

**Financial Analysis of Companies
That Filed for Chapter 11 Bankruptcy
in 2000 and 2001 as a Result
of Asbestos Obligations**

**Prepared by
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Financial Analysis of Asbestos Companies

Under Chapter 11 Reorganization

Hundreds of thousands of people have become ill or died because they were exposed to processes or products that used or contained asbestos. The health and financial consequences to these victims and their families have been devastating. Compensation from asbestos companies or their predecessors is their legal right.

Those responsible for their devastating condition are obligated to help them and their families cope with the daily struggle of asbestos disease, as they try to restore their lives. Seven of the largest companies that were facing huge asbestos liabilities because they or their predecessors had exposed their workers to asbestos sought Chapter 11 bankruptcy reorganization protection in 2000 and 2001. This protection allowed them to remain in business, while, at the same time, meeting their legal obligations to their former employees and their families.

The Association of Trial Lawyers of America sponsored the following study to examine the financial condition of the seven largest asbestos companies before and after they sought Chapter 11 protection.

Emory University's John H. Harland Professor of Finance, Accounting, and Economics George J. Benston analyzed these companies and compared them to companies in their industries that did not declare bankruptcy to determine how successful their operations were under the supervision of the Bankruptcy Court, such that they would be able to honor their obligations to asbestos victims and continue to provide products and services to their customers and jobs for their employees.

The views and opinions expressed in this study are solely those of Professor Benston and do not necessarily reflect the views and opinions of the Association of Trial Lawyers of America.

Executive Summary

The seven “Chapter 11” companies and the dates on which they filed for bankruptcy are:

COMPANY NAME	DATE OF FILING
Babcock & Wilcox Company	February 22, 2000
Owens Corning	October 5, 2000
Armstrong World Industries	December 6, 2000
Building Materials Corporation of America (BMCA) ¹	January 5, 2001
W.R. Grace & Co.	April 2, 2001
US Gypsum Corporation	June 25, 2001
Federal-Mogul Corporation	October 1, 2001

Summary of Findings

Professor Benston notes that companies that file for Chapter 11 reorganization are faced with especially high legal costs and other costs related to bankruptcy reorganization. They also must contend with court-imposed restraints on their operations and holdings of liquid assets to pay claimants, which reduce profitability.

Nevertheless, based on his analysis of the seven companies’ financial statements over the five years 1998–2002 and projections over 2003–2005, he concludes: “On the whole, they essentially have increased or stabilized their sales, assets, employment, and profitability, and have projected increases. It is fair to say that they are viable and likely to be increasingly successful companies that should generate funds to exit bankruptcy significantly stronger than when they went in.”

- **Each of the 7 companies studied remained profitable after bankruptcy.**

They have been able to continue their operations successfully, and with few exceptions, they have prospered, increasing their sales. They have been able to maintain their assets and employment, meet their obligations to business creditors and employees, and make capital investments that will allow them to continue to prosper. Profitability after filing for Chapter 11 reorganization has increased and is forecast to increase approximately back to pre-bankruptcy filing amounts.

- **Changes in the Chapter 11 companies’ total assets show that they continue to be viable, on-going enterprises.**

¹ Subsidiary and sole operating asset of G-I Holdings, which is the parent holding company that filed for Chapter 11 bankruptcy; BMCA has not filed for bankruptcy.

The companies' aggregate actual (adjusted to exclude asbestos insurance receivables and discontinued operations, where applicable) and forecast total assets changed only slightly from 1998 through 2005. The data indicate that filing for reorganizations did not measurably affect the assets held by the companies.

- **Total employment at these companies increased or did not decline materially.**

Post-filing employment increased at one company, Babcock & Wilcox, by 39%. Three other companies also increased their post-filing employment. Three other companies decreased their post-filing employment - the largest decrease by Owens Corning was 10%. In the case of two companies which decreased their post-filing employment, these decreases resulted from pre-filing restructuring programs and divestitures made in the ordinary course of business and were unrelated to the Chapter 11 reorganizations.

- **All the companies met their obligations to fund employee pensions.**

Post-Chapter 11 filing pension contributions increased substantially from \$64.5 million in 1999 to \$114.6 million in 2000 to \$243.2 million in 2001. Contributions went down in 2002 to \$107.2 million. These contributions indicate on-going funding, rather than a onetime contribution.

- **The companies should do well in the future.**

A company's prospects for the future are indicated by its capital expenditures. The companies continued to make capital expenditures after they filed for bankruptcy reorganization, although to a lesser degree than before. The amounts are expected to increase slightly over the 2003-2005 period.

Professor Benston concludes that, even though these companies face growth constraints because of requirements to hold substantial amounts of cash and cash equivalents, the financial and employment outlook for all the companies looks strong. "Based on the financial information I analyzed, all of these measures indicate that the Chapter 11 companies are likely to continue to prosper in the future," he concluded.

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Financial Analysis of Companies That Filed for Chapter 11 Bankruptcy in 2000 and 2001 as a Result of Asbestos Obligations

George J. Benston*

In 2000 and 2001, the seven largest companies facing substantial liabilities for damages to people who were injured by asbestos products which they or their predecessors produced in earlier years filed for bankruptcy reorganization under Chapter 11. This action required the companies to operate under supervision of the Bankruptcy Court, which allowed them to continue providing their consumers with products, employees with jobs, and generate resources to pay their obligations to people injured by asbestos. The questions at issue are whether and to what extent these companies have been able to operate successfully under this condition.

The seven “Chapter 11” companies and the dates on which they filed for bankruptcy reorganization are:

COMPANY NAME	DATE OF FILING
Babcock & Wilcox Company	February 22, 2000
Owens Corning	October 5, 2000
Armstrong World Industries	December 6, 2000
Building Materials Corporation of America (BMCA) [†]	January 5, 2001
W.R. Grace & Co.	April 2, 2001
US Gypsum Corporation	June 25, 2001
Federal-Mogul Corporation	October 1, 2001

I examined data from the companies’ 10-K annual filings with the Securities and Exchange Commission (SEC) for years around and including these companies’ Chapter 11 filings—1998 through 2002. To the extent possible, I used financial statement numbers that were backward adjusted for acquisitions and dispositions. In addition, forecasts of financial data for 2003, 2004, and 2005 were obtained from the companies.

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[†] Subsidiary and sole operating asset of G-I Holdings, which is the parent holding company that filed for Chapter 11 bankruptcy; BMCA has not filed for bankruptcy.

The data are presented in three ways. First, the numbers are aggregated to show the magnitude of the Chapter 11 companies' operations and how these changed before and after they filed for bankruptcy. These data include the forecasts for 2003, 2004, and 2005. Since these data are confidential, they are presented only in an aggregated form. The data are presented in Figures 1 to 9.²

Second, data for each of the seven companies are presented in tables showing the relationship of their operations and financial condition before and after their filing for Chapter 11 bankruptcy. For this purpose, the data are "normalized," by dividing the amounts for each year by the amount in the year before the companies filed for Chapter 11 (times 100 to convert the ratios to percentages). Thus, the amount for the year before filing is equal to 100; the numbers in the year(s) before and following this year give the percentage increase or decrease relative to the pre-filing year. This allows readers to compare

It is fair to say that they are viable and are likely to be increasingly successful companies that should generate funds to exit bankruptcy reorganization significantly stronger than when they went in.

each company's performance before and after Chapter 11 filing and also to see the extent to which individual companies' performance differ from each other and the aggregate.

Third, to account, at least in part, for the effect of other time-related factors over the five years studied, the Chapter 11 companies' performance is contrasted with competitors that did not declare bankruptcy, grouped into four industries: building products (Armstrong, Owens Corning, US Gypsum, and BMCA), specialty chemicals (WR Grace), automotive parts (Federal-Mogul), and power generation (Babcock & Wilcox). Data were obtained for eleven building products companies, eight specialty chemical companies, eleven automotive parts companies, and four power generation companies.³ The comparable companies' data are aggregated and "normalized" to the same year as the Chapter 11 companies, so that their performances may be compared.

² Although Owens Corning filed for bankruptcy on October 5, 2000 and Armstrong on December 6, 2000, I consider 2001 to be their first bankruptcy year, because the data for 2000 largely reflect their pre-bankruptcy operations and year-end financial position. Babcock & Wilcox filed for bankruptcy on February 22, 2000. In that year, its sales and assets are only 5% and 3% of the aggregate shown on the figures. Therefore, I designated 2000 as its bankruptcy year. Thus, all the Chapter 11 companies, except for Babcock & Wilcox, have 2001 as their bankruptcy year.

³ The names of the comparison companies are presented in Appendix A. The companies are roughly of comparable size, with the exception of Georgia Pacific. Because it represents some 40% of the aggregate of the comparable building products companies, these aggregates are shown including and excluding Georgia Pacific.

