

Why the Asbestos Genie Won't Stay in the Bankruptcy Bottle

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During the 1940's to the 1970's, asbestos was widely used for its fire-retardant capabilities in workplaces, schools and homes. Breathing asbestos fibers into the lungs can cause a variety of diseases, ranging from scarring of the lungs with little or no disability to diseases such as mesothelioma that are usually fatal. At least 500,000 individuals have filed claims related to asbestos exposure and, because a typical claimant files claims against approximately 20 defendants, as many as 10 million claims may have been filed. Over 75 firms have filed for bankruptcy due to asbestos liabilities and estimates of the total cost of the asbestos mass tort range up to \$275 billion—larger than Superfund!

This paper starts with some background about the asbestos mass tort and why it has grown so rapidly. It then discusses the special asbestos provisions of the U.S. Bankruptcy Code, why firms are forced to file for bankruptcy to limit their liability for asbestos damage and how bankrupt firms' assets are channeled to pay tort claims. Finally it explores why the asbestos mass tort has continued to grow despite more and more bankruptcies by the largest asbestos defendants.

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Why the Asbestos Genie Won't Stay in the Bankruptcy Bottle¹

Michelle J. White

During the 1940's to the 1970's, asbestos was widely used for its fire-retardant capabilities in workplaces, schools and homes, as well as in many consumer products. Breathing asbestos fibers into the lungs can cause a variety of harms, ranging from scarring or thickening of the lungs with little or no disability to diseases such as asbestosis, lung cancer, and mesothelioma that are often fatal. Two of these diseases, asbestosis and mesothelioma, are "signature diseases" that are uniquely associated with asbestos exposure, but others can result from asbestos exposure, smoking, other causes, or a combination. The most serious asbestos diseases develop after a latency period of up to 40 years, most often in workers who worked in asbestos production facilities or installed asbestos-containing insulation in ships or buildings. Although the probability of developing a serious asbestos disease rises with longer and more intense exposure, cases of cancer and mesothelioma have been documented in people with only minimal asbestos exposure.² According to one estimate, more than 100 million people in the U.S. were exposed to asbestos.³

At least 500,000 individuals have filed claims related to asbestos exposure and, because a typical claimant files claims against approximately 20 defendants, as many as 10 million claims may have been filed. Five corporations have spent more than \$1 billion each on asbestos litigation and U.S.-based insurers of asbestos defendants have paid out over \$20 billion to date. Contrary to expectations, the number of claims filed increased rapidly during the 1990's.⁴ Most of the core group of asbestos producers and asbestos mine owners has filed for bankruptcy or is expected to file soon, so that the focus of litigation is spreading to defendants in other sectors, such as automobile and automobile parts producers and retailers. Recent reports for the insurance industry estimated that 1

¹ I am grateful to the discussants at the symposium, Daniel Keating and Kevin Irwin, for very helpful comments.

² See B.I. Castleman, *Asbestos: Medical and Legal Aspects*, 4th edition (1996), ch. 7.

³ "Overview of Asbestos Issues and Trends," Public Policy Monograph, American Academy of Actuaries, Dec. 2001, available at www.actuary.org.

⁴ See S.J. Carroll, D.R. Hensler, J. Gross, and M.J. White (2001), *Asbestos Litigation in the U.S.: A New Look at an Old Issue*, Santa Monica: RAND Corporation, DB-362.0-ICJ, and J.S. Kakalik, P.A. Ebener, W. Felstiner, and M.G. Shanley (1983), "Costs of Asbestos Litigation," RAND R-3042-ICJ, for figures on the average number of defendants per plaintiff in asbestos lawsuits.

million people would eventually file claims and the total cost would reach \$200 to \$275 billion.⁵ If asbestos damages actually reach even the \$200 billion figure, then asbestos will outrank Superfund in terms of cost.

The first section of this paper discusses the special asbestos provisions of the U.S. Bankruptcy Code and why asbestos firms are forced to file for bankruptcy to limit their liability for damage. The second section examines why the asbestos genie won't stay in the bankruptcy bottle. It looks at how and why the asbestos mass tort continues to grow despite the large number of defendants that have filed for bankruptcy.⁶

I. Some facts and some law concerning asbestos and bankruptcy

Table 1 gives a list of bankruptcy filings by firms with large asbestos liabilities. It shows that 49 firms filed for bankruptcy due to asbestos claims between 1982 and 1999 and an additional 30 firms filed since the beginning of 2000.

In theory, the liability of firms to asbestos victims could be limited in any of three ways: by firms negotiating mandatory class action settlements that cover all present and future asbestos claims, by Congress adopting a government-administered mandatory compensation scheme for asbestos claims similar to those for Black Lung disease and damage due to childhood vaccines, or by firms filing to reorganize in bankruptcy under Chapter 11. All of these strategies were tried in the 1990's. However the Supreme Court did not approve the proposed mandatory class action settlement of asbestos claims and Congress never adopted proposed legislation providing for a mandatory administrative compensation scheme.⁷ Instead, in 1994, Congress adopted a special set of bankruptcy provisions designed to facilitate reorganizations of firms with large asbestos liabilities

⁵ See "Overview of Asbestos Issues and Trends, American Academy of Actuaries, Public Policy Monograph, Dec. 2001 and M.E. Angelina and J.L. Biggs (2001), "Sizing up Asbestos Exposure," *Mealey's Litigation Report: Asbestos*, vol. 16:20, pp. 32-38, Nov 26, 2001.

⁶ See M.J. Roe, "Bankruptcy and Mass Tort," *Columbia L. Rev.*, vol. 84, p. 846 (1984) for an early discussion advocating bankruptcy as a solution to mass torts. For a history of asbestos litigation up to the early 1980's, see Paul Brodeur, *Outrageous Misconduct* (1985).

⁷ The case involving a large, mandatory class action settlement of asbestos claims was *Amchem Prods. Inc. v. Windsor*, 117 S. Ct. 2231 (1997), aff'g *Georgine v. Amchem Prods., Inc.*, 83 F.3d 610 (3d Cir. 1996) and the never-passed legislation was H.R. 1283, Asbestos Compensation Act of 2000. Another bill has been introduced in the current session of Congress, H.R. 1412, that would provide retroactive tax relief for asbestos damage payments. See E.H. Jones, "Rough Justice in Mass Future Claims: Should Bankruptcy Courts Direct Tort Reform?" *Texas Law Review*, vol. 76 (1998), pp. 1695-1722, for discussion of Amchem.

(11 U.S.C. SS 524(g) and (h)). Bankruptcy therefore emerged as the only means for firms to limit their asbestos liabilities.

An important advantage that all firms receive from filing for bankruptcy is the automatic stay, which stays litigation in which the firm is a defendant. For asbestos firms, the automatic stay provides a valuable reprieve from the expense of paying compensation to victims. Asbestos firms in bankruptcy also normally obtain an injunction extending the automatic stay to parent and subsidiary firms that have not filed for bankruptcy, thus protecting the assets of these companies as well. Bankrupt firms do not resume payments to tort victims or other creditors until a reorganization plan has been confirmed, which in asbestos bankruptcies often takes five years or more, and then compensation is resumed under the much less favorable terms of the plan.

