April 20, 2009

FASB Board Members
c/o Russell Golden, Technical Director
Financial Accounting Standards Board
401 Merritt 7/PO Box 5116
Norwalk, Connecticut 06856-5116

Dear Board Members,

I am writing, as promised, to follow up on issues raised in the course of the recent FASB Roundtable regarding Contingent Liability Disclosure, FAS 5.

The enclosed report sets forth elements of an analytical framework, and our research findings, relative to the questions raised in the Roundtable and now facing the FASB in its redeliberation of proposed changes to FAS 5. In this document, among other things we present a proposed set of principles for the redeliberation. We discuss case studies regarding disclosure of asbestos and nanotechnology related liabilities. We recommend a new mechanism for working around the concern about prejudicial disclosures. Finally, we set forth recommendations for some of the revisions of FAS 5.

Although our review focuses on product liability issues, it is important to recognize that FAS 5 contingent liability disclosure addresses an array of issues, from banks’ contractual liabilities, to carbon pricing issues facing utilities, to warranty related issues. While it may still take substantial effort by the Board to refine the exposure draft, these changes are important to investors. Especially as we approach convergence with IFRS, it is essential to better define how contingent liabilities can be disclosed within the complex US legal context, and to bring that understanding to the convergence process.

It was a pleasure to participate in the Roundtable. Please contact me if you wish to discuss any aspect of this paper.

Sincerely,

Sanford Lewis
Counsel
Investor Environmental Health Network

PO Box 231 Amherst, MA 01004-0231 • sanfordlewis@strategiccounsel.net
413 549-7333 ph. • 781 207-7895 fax
FOLLOW-UP REPORT
FROM ROUNDTABLE OF THE
FINANCIAL ACCOUNTING STANDARDS BOARD
AND RECOMMENDATIONS
REGARDING REDELIBERATION OF
FAS 5 CONTINGENT LIABILITY REPORTING
STANDARDS

Sanford Lewis, Counsel
Investor Environmental Health Network
April 20, 2009
<table>
<thead>
<tr>
<th>TABLE OF CONTENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUMMARY</td>
</tr>
<tr>
<td>KEY PRINCIPLES FOR REDELIBERATION</td>
</tr>
<tr>
<td>Respect the rights and needs of both short-term and long-term investors.</td>
</tr>
<tr>
<td>Ensure that estimates are provided to investors on potentially material liabilities. Do not shift the burden and cost of generating such estimates to the investing community.</td>
</tr>
<tr>
<td>Liability estimates useful to investors can most readily be achieved by working around the strictures of Attorney-Client privilege, and requiring disclosure of estimates that do not utilize privileged information.</td>
</tr>
<tr>
<td>The disclosure standard must be enforceable and enforced.</td>
</tr>
<tr>
<td>OVERVIEW OF EARLY AND LATE STAGE LIABILITY DISCLOSURE ISSUES</td>
</tr>
<tr>
<td>Early stage: the future looks “remote”</td>
</tr>
<tr>
<td>Late stage: disclosure and estimation deferred</td>
</tr>
<tr>
<td>CASE STUDY 1. ASBESTOS: THE FAILURE OF CONTINGENT LIABILITY DISCLOSURE RULES TO PROTECT INVESTORS</td>
</tr>
<tr>
<td>Lawyers influence projections downwardly, deferring bankruptcy</td>
</tr>
<tr>
<td>Liability estimates filed with insurers are typically larger and over longer timelines than for investors</td>
</tr>
<tr>
<td>FAS 5 leads some companies to contract for externally produced liability estimates</td>
</tr>
<tr>
<td>Failure to examine comparable cases in late stage liability disclosure</td>
</tr>
<tr>
<td>Summary of recommendations based on asbestos experience for late stage disclosure and liability estimation</td>
</tr>
<tr>
<td>CASE STUDY 2. NANOTECHNOLOGY: INNOVATIVE TECHNOLOGIES RAISE EARLY STAGE LIABILITY DISCLOSURE ISSUES</td>
</tr>
<tr>
<td>Promising innovations, emerging long term risks</td>
</tr>
<tr>
<td>Scientific issues</td>
</tr>
<tr>
<td>Carbon nanotubes: the strongest nanotechnology/asbestos analogue</td>
</tr>
<tr>
<td>Current disclosure practices by producers of carbon nanotubes</td>
</tr>
<tr>
<td>Appropriate level of investor disclosure for long-term technology risk disclosures drawing upon carbon nanotube example</td>
</tr>
<tr>
<td>Relationship to existing SEC disclosure requirements</td>
</tr>
<tr>
<td>ADDITIONAL NOTES REGARDING LATE STAGE LIABILITIES</td>
</tr>
<tr>
<td>Investors need both factual disclosures and estimates based on those disclosures</td>
</tr>
<tr>
<td>A hierarchy of estimates and disclosures for late stage liability disclosures</td>
</tr>
<tr>
<td>Recoveries from insurance or other arrangements</td>
</tr>
<tr>
<td>Disclosure and estimation by private companies</td>
</tr>
</tbody>
</table>
SUMMARY

