigarettes. However, states have been hungry for additional sources of revenue. Increased reliance on cigarette excise taxes and the MSA for revenue has made the states partners in the success of cigarette sellers. Thus, even if the MSA has reduced the cost of passing laws unfavorable to the interests of cigarette manufacturers, it has also decreased the benefit of passing such laws. For this reason, the net effect of the MSA on legislation to regulate tobacco products is unclear. The states' interest in legislation unfavorable to

368. *Id.* at 736.

369. *Id.*

370. Rajeev K. Goel & Michael A. Nelson, *The Master Settlement Agreement and Cigarette Tax Policy*, 29 J. POL'Y MODELING 431, 432 (2007).

371. *Id.* at 437.

372. *See id.*

373. Robert S. Wood, *Tobacco's Tipping Point: The Master Settlement Agreement as a Focusing Event*, 34 POL'Y STUD. J. 419, 420 (2006). *See generally* MALCOLM GLADWELL, THE TIPPING POINT: HOW LITTLE THINGS CAN MAKE A BIG DIFFERENCE (2000).

374. *See* Wood, *supra* note 373, at 431.

375. Universal Tobacco Settlement Act, S. 1415, 105th Cong. (1997).

the cigarette manufacturers may be reflected in sentiment for and against enactment of such laws by the U.S. Congress as well.

The relevant policy question is whether the MSA prevented any further legislative action at the federal level regarding tobacco control. The former U.S. Food and Drug Administration (FDA) commissioner David Kessler tried to impose FDA regulations on tobacco, but failed when the Supreme Court overturned them in 2000.[376] There have been several bills appearing in Congress attempting to give the FDA such authority. During 2008, a bill which would have given the FDA regulatory power over tobacco made its way through the House, passing 326 to 102.[377] The bill failed in the Senate after facing a filibuster threat from Senator Richard Burr from North Carolina as well as a threat of veto by then President George W. Bush.[378]

Finally, in April 2009 following the transition into the Obama Administration, the House again passed a bill 298 to 112 to give the FDA power to regulate tobacco.[379] This power would allow the FDA to reject new tobacco products, restrict advertising, eliminate harmful additives and candy-like flavorings, and regulate nicotine levels in cigarettes.[380] This bill even gained the support of Philip Morris, saying that it supports "'tough but reasonable federal regulation of tobacco products.'"[381] A modified bill passed the Senate on June 11, 2009 and was signed by President Obama on June 22, 2009.[382] The U.S. Congressional Budget Office (CBO) prepared a cost estimate report for the House bill in April 2009.[383] According to the report, the CBO estimated that taking both revenue and direct spending effects into consideration, enacting H.R. 1256 would increase budget deficits by a total of $100 million over the 2010-2014 period.[384] However, over the 2010-2019 period, H.R. 1256 would actually reduce budget deficits by $200 million.[385]

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376. Stephanie Saul, *House Votes to Regulate Tobacco as a Drug*, N.Y. TIMES, July 31, 2008, at C2.

377. *Id.*

378. *Protection for Smokers: The New Congress Can Secure an Early Victory by Giving the FDA Authority Over Tobacco*, WASHINGTON POST, Jan. 2, 2009, at A14.

379. Family Smoking Prevention and Tobacco Control Act, Pub. L. No. 111-31, § 3, 123 Stat. 1776, 1781-82 (2009). *See also* Rebecca Cole, *House Votes to Put Tobacco Products Under FDA Control*, L.A. TIMES, Apr. 3, 2009, at A18.

380. Cole, *supra* note 378, at A18.

381. *Id.*

382. Family Smoking Prevention and Tobacco Control Act, Pub. L. No. 111-31, 123 Stat. 1776.

383. CONGRESSIONAL BUDGET OFFICE, COST ESTIMATE: H.R. 1256, FAMILY SMOKING PREVENTION AND TOBACCO CONTROL ACT 1 (2009).

384. *Id.*

385. *Id.*

D. Securitization of MSA Funds

The first tobacco bond was issued in 1999.[386] As of year-end 2008, eighteen states had securitized some or all of their MSA revenue streams and others had taken actions to do so.[387] Widespread use of this financial instrument in the context of the MSA, coupled with major public policy concerns that have arisen in other areas, such as for subprime mortgage-backed securities, raise important policy and legal questions for the MSA. Among these, the most important questions concern the possibility of market failures in the markets for these securitized assets that call for government action and may be unique to the tobacco/MSA context.