The special asbestos bankruptcy provisions of Chapter 11 (11 U.S.C. SS 524(g) and (h)) provide that asbestos defendants in Chapter 11 can receive a discharge from present and future personal injury and property damage claims. A determination must be made that the amount available to pay claims is less than their total value, so that the firm is insolvent. The firm's reorganization plan must provide for trusts to compensate both personal injury and property damage claimants. Each type of claim is "channeled" to the relevant trust.⁸ Personal injury claims are divided into present and future claims. A "bar date," or deadline, is established by which present claims must be filed. Based on the number of allowed present claims and estimates of the number of future claims by victims who will develop asbestos disease in the future, the total value of present personal and future injury claims is estimated. Together these values are used to negotiate the level of funding of the settlement trust, how much of the reorganized firm's equity must go to the trust, and a schedule of payments for victims by type of disease. The Code requires that a representative be appointed to negotiate on behalf of the future personal injury claimants, that present and future personal injury claimants must be treated "in substantially the same manner," that at least half of the reorganized firm's equity go to the trust, and that at least 75% of claimants vote to approve the

⁸ Property damage claims, for the cost of removing asbestos from schools and other buildings, are much lower in total than personal injury claims.

reorganization plan. Thus in return for half or more of the reorganized firm's equity, the firm can emerge from bankruptcy free of asbestos liabilities.⁹

The first asbestos bankruptcy filings, by UNARCO and the Johns-Manville Corporation (J-M), occurred in 1982. J-M was the largest producer of asbestos-containing insulation products and it also owned asbestos mines. Its reorganization plan, adopted in 1988 after six years of negotiation, set a pattern for subsequent asbestos bankruptcies and as well as for the special asbestos provisions of the Bankruptcy Code. All tort claims against the successor firm (the Manville Corporation) were discharged and personal injury claims were channeled to the Manville Personal Injury Settlement Trust (MPIST).¹⁰ The MPIST was financed by bonds with a face value of \$1.8 billion, 80% of the equity of the reorganized Manville Corporation, and the right to receive 20% of the Manville Corporation's profits for 25 years. In total, the trust's assets were valued at \$3.0 billion.¹¹ Based on its assets and a prediction of the number of future claims, the MPIST adopted a schedule of liquidated values by disease and committed itself to paying both present and future claimants the same amounts. The schedule of liquidated values, in part, was: bilateral pleural disease: \$12,000; lung cancer: \$60,000 or \$90,000 depending on severity; and malignant mesothelioma: \$200,000.¹² A feature of the MPIST is that it does not contest liability as long as claimants accept its scheduled compensation. This means that claimants need only show that they were exposed to asbestos that could have been produced by the Johns-Manville Corporation and document their damage. This simplified procedure was intended to keep transactions costs low. Claimants can alternately request arbitration or pursue litigation, but only after they have

⁹ See G. Marcus Cole, "A Calculus Without Consent: Mass Tort Bankruptcies, Future Claimants, and the Problem of Third Party Non-Debtor "Discharge." *Iowa L. Rev.*, vol. 84, p. 753 (1999), and M.D. Plevin and P.W. Kalish, "What's Behind the Recent Wave of Asbestos Bankruptcies?" *Mealey's Litigation Reporter: Asbestos*, vol. 16:6, April 20, 2001 for discussion. In some cases, insurance companies also contribute a lump sum to the trust in settlement of claims under insurance policies issued to the firm, in return for a discharge from claims under these policies.

¹⁰ A Manville Property Damage Settlement Trust was also established, but with a much lower level of funding. The total value of claims was estimated to be \$1.5 billion, but, from the beginning, the property damage trust paid claimants only a fraction of the value of their claims. See R.B. McKay, "Asbestos Property Damage Settlement in a Bankruptcy Setting," *Law and Contemporary Problems*, vol. 53(4), pp. 37-48, 1990.

¹¹ See M.S. Smith, "Resolving Asbestos Claims: The Manville Personal Injury Settlement Trust," *Law and Contemporary Problems*, vol. 53(4), pp. 27-36, 1990.

¹² See "Manville Trust Settlement Approved; Initial Pro Rata Payments Set At 10 Percent," *Mealey's Litigation Reporter: Asbestos*, vol. 9:23, January 6, 1995.

filed a claim with the MPIST. If claimants pursue arbitration or litigation, then the MPIST contests liability. As part of its effort to keep transactions costs low, the MPIST limits plaintiffs' lawyers' fees to 25% of compensation and it also limited its own costs to about 5% of compensation.¹³

The MPIST did not find the compensation business to be smooth sailing. Initially, it paid compensation equal to liquidated value and, in its initial year of operation (1988), the average level of compensation per claimant was \$40,000. (See table 2.) But it soon became clear that the number of claimants would be much higher than the Trust had forecast. Also during the initial period of operation, many claimants opted for litigation, but little provision had been made either for staff to represent the MPIST in litigation or for the cost of paying damage awards when the trust lost.¹⁴ Operations were suspended in 1990 and only a few claims were paid between 1990 and 1995. When the MPIST resumed operations in 1995, the schedule of payments was cut to 10% of the original level, in order to preserve adequate assets to compensate future claimants. Nonetheless, the number of claims continued to rise and, in 2001, the Trust again suspended operations. This time, it quickly cut payments in half, to 5% of liquidated values.¹⁵ As of 2000, nearly 500,000 claims had been filed, \$2.2 billion had been paid out, and the average payment to claimants over the history of the MPIST had dropped to about \$8,000 (see table 2). Table 3 shows the breakdown by disease of claims filed against a large asbestos defendant.¹⁶ Only 13% of claims involve cancer or mesothelioma, while an additional 36% involve asbestosis (fibrosis of the lung that causes shortness of breath, sometimes severe). The remaining 51% are for non-malignant pleural diseases.

Following the adoption of the asbestos bankruptcy provisions, the number of bankruptcy filings by firms with large asbestos liabilities increased. Table 4 lists

¹³The 5% figure excludes the costs of litigation. If litigation costs were included, the figure would be 10.5%. See M.S. Smith, "Resolving Asbestos Claims: The Manville Personal Injury Settlement Trust," *Law and Contemporary Problems*, vol. 53(4), pp. 27-36, 1990, at p. 34.

¹⁴See M.S. Smith, "Resolving Asbestos Claims: The Manville Personal Injury Settlement Trust," *Law and Contemporary Problems*, vol. 53(4), pp. 27-36, 1990, at p. 34. In a dataset of asbestos trials that the author has been developing, the MPIST lost a number of arbitrations and trials by default during the early 1990's, when it failed to appear.

¹⁵S. J. Carroll, D.R. Hensler, J.Gross, and M. White (2001), *Asbestos Litigation in the U.S.: A New Look at an Old Issue*. RAND DB-362.0-ICJ, August 2001.

¹⁶This defendant is not identified, but is described as "large." The breakdown of claims by disease against it is likely to be similar to the breakdown of claims filed against the MPIST.

information about several asbestos reorganization plans and settlement trusts adopted since 1994. It suggests the increasing discrepancy between the value of asbestos claims and the level of funding for the compensation trusts that pay these claims, since in several cases the compensation trusts appear to have little funding other than the proceeds of lawsuits filed by the bankruptcy trustee. One firm, Eagle-Picher, filed for bankruptcy in 1991 and its reorganization plan was approved in 1996. Under the plan, its asbestos liabilities were valued at \$2 billion. The Eagle-Picher Personal Injury Trust was funded with \$397 million in cash plus notes and debentures of the reorganized company. It also received all of the reorganized company's equity. The schedule of compensation was much lower than that originally set by the MPIST: \$6,500 for mesothelioma, \$2,000 for lung cancer, \$1,000 for other cancers, and \$400 for non-malignant diseases.¹⁷ Another firm, H.K. Porter, adopted its reorganization plan in early 1998. Its plan estimated that the total number of personal injury claimants would be 559,000 and that total liabilities to claimants were \$2.2 billion. The H.K. Porter personal injury trust was funded with \$92 million plus the right to receive the proceeds of various lawsuits brought by the creditor's committee. The following schedule of payments by disease was adopted: \$1,000 for mesothelioma, \$600 for lung cancer, \$375 for other cancers, and \$200 for non-malignant diseases.¹⁸ Other asbestos reorganization plans are similar (see table 4).

The fact that none of the compensation trusts established since the MPIST have been as well funded suggests that, as bankruptcy has become routine for asbestos firms, their managers have become skilled either at transferring valuable assets out of the firm before it files for bankruptcy or at negotiating more favorable terms for the funding of compensation trusts. Back in 1982, the managers of the Johns-Manville Corporation probably did not anticipate that bankruptcy reorganization the firm would prove to be as costly as it was. A more recent example is the proposed reorganization plan of Babcock & Wilcox, which filed for bankruptcy in 2000. Under a plan proposed by management,

¹⁷ An Eagle-Picher Property Damage Trust was also set up to compensate owners of buildings containing asbestos, with funding of \$3 million. See "Reorganization Plan Confirmed In Eagle-Picher Bankruptcy Proceedings," *Mealey's Litigation Reporter: Asbestos*, vol. 11:21, December 6, 1996.