Summary of Findings

- Overall Conclusions. The Chapter 11 companies analyzed appear to have used the respite in creditor demands allowed by their bankruptcies to reverse some pre-filing downward movements in their operations. On the whole, they essentially have increased or stabilized their sales, assets, employment, and profitability, and have projected increases. It is fair to say that they are viable and are likely to be increasingly successful companies that should generate funds to exit bankruptcy significantly stronger than when they went in.
- Annual sales, total assets, and number of employees provide measures of the extent to which the Chapter 11 companies have been able to continue producing products that are purchased by consumers. The figures and tables show that the Chapter 11 companies have been able to continue their operations successfully. Indeed, with few exceptions, they have prospered, increasing their sales. They have been able to maintain their assets and employment, meet their obligations to business creditors and employees, and make capital investments that will allow them to continue to prosper. Although there are some differences among the Chapter 11 companies, total employment did not decline materially. Compared to other companies in their industries, they generally did as well or better, with some exceptions.
- Profitability, measured as earnings from operations before interest, taxes, depreciation and amortization (EBITDA), indicates the ability of companies to provide funds to meet their obligations to creditors and (for non-bankrupt companies) stockholders. Companies that file for Chapter 11, though, are faced with especially high legal and other costs related to bankruptcy, and Court-imposed restraints on their operations and holdings of liquid assets to pay claimants, which reduce profitability. Not surprisingly, therefore, the Chapter 11 companies' EBITDA decreased somewhat in the year they filed for bankruptcy, continuing a trend that began in earlier years. However, perhaps surprisingly, their profitability then increased and is forecast to increase approximately back to pre-bankruptcy filing amounts. Individually, the companies differ considerably. Two companies' profitability increased substantially, while the others' declined by varying amounts. The comparable companies' profitability also tended to decline over the same period, but not as much as did the Chapter 11 companies generally. All the Chapter 11 companies, though, remained profitable after filing for bankruptcy.
- A company's prospects for the future are indicated by its capital expenditures, which forecast its expectation and ability to improve production methods, improve and develop products, and thereby generate future net earnings and funds. The Chapter 11 companies continued to make

capital expenditures after they filed for bankruptcy, although to a lesser degree than before. The amounts are forecast to increase slightly over the 2003–2005 period. The changes for the individual companies are mixed, with about half increasing expenditures and one decreasing expenditures substantially, reflecting the absence of additional acquisitions. In three cases, the Chapter 11 companies increased their capital expenditures more than comparable companies in their industries. In addition, the companies' forecasts of higher sales and EBITDA, and announcements of additional contracts and products indicate that they expect to do well in the future.

These findings reflect the fact that the companies studied did not file for bankruptcy because they had displeased customers, failed to compete effectively, were displaced by superior products or technology, or been ineptly managed, but because this was the only way they could continue operations, given their obligations to people injured in the past by asbestos and asbestos-related products. I draw this conclusion from analyses of the Chapter 11 companies' and their competitors' sales, assets, employment, EBITDA, capital expenditures, and announcements of future contracts and products that follow.

Sales

Annual sales provides perhaps the most important measure of the extent to which the Chapter 11 companies have been able to continue producing products that are purchased by consumers.

Figure 1 shows that the Chapter 11 companies' aggregate sales were essentially maintained following their filing for bankruptcy. They forecast increasing sales somewhat in 2003 and continuing to increase sales, at least through 2005, when the aggregate sales are expected to exceed sales for 1999, the highest sales level during the pre-filing years analyzed.

Annual sales provides perhaps the most important measure of the extent to which the Chapter 11 companies have been able to continue producing products that are purchased by consumers.

Table 1 shows that the individual Chapter 11 companies generally maintained or increased their sales levels through 2002. Babcock & Wilcox's sales increased steadily and substantially over its 1999 pre-filing sales, to 141% of this amount in 2002. BMCA's and WR Grace's 2002 sales were 13% and 14% greater than their 2000 pre-filing sales. Sales at Armstrong and Owens Corning were almost un-

changed. Although US Gypsum's sales in 2002 were 92% of its 2000 pre-filing sales, those sales were 6% greater than sales in 2001, a year in which sales had decreased to 87% of the

previous pre-filing year. Federal-Mogul's 2001 sales decreased to 91% of its 2000 pre-filing sales, and then were almost unchanged in 2002. The initial decline appears due to a rationalization of its operations following substantial acquisitions in 1998, when it acquired Turner & Newell and the Moog automotive division of Cooper Industries, which increased its sales from \$1.8 billion in 1997 to \$6.5 billion in 1999, its first full year of post-acquisition operations.

Compared to companies in the same industry, the Chapter 11 companies' sales increased somewhat more or less. The specialty chemicals and power generation Chapter 11 companies' sales increased more and the building-products and auto parts Chapter 11 companies' sales increased less than their competitors.

Total Assets

Changes in the Chapter 11 companies' total assets show that they continue to be viable on-going enterprises.

As shown on Figure 2, the Chapter 11 companies' aggregate actual⁴ and forecast total assets changed only slightly from 1998 through 2005. The data indicate that filing for bankruptcy did not measurably affect the assets held by the companies.

Table 2 shows that the total assets of the Chapter 11 companies generally increased after they filed for bankrupt-

Changes in the Chapter 11 companies' total assets show that they continue to be viable on-going enterprises.

cy. Babcock & Wilcox's 2002 year end assets increased by 29% over its pre-filing year-end 1999 assets. Both Armstrong and US Gypsum's 2002 year-end assets were 15% greater than their assets at the pre-filing year-end 2000. WR Grace and Owens Corning's year-end 2002 assets also increased, but only by 9% and 1% over this period. BMCA and Federal-Mogul's assets followed the same patterns as their sales. BMCA's year-end 2002 assets were 96% of its pre-filing year amount, an increase of 4% over the previous (2001) year. Federal-Mogul's assets at year-end 2002 declined to 79% of its pre-filing year 2000 amount, due to the adoption of a new accounting principle, which resulted in a significant write-off of goodwill, and material write-downs of assets associated with its 1998 acquisitions.

The Chapter 11 companies' competitors generally increased their assets at somewhat higher rates than the companies that declared bankruptcy, except for specialty chemicals. It should be noted that the Chapter 11 companies cannot grow by acquisitions for stock, because they do not have equity stock to exchange. However, several of their competitors increased asset size as a result of acquisitions. Nevertheless, as noted earlier, all but two of the Chapter 11 companies' asset growths were positive over their years in bankruptcy.

⁴ Total assets are adjusted to exclude asbestos insurance receivables and discontinued operations, where applicable.

Employment

A note of caution with respect to employment numbers is necessary. Unlike sales, assets, and other amounts taken from financial statements, the number of employees as of the end of a year is not adjusted for acquisitions, mergers, and discontinued operations. Hence, employment numbers reflect changes that are due to these structural changes rather than to changes in the level and scope of on-going operations.

As shown in Figure 3, the number of people employed by the Chapter 11 companies in aggregate at year-end 2002 decreased slightly (3.4%) and insignificantly over their pre-bankruptcy-year amount, due primarily to decreases at three companies. The other four companies' employment increased or remained stable.

Table 3 shows that year-end 2002 employment at Babcock & Wilcox increased by 39% over its 1999 pre-filing year. Post-filing employment increased somewhat at Armstrong (by 7%), BMCA (by 6%), and WR Grace (by 2%), and decreased by 5% at US Gypsum and Federal-Mogul. Owens Corning experienced a 10% decline in employment. The 10-K reports of Federal-Mogul and Owens Corning identify these companies' employment decreases as resulting from pre-filing planned restructuring programs and divestitures made in the ordinary course of business.

In comparison with competitors, employment at the Chapter 11 companies increased relatively more, except for building products if the comparable companies include Georgia Pacific. Thus, overall employment at the Chapter 11 companies does not appear to have been negatively affected by their filing for bankruptcy.

Figure 4 shows that the Chapter 11 companies kept up their obligations to fund their pension obligations to their employees. Indeed, their post-filing pension contributions in 2001 increased substantially from \$64.5 million in 1999 and \$114.6 million in 2000 to

Thus, overall employment at the Chapter 11 companies does not appear to have been negatively affected by their filing for reorganization.

\$243.2 million in 2001, after which the contribution in 2002 came down to a still relatively high \$107.2 million, which is indicative of on-going funding, rather than a one-time contribution. As a result of the downturn in the market over the last few years, it is anticipated that these companies, in particular

Federal-Mogul, will have to make substantial cash outlays to cover the minimum pension requirements. These cash outlays are projected to come from normal operations of these viable companies.

Profitability

Profitability provides a measure of the extent to which companies are successful in generating resources for their creditors and owners (and the government in the form of taxes) from their operations. I examine a commonly used measure, EBITDA, earnings from operations before interest, taxes, depreciation, and amortization. I exclude asbestos-

related litigation expenses and insurance recoveries and Chapter 11 filing and reorganization expenses. However, costs incurred as a result of a diversion of executive time to deal with the bankruptcy filings and Court-imposed restrictions on acquisitions and uses of funds that are restricted for the benefit of asbestos claimants, probably negatively affected the Chapter 11 companies. Hence, the profitability of their regular operations in comparison with other companies is biased downward.

In addition to EBITDA alone, I present two standard means of adjusting the numbers for the scale of a company's operations and resources—EBITDA as a percentage of sales and EBITDA as a percentage of total assets (adjusted as described in footnote 4). These measures are calculated by adding up each company's sales or assets and then dividing the sums into the aggregate EBITDA (and then multiplying by 100 to convert the ratios to percentages). Both percentages account for changes in EBITDA that are due primarily to increases in company size.