Issuance of tobacco bonds is part of a much larger set of markets for asset-backed securities. In such markets, the asset backing the security is a stream of future income flows. When a government entity is the sponsor, the sponsor obtains an immediate portion of the anticipated income stream as a lump sum. In a securitization transaction, the sponsor, in this context a state government, sets up an independent legal entity, called a special purpose vehicle (SPV) or conduit.[388] The SPV may be a corporation, trust, or other type of entity.[389] The SPV issues debt instruments that have as their collateral loans or receivables, which are termed "asset-backed securities."[390] A major distinction between asset securitization and a secured loan is that cash flows from the securitized assets are separated from the originator in a "true sale," which is advantageous in protecting the originator from recourse in the event that payment of returns on securities and principal is delayed or not paid at all, and suffices under bankruptcy law to remove the asset from the sponsor's bankruptcy estate.[391] In lieu of the sponsor, the SPV may have the responsibility of collecting payment from its source, e.g., credit-card holders, home owners, or the originators.[392] Giving the SPV authority to collect such monies may lend support to the view that this is a true sales transaction.[393]

Securitization of proceeds from the MSA offers both advantages and disadvantages to states.[394] An important advantage is that securitization transfers the risk of cigarette manufacturer bankruptcy, especially the OPMs,

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386. FITCH RATINGS, RATING U.S. TOBACCO SETTLEMENT ASSET-BACKED BONDS 7 (2007).

387. TOBACCO PUBLIC POLICY CENTER, STATE SECURITIZATION OF TOBACCO MASTER SETTLEMENT AGREEMENT (MSA) PAYMENTS (Apr. 30, 2007), http://www.law.capital.edu/Tobacco/documents/securitization_fact_sheet.pdf.

388. Edward M. Iacobucci & Ralph A. Winter, *Asset Securitization and Asymmetric Information*, 34 J. LEGAL STUD. 161, 164 (2005).

389. *Id.*

390. *See id.*

391. *Id.* at 165-66. *See also* STEVEN L. SCHWARCZ ET AL., SECURITIZATION, STRUCTURED FINANCE AND CAPITAL MARKETS 7 (2004).

392. Iacobucci & Winter, *supra* note 388, at 167.

393. *Id.*

394. *See* Jody Sindelar & Tracy Falba, *Securitization of Tobacco Settlement Payments to Reduce States' Conflict of Interest*, HEALTH AFF., Sept.-Oct. 2004, at 188, 192.

to bondholders.[395] In return for bearing this risk, bondholders demand a reduction in the bond price in proportion to the perceived risk of nonpayment of income to bondholders at some time in the future. Second, the lump sum made available to the originator can be used to fund public projects or be immediately returned to taxpayers in some form.[396]

A possible disadvantage is that the originator may be held liable in the event of a default.[397] Or, even if there is no legal obligation, bondholders may view compensation as a moral obligation,[398] and/or the originator's general creditworthiness may be called into question by investors. A second drawback is the high transactions cost of asset securitization, including attorneys' fees, liquidity or credit enhancement facilities and indirect costs such as those associated with the true sale requirement.[399] Third, the value of the securities depends on the rate at which the market discounts future cash flows. The discount rate depends not only on time preference of investors (i.e., the rate at which investors are willing to forego current consumption for consumption in a later period), but also on the risk that investors associate with repayment. To the extent that investors are impatient, i.e., discount future cash flows at a high rate, and view these securities as risky, the rate of discount will be high.