¹⁸ See "April 15 Hearing On Disclosure Statement In H.K. Porter Bankruptcy," *Mealey's Litigation Reporter: Asbestos*, vol. 13:4, March 20, 1998.

the personal injury compensation trust would provide compensation only to claimants that have either some form of cancer or asbestosis that is severe enough to leave the claimant totally disabled. Since more than 51% of claims listed in table 3 would be disqualified by these conditions, imposing them would save Babcock & Wilcox a large amount compared to remaining out of bankruptcy. Also under the proposal, none of the reorganized Babcock & Wilcox' shares would go to the trust unless it defaulted on a \$100 million promissory note. If it defaulted, then a majority of its stock would be transferred to the trust.¹⁹

A goal of the compensation trusts was to reduce the transactions costs of providing compensation relative to levels prevailing in non-bankruptcy asbestos litigation.²⁰ A report by the RAND Corporation in 1984 estimated that about 30% of asbestos compensation went to plaintiffs' legal expenses and an additional 33% went to defendants' legal expenses, so that only about one-third of all compensation expenditures reached the claimants.²¹ The MPIST attempted to lower these costs both by not contesting liability when claimants accepted the standard schedule of compensation and by holding their own transactions costs down to a low level. Later compensation trusts have also followed this pattern. But efforts to hold down transactions costs probably encouraged the filing of both low damage claims and claims that are fraudulent. Table 3 shows that for a single large defendant, only 13 percent of claims involve mesothelioma or other types of cancer.

Finally, table 5 gives claims data for a group of large, publicly-traded firms with large asbestos liabilities, as of 2000. The data show the total number of claims filed, claims filed in 2000, average cost per claim, and the total amount in reserve for future claims. The combination of a rising number of asbestos claims and a rising number of bankruptcy filings by traditional asbestos defendants has meant that the focus of litigation

¹⁹ Under the proposed reorganization plan, the trust would also receive \$50 million in cash and rights under insurance policies of the debtor having an estimated value of \$1.15 billion. Note that the proposed Babcock & Wilcox reorganization plan has not been adopted. See M.D. Plevin and P.W. Kalish, "What's Behind the Recent Wave of Asbestos Bankruptcies?" *Mealey's Litigation Reporter: Asbestos*, vol. 16:6, April 20, 2001, and "Babcock & Wilcox Files Reorganization Plan," *Mealey's Litigation Reporter: Asbestos*, vol. 16:5, April 6, 2001.

²⁰ "...the crafters of the Plan (the MPIST) genuinely wanted the Trust to be a negotiation-based settlement organization." Smith (1990, p. 34).

²¹ See J.S. Kakalik, P.A. Ebener, W. Felstiner, G. Haggstrom, and M.G. Shanley (1984), "Variation in Asbestos Litigation Compensation and Expenses," RAND R-3132-ICJ.

is shifting to new defendants with deep pockets but more marginal involvement in asbestos, such as oil companies and automobile producers. A RAND study of asbestos litigation in the early 1980's found that most claims were filed against approximately 300 "traditional" asbestos defendants, mainly suppliers of raw asbestos, manufacturers of asbestos insulation and other asbestos-containing products, and firms that install asbestos products. A more recent RAND study reported that asbestos claims had been filed against more than 1000 corporations and that these firms were in half of the industries in the U.S. economy.²² A separate study by the American Academy of Actuaries found that asbestos claims had been filed against 2000 corporations. Among the newer defendants are firms with only peripheral involvement in asbestos, such as Campbell's Soup and Gerber Baby Food.²³ These defendants generally either had encapsulated asbestos in their products or had asbestos insulation on their premises. Sometimes they purchased a subsidiary that had exposure of this type.

II. Why are asbestos claims still rising?

As noted above, recent estimates of the total cost of asbestos damage payments are in the range of \$200 billion, of which \$73 billion has already been paid out. Table 6 shows that, for a group of large asbestos defendants, the number of claims for asbestos damage has been rising rather than falling over time. Given that most of the traditional asbestos defendants have already limited their liability by filing for bankruptcy, why is the number of claims still rising and why are costs predicted to be so high? In this section, I explore a laundry list of reasons why the bankruptcy filings have not stopped—or even slowed---the filing of asbestos claims.

Asbestos use. One reason why claims are still rising is that consumption of asbestos in the U.S. only peaked in 1974.²⁴ Assuming that the average latency period for development of asbestos disease is 30 years, the peak period of disease manifestation

²² S. J. Carroll, D.R. Hensler, M. White and J. Gross, *Asbestos Litigation in the U.S.: A New Look at an Old Issue*, RAND DB-362.0-ICJ, August 2001.

²³ "Overview of Asbestos Issues and Trends," American Academy of Actuaries, Public Policy Monograph, Dec. 2001. This study indicates that 2000 firms have now been sued by asbestos claimants.

²⁴ See B.I. Castleman, *Asbestos: Medical and Legal Aspects*, 4th edition (1996), figure 1, p. 788. Peak U.S. consumption of asbestos was about 800,000 metric tons in 1974. By 1995, it had fallen to about 20,000 metric tons.

may be a few years in the future. However cancer deaths in the U.S. attributable to asbestos exposure are already falling, they are estimated to have peaked in 1992 at 9,700 per year.²⁵

In addition to the asbestos exposure that occurs because of old building materials still in place, asbestos was used in many consumer products long after it was eliminated from building products in the U.S. An example is a clay-like modeling compound containing 50% asbestos that was used in New Jersey schools as late as in 1982. The Environmental Protection Agency waited until 1989 to issue regulations that would have eventually banned most uses of asbestos, but the ban was challenged by the Canadian government and Canadian asbestos interests and was overturned in 1991.²⁶ Although most asbestos claims are filed by plaintiffs who allege exposure to asbestos through their work, some plaintiffs allege exposure entirely from asbestos-containing consumer products. These claims are likely to increase in the future. A recent case involved a homeowner who purchased asbestos-containing items at Sears during the 1950's, including tile, joint compound, and a jacket for a boiler. Some of the items were made by General Electric. In 2000, the plaintiff was awarded damages of \$1,500,000.²⁷

Asbestos litigation is very profitable for plaintiffs' lawyers. A few law firms handle a high fraction of asbestos claims: for example, more than half of all claims against the MPIST are filed by ten law firms.²⁸ These firms often do not handle other types of litigation. They have made a substantial investment in developing evidence concerning when defendant firms knew that working with asbestos was dangerous to workers' health and which firms sold asbestos products in particular locations and particular years. Because they can credibly threaten to go to trial, they can often bargain very favorable settlement terms for plaintiffs.

²⁵ See Castleman, p. 784.

²⁶ In addition to insulation, asbestos was widely used in drywall, sprayed-on ceiling coatings, brakes, table salt, fake fireplace logs and hair dryers. See Castleman, p. 788-92.

²⁷ "N.Y. Jury Finds Sears/GE Liable For Exposure; Awards \$1.5 Million To Meso Victim," *Mealeys Litigation Reporter: Asbestos*, Vol. 15:17, Oct. 6, 2000.

²⁸ See Manville Personal Injury Settlement Trust, *Financial Statements and Report for the period ending September 30, 2000, In re Johns Manville, Andrews Asbestos LR*, Document Section D, 2000.

In most mass tort litigation, plaintiffs' lawyers would be forced to switch to a new type of litigation if the main defendant(s) filed for bankruptcy. However, asbestos differs from other mass torts in having a virtually unlimited list of potential defendants. Thus as more of the core group of asbestos defendants have filed for bankruptcy, asbestos law firms have turned to new defendants. They also have moved to a strategy of filing claims against increasing numbers of defendants for each plaintiff. This means that even if new defendants pay less per claim, the loss of revenue from each defendant is made up by collecting from more of them. Table 7 gives a list of all of the defendants that a single plaintiff sued, 62 in all. The defendants include many of the traditional asbestos producers, plus a long list of automobile and automobile parts producers. With such a long list of defendants, small settlements add up.

The economics of representing asbestos plaintiffs suggests that suing additional defendants per plaintiff is very profitable, because most of the costs that lawyers incur are fixed. For each plaintiff, medical tests must be run, a medical expert must examine the test results and determine which plaintiffs have asbestos disease, and a set of papers must be drawn up. But once this investment is made, the cost of adding additional defendants is very low.

But plaintiffs' law firms need a steady flow of new plaintiffs in order to maintain their incomes. Because the number of plaintiffs developing serious asbestos diseases is declining, new plaintiffs are increasingly likely to have been exposed to asbestos, but to have no disability. A common practice is for plaintiffs' lawyers to arrange with union officials to provide free screening for asbestos exposure to all workers at a particular factory. A portable X-ray machine in a van parks outside the factory and offers screening tests to any worker who is willing to sign a retainer agreement with the firm. As X-ray technology has improved over time, lower and lower levels of asbestos particles in the lungs have become observable, so that the number of potential claimants has increased. Sometimes X-ray vans park at random locations and offer screening to anyone in the area.²⁹ While claims of plaintiffs who have no disease or disability are less likely to win at trial than claims of plaintiffs who are seriously disabled, these claims can be very

²⁹ See M.E. Angelina, "The 'Energizer Bunny' of Toxic Torts," Dec. 2001, www.towers.com/towers/publications/emphasis/emp2001-1/energizer.htm.

profitable if they either settle or go to trial along with claims of plaintiffs with more severe injuries.