Figures 5, 6, and 7 present aggregates for the Chapter 11 companies. The patterns for all three measures of profitability are similar. EBITDA (expressed as an amount or as a percentage of sales or assets) is highest for 1999, decreases somewhat in the first bankruptcy year, 2001, and is projected to increase to about the pre-bankruptcy 2000 number by 2005. The substantial increase in 1999 is due entirely to Federal-Mogul, whose 1999 EBITDA of \$1,180,000 (which includes the first full year of its 1998 acquisitions) is almost twice the \$697,000 reported for 1998. In 2000, when Federal-Mogul actually filed for bankruptcy on October 1, its EBITDA was \$834,000, after which it declined and stabilized to \$502,000 and \$500,000 in 2001 and 2002, respectively. Its EBITDA/sales and

EBITDA/total assets percentages follow the same pattern.

Table 4, 5, and 6 present the individual Chapter 11 company data for each company, normalized to compare the year(s) before and after their filing for bankruptcy. The three measures of profitability yield similar results.

Based on the financial information I analyzed, all of these measures indicate that the Chapter 11 companies are likely to prosper in the future.

Individual companies, though, differ substantially. Two companies' profitability has increased substantially during bankruptcy—BMCA by 37%–61% and Babcock & Wilcox by 33%–46%, depending on the metric. The other Chapter 11 companies have been less profitable. However measured, none of them experienced more than a 47% drop in profitability, and most had about a 25% reduction.

Profitability of comparable specialty chemicals and automotive parts companies also declined over the period, but not as much as did the Chapter 11 companies. Measured as EBITDA alone, the comparable building products companies (including or excluding Georgia Pacific) improved, while measured as a percentage of sales or assets, their profitability declined or was almost unchanged. However, for all three measures, the comparable building products companies were more profitable than the Chapter 11 companies. Profitability of the power generation comparable companies increased, but not as much as did Babcock & Wilcox. As percentages of sales or assets (which, considering the substantial increases in sales and assets over the period, are more relevant numbers), the

comparable companies' profitability declined slightly, while Babcock and Wilcox's increased substantially.

Prospects for the Future

The prospects for the future of an enterprise may be estimated in three ways: forecast sales, assets, and EBITDA; past and forecast capital expenditures (which provide the means for future production, productivity improvements and new and improved products); and announcements of contracts and new products. Based on the financial information I analyzed, all of these measures indicate that the Chapter 11 companies are likely to prosper in the future.

- Forecasts: Sales are projected by the companies in their internal reports to increase over 2003 through 2005, from \$21.6 billion in 2002 to \$23.4 billion in 2005 (see Figure 1). Assets are expected to increase slightly, from \$26.0 billion in 2002 to \$26.8 billion in 2005 (see Figure 2). EBITDA and EBITDA as percentages of sales and total assets are projected by the companies to increase substantially over 2002, bringing them close or better than their pre-bankruptcy levels (see Figures 5, 6, and 7).
- Capital expenditures are projected to continue in the future, although at a somewhat lower amount than before the Chapter 11 companies filed for bankruptcy. The amounts invested were lower during the bankruptcy years (2001 and 2002), but were still substantial, as shown by Figure 8. These expenditures are projected to increase slightly in 2003 through 2005. Three of the seven Chapter 11 companies' capital expenditures were higher in 2002 than in their pre-bankruptcy year. The capital expenditures of one of the seven (US Gypsum) decreased substantially.

The Chapter 11 companies have been and expect to remain strong industry competitors and leaders.

The other building product companies' capital expenditures increased about the same as or more than comparable companies. WR Grace, Federal-Mogul and Babcock & Wilcox invested much more than comparable companies. Overall, the data on capital expenditures shows that the Chapter 11 companies expect to continue to be viable—indeed, to continue expanding their operations.

- Announcements of contracts and plans for long-run growth and investments in new technologies taken from press releases and management statements included in SEC 10-K reports, quoted in Appendix B, indicate that the Chapter 11 companies have been and expect to remain strong industry competitors and leaders.

Bankruptcy-imposed Constraint on Profitability and Growth

Chapter 11 bankruptcy has limited the seven corporations analyzed by requiring them to hold substantial amounts of cash and cash equivalents (e.g., marketable debt securities) to

pay asbestos claimants and, for Federal-Mogul, as required by the U.K. Administration. These assets offer low returns, as production companies have no comparative advantage holding or trading securities. Hence, to the extent that the Chapter 11 companies must hold cash and cash equivalents in excess of the amounts they would hold in the ordinary course of business, their profitability and ability to purchase productive (capital) assets is decreased.

Figure 9 presents the aggregate amounts of cash and cash equivalents held by the seven Chapter 11 companies in each of the five years surrounding their filing for bankruptcy. All of the Chapter 11 companies' increased their cash holdings substantially after filing for bankruptcy. To compare the companies' pre- and post-filing cash holdings, I averaged their 1998 and 1999 aggregate amounts (\$540 million) and their 2001 and 2002 aggregate amounts (\$2,666 million). The amounts for 2001–2002 increased by 494% over 1998–1999. This substantially greater holding of less-productive assets surely decreased the profitability of the Chapter 11 companies and reduced their capital expenditures.

It also should be noted that, as a result of the strong operations, as described in Appendix B (i), some of the Chapter 11 companies reduced their available debtor-in-possession credit facilities, which reduces the financing costs on the undrawn revolvers.

A Note on Measurements

Comparable Company Analysis

To account, to the extent possible, for changes in the markets for the Chapter 11 companies' products, the following procedures were followed. First, the products sold were identified from descriptions in 10-Ks and company documents. Then, companies that also produced these products were identified. Senior company executives were interviewed; they identified the names of their principal competitors. Additional names were obtained from four-digit Standard Industrial Code (SIC) listings and the Hoover.com database. Companies that did not file 10-K reports could not be included.

The competitor companies identified are far from perfect matches, which limits the conclusions that can be drawn from the comparisons. In particular, within the buildings material group, one competitor—Georgia Pacific—provides about a third to a half of the sales, assets, etc. (depending on the measure and the year). Consequently, I show the other ten companies separately in the Tables. In fact, this does not change the measured relationships much. Growth, apparently by acquisitions, affected the comparable company data. In general, there are a sufficient number of observations to obviate this measurement, the exception being power generation (Babcock & Wilcox). Three of the four competitors' 2002 assets were 400%, 310%, and 690% of the amount of their 1998 assets; one decreased by 6%. In addition, Babcock & Wilcox underwent substantial changes, as indicated by the variance of its numbers. Hence, this comparison has limited value.

Employment

This report includes most of the employees of companies that filed for bankruptcy in what Joseph E. Stiglitz, Jonathan M. Orszag, and Peter R. Orszag (Sebago Associates) describe as the “fourth wave”. In their December 2002 report, *The Impact of Asbestos Liabilities on Workers in Bankrupt Firms*, commissioned by the American Insurance Associa-

tion, Stiglitz et al. delineate four “waves” of asbestos-related bankruptcies. The fourth wave, which covers the years 1998-2002 and includes 24 companies, employed 136,831 employees “before bankruptcy filing,” 67% of the total number of employees of all asbestos-related companies that declared bankruptcy from 1978 through 2002 (ibid, Table 3, p.17). The seven companies analyzed herein had 117,710 employees in 2000, 86% of the 136,831.

Stiglitz et al.’s principal finding is that workers in firms declaring asbestos-related bankruptcy after 1998 lost 27,419 jobs over the five years *before* bankruptcy, after adjusting for changes in industry employment (ibid, Table 7, p. 26).⁵ They did not determine how many jobs were lost as a result of the asbestos-liability firms declaring bankruptcy or were lost after they filed for bankruptcy. I found that the number of employees at the seven Chapter 11 companies I study declined by 4,000 (3.4%) during their bankruptcy years, 2000 and 2002 (see my Figure 3). Furthermore, employment at four of the seven companies increased compared to the year before they filed for bankruptcy, two declined by 5%, and one by 10%. In general, changes in the seven Chapter 11 companies’ employment numbers were relatively higher than those of comparable companies compared to the year(s) before they filed for bankruptcy, as shown by my Table 3.

⁵ They also calculate the loss of retirement benefits to workers whose retirement funds include stock in their own companies. All stockholders of these companies, though, incurred such losses. The only measure of the performance of Chapter 11 companies included in their study is based on the stock prices of 13 companies that declared bankruptcy sometime before September 2002 for which data for a ten-year period are available. Not surprisingly, because bankruptcy reduces and usually eliminates the market value of shares, the stock prices of these companies (expressed as an index) declined over the ten years almost to zero (see their Chart 4, p. 32). The decline probably reflects the reduction in the prices of the individual companies at or around the time they filed for bankruptcy. Stiglitz et al. do not measure (nor do they say they measure) the actual bankruptcy performance of Chapter 11 companies.

About the Author

GEORGE J. BENSTON is the John H. Harland Professor of Finance, Accounting, and Economics in the Goizueta Business School and Professor of Economics in the College of Arts and Sciences of Emory University, and Honorary Visiting Professor at City University (London). At Emory, he also has served as Coordinator of both the Finance and Accounting Areas and as Associate Dean for Research and Faculty Development. Before coming to Emory in 1987, he was on the faculties of the University of Rochester and the University of Chicago, and has been the John M. Olin Distinguished Visiting Fellow at Oxford University and a visiting professor at the London School of Economics, the London Graduate School of Business Studies, Hebrew University and Berkeley. He received his Ph.D. from the University of Chicago, M.B.A. from New York University, and B.A. from Queens College. He also is a Certified Public Accountant (North Carolina). The honors he has received include Distinguished Scholar Award, 2003 (Eastern Finance Association), Adam Smith Award 2002 (jointly with George Kaufman and Edward Kane, National Association of Business Economists), Henry Thornton Lecturer (19th) 1997 (City University, London, UK), and Distinguished International Lecturer 1980 (American Accounting Association). Professor Benston presently serves as an associate editor of the *Journal of Money, Credit and Banking*, *Journal of Applied Corporate Finance*, *Research in Financial Services Annual*, *Accounting and Public Policy*, and *Issues in Accounting Education*, and was co-editor of the *Journal of Financial Services Research* from its founding in 1987. He also is a member of the Shadow Financial Regulatory Committee and the Financial Economists' Roundtable.