Several safeguards provide at least partial protection to bondholders against the risk of nonpayment. First, the bond sales are typically made in senior-subordinate bond structures. Losses are realized by the subordinate bond classes before any losses are realized by the senior bond classes. Second, liquidity reserve funds are established to pay principal and interest on bonds if revenues pledged under terms of the MSA are insufficient to pay obligations to bondholders. For example, for California bonds issued under the name Golden State Tobacco Securitization Corporation, the Bank of New York Trust Company, N.A., the escrow agent, "holds a separate and segregated irrevocable escrow trust fund, pledged irrevocably to the payment of principal, interest, and redemption price of the bonds."[400] For this reason, Fitch gave the bonds a AAA rating, far higher than the average for such securities.[401]

In general, Fitch, one of the three major rating organizations, rates senior tobacco bonds at BBB, one step above its rating of the major cigarette

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395. Walter Henry Clay McKay, *Reaping the Tobacco Settlement Windfall: The Viability of Future Settlement Payment Securitization as an Option for State Legislatures*, 52 ALA. L. REV. 705, 716-17 (2000). *See also* Sindelar & Falba, *supra* note 394, at 192.

396. McKay, *supra* note 395, at 716.

397. *Id.*

398. *Id.* at 716-17.

399. Steven L. Schwarcz, *The Alchemy of Asset Securitization*, 1 STAN. J.L. BUS. & FIN. 133, 141 (1994).

400. *See Fitch Rates Golden State Tobacco Securitization Corp (CA) Refunded Bonds Ser03B 'AAA'*, BUS. WIRE, Aug. 4, 2005, at 1; Kathleen Pender, *Tobacco Gives State a Boost*, S.F. CHRON., Sept. 23. 2003, at B1.

401. *Id.*

manufacturers of BBB. Fitch assumes that if a manufacturer declared bankruptcy, the manufacturer would continue to make payments under the MSA because if it did not, the manufacturer would again be subject to litigation from the settling states.[402]

Investors in asset-backed securities in general and in tobacco bonds in particular face several sources of uncertainty. There is uncertainty about whether it will be proven that settling states did not comply with their qualifying statutes and if so, what the resulting magnitude of the adjustment for those settling states will be. The adjustments are generally being evaluated through arbitration. No standards provide an operational definition of what constitutes non-enforcement. The states and perhaps the SPVs have private information on factors affecting arbitrators' decisions that is not available to investors. Although reserve funds, generally sized with one year of payments for each transaction and held by the indenture trustee, may absorb some of the effect of NPM adjustment, the size of the adjustment for each settling state will determine if such a reserve is sufficient. Pending resolution of even the first set of NPM adjustments, i.e., for 2003, the liquidity of existing tobacco settlement securitizations is in question since the funds to be allocated to settling states is being held in escrow in a disputed claims account until a decision is made on the NPM adjustment. The maximum possible NPM adjustment for 2003 is approximately $1.1 billion.[403]

A major determinant of the future MSA payments involves stresses to cash flows reflecting a number of things: (1) declining cigarette consumption—resulting from higher cigarette prices reflecting higher cigarette excise taxes, MSA payments by the PMs, and factors determining the trend to decreased cigarette consumption before the MSA was reached; (2) loss of revenue due to other public policies; (3) grower buyout payments and marketing restrictions, and public smoking bans; as well as (4) losses of revenue due to MSA-specific adjustments, such as the NPM adjustment, which have already been discussed.

Securitization is now under increased public scrutiny, especially given the financial crisis that began in 2008 resulting in considerable part from defaults on mortgages and mortgage-backed securities.[404] A key general issue is whether buyers of securitized assets are as well informed as are the sellers. Iacobucci and Winter have argued that asset securitization serves to allocate assets to those investors who are best informed about the underlying risks.[405] The basic argument is that, in general, it is difficult to monitor management of complex organizations, which is typical of large corporations from the outside. According to the authors:

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402. FITCH RATINGS, *supra* note 386, at 2.

403. This figure assumes the OPMs' portion continues to be upheld. Philip Morris USA, *Payments*, PM USA MSA DESK REFERENCE GUIDE, Oct. 2007, at 3, http://www.tobaccoissues.com/pdf/tobacco_settlements/4_Payments.pdf.