Asbestos defendants and the asbestos settlement trusts have complained for years that funds intended for compensation of seriously disabled victims are being wasted on compensation of non-injured plaintiffs whose claims at best are unmeritorious and at worst are fraudulent. Defendants claim that plaintiffs' law firms engage in such practices as using manipulated medical tests or using a single lung X-ray for multiple plaintiffs. They have attempted to refuse payment of claims based on results from particular medical laboratories.³⁰ Recently, a Federal judge dismissed many asbestos lawsuits that were based only on lung X-rays obtained from mass screenings, claiming that "...the filing of mass screening cases is tantamount to a race to the courthouse and has the effect of depleting funds, some already stretched to the limit, which would otherwise be available for compensation to deserving plaintiffs,...".³¹ But in a recent trial in Mississippi, six plaintiffs with asbestosis were awarded damages of \$25 million dollars each, even though none of them had incurred any medical expenses or lost any time at work due to their asbestos exposure. One of the plaintiffs told a *Fortune* reporter that his health was good enough that he jogged until the age of 60 and still walks three or four miles a day at age 65.³²

³⁰ An article about Owens-Corning Fiberglass indicates that many of the recently filed claims "appear to be the product of mass screening programs and not to involve malignancies or other significant asbestos related impairment." The company says it believes that at least 40,000 recently filed claims involve plaintiffs whose pulmonary function tests were improperly administered or manipulated by testing laboratories or were inconsistent with proper medical practice." See "Asbestos Companies Detail Numbers Of Pending Claims, New Filings In 1997," *Mealeys Litigation Reporter: Asbestos*, vol. 13:7, May 1, 1998. Also see "Manville Trust Cracks Down On Use Of PFT Results; Reviews Category III Claims," *Mealeys Litigation Reporter: Asbestos*, vol. 11:20, Nov. 15, 1996, which reports that the MPIST began refusing to accept pulmonary function tests from several medical laboratories. The Chairman of W.R. Grace claimed that it filed for bankruptcy because "Grace cannot effectively defend itself against unmeritorious claims." Quoted in M.D. Plevin and P.W. Kalish, "What's Behind the Recent Wave of Asbestos Bankruptcies," *Mealeys Litigation Reporter: Asbestos*, vol. 16:6, April 20, 2001.

³¹ The lawsuits that were dismissed were filed by the law firm of Baron & Budd. The judge was Judge Charles R. Weiner, who oversees the asbestos multi-district litigation in the U.S. District Court for the Eastern District of Pennsylvania. See "MDL Judge Issues Order to Administratively Dismiss X-ray Screening Cases," *Mealey's Litigation Reporter: Asbestos*, vol. 17:1, Feb. 1, 2002.

³² See Roger Parloff, "Asbestos: The \$200 Billion Miscarriage of Justice," *Fortune*, Monday March 4, 2002.

Changes in tort law that favor asbestos claimants.

Changes in the law have also contributed to the attractiveness of filing asbestos claims, since they have tended to favor plaintiffs. Standard product liability theory evolved in the late 1960's and early 1970's from negligence to the current doctrine of strict liability if there was failure to warn or a design defect or failure in testing. Also the theory of liability based on market share, developed in connection with the DES litigation, has influenced asbestos cases even though it has not been explicitly adopted. An additional factor is that standards concerning manufacturers' required knowledge of the dangers of asbestos have risen over time and courts have not hesitated to impose the later standards on earlier behavior. Richard Epstein notes a 1982 case against Johns-Manville that he argues would have led to a directed verdict in the defendant's favor in 1970, but which actually led to an award of punitive damages when it went to trial in 1982.³³ One large asbestos defendant, 3M Corp., never made asbestos products, but faces large asbestos liability based on its failure to warn that the dust masks it produced don't work if improperly used.³⁴

Another area of legal evolution involves the issue of which of the defendant's insurance policies cover any particular claim. The language of standard commercial liability insurance policies from the late 1950's made it explicit that injuries involving cumulative trauma would be covered under the "accident" language of the standard policy. However there was no contractual language that specified which insurance policy provided coverage when long periods of time had elapsed between plaintiffs' initial exposure and their manifestation of disease, assuming that defendants had purchased coverage from multiple insurers over the period. Under the "single trigger" theory, the coverage was provided by the policy in effect when the plaintiff first manifested disease. Under the "double trigger" theory, coverage was provided by both the policy in effect at the date of disease manifestation and the policy in effect at the date of exposure. Under

³³ The case is *Moran v. Johns-Manville Sales Corp.*, 691 F.2d 811, 815 (6th Cir. 1982), discussed in R.A. Epstein, "The Legal and Insurance Dynamics of Mass Tort Litigation," *J. of Legal Stud.*, vol. XIII (Aug. 1984), 475-506, at p. 483.

³⁴ See Roger Parloff, "Asbestos: The \$200 Billion Miscarriage of Justice," *Fortune*, Monday March 4, 2002.

the “triple trigger” theory, the plaintiff can choose to elect coverage under any of the policies in effect between the date of exposure and first manifestation. Finally, many states have adopted the “continuous trigger” doctrine, which triggers *all* of the policies in effect between the two dates. The continuous trigger doctrine in effect increases aggregate insurance coverage, because particular claims that would not be covered by one policy may be covered by another. It therefore makes filing claims more attractive.³⁵

Another area in which the law has changed in favor of claimants involves reclassifying insurance policies from products liability coverage to premises coverage. Products liability policies normally have an aggregate policy limit, while premises policies have a policy limit per occurrence but no limit on the number of covered occurrences. In some cases, products liability policies that had reached their policy limits have been reclassified as premises coverage, thus increasing defendants’ insurance coverage.³⁶ This change clearly makes filing claims more attractive.

Joint and several liability and incentives for lawyers to file multiple claims.

Bankruptcy filings by particular asbestos defendants also have a negative effect on other asbestos defendants, because the non-bankrupt firms are forced to pick up some of the liabilities that would have been borne by the bankrupt firm. Most asbestos claimants sue multiple defendants. Although state law varies, many states have joint and several liability for damage. Suppose firms A, B and C are found jointly liable for damage to a plaintiff. Then if firm A files for bankruptcy or is already in bankruptcy, then firms B and C may be liable for firm A’s share of the damage. This means that when firm A files

³⁵ Epstein notes that many courts have avoided adopting the date of first manifestation as a trigger because it gives insurers an incentive to cancel coverage following the first notice of injury if they expect that the same cause will produce other claims. Other doctrines reduce their incentive to do so and thereby favor plaintiffs by increasing the amount of coverage available to pay claims, but raises the cost that defendants pay for coverage. For general discussion, see Epstein, *id.*, and L.J. Khan (1993), “Untangling the Insurance Fibers in Asbestos Litigation: Toward a National Solution to the Asbestos Injury Crisis,” *Tulane Law Review*, vol. 68, pp. 195-240, for discussion.

³⁶ See M.E. Angelina, “The ‘Energizer Bunny’ of Toxic Torts,” Dec. 2001, www.towers.com/towers/publications/emphasis/emp2001-1/energizer.htm An example of premises coverage is the insurance on the World Trade Center towers. The policy limit per occurrence was \$3.5 billion, but it is disputed whether the attacks on the two towers constituted one occurrence or two and therefore whether the insurance coverage is \$3.5 billion or \$7 billion. Conversion of products liability coverage to premises coverage would similarly raise the policy limit if individual asbestos claims were held to constitute separate occurrences.

for bankruptcy, firms B and C are made worse off. The additional liability may cause firms B and C to file for bankruptcy. This domino effect has been an important factor in the bankruptcies of many of the traditional asbestos defendants. As each additional firm files for bankruptcy, the remaining firms become more likely to file because of increased demands for damage payments.

Joint and several liability also increases plaintiffs' lawyers' incentive to file multiple claims. If a plaintiff wins a high damage award at trial, then the more defendants there are, the higher the probability of the plaintiff collecting the entire amount of the award.