Professor Benston has published over 150 books, monographs, and articles in refereed academic journals in accounting, finance and economics. This work concerns the regulation of financial institutions, services, and markets, the structure and competitiveness of banking and financial markets, SEC financial disclosure, economies of scale in banking, savings and loan and bank failures, mortgage “redlining”, industrial organization and antitrust economics, and racial and gender discrimination in lending and annuities. His books include *Following the Money: The Enron Failures and the State of Corporate Disclosure* (with Robert Litan, Michael Bromwich, and Alfred Wagenhofer, Brookings Institution, 2003), *Regulating Financial Markets: A Critique and Some Proposals* (American Enterprise Institute, 1999), and *The Separation of Commercial and Investment Banking: The Glass-Steagall Act Revisited and Reconsidered* (Oxford Univ. Press, 1990).

In addition to academic research, he has consulted for and worked with the principal banking regulatory agencies (e.g., FDIC, Federal Reserve, Comptroller of the Currency) and testified before several committees of the US Congress and regulatory bodies (e.g., House and Senate Banking Committees, Securities and Exchange Commission, and the Financial Accounting Standards Board). Most recently, he has been an advisor on accounting to the Examiner in Bankruptcy, Enron Corporation. Prior to entering academia, he was employed in public accounting and in banking.

Appendix A

Comparable Companies By Industry

BUILDING PRODUCTS

American Woodmark
ElkCorp
Georgia Pacific
Interface
Lafarge North America
Masco
Mohawk Industries
NCI Building Systems
Nortek
PPG Industries
Universal Forest Products

SPECIALTY CHEMICALS

Albemarle Corp.
Crompton Corp.
Cytec Industries
Engelhard Corp.
Great Lakes Chemical
Hercules Incorporated
Lubrizol Corp.
Rohm & Haas

AUTOMOTIVE PARTS

American Axle
ArvinMeritor
Borg Warner
Dana Corporation
Delphi
Dura Automotive
Eaton
Johnson Controls
Lear
Stoneridge
Tenneco

POWER GENERATION

Flowserve
Fluor
Jacobs Engineering
The Shaw Group

Appendix B

Performance and Prospects of Chapter 11 Companies Derived from Press Releases and Form 10-Ks Filed with the Securities and Exchange Commission

During bankruptcy, many Chapter 11 companies have achieved the following:

- a. Received various quality-related awards
 - Federal-Mogul Press Release 6/30/03—“Federal-Mogul Corporation was recently named “Supplier of the Year 2002” by Yamaha South America. The award recognizes Yamaha suppliers that had an outstanding performance in quality, delivery, product development and overall customer service in 2002”.
 - Federal-Mogul Press Release 6/27/03—“Federal-Mogul earned the distinction of “Manufacturer of the Year,” from the program group Independent Auto Parts of America (IAPA).”
- b. Been awarded large new contracts
 - B&W Press Release 12/11/02—“Babcock & Wilcox Canada Wins \$280 Million Contract for Coleson Cove”
 - B&W Press Release 6/6/02—“Babcock & Wilcox Awarded US\$105 Million Construction Project”
 - B&W Press Release 1/22/01—Babcock & Wilcox Awarded \$100 Million Contract to Build New Coal-Fired Power Plant in Wyoming “This is a significant development, and we are pleased to have been selected as their extended-scope contractor for this vital project,” said James F. Wood, president of Babcock & Wilcox.
- c. Maintained their industry leadership position, often with #1 or #2 market share
 - Federal-Mogul Press Release 4/22/02—“Our ability to bolster market leadership in a period of industry uncertainty is related to our strong brands, new product technology, and continued improvement in delivery performance to industry-leading levels,” said Chip McClure, Federal-Mogul’s chief executive officer and president.
 - BMCA 12/31/02 10-K—“Building Materials Corporation of America is a leading national manufacturer of a broad line of asphalt and polymer based roofing products and accessories for the residential and commercial roofing markets. We are a lead-

ing manufacturer of a complete line of premium residential roofing products. We believe that we are the largest manufacturer of both asphalt built-up roofing products and modified bitumen products in the United States.”

- US Gypsum 12/31/02 10-K—“Through its subsidiaries, the Corporation is a leading manufacturer and distributor of building materials producing a wide range of products for use in new residential, new nonresidential, and repair and remodel construction, as well as products used in certain industrial processes. U.S. Gypsum is the largest manufacturer of gypsum wallboard in the United States and accounted for approximately one-third of total domestic Gypsum wallboard sales in 2002. The Corporation competes in North America as the largest of 10 producers of gypsum wallboard products and in 2002 accounted for approximately one-third of total gypsum wallboard sales in the United States.”
- WR Grace 12/31/02 10-K—“Grace believes that Davison is one of the world leaders in refinery catalysts and the largest supplier of FCCs in the world.”
- Armstrong Press Release 5/23/03—“Armstrong World Industries, Inc. is a global leader in the design and manufacture of floors, ceilings and cabinets.”
- Owens Corning Press Release 8/12/03—“Owens Corning is a world leader in building materials systems and composite systems.”

d. Focused on a long-term growth strategy

- Federal-Mogul 12/31/02 10-K—“The Company has pursued a growth strategy focusing on its core competencies of manufacturing and engineering by concentrating efforts and resources on core business segments that will provide long-term growth.”
- US Gypsum 2Q Earnings Release 7/29/03—“We continued to grow and strengthen our core businesses during the quarter by focusing on customer service, operating efficiencies and selective growth opportunities,” said USG Corporation Chairman, CEO and President William C. Foote. “These improvements were not fully reflected in our bottom line, though, due to higher cost factors, especially the rise in natural gas prices. These cost pressures are likely to continue in the near term, and the corporation is focusing on ways to offset them.”
- WR Grace 12/31/02 10-K—“In addition to new product introductions, product enhancements and acquisitions, Grace looks for growth opportunities in developing countries, where increases in construction activity and sophistication of construction practices can increase demand for Grace’s construction chemicals and building materials products. Grace seeks to increase profitability and minimize the impact of cyclical down-

turns in regional economies by introducing technically advanced higher-performance products, expanding geographically, and developing business opportunities in renovation construction markets.”

- Armstrong 3Q Earnings Release 11/9/01—“While we continue to be affected by the economic downturn, we are investing in our core businesses,” said Armstrong Chairman and CEO Michael D. Lockhart. “We remain focused on improving the cost structure, product offerings and long-term profitability of the business.”
- e. Continued investment in technology with realized productivity gains
- Federal-Mogul 2Q Earnings Release 7/29/03—“We remain on course with our strategic plan and I’m pleased with our execution, especially in the areas of cash flow and productivity. Through productivity, we have been able to offset industry pricing pressures, increased pension expense and inflation” said Chip McClure, Federal-Mogul’s chief executive officer and president.
 - US Gypsum 2002 Earnings Release 2/4/03—US Gypsum Corporation Chairman, President and CEO, William C. Foote, commenting on the results of the past year. “In our gypsum business, we made capital investments to add capacity for our SHEETROCK(r) Brand joint compounds and DUROCK(r) Brand cement board products. Both product lines, as well as USG’s SHEETROCK(r) Brand gypsum wallboard, achieved record shipments during the year.”
- f. Continued investments in research and development and customer service for potential long-term growth
- Federal-Mogul Press Release 1/20/03—“The 40-year-mark represents the commitment of Federal-Mogul to constantly improve operations by focusing on leading-edge research and development,” said James Toth, facility manager. “Some corporations are quick to reduce their research and development (R&D) investment during periods of challenging market or economic conditions, but Federal-Mogul has realized the long-term benefits and opportunities created by continuously updating our technology.”
 - WR Grace 12/31/02 10k—“Grace’s strategy has been, and will continue to be, to seek to enhance enterprise value by profitably growing its specialty chemicals businesses globally and achieving high levels of financial performance. To achieve these objectives, Grace plans to (i) invest in research and development activities, with the goals of introducing new high-performance products and services and enhancing manufacturing processes; (ii) implement process and productivity improvements and cost-

- management initiatives (including the use of Six Sigma processes) such as rigorous controls on working capital and capital spending; and (iii) pursue selected acquisitions and alliances. These plans are designed to make Grace a high-performance company focused on the strengths of its global specialty chemicals businesses.”
- US Gypsum Q1 Press Release 4/24/03—“USG achieved solid results in the first quarter,” reported US Gypsum Corporation Chairman, President and CEO William C. Foote. “Demand for most of our products and services continued to be strong and USG’s operating units remained focused on implementing their plans for improving customer service, increasing operating efficiencies and growing their businesses. We did face significantly higher energy costs during the quarter, but we were able to partially offset their negative impact with productivity improvements and our energy hedging program.”
- g. Continued investment in cost reduction programs, such as Six Sigma, to improve operating margins in a difficult environment
- WR Grace 1Q Earnings Release 4/22/03—“The first quarter presented unique challenges for a global company like Grace,” said Grace Chairman, President and Chief Executive Officer Paul J. Norris. “The weaker dollar helped our reported sales, but the continued softness in the economy yielded little in the way of real growth. Our costs and expenses were adversely affected by war-related uncertainties, added pension costs and abnormally high manufacturing costs, partially due to the severe winter in the U.S. Our challenge for the rest of the year is to maximize the benefits from our productivity and six sigma activities, and to capitalize on what we hope will be improving economic conditions.”
 - Owens Corning 12/31/02 10-K—“The Company spent a significant amount of time reviewing its cost structures in 2001 as a response to the impact of the weaker economy. During 2000, the Company recorded pretax charges of \$229 million for restructuring and other activities as a result of its reassessment of business strategies with respect to investments in certain ventures, facilities and overhead expenditures.”
 - US Gypsum 3Q Earnings Release 10/24/02—William C. Foote, US Gypsum Corporation Chairman, CEO and President stated, “Despite the softness in the economy this year, our businesses have become stronger due to their focus on fundamentals. This includes efforts to improve customer service, reduce production costs and use working capital more efficiently. Through the first nine months of the year, we are exceeding our goals in essentially all areas, and that success has contributed to USG’s improving levels of profitability.”