In light of the current financial crisis, the investing public is more aware than ever of the tendency of preparers of financial statements to deny, or treat as “remote,” the issues that may one day lead to dire financial consequences for the company. The loss of investor confidence in financial reporting necessitates improvements in disclosure and estimation of contingent losses. The Financial Accounting Standards Board’s 2008 exposure draft, proposing revisions of the existing FAS 5, represented an important recognition that the existing rules are inadequate to inform investors of contingent losses. However, the proposal met significant opposition from the community of preparers, and as a result the Board has expressed an intent to redeliberate the proposal beginning early in 2009. The following report, prepared on behalf of the Investor Environmental Health Network, proposes a framework for redeliberation of the proposal.

Key Principles for Redeliberation

1. Respect the rights and needs of both short-term and long-term investors.

2. Ensure that estimates are provided to investors on potentially material liabilities. Do not shift the burden and cost of generating such estimates to the investing community.

3. Liability estimates useful to investors can most readily be achieved by working around the strictures of Attorney-Client privilege, and requiring disclosure of estimates that do not utilize privileged information.

4. The disclosure standard must be enforceable and enforced.

Case Studies

The asbestos case study is one of the largest product liability issues to date. Asbestos has resulted in the bankruptcy of numerous companies. Early-stage disclosures were scant; late stage disclosures have tended at many companies to be deferred for as long as possible, leaving investors in the dark and in many instances blindsiding them as unestimated and underestimated liabilities flip suddenly into bankruptcy. The asbestos case study has important implications for both early and late stage disclosure requirements in a revised FAS 5.

The nanotechnology case study exemplifies a current issue of emerging technology, notable for its parallels to the history of asbestos, but currently in the early stage of development. Our analysis shows that investors are currently being underinformed about the prospects of long-term liability associated with certain nanotechnology products. This case study demonstrates that a clearer FASB standard for disclosure of these early stage potential liabilities, probably characterized as remote by companies today, can improve the degree to which investors are armed with the data on risks needed to make rational and informed investment decisions.
RECOMMENDATIONS

Early stage disclosures

The exposure draft for revision of FAS 5 proposed that potential liabilities viewed by the preparer as "remote" would only need to be disclosed if they were likely to be resolved within one year and the potential magnitude of loss would be severe. The Roundtable discussion agenda raised a question of the threshold for disclosure: "Are there some contingencies that are material to users of financial statements, and therefore should be disclosed, even though the likelihood of loss is remote? If so, do such loss contingencies require the same level of disclosure as those for which the likelihood of loss is more than remote (that is, at least reasonably possible)?)"