Forum Shopping. Plaintiffs' lawyers can increase the value of asbestos claims by filing in a court that has a record of favoring plaintiffs in asbestos cases. 20% of asbestos cases are filed in state court in Mississippi, even though few claimants were exposed to asbestos in Mississippi or live in Mississippi.³⁷ According to *Fortune* magazine, many of these cases are filed one particular Mississippi court, where a particular judge is very pro-plaintiff. Although few asbestos cases go to trial in Mississippi,³⁸ one trial in 1998 resulted in damages of \$48.5 million for 12 plaintiffs and another in 2001 resulted in damages of \$150 million for six plaintiffs.³⁹ The high verdicts suggest that asbestos settlements are also high in Mississippi.⁴⁰

Insurance “stacking” and incentives to file fraudulent claims.

Consider the interaction between asbestos firms and their insurers. Most large firms buy multiple layers of liability insurance. For example, insurer A might issue a policy that covers the first five million dollars of liability (subject to a deductible), then another

³⁷ See “Overview of Asbestos Issues and Trends,” American Academy of Actuaries, Public Policy Monograph, Dec. 2001, p. 3.

³⁸ The fraction of asbestos cases tried to a verdict in Mississippi is only 0.5 percent, according to the author's unpublished research on asbestos trials.

³⁹ See Roger Parloff, “Asbestos: The \$200 Billion Miscarriage of Justice,” *Fortune*, Monday March 4, 2002, “Mississippi Jury Awards 12 Plaintiffs \$48.5 Million,” *Mealey's Litigation Report: Asbestos*, vol. 13:13, Aug. 3, 1998, and “Mississippi Jury Returns \$150 Million Verdict Against AC&S, 3M, and Dresser,” *Mealey's Litigation Report: Asbestos*, vol. 16:19, Nov. 12, 2001.

⁴⁰ Following the Mississippi trial, concern about Halliburton's asbestos liabilities caused Moody's Investors Service to downgrade its credit rating in December 2001 and again in January 2002. Halliburton's stock price fell more than 70 percent during the period from January 2001-January 2002 due to concern over its asbestos liabilities. Halliburton had settled 201,000 asbestos claims as of January 2002. See Kenneth N. Gilpin, “Halliburton Credit Rating is Cut Again on Worry About Asbestos,” *New York Times*, January 24, 2002.

insurer B might issue a policy that covers the next 10 million dollars, then insurer C covers the next 50 million dollars and insurer D covers the next 100 million dollars. Once each insurer pays out its policy limit, the next insurer in the stack takes over. Insurers generally manage the firm's litigation strategy and pay for legal costs as well as paying for damages. After all of the firm's insurance coverage has been exhausted, the firm itself pays for the remainder of claims. Firms often file for bankruptcy when they exhaust their insurance coverage, although some have filed earlier.

Because of the volume of asbestos claims, many insurers expect to pay out their policy limits and this affects their incentives concerning how to manage asbestos claims. Suppose claims filed are a mixture of valid and fraudulent. Also suppose fraudulent claims can be identified by an auditing procedure, but auditing is expensive. If claims go to trial, then auditing occurs. At trial, valid claims win and fraudulent claims lose. But since most asbestos claims are settled, insurers have a choice between offering settlements on all claims without auditing versus auditing all claims before making settlement offers. These two strategies are referred to as soft versus aggressive (sometimes the latter is referred to as "scorch and burn"). Under the aggressive strategy, insurers offer settlements only on valid claims. Plaintiffs' lawyers therefore have an incentive to file only valid claims, because fraudulent claims generate costs but no benefits. Under the soft strategy, insurers offer to settle both types of claims for an amount that is assumed to be at least equal to the cost of filing them. As a result, plaintiffs' lawyers have an incentive to file both fraudulent and valid claims. Therefore the soft strategy gives plaintiffs' lawyers an incentive to file fraudulent as well as valid claims, while the aggressive strategy gives plaintiffs' lawyers an incentive to file only valid claims.

Now suppose insurer A is responsible for the defendant's litigation strategy and consider whether insurer A prefers the weak or the aggressive strategy. Suppose insurer A knows that the total value of valid claims against the firm exceeds \$5 million. Then insurer A has an incentive to choose the weak litigation strategy and not to audit claims. This is because, if it audited, litigation costs would rise, but whatever funds were saved by not paying fraudulent claims would have to be used instead to pay additional valid claims. Thus the gain from adopting the aggressive strategy goes to other insurers or the

firm itself, rather than to insurer A. As a result, insurer A prefers to adopt the soft litigation strategy. But because insurer A settles all claims, plaintiffs' lawyers have an incentive to file fraudulent as well as valid claims. Insurer B has similar incentives, once it takes over as the firm's insurer and litigation manager.

Now suppose everything remains the same, but instead of having four stacked insurance policies, the firm instead has only one insurer with a policy limit of \$165 million (the sum of the policy limits of the four stacked policies). In this case the insurer is more likely to choose the aggressive litigation strategy. This is because if the total value of valid claims is less than \$165 million, then an aggressive strategy of auditing all claims may cause the value of claims to fall below \$165 million by enough to justify the cost of auditing. Thus the smaller the number of separate layers of insurance a firm has, the more likely its insurers are to choose an aggressive litigation strategy and vice versa. Similarly, if firms self-insure for liability, then they are more likely to take an aggressive litigation strategy.

One implication of this scenario is that reducing the transactions costs of asbestos litigation by not auditing claims—often thought to be desirable—may lead to many fraudulent claims being filed.

Changes in legal procedure that benefit asbestos claimants. Asbestos lawsuits, in addition to being very numerous, are concentrated in a few jurisdictions. Pennsylvania has 26% of asbestos trials and New York and Texas each have 14%.⁴¹ This means that asbestos claims clog the dockets of particular courts. Judges in these courts have responded by trying new methods to resolve large numbers of claims quickly. Most of these efforts involve encouraging defendants to settle large numbers of lawsuits. But when low value lawsuits are settled, lawyers have an incentive to file additional claims.

One method that judges frequently use to resolve asbestos claims involves a combination of consolidating claims and bifurcating trials. The judge picks six to twenty

⁴¹ This counts each plaintiff as a separate trial, even if several plaintiffs are combined in a consolidated trial. See Michelle J. White, "Asbestos Litigation: The Role of Procedural Innovations in the Making of a Mass Tort," NBER working paper, 2002.

cases from a larger group of 100 to 1000 cases. The small group of cases is tried using a procedure called reverse bifurcation, in which the jury decides causation and compensatory damages in phase one. Decisions concerning liability and punitive damages are saved for later. When phase one of the trial finishes, the judge encourages the parties to settle both the small and the large groups, based on the damage figures that the jury has found for the small group. If they fail to settle, then the same jury will decide liability and possibly punitive damages for the small group of cases.

If the damage awards in the initial phase are high, then the threat to continue to use the same jury to decide liability for the small group and/or damages for the large group is particularly effective in pressuring defendants to settle. This occurred in one trial in Mississippi, in which the first group of trials involving twelve plaintiffs resulted in damages awards that averaged \$4 million per case. When the judge threatened to use the same jury for additional cases, the defendants settled the large group of 1738 plaintiffs on terms that were very favorable for plaintiffs.⁴² Judges also may threaten to send the issue of punitive damages to the same jury if no settlement occurs.⁴³

But when plaintiffs' lawyers obtain settlements for large blocks of claims, they have an incentive to file additional blocks of claims. They also have an incentive to file fraudulent claims and then negotiate for the same settlement levels for fraudulent and valid claims. An additional factor is that when blocks of claims are settled, low damage claimants often receive more than the expected value of their claims at trial and high damage claimants—such as mesothelioma victims--receive less. As a result, the past several years have seen the emergence of specialized law firms that represent only high damage asbestos claimants and handle these cases individually.⁴⁴ The combination of trials for high damage claims and settlements of low damage claims for more than their expected value at trial clearly harms defendants and encourages the filing of additional lawsuits.

⁴² The case is *Cosey v. E.D. Bullard Co.*, Civ. No. 95-0069 (Miss. Cir. Ct. Jefferson County 1995), discussed in V.E. Schwartz and L. Lorber, "A Letter to the Nation's Trial Judges: How the Focus on Efficiency is Hurting You and Innocent Victims in Asbestos Liability Cases," *Am. J. of Trial Advocacy*, vol. 24, Fall 2000, 247-271, at p. 255, and in Roger Parloff, "Asbestos: The \$200 Billion Miscarriage of Justice," *Fortune*, Monday March 4, 2002.