- h. Continued strategic fit acquisitions and divestitures
- Federal-Mogul 12/31/02 10-K—“In August 2001, the Company acquired 85% of WSK Gorzyce, S.A., a leading Polish producer of pistons and other automotive components. WSK employs 2,500 employees at its manufacturing location in Gorzyce, Poland with annual sales of approximately \$50 million”
 - Federal-Mogul 12/31/02 10-K—“In November 2002, the Company completed the divestiture of Federal-Mogul Camshafts de Mexico S. de R.L. de C.V. (*“Camshafts de Mexico”*), to Linamar Corporation. Camshafts de Mexico manufactures camshafts for the North American original equipment market.”
 - WR Grace 12/31/02 10-K—“In March 2002, Grace acquired the assets of Addiment, Incorporated, a leading supplier of specialty chemicals to the concrete paver and masonry industries in the U.S. and Canada.”
 - Owens Corning 12/31/02 10-K—“During the first quarter of 2001, the Company completed the sale of the majority of its Engineered Pipe Business, a producer of glass-reinforced plastic pipe with operations mostly in Europe.”
- i. Reduced borrowing requirements
- Armstrong Press Release 5/31/01- Leonard Campanaro, Armstrong’s Senior Vice President and Chief Financial Officer said: “As we move through the reorganization process, we are becoming increasingly confident of our ability to fund our businesses with cash generated from operations, particularly in light of the fact that Company wide we had built up cash on hand from our operations in excess of \$150 million as of April 30, 2001. We have not needed to use the Credit Facility in the first six months of our Chapter 11 case, which is the period when we expected we might have the greatest potential need. Since there are no borrowings against the facility and we do not currently anticipate any in the future, we concluded that a \$200 million facility is more than sufficient to meet our foreseeable liquidity needs. As a result, we are pleased with this reduction of the facility and the resulting significant savings in related fees.”
 - US Gypsum 12/31/02 10-K—“In January 2003, the Corporation reduced the size of the DIP Facility to \$100 million. This action was taken at the election of the Corporation due to the levels of cash and marketable securities on hand and to reduce costs associated with the DIP Facility. The resulting DIP Facility will be used largely to support the issuance of standby letters of credit needed for the Corporation’s business operations.”

Figure 1. Aggregate Sales of the Seven Largest Chapter 11 Companies with Asbestos Overhang

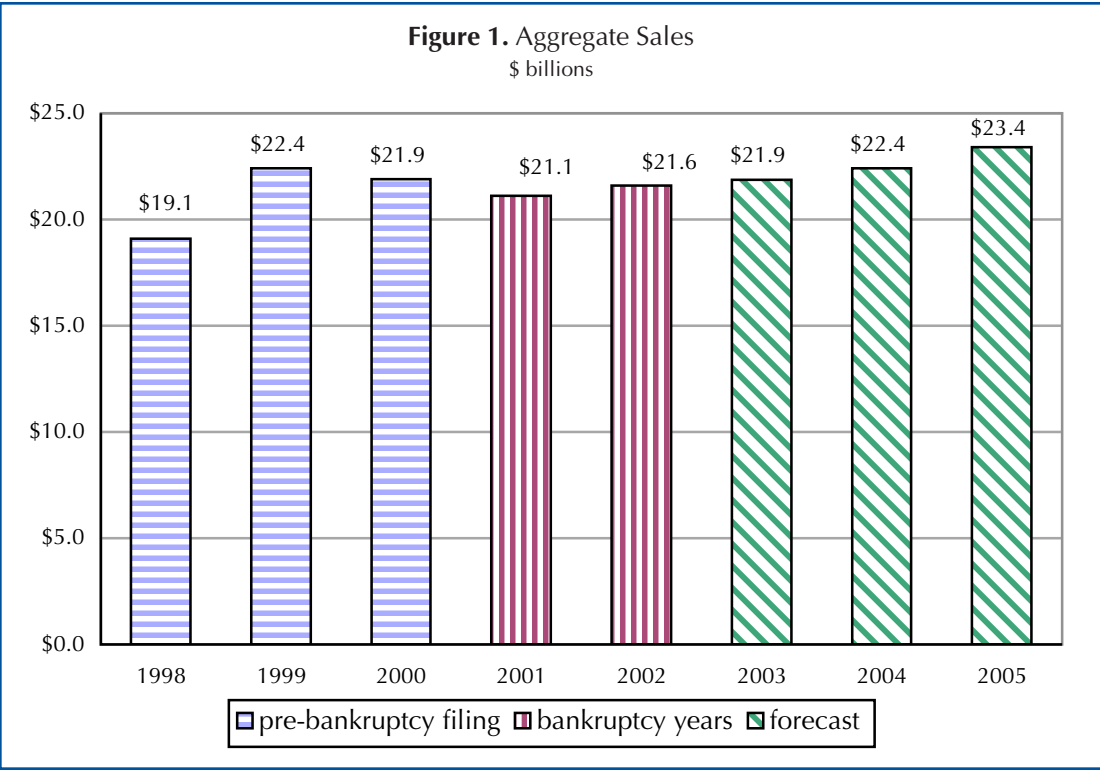


Table 1. Sales, Comparative Analysis of Chapter 11 and Comparable Companies

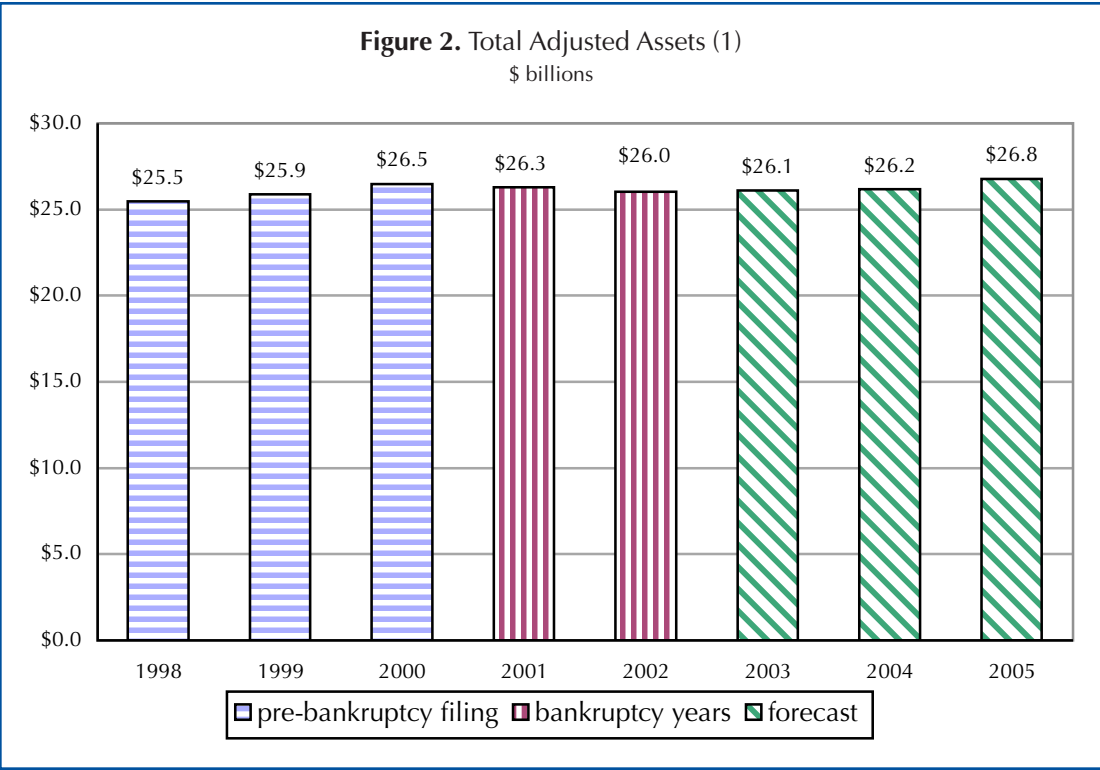
Relative to Year Before Bankruptcy = 100 for both Chapter 11 and Comparable Companies

	1998	1999	2000	2001	2002
<u>Building Products Industry</u>					
Armstrong (1)	77	102	100	97	98
Owens Corning (1)	102	103	100	97	99
US Gypsum	88	101	100	87	92
Building Materials Corp. of America (2)	90	94	100	107	113
Aggregate Building Products	91	101	100	95	98
Comparable companies					
Including Georgia Pacific	75	89	100	108	109
Excluding Georgia Pacific	84	93	100	104	112
<u>Specialty Chemicals Industry</u>					
WR Grace	97	97	100	108	114
Comparable companies	76	89	100	91	85
<u>Automotive Parts Industry</u>					
Federal-Mogul	74	108	100	91	90
Comparable companies	83	97	100	96	100
<u>Power Generation Industry</u>					
Babcock & Wilcox	107	100	109	135	141
Comparable companies	106	100	100	108	131

(1) Armstrong filed for bankruptcy on December 6, 2000 and Owens Corning on October 5, 2000.