404. FRANK J. FABOZZI & VINOD KOTHARI, INTRODUCTION TO SECURITIZATION xiii (2008).

405. *See* Iacobucci & Winter, *supra* note 388, at 182-84.

> Securitized assets are often cash flows such as receivables with risk that is more easily assessed than the risk of the general assets of the firm, such as physical assets or intangibles such as good will or growth opportunities within a market. Informational asymmetries may therefore arise regarding the returns on the general assets of the firm when investors are equally informed about the prospective returns on assets such as receivables. This means that issuing claims on the receivables avoids the lemons problem that would be associated with an issue of claims on general assets.[406]

This raises concerns of the lemons problem, which exists when buyers possess less information about a specific product than sellers, for example, about the quality of a used car.[407] The seller will know whether or not the car has been involved in accidents and the past history of preventive maintenance.[408] The buyer typically knows less about this.[409] Since buyers suspect that cars for sale are worse than average, they are willing to pay less, which depresses the resale value of used cars and has led to a market in pre-certified used cars, those for which a reputable seller vouches for the cars' underlying quality.[410]

In general, it would seem that buyers of tobacco bonds would possess as much information about the financial health of cigarette manufacturers, as do the originators, the states, and the SPVs. On the other hand, as noted above, there is virtually a certainty, given the secrecy of the dispute resolution process between the PMs and the states, that originators and SPVs possess more information about NPM proceedings than do potential buyers. To the extent that potential buyers are kept in the dark, this should be reflected in lower selling prices of these securities. In this sense, it would appear that sellers have an incentive to argue for greater transparency in the NPM adjustment process.

Although investors extract price concessions to compensate for the lemons problem, like the purchasers of used cars, the policy issue is that when securitizing entities perform inadequate screening of loans, it is home owners who are harmed. The cigarette manufacturers are the parallel party in the context of bonds backed by MSA receipts. Thus, although such concerns may place asset-backed securities in a bad light generally, the lemons problem does not seem to apply to the tobacco case.

Lack of standards on enforcement of MSA and the secrecy of dispute resolution process should be reflected in the market value of tobacco bonds. One would expect then that states would argue for more transparency. But apparently states have reasons of their own for maintaining secrecy.

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406. *Id.* at 180-81.

407. George A. Akerlof, *The Market for "Lemons": Qualitative Uncertainty and the Market Mechanism*, 84 Q. J. ECON. 488, 489-90 (1970).

408. *See id.* at 490.

409. *See id.*

410. *Id.* at 488.

PART V. CONCLUDING REMARKS

After a decade of experience with the MSA, the most important question is whether or not MSA-type public policies are worth repeating. Our answer is a "qualified no." A case can in fact be made for an "unqualified no." In our view, the following are the most negative features of the MSA.

First, the MSA is first and foremost a private settlement. Private settlements are commonplace in litigation and terms of the settlement and other facts of the case are often privately held between the opposing parties. Private settlements can result in savings in litigation cost and other costs of more lengthy disputes. Yet, even in the case of individual litigants, the deterrent signals that lead to the litigation can be lost, or at a minimum substantially weakened. In a sense, the MSA differs from most private settlements in that many documents characterizing previous activities of the cigarette manufacturers have been made public. However, important details about the execution of the agreement, such as the issue of the extent to which the four major cigarette manufacturers have lost market share to competitors as a result of states' failure to erect an entry barrier, have been kept private. Publicity about this dispute would have likely made it politically difficult for State Attorneys General to enforce a state-major cigarette manufacturer cartel. As it stands, State Attorneys General who normally would have responsibility to protect competition within their jurisdictions were able to do just the opposite, presumably with a goal of increasing revenue to state treasuries.

Principal-agent problems (the principal is the taxpayer/voter/citizen) can arise when outside counsel rather than public officials take a major role in settlement negotiations. Only a small core group—two State Attorneys General, two cigarette manufacturers, and one plaintiff's attorney—took the lead in constructing the MSA. It was difficult for such a small group to create an agreement that would benefit a broad class of principals.[411]

Second, the deadweight loss of taxation, including excise taxes on a product such as cigarettes, may be justified in cases in which consumption produces negative externalities as in the case of cigarette consumption. In addition, there is the substantial additional cost of attorneys' and experts' fees that are incurred as a byproduct of the MSA's dispute resolution process.