⁴³ See L. Brickman, "The Asbestos Litigation Crisis: Is there a Need for an Administrative Alternative?" *Cardozo L. Rev.*, vol. 13, p. 1819 (1992).

⁴⁴ See Carroll et al (2001), p. 24.

Finally, when cases are consolidated for purposes of trial, plaintiffs' probability of winning tends to rise. One reason is that jurors are likely to feel sympathetic to non-disabled plaintiffs in a trial, because severely disabled plaintiffs' claims are considered at the same trial. Jurors may either award damages for "fear of cancer" or may award the same damages to all plaintiffs on the grounds that non-disabled plaintiffs' disease will inevitably progress to the same severity level as disabled plaintiffs' disease. Also, evidence that is relevant to one plaintiff's case may affect other plaintiffs' cases if their claims are consolidated. As an example, suppose all of the plaintiffs in a consolidated trial have lung cancer and suppose at least one is a smoker and at least one is a non-smoker. In trials involving smokers, asbestos defendants normally argue that the plaintiff's lung cancer resulted from smoking rather than asbestos exposure and this argument sometimes wins. But the argument is less likely to succeed when the jury also observes a non-smoking plaintiff who has lung cancer, since the non-smoking plaintiff demonstrates that lung cancer can develop from asbestos exposure alone. As a result, smoking plaintiffs are more likely to win at trial when their claims are consolidated with those of non-smoking plaintiffs. In a statistical study of asbestos trials, I found that when two or three plaintiffs have a consolidated trial rather than individual trials but everything else is held constant, each plaintiff's probability of winning rises by 14 percentage points compared to the results in independent trials. When four or five plaintiffs' cases are consolidated, each plaintiff's probability of winning rises by 10 percentage points compared to the results in independent trials. Both differences are statistically significant.

The asbestos bankruptcy decision and incentives to file fraudulent claims. When asbestos firms are near filing for bankruptcy, the special rules of 11 U.S.C. SS 524(g) and (h) may give them an incentive to encourage the filing of fraudulent claims. As discussed above, asbestos bankruptcies require that a trust be set up to compensate tort claimants and that at least 50% of the reorganized firm's equity go to the trust. The reorganization plan predicts the total number of present and future claimants and specifies a schedule of compensation by disease. The higher the projected cost of compensation, the more of the reorganized firm's equity must go to the trust.

In this situation, managers of an asbestos firm who are contemplating filing for bankruptcy may have an incentive to encourage the filing of fraudulent claims because fraudulent claims lower the cost of reorganizing in bankruptcy. To illustrate, suppose all asbestos claimants have the same disease, but a proportion f of claims is fraudulent, while the remaining claims are valid. Managers are assumed to choose between litigating all claims outside of bankruptcy versus filing for bankruptcy under Chapter 11. Suppose claims that go to trial have an expected value of \$100 if they are valid and \$0 if they are fraudulent. The costs of going to trial are \$30 for plaintiffs and \$35 for defendants. (These figures correspond to estimates of asbestos litigation costs as a percentage of compensation.⁴⁵) In litigation, the expected value to plaintiffs of a valid claim at trial is $100 - 30 = \$70$ and the expected cost to managers of a valid claim at trial is $\$100 + 35 = \135 . The expected value to plaintiffs of a fraudulent claim at trial is $-\$30$ and the expected cost to managers of a fraudulent claim at trial is \$35. Claimants are assumed to drop fraudulent claims if managers choose litigation, because the expected value of these claims at trial is negative.

First suppose managers choose bankruptcy. They must propose a reorganization plan involving a compensation trust. Suppose the proposed plan specifies that the trust will pay all claimants p percent of the expected value of a valid claim in litigation, or $p100$, regardless of whether their claims are valid or fraudulent. Also suppose the transactions cost of resolving claims in the trust is 25% of the amount paid for plaintiffs and 5% of the amount paid for the trust itself. (These figures correspond to the MPIST's reported transactions costs of paying claims.) Therefore, claimants' expected payoff in bankruptcy is $p100(1 - .25)$ and the trust's expected cost per claim in bankruptcy is $p100(1 + .05)$. Claimants vote on the plan and 75% of them must vote in favor for it to be approved.⁴⁶

⁴⁵ The \$100 figure is assumed to equal the probability of the plaintiff winning at trial times the amount of damages awarded if the plaintiff wins. For transactions costs figures, see J. S. Kakalik, P.A. Ebener, W. Felstiner, and M.G. Shanley (1983), "Costs of Asbestos Litigation," RAND R-3042-ICJ.

⁴⁶ Whether claimants vote in favor or against a proposed reorganization plan depends on what they predict they will receive if the plan is rejected. In his discussion of this paper, Dan Keating points out that the firm is assumed to go back to litigating claims as though it had never filed for bankruptcy in the first place if the plan is rejected. As he points out, this assumption is clearly unrealistic, since firms usually file for bankruptcy only when they exhaust their insurance coverage. In fact, rejection of a plan would probably lead to delay and to a new reorganization plan being proposed, rather than a return to litigation. In future

Managers are assumed to file for bankruptcy versus to remain out of bankruptcy and litigate all claims based on which alternative costs less. Because an asbestos firm's bankruptcy reorganization plan must be approved by at least 75% of claimants, managers' decision therefore depends on whether more than or less than 75% of claims are fraudulent, i.e., whether the critical voter on the reorganization plan is a fraudulent or valid claimant.

Suppose first that $f = .20$, so that the critical voter is a valid claimant. Valid claimants only vote for the reorganization plan if they receive at least as much from the compensation trust as their expected gain in litigation. Since their expected gain in litigation is \$70, the lowest offer in bankruptcy that they will accept must satisfy the condition that $p(100)(1 - .25) = 70$. This implies that the payoff rate p from the compensation trust must be no lower than .93, or $p = 93\%$. Thus managers must offer claimants a payoff rate of at least 93% from the settlement trust in order to induce valid claimants to vote for the reorganization plan. Fraudulent claimants cannot block the plan if this condition holds, because there are too few of them and, in any case, they strongly prefer bankruptcy over litigation. Now consider whether managers prefer to file for bankruptcy versus remain out of bankruptcy. Managers' expected cost per claim in litigation is $(.80)(135) + (.20)(35) = \115 and their cost per claim in bankruptcy is $(.93)(100)(1.05) = \$97.65$. This means that managers gain \$17.35 per claim from filing for bankruptcy. While they gain from not compensating fraudulent claimants in litigation, this gain is more than offset by paying less to valid claimants in bankruptcy.

Now suppose $f = .80$, so that the critical voter is now a fraudulent claimant, but everything else remains the same. Fraudulent claimants prefer bankruptcy to litigation as long as the payoff rate p in bankruptcy is positive, because they receive $p100(.75)$ in bankruptcy but nothing in litigation. Therefore they vote in favor of bankruptcy reorganization plans as long as they receive even a negligible payoff. To be concrete, suppose managers propose a payoff rate p of 10%. Managers' cost per claim in bankruptcy is therefore $(.10)(100)(1.05) = \$10.50$. Their expected cost in litigation is now $(.20)(135) + (.80)(35) = \55 . Managers now gain \$44.50 per claim from filing for

research, I plan to explore a version of the model that responds to these issues. I am very grateful for Dan Keating's comments and suggestions.

bankruptcy. Their gain from filing for bankruptcy when the critical voter is a fraudulent claimant is much larger than when the critical voter is a valid claimant.

Thus while managers gain from filing for bankruptcy regardless of whether the critical claimant is valid or fraudulent, their gain from filing is much greater when the critical claimant is fraudulent. These results suggest that managers of asbestos firms may benefit from encouraging the filing of additional fraudulent claims, assuming that the firm is likely to file for bankruptcy. However if managers encourage the filing of fraudulent claims, then the total number of claims rises and the cost of paying the additional claims may more than offset the firm's gain from paying less per claim in bankruptcy.

Overall, managers, insurers, and plaintiffs' lawyers all may gain from the filing of fraudulent asbestos claims. Perhaps it should not be surprising that the volume of litigation continues to rise with no end in sight.

III. Conclusion

Bankruptcy is the only means for individual asbestos defendants to limit their liability to tort claimants, but it has not been effective in limiting the total number and cost of asbestos claims. This article explores why the asbestos crisis has continued to grow in scale, despite more and more bankruptcies by the largest asbestos defendants.