(2) Sole operating asset of G-I Holdings, which filed for bankruptcy on January 5, 2001; assumed here filed in 2000.

Figure 2. Total Adjusted Assets of the Seven Largest Chapter 11 Companies with Asbestos Overhang



(i) Total adjusted assets exclude asbestos insurance receivables and discontinued operations where applicable

Table 2. Total Assets (Adjusted), Comparative Analysis of Chapter 11 and Comparable Companies (1)

Relative to Year Before Bankruptcy = 100 for both Chapter 11 and Comparable Companies

	1998	1999	2000	2001	2002
<u>Building Products Industry</u>					
Armstrong (2)	105	94	100	102	115
Owens Corning (2)	70	94	100	103	101
US Gypsum	67	85	100	109	115
Building Materials Corp. of America (2)	112	116	100	92	96
Aggregate Building Products	81	93	100	103	107
Comparable companies					
Including Georgia Pacific	61	74	100	96	101
Excluding Georgia Pacific	79	92	100	103	119
<u>Specialty Chemicals Industry</u>					
WR Grace	95	95	100	101	109
Comparable companies	67	102	100	93	83
<u>Automotive Parts Industry</u>					
Federal-Mogul	110	106	100	92	79
Comparable companies	79	97	100	97	98
<u>Power Generation Industry</u>					
Babcock & Wilcox	218	100	103	109	129
Comparable companies	96	100	102	115	132

(1) Total adjusted assets exclude asbestos insurance receivables and discontinued operations where applicable

(2) Armstrong filed for bankruptcy on December 6, 2000 and Owens Corning on October 5, 2000.

(3) Sole operating asset of G-I Holdings, which filed for bankruptcy on January 5, 2001; assumed here filed in 2000.

Figure 3. Number of Employees at the Seven Largest Chapter 11 Companies with Asbestos Overhang

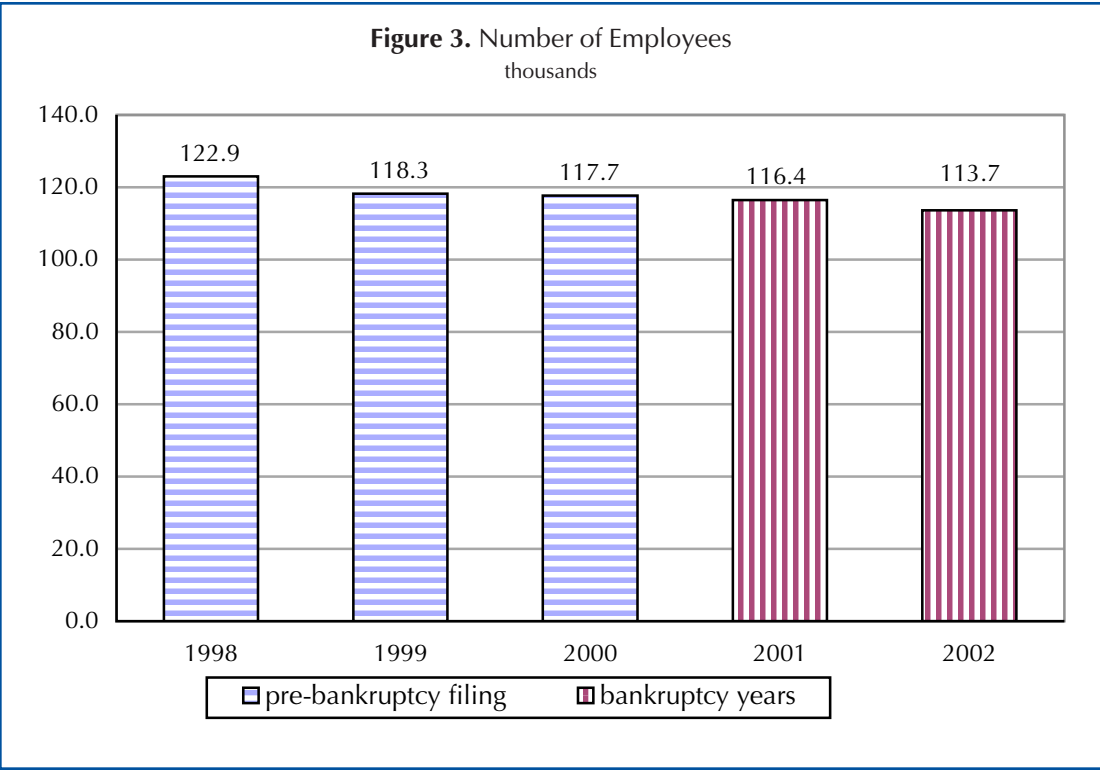


Table 3. Number of Employees, Comparative Analysis of Chapter 11 and Comparable Companies

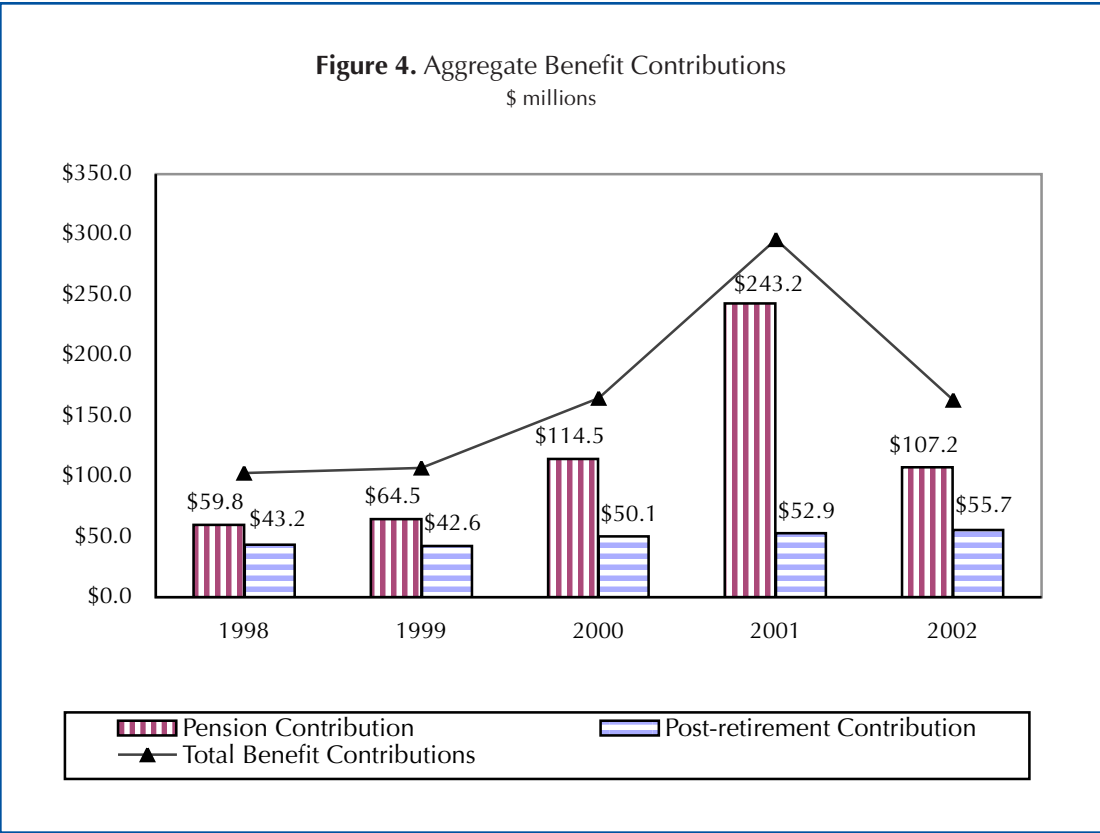
Relative to Year Before Bankruptcy = 100 for both Chapter 11 and Comparable Companies

	1998	1999	2000	2001	2002
<u>Building Products Industry</u>					
Armstrong (1)	123	119	100	108	107
Owens Corning (1)	100	100	100	95	90
US Gypsum	92	96	100	96	95
Building Materials Corp. of America (2)	103	109	100	106	106
Aggregate Building Products	104	105	100	100	97
Comparable companies					
Including Georgia Pacific	70	85	100	103	100
Excluding Georgia Pacific	78	90	100	108	111
<u>Specialty Chemicals Industry</u>					
WR Grace	100	100	100	102	102
Comparable companies	94	109	100	99	89
<u>Automotive Parts Industry</u>					
Federal-Mogul	109	101	100	98	95
Comparable companies	85	100	100	93	91
<u>Power Generation Industry</u>					
Babcock & Wilcox	117	100	144	139	139
Comparable companies	100	100	110	120	124

(1) Armstrong filed for bankruptcy on December 6, 2000 and Owens Corning on October 5, 2000.