Third, there is a mismatch between the goals of civil litigation and the litigation that led to the MSA. A key goal of plaintiffs in a litigated dispute is to recover compensation for a past harm. Compensatory damages are designed to make injury victims whole. Ordinarily, the implication is that the party or parties that caused the damage due to an action or inaction are to compensate the injured victims. The MSA imposes liability on firms that were not market participants at the time the MSA was reached. Thus, such non-market participants cannot possibly have caused any loss, at least at the time the MSA was concluded. In fact, empirical evidence that smoking increased states'

411. Wood, *supra* note 4, at 624-44.

Medicaid expenditures is lacking, especially when compared to the payments the states received. If there were an increase, it was nowhere commensurate with the amounts states are receiving from the MSA. The MSA payments are more appropriately characterized as punitive damages. In contrast to compensatory damages, there is no guideline for setting punitive damages other than they should be set at a level sufficiently high as to deter the harmful activity in which the defendant presumably engaged.

Fourth, although governments sometimes undertake public policies with an anticompetitive flavor, if enhancing and maintaining the public welfare is a societal objective, care should always be taken in implementing such policies. Governments often erect entry barriers. Examples are commercial and residential zoning, licensure, and regulation of product quality and of commercial advertising. In each case, there should be demonstrable benefits which outweigh the cost resulting from diminished competition. In the case of cigarettes, the harms to personal health and the external costs cigarette consumption imposes on others have been amply demonstrated. When there are negative externalities, consumers should be made to pay for the costs their actions impose on others. Thus, given the externalities of cigarette consumption, there is a strong case for imposing taxes on the use of the product and/or imposing outright restrictions on its use up to the level of the externality. A case has been made for taxation above the external level if smokers view excise taxes as a device for limiting their consumption of cigarettes.

Cigarette prices are higher as a result of the MSA for three reasons: (1) a portion of the cost of the MSA was shifted forward to consumers; (2) the MSA made it easier for states to enact higher excise taxes; and (3) the escrow accounts imposed on non-MSA participating firms allowed participating manufacturers to raise their prices. Prices rose immediately after the MSA was implemented. In fact, prices rose by more than the increase in cost to MSA participating cigarette manufacturers as a direct result of the new payment obligations. In this sense, the MSA operated in a manner parallel to an excise tax increase. It is plausible to expect that at least part of an excise tax be shifted forward to consumers in the form of higher prices, with that portion of the tax not shifted being borne by the seller of the product. However, there is some empirical evidence of overshifting of excise taxes in general, and of cigarette excise taxes in particular.[412] When there is overshifting, the sellers' profits increase after the tax increase is imposed. Such overshifting occurs when competitors simultaneously face a common increase in factor cost. Thus,

412. *See* Jeffrey E. Harris, *The 1983 Increase in the Federal Cigarette Excise Tax*, 1 TAX POL'Y & ECON. 87, 99-102 (Lawrence H. Summers ed., 1987); Daniel Sullivan, *Testing Hypotheses About Firm Behavior in the Cigarette Industry*, 93 J. POL. ECON. 586, 593-95 (1985); Daniel A. Sumner, *Measurement of Monopoly Behavior: An Application to the Cigarette Industry*, 89 J. POL. ECON. 1010, 1016-17 (1981); Trogdon & Sloan, *supra* note 365, at 734-35.

each competitor can expect that when it raises price, its competitors will follow. If by contrast, only one competitor experiences an increase in a factor price, for example as a result of a union contract increasing the wage it pays its workers, then a firm might not expect its competitors to follow its price increase. The MSA also made it easier for states to combat cigarette manufacturer political opposition to excise tax increases in various states.[413] The escrow accounts imposed on non-MSA participating firms made it easier for participating manufacturers to raise their prices and thereby their profits. The secrecy of the MSA allowed the states and the cigarette manufacturers to pull off this exercise of market power. In sum, U.S. cigarette consumers are not only paying for the MSA, but they are contributing to cigarette manufacturer profitability as well. The MSA is more costly to administer than an excise tax in that there is the added expense of payments to plaintiffs' attorneys and their experts. Although efficiency gains from an action that harms competition may enhance social welfare if the efficiency gains are sufficiently large to offset the welfare losses from reduced competition, anti-competitive policies are not justifiable if there is an alternative approach to achieving the efficiencies in this context, such as a higher excise tax on cigarettes.[414]