The future of asbestos litigation probably will involve claims being filed by plaintiffs whose exposure to asbestos was increasingly fleeting and they will be suing defendants whose involvement in the chain of commerce for asbestos products was increasingly tangential. These claims would probably be increasingly difficult to win at trial. But if judges browbeat defendants to settle large blocks of claims for small sums, then the sheer volume of the litigation will keep it profitable and expensive for a long time to come.

Table 1:
Bankruptcy Filings by Firms with Large Asbestos Liabilities
(includes filings up to June 2002)

Filings During 2000-2002

Armstrong World Industries/Nitram/Desseaux (2000)
Asbestospray (2000)
Babcock & Wilcox (2000)
Harnischfeger Corp. (2000)
North American Asbestos (2000)
Pittsburgh Corning (2000)
Owens Corning (2000)
Rock Wool (2000)
Southern Textile Corp. (2000)
Spraycraft (2000)
Burns & Roe (2000)
E.J. Bartells (2000)
Eastco Industrial Safety Corp. (2001)
G-I Holdings (GAF Corp.) (2001)
W.R. Grace (2001)
U.S. Gypsum (2001)
United States Mineral Products Co. (2001)
Washington Group International (2001)
Federal Mogul (2001)
Kaiser Aluminum (2002)
Harbison-Walker Refractories Co./A.P. Green Ind./North American Refractories Co. (NARCO) (2002)
Porter Hayden (2002)
Plibrico Co. (2002)
Shook & Fletcher Insulation Co. (2002)
Fuller-Austin Insulation Co. (2002)
Solutia, Inc. (2002)
A.P. Green Industries Inc. (2002)
Shook and Fletcher (2002)
U.S. Mineral Corp./U.S. Mineral Co. (2002)
Artra Group Inc./Synkoloid Corp. (2002)

Earlier Filings

Amatex Corp. (1982)
American Shipbuilding Co./Tampa Shipyards
Big Rivers Electric Corp. (1996)
Brunswick Fabrications (1998)
Carey Canada/Philip Carey/Celotex Corp./Rapid American (1990)
Cassiar Mining Corp. Ltd. (1992)
Continental Producers
Delaware Insulations (1989)
Diamond Power Specialty Co.
Drexel Burnham Lambert Group Inc./Jim Walter Corp.
Eagle-Picher Industries (1991)
Ehret Magnesia Manufacturing Co./Baldwin-Ehret Hill Inc./Baldwin Hill Inc. (1993)
Ferodo America Inc.
Forty-eight Insulations (1985)

Foster Wheeler Corp.
 Fuller Austin (1998)
 Gasket Holdings Inc.
 Gatke Corp. (1987)
 Great Lakes Carbon Corp./Sigri Great Lakes Carbon Corp./SGL Carbon Corp.
 H.K. Porter (1991)
 Hillsborough Holdings Corp./Celotex/Jim Walter Corp. (1989)
 Johns-Manville Corp. (1982)
 Joy Technologies (1999)
 Keene Corp./Reinhold Industries (1993)
 Kentile Floors (1993)
 Lykes Corp./Lykes Bros. Steamship (1995)
 M.H. Detrick Co. (1998)
 National Gypsum/Ancor Holdings, Austin Co. (1990)
 Nicholet (1987)
 Nuturn Corp.
 North American Asbestos Corp. (1976)
 Pacor Inc./Pacor Material Supply Co. (1986)
 Powhatan Mining Co.
 Prudential Lines (1986)
 Raymark Industries/Raybestos Manhattan (1989)
 Rock Wool Manufacturing (1996)
 Rutland Fire Clay Co. (1999)
 SGL Carbon (1998)
 Skinner Engine Co (2001)
 Standard Asbestos Manuf. & Insul. (1990)
 Standard Insulations (1986)
 Todd Shipyard (1987)
 Turner & Newall Industries Inc.
 TAF International Ltd.
 United States Lines (1986)
 Wallace & Gale (1984)
 Waterman Steamship Corp. (1983)
 Western Macarthur Corp.

Multiple names indicate subsidiaries and/or former corporate names. Filing dates are in parentheses.

Sources: "Overview of Asbestos Issues and Trends," American Academy of Actuaries, Public Policy Monograph, Dec. 2001, p. 17, and *Mealey's Litigation Reporter: Asbestos*, various issues.

**Table 2:
Claims against the Manville Personal Injury Settlement Trust**

	Cumulative number of claims filed	Cumulative number of claims settled	Total amount paid	Average payment per claim since 1988
1988		12,600	\$500 million	\$40,000
1989	48,200			
1992	190,000			
1995	280,000			
1998	388,000	185,000	\$1.8 billion	\$9,700
2000	482,000	277,000	\$2.2 billion	\$7,900

Source: Reports of the Manville Personal Injury Settlement Trust. See www.mantrust.org.

**Table 3:
Breakdown of Claims Against a Single Large Defendant by Type of Disease**

Disease	Percent of Claims
Mesothelioma	4
Other cancer	9
Asbestosis	36
Disabling lung disease	17
Non-disabling lung disease	12
Bi-lateral pleural disease	15
Other	7

Source: S.J. Carroll, D.R. Hensler, J. Gross, and M.White (2001), *Asbestos Litigation in the U.S.: A New Look at an Old Issue*. Santa Monica: RAND Corporation.

Table 4: Characteristics of Recent Reorganization Plans

Celotex: approximately 250,000 claims, with an aggregate value estimated at \$2.8 billion. The trust is to be funded with cash, notes, equity of the reorganized firm, and insurance worth an estimated \$1 billion. Schedule of payments: mesothelioma: \$40,000; lung cancer with asbestosis: \$20,000; lung cancer without asbestosis: \$6,800; severe asbestosis: \$15,000; moderate asbestosis: \$7,500; mild asbestosis: \$2,500; gastrointestinal cancer with asbestosis: \$20,000; impaired pleural disease: \$1,500; and unimpaired asbestosis: \$100. (Source: “Celotex Files Reorganization Plan,” *Mealey’s Litigation Reporter: Asbestos*, February 17, 1995, and “Judge Confirms Celotex Reorganization Plan,” *Mealey’s Litigation Reporter: Asbestos*, Dec. 20, 1998.)

Amatex: Schedule of payments: mesothelioma: \$925; lung cancer: \$400; asbestosis death: \$400; and other cancer: \$200. Exact payment amounts will depend upon the number of valid claims filed. (Source: “May 1 Filing Deadline Set For Claims Against Amatex Settlement Trust,” *Mealey’s Litigation Reporter: Asbestos*, Dec. 6, 1996.)

Eagle-Picher: Filed for bankruptcy in 1991, plan approved 1996. Asbestos claims valued at \$2 billion. Funding for the trust is \$250 million in ten year debentures, \$50 million in cash, \$77 million in other notes, and all of the equity of the reorganized company. Of this, \$3 million will go to the Property Damage Trust. Schedule of payments: mesothelioma: \$6,500; lung cancer: \$2,000; other cancers: \$1,000; non-malignancy: \$400. (Source: “Nov. 13 Confirmation Hearing on Eagle-Picher Reorganization Plan Set” and “Reorganization Plan Confirmed in Eagle-Picher Bankruptcy Proceedings,” *Mealey’s Litigation Reporter: Asbestos*, vol. 11:16, Sept. 20, 1996 and vol. 11:21, Dec. 6, 1996.)

Forty-eight Insulations: Liquidating plan; \$59 million will be distributed to creditors and tort claimants. Schedule of payments: mesothelioma (5,769 claims): \$1,086; lung cancer (9,695 claims): \$543; and other asbestos-related diseases (115,046 claims): \$272. (Source: “Forty-eight Insulations Liquidation Plan Confirmed” and “Bankruptcy Judge Reopens Forty-Eight Insulations Case After Class Action,” *Mealey’s Litigation Reporter: Asbestos*, vol. 10:12, July 21, 1995 and vol. 11:15, September 6, 1996.)

H.K. Porter: Plan adopted in 1998. The plan estimated that the total number of personal injury claimants would be 559,000 and that total liabilities to these claimants were \$2.2 billion. The trust was funded with \$92 million plus the right to receive the proceeds of various lawsuits brought by the creditor’s committee. The schedule of payments by disease was: \$1,000 for mesothelioma, \$600 for lung cancer, \$375 for other cancers, and \$200 for non-malignant diseases. (Source: “April 15 Hearing On Disclosure Statement In H.K. Porter Bankruptcy,” *Mealey’s Litigation Reporter: Asbestos*, vol. 13:4, March 20, 1998.)