(2) Sole operating asset of G-I Holdings, which filed for bankruptcy on January 5, 2001; assumed here filed in 2000.

Figure 4. Aggregate Benefit Contributions of the Seven Largest Chapter 11 Companies with Asbestos Overhang



Note: 1998-2000 pre-bankruptcy filing years and 2001-2002 bankruptcy years

Figure 5. Earnings Before Interest, Taxes, Depreciation and Amortization (EBITDA) of the Seven Largest Chapter 11 Companies with Asbestos Overhang

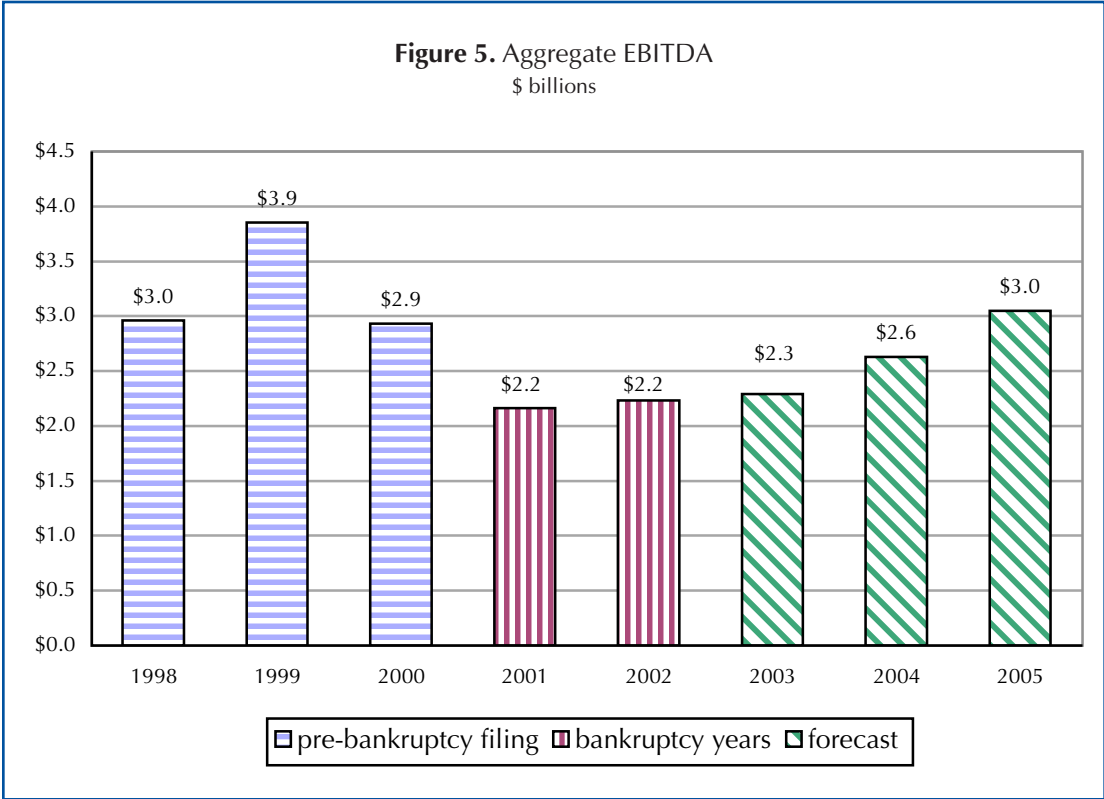


Table 4. Earnings Before Interest, Taxes, Depreciation and Amortization (EBITDA), Comparative Analysis of Chapter 11 and Comparable Companies

Relative to Year Before Bankruptcy = 100 for both Chapter 11 and Comparable Companies

	1998	1999	2000	2001	2002
<u>Building Products Industry</u>					
Armstrong (1)	110	135	100	77	71
Owens Corning (1)	111	130	100	94	83
US Gypsum	106	131	100	39	60
Building Materials Corp. of America (2)	106	121	100	137	155
Aggregate Building Products	109	131	100	73	76
Comparable companies					
Including Georgia Pacific	86	98	100	101	101
Excluding Georgia Pacific	90	94	100	93	105
<u>Specialty Chemicals Industry</u>					
WR Grace	79	98	100	92	88
Comparable companies	80	97	100	73	79
<u>Automotive Parts Industry</u>					
Federal-Mogul	84	142	100	60	60
Comparable companies	67	98	100	79	86
<u>Power Generation Industry</u>					
Babcock & Wilcox	171	100	35	144	188
Comparable companies	100	100	112	112	127

(1) Armstrong filed for bankruptcy on December 6, 2000 and Owens Corning on October 5, 2000.

(2) Sole operating asset of G-I Holdings, which filed for bankruptcy on January 5, 2001; assumed here filed in 2000.

Figure 6. Aggregate EBITDA as a Percentage of Sales of the Seven Largest Chapter 11 Companies with Asbestos Overhang

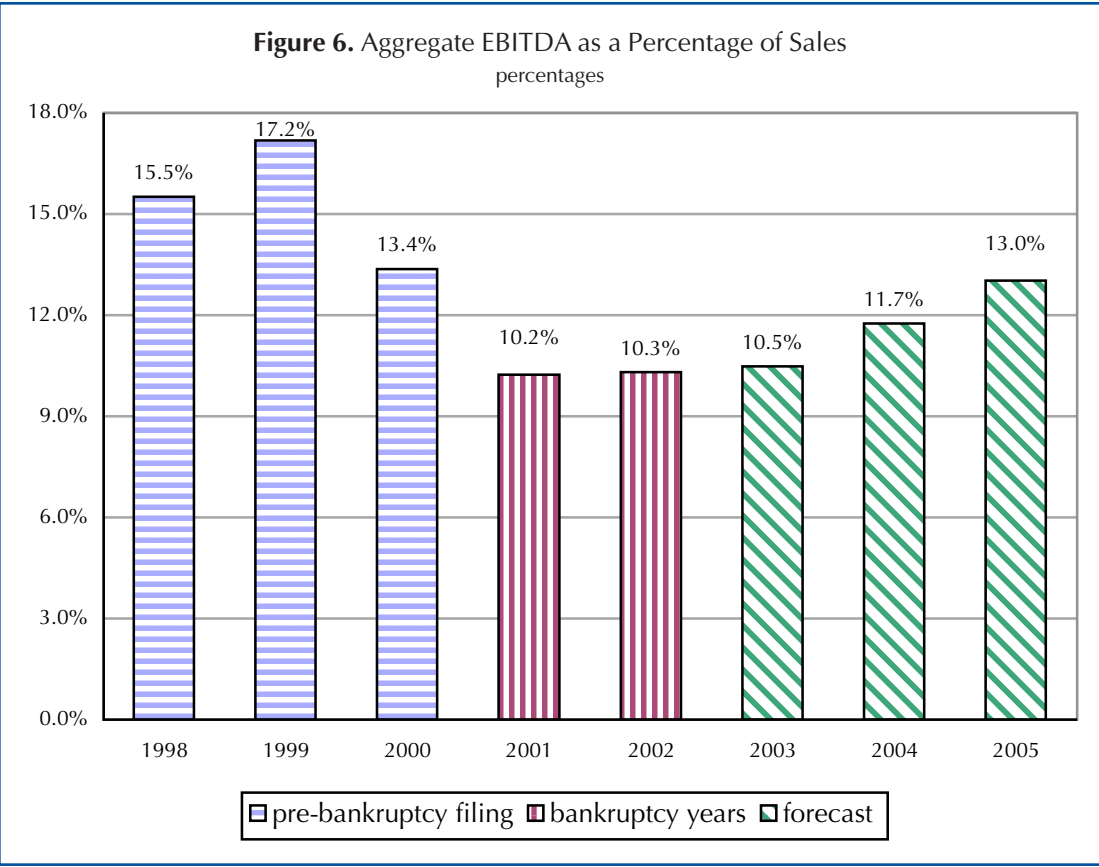


Table 5. EBITDA as a Percentage of Sales, Comparative Analysis of Chapter 11 and Comparable Companies