Fifth, the MSA has in effect made the states addicted to cigarettes like the smokers. MSA payments have become a general revenue source for the states. To the extent that smoking is harmful to health and/or imposes financial externalities in the form of increased state expenditures on health care, one might have expected states to use much of the revenue to inform individuals, particularly youth, of the harms of smoking, to subsidize quitting aids, and to finance the increased public expenditures incurred by the states attributable to smoking.

Sixth, the MSA tax raises concerns about intergenerational equity. Assuming that past smoking imposed financial externalities on taxpayers in the past, those taxpayers would merit compensation for past harms. If these state Medicaid programs incurred excess expenses as a consequence of smoking, persons who paid excess taxes between 1966 and 1970 (the years Medicaid was implemented by states) through 1998 (the year the MSA was reached) are those that should be compensated. Many persons who were taxpayers during this time period are no longer alive. So as with reparations for past harms, it is the children of such taxpayers who are the beneficiaries. But there is an additional concern about intergenerational equity. Many states have securitized future cash flows with the proceeds used to plug current deficits, not from capital projects, but from current operations. Thus, if future taxpayers, some yet unborn, must bear the burden of the financial externalities, the MSA will provide little or no revenue to cover these extra tax obligations. In essence, the MSA has served as a temporary deep pocket to defray current excesses in

413. *See* Trogdon & Sloan, *supra* note 365, at 737.
414. *See, e.g.*, Bulow, *supra* note 75, at 36.

public budgets. And cigarette smokers in effect are providing public funds to plug deficits from public spending on a wide variety of public programs.

There are also counterarguments which place the MSA in a more favorable light. There is an argument that the MSA, while not representing public policy at its best, is a "second best" alternative. The "first best," an increased federal excise tax providing revenue to fund tobacco control programs and laws banning advertising and other forms of promotion of tobacco products, has been politically infeasible. Further, state legislatures would have been reluctant to authorize the legal resources that would have been needed for the State Attorneys General to pursue their cases without substantial outside help from private plaintiffs' attorneys. The higher administrative cost of the MSA tax is just an added cost of doing business when governments lack political prowess. While the MSA tax is regressive in the sense that smokers tend to have lower incomes, the tax appears less regressive if one considers the substantial costs that smoking imposes on the smokers themselves. Thus, by raising the price of cigarettes, the MSA is doing smokers a favor. Given that cigarette consumption is a "bad," there is less reason for concern when the public sector participates in cartelization of an industry, even if important aspects of the cartelization process, in particular protecting the market shares of the Original Participating Manufacturers, is conducted in secret.

In the sense that the MSA is a *fait accompli*, the above arguments and counterarguments are mainly of interest to scholars. On the other hand, they do bear on the issue of whether or not the MSA is a model to emulate for dealing with other threats to public health. In our view, the MSA is not a sound precedent for other policy applications. In particular, taxation and enforcement of competition are inherently public functions. The MSA amounts to taxation by private agreement. State Attorneys General engage in enforcing antitrust laws. The notion of enforcing cartels conflicts with their antitrust enforcement obligations. Aside from the intergenerational issues, practical deficiencies of securitization have been ably demonstrated in other contexts, at least some of which apply to securitization of MSA proceeds. There are clear benefits to individual rights, like having the right to sue individuals for wrongdoing, particularly when other protections fail. However, the use of private litigation as a public policy tool is far more questionable. In particular, there is the risk that private litigation crowds out investments in public enforcement. And the secrecy of settlements between private parties is less appropriate when applied to public policy where taxpayers/citizens presumably have a right to know.