Babcock & Wilcox (proposed): Funding will be insurance rights having an estimated value of \$1.15 billion, \$50 million cash from B&W, and a 10 year promissory note from B&W for \$100 million. If B&W defaults on the note, then a majority of B&W voting stock would be transferred to the trust. Qualifying victims must have malignant mesothelioma, lung cancer, other cancer, or “severely disabling asbestosis.” To qualify under the latter, victims must, among other requirements, be certified as totally disabled as a result of an asbestos-related disease. (Source: and M.D. Plevin and P.W.Kalish, “What’s Behind the Recent Wave of Asbestos Bankruptcies?” *Mealey’s Litigation Reporter: Asbestos*, vol. 16:6, April 20, 2001.)

**Table 5:
Number of Past and Current Asbestos Claims for Selected Companies
as of 2001**

	Total claims resolved	Average cost per claim	Total cost	Number of pending claims	Claims filed in 2000	Reserve for claims
Owens-Illinois	241,000	\$4,900	\$1.18 billion	19,000	20,000	\$489,000,000
USG Corp.	57,000	\$2,600	\$186 million	92,000	53,000	\$889,000,000 - \$1.28 billion
	26,000 (future)	\$1,475		59,000		
Crown Cork & Seal	40,000 (year 2000 only)	\$2,500	\$100 million	44,000		\$420,000,000
Federal Mogul				137,000	64,000	\$1.8 billion
Owens-Corning Fibreboard*	355,000	\$7500 - \$9000	\$1.08 billion	90,600		\$3.4 billion
WR Grace				61,000		\$1.1 billion
Armstrong World Ind.						\$758 million - \$1.36 billion
PPG				116,000		
Pfizer				119,000		
Foster Wheeler				92,000		
Babcock & Wilcox	340,000	\$2700	\$1.6 billion			

*In its bankruptcy filing in October 2000, Owens-Corning stated that 460,000 asbestos personal injury claims had been filed against it and that it had paid out more than \$5 billion in damage awards, settlements and legal costs. See "Owens Corning Files For Chapter 11 Reorganization In Delaware Bankruptcy Court," *Mealeys Litigation Reporter: Asbestos*, vol. 15:17, Oct. 6, 2000.

Source: "Babcock & Wilcox Files Reorganization Plan," *Mealeys Litigation Reporter:Asbestos*, vol. 16:5, April 6, 2001 (for Babcock & Wilcox) and "Asbestos Companies Report Annual Numbers of Pending Claims, New Filings in 2000," *Mealeys Litigation Reporter: Asbestos*, vol. 16:8, May 18, 2001 (for all other firms).

Table 6: Asbestos Claims Filed Against Five Major Defendants

Year	Number of claims filed
1991	81,000
1992	90,000
1993	112,000
1994	102,000
1995	164,000
1996	160,000
1997	123,000
1998	222,000

Source: S.J. Carroll, D.R. Hensler, J. Gross, and M. White (2001), *Asbestos Litigation in the U.S.: A New Look at an Old Issue*. Santa Monica: RAND Corporation.

Table 7: List of Defendants for a Single Asbestos Claimant

<p>Armstrong World Industries, Inc., individually and as successor to Armstrong Cork Company ACandS, Inc., individually and as legal assignee of Armstrong Cork Company and Armstrong World Industries, Inc. Ametek, Inc., individually and as successor-in-interest to Haveg Industries, Inc. Anchor Packing Company A.P. Green Industries, Inc. Asbestos Claims Management Corporation f/k/a National Gypsum Company A.W. Chesterton Co. (a Missouri corporation) Brown & Root, Inc. (Delaware corporation), individually and as successor to Brown & Root, Inc. (a Texas Corporation) Brown & Root Holdings, Inc., individually and as successor to Brown & Root, U.S.A., Inc. Certainteed Corporation (a Delaware corporation), individually and as legal assignee and successor-in-interest of Gustin Bacon Company Combustion Engineering, Inc. Crown Cork & Seal Company, Inc., individually and as successor to Mundet Cork Company Dana Corporation (Virginia corporation) Flexitallic, Inc., individually and as successor to Flexitallic Gasket Company Flexitallic, L.P., a Texas Corporation Flintkote Company (a Delaware corporation) Foster Wheeler Energy Corporation (a new York Corporation) GAF Corporation, individually and as successor to Ruberoid Corporation Garlock Inc. Gasket Holdings, Inc., individually and as successor-in-interest to Flexitallic Gasket Company General Electric Company General Refractories Company Georgia-Pacific Corporation, individually and as successor to Bestwall Gypsum Company Guard-Line, Inc. Harbison-Walker Refractories Company (a Delaware corporation), f/k/a Indresco, Inc. Hercules Incorporated J.T. Thorpe Company, individually and as successor to Thorpe Insulation Company Kaiser Aluminum & Chemical Corporation Kelly-Moore Paint Company, Inc. Metropolitan Life Insurance Company</p>	<p>Rapid-American Corporation, individually and as successor-by-merger to Glen Alden Corporation, Briggs Manufacturing Company, Philip Carey Corporation and Philip Carey Manufacturing Corporation Riley Stoker Corporation, individually and as successor to Smith-Sharpe Company and Smith-Bean Fire Brick Company Synkoloid, a division of Muralo Co., Inc. T & N PLC (f/k/a Turner & Newell PLC and Turner & Newall, Ltd.), individually and as alter ego to J.W. Roberts, Ltd., TAC Construction Materials, Ltd., Keasbey & Mattison Co., Inc., Atlas Asbestos Co., Ltd. and Atlas-Turner, Inc. Uniroyal Holding, Inc, individually and as successor to Uniroyal, Inc., formerly U.S. Rubber Company United States Gypsum Company, individually and as predecessor to A.P. Green Industries, Inc. United States Mineral Products Company Westinghouse Electric Corporation W.R. Grace & Co.-Conn. (successor to W. R. Grace & Company, The Zonolite Company, The Texas Vermiculite Company, and Dewey & Almy Chemical Co. Win-Way, Inc. Zurn Industries, Inc. (a/k/a and successor-by-merger to Erie City Iron Works) Allied Signal, Inc., individually and as successor to Bendix, Inc. and Bendix Corporation Arvin Industries, Inc., individually and as successor in interest to Maremont Corporation Borg-Warner Automotive, Inc. Bridgestone/Firestone, Inc., individually and as successor-in-interest to Firestone Tire & Rubber Company and World Bestos Corporation Carlisle Companies, Inc. Daimler Chrysler Corporation, a/k/a Daimler Chrysler A.G., individually and as successor-in-interest to Chrysler Motors Corporation, Chrysler Corporation, Mercedes Benz of North America, Inc. and Mopar Motor Parts Corporation Ford Motor Company General Motors Corporation, individually and as successor-in-interest to Delco Products Division of General Motors Corporation Goodyear Tire & Rubber Co. Federal Mogul Corporation (a Michigan corporation), individually and as successor-in-interest to Moog Automotive Corporation, World Bestos</p>
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Minnesota Mining and Manufacturing Company (a Minnesota corporation), a/k/a 3M	Corporation, Wagner Electric Corporation, and Abex Friction
North American Refractories Company	Products, and as successor-in-interest to T&N
Owens-Illinois, Inc.	plc,
Plibrico Company (f/k/a Plibrico Jointless Firebrick Company)	Turner & Newell PLQ and Federal Mogul Products, Inc.
Plymouth Products, Inc., f/ka American Machine and Metals, Inc., individually and as successor-in-interest to Ametek Inc., d/b/a Haveg Industries, Inc.	Pneumo -Abex Corporation (a Michigan corporation), dba Parker Abex NWL Aerospace, individually and as successor-in-interest to Pneumo Abex Corp. and Abex Corp, f/k/a American Brake Shoe Company, Abex Friction Production, individually, as as a division of
PPG Industries Inc. (a Pennsylvania corporation) individually and as successor in real party in interest to Pittsburgh Corning Corporation	Cooper Industries, Inc.
Proko Industries, Inc.	Swan Transportation Company f/k/a Tyler Pipe
Quigley Company (a New York Corporation)	Industries Inc. (a Delaware corporation) John Does 1-100, names unknown

Source: www.mesotheli.com (lawfirm of Delaney and Granich, Albany, NY).