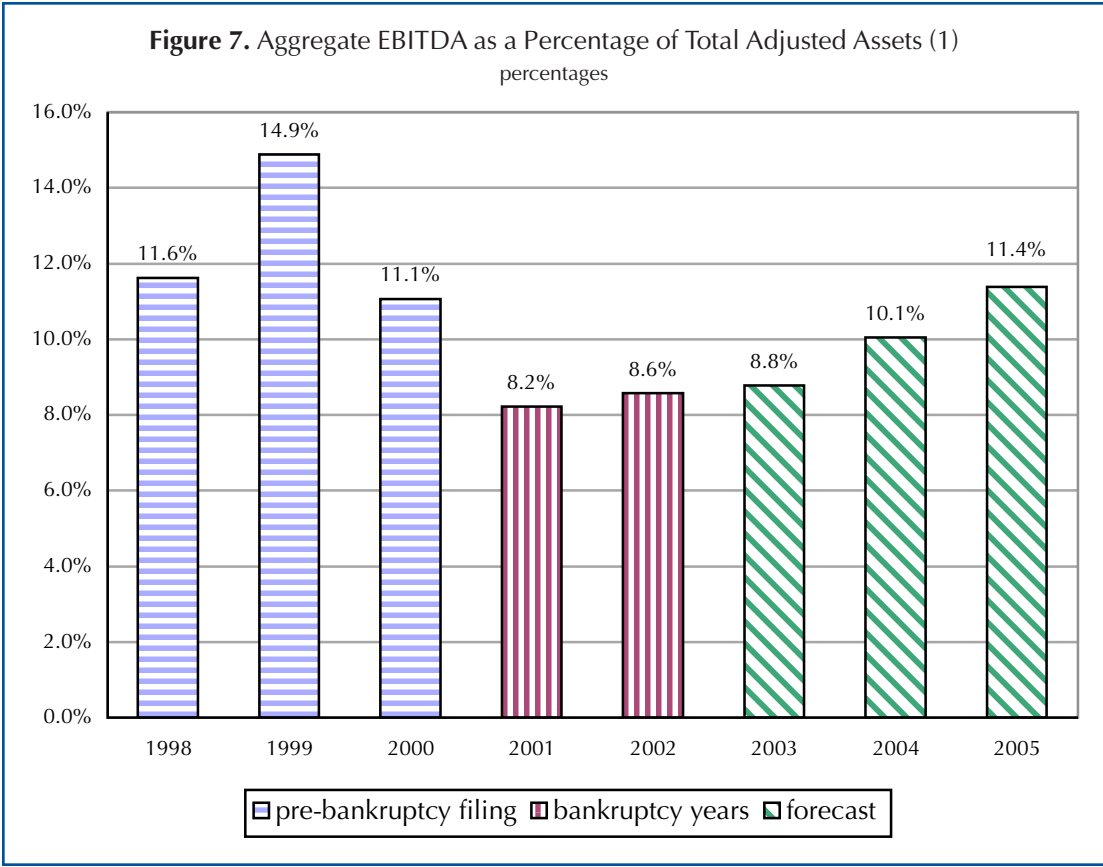
Relative to Year Before Bankruptcy = 100 for both Chapter 11 and Comparable Companies

	1998	1999	2000	2001	2002
<u>Building Products Industry</u>					
Armstrong (1)	143	132	100	80	72
Owens Corning (1)	108	126	100	97	84
US Gypsum	120	130	100	44	66
Building Materials Corp. of America (2)	117	128	100	128	137
Aggregate Building Products	120	129	100	77	78
Comparable companies					
Including Georgia Pacific	114	111	100	93	93
Excluding Georgia Pacific	107	102	100	89	94
<u>Specialty Chemicals Industry</u>					
WR Grace	81	101	100	85	77
Comparable companies	106	109	100	80	93
<u>Automotive Parts Industry</u>					
Federal-Mogul	112	131	100	66	66
Comparable companies	81	101	100	82	86
<u>Power Generation Industry</u>					
Babcock & Wilcox	161	100	32	107	133
Comparable companies	95	100	112	104	96

(1) Armstrong filed for bankruptcy on December 6, 2000 and Owens Corning on October 5, 2000.

(2) Sole operating asset of G-I Holdings, which filed for bankruptcy on January 5, 2001; assumed here filed in 2000.

Figure 7. Aggregate EBITDA as a Percentage of Total Assets (Adjusted) of the Seven Largest Chapter 11 Companies with Asbestos Overhang



(i) Total adjusted assets exclude asbestos insurance receivables and discontinued operations where applicable

Table 6. EBITDA as a Percentage of Total Assets (Adjusted), Comparative Analysis of Chapter 11 and Comparable Companies

Relative to Year Before Bankruptcy = 100 for both Chapter 11 and Comparable Companies

	1998	1999	2000	2001	2002
<u>Building Products Industry</u>					
Armstrong (1)	104	144	100	75	61
Owens Corning (1)	158	139	100	92	82
US Gypsum	159	154	100	35	53
Building Materials Corp. of America (2)	94	104	100	150	161
Aggregate Building Products	134	141	100	70	71
Comparable companies					
Including Georgia Pacific	141	133	100	105	101
Excluding Georgia Pacific	114	103	100	90	88
<u>Specialty Chemicals Industry</u>					
WR Grace	82	103	100	92	81
Comparable companies	120	95	100	79	95
<u>Automotive Parts Industry</u>					
Federal-Mogul	76	133	100	65	76
Comparable companies	85	101	100	81	88
<u>Power Generation Industry</u>					
Babcock & Wilcox	79	100	34	132	146
Comparable companies	104	100	109	98	96

(1) Armstrong filed for bankruptcy on December 6, 2000 and Owens Corning on October 5, 2000.

(2) Sole operating asset of G-I Holdings, which filed for bankruptcy on January 5, 2001; assumed here filed in 2000.

Figure 8. Aggregate Capital Expenditures of the Seven Largest Chapter 11 Companies with Asbestos Overhang

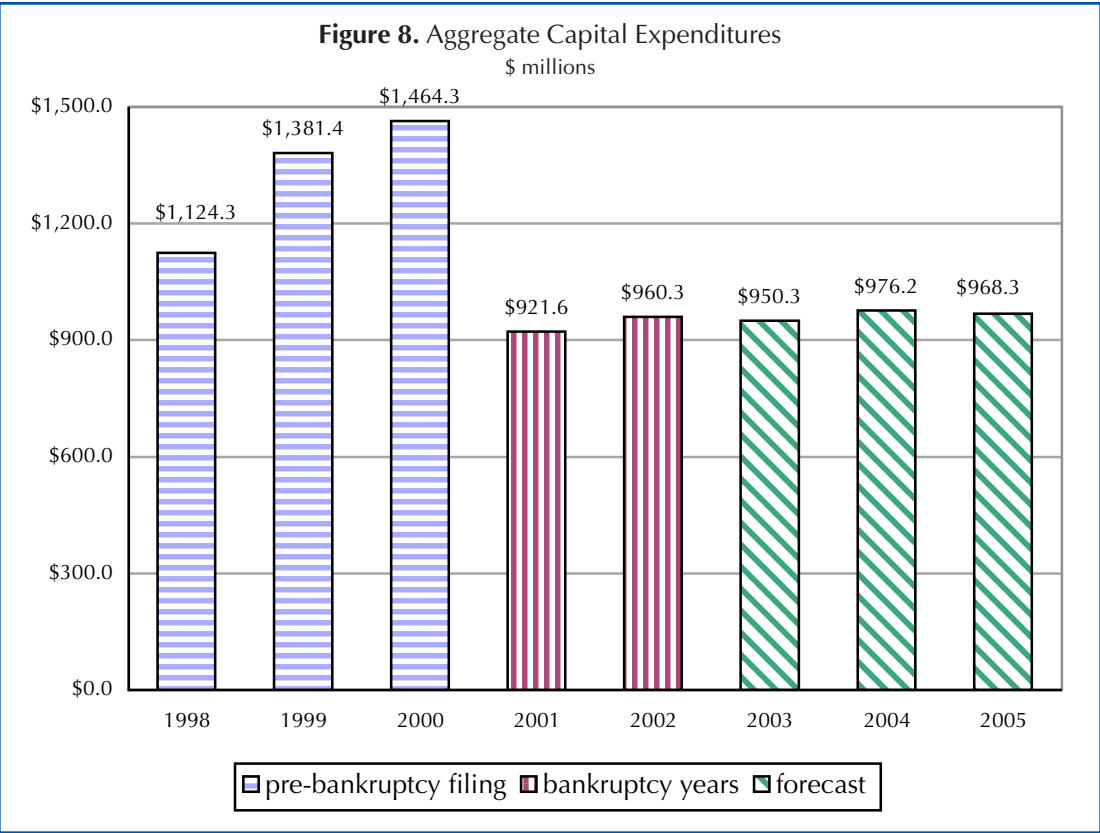


Table 7. Capital Expenditures, Comparative Analysis of Chapter 11 and Comparable Companies

Relative to Year Before Bankruptcy = 100 for both Chapter 11 and Comparable Companies

	1998	1999	2000	2001	2002
<u>Building Products Industry</u>					
Armstrong (1)	93	110	100	80	79
Owens Corning (1)	53	51	100	57	52
US Gypsum	81	112	100	29	26
Building Materials Corp. of America (2)	122	74	100	46	56
Aggregate Building Products	73	83	100	50	47
Comparable companies					
Including Georgia Pacific	71	86	100	72	66
Excluding Georgia Pacific	71	89	100	66	61
<u>Specialty Chemicals Industry</u>					
WR Grace	156	127	100	97	141
Comparable companies	84	91	100	89	74
<u>Automotive Parts Industry</u>					
Federal-Mogul	72	125	100	99	107
Comparable companies	104	107	100	83	72
<u>Power Generation Industry</u>					
Babcock & Wilcox	69	100	55	75	167
Comparable companies	238	100	48	105	81

(1) Armstrong filed for bankruptcy on December 6, 2000 and Owens Corning on October 5, 2000.

(2) Sole operating asset of G-I Holdings, which filed for bankruptcy on January 5, 2001; assumed here filed in 2000.

Figure 9. Aggregate Cash and Cash Equivalents for the Seven Largest Chapter 11 Companies with Asbestos Overhang