In response, we note that there was strong support from financial statement users in the Roundtable to require disclosure of severe, remote liabilities regardless of whether they would resolve within a year. We recommend that at a minimum the following disclosures be required under the revised FAS 5:

Require disclosure of circumstances that, in the case of an unfavorable resolution of future claims, may reasonably lead to a severe magnitude of loss, even if viewed as remote and/or long-term by the management. At a minimum, include a footnote disclosure stating:

a) In the case of potential for severe tort or product liability issues that may result from emerging scientific findings, briefly describe developments in the scientific literature that may indicate the potential for liabilities associated with the company’s products or activities, such as:

   i. The appearance of several, or substantial, peer-reviewed studies in respected scientific journals, or literature survey reports, that are indicative of potential hazards of the company’s products or activities.

   ii. Recognition given to such science by significant institutes, task forces, institutions or agencies anywhere in the world, such as government research or regulatory bodies, insurers, reinsurers, think tanks, etc.

b) In the case of other uncertainties, such as severe contractual liability scenarios, describe other factual information or contingencies that may cause such contingent losses, for instance:

   i. Government policies to set a cap on carbon emissions, currently under discussion, could dramatically increase the cost of certain existing contractual obligations held by an energy company;

   ii. A decline in the value of home prices could lead to significant contractual losses.

c) Describe briefly measures the filer is taking to minimize or prevent any eventual liability, such as consumer education, research, materials modification, exposure reduction, public policy efforts, insurance, etc.
d) Provide brief indicators of the severity of scale of the possible liability – for instance, the percentage of the company’s expected sales volume that this product comprises, the possible extent of workplace exposures where materials are used in the fabrication of goods, significant exposures to elderly or young consumers, etc.

**Late stage disclosures and estimations**

Significant attention was given in the exposure draft and the Roundtable regarding the circumstances in which estimates should be made, and the potential for disclosure of other information short of estimates. Substantial complexity was added to the discussion by the concerns regarding disclosure of estimates that may be prejudicial to the filer. In the agenda of the Roundtable, for example, the following questions were raised.

Paragraph 10 of FASB Statement No. 5, Accounting for Contingencies, requires entities to “give an estimate of the possible loss or range of loss or state that an estimate cannot be made.” Users have indicated a need for quantitative information about loss contingencies and feel that entities too often provide no quantitative information and state that an estimate cannot be made. Preparers have indicated that, in fact, an estimate of the range of loss often cannot be made and even in circumstances in which an estimate can be made, disclosing that estimate may be prejudicial to the entity.

a. If an estimate of the possible loss or range of loss can be made, should disclosure of that estimate be required? Should there be a prejudicial exemption from providing such an estimate?

b. In circumstances in which an estimate of the possible loss or range of loss cannot be made (or would be prejudicial to the entity), what other relevant quantitative information that would be useful to users could be provided?

c. Is there a meaningful way to convey to users the potential magnitude of a contingency using qualitative information rather than quantitative information?

As we will discuss at length below, our response to these questions demonstrates the need for reframing of the type of disclosures to be made and the relative role of prejudicial information. We recommend that for contingent liabilities that are nonremote, and for which the magnitude of loss may be material either individually, or in the aggregate as a group of similar or related claims, FAS 5 should require:

a. **Disclosure of factual information, documentation of the claims asserted, and links to pleadings in those cases.**

b. An estimate of the range of potential liability. The financial statement filer should be encouraged to accomplish this estimation by one of the following two methodologies:
i. A professional third-party estimation of the range of potential liabilities utilizing publicly disclosed and available non-privileged information. (The preparer should clarify whether the third-party consultant conducted this assessment without access to privileged information, and if so, how this affects the accuracy of the estimate.) The preparer should provide the consultant with any non-privileged information in its possession that is relevant to the assessment, such as number of sites, number of claims, number of items sold, etc.

ii. Where the filer chooses to, it may provide information based on the estimations or predictions by its own counsel. The filer is encouraged to work with its counsel and auditors to undertake such disclosures in a manner that eliminates or minimizes the impact on privileged information, including aggregation of estimates.

c. The estimate presented by the company should be one of the following, working from the top of this hierarchy in descending order, and using the form highest on the list that is feasible:

- Probability weighted estimate of the liability;

- The range of potential losses and the “most likely” estimate of the liability;

- Range of potential losses associated with the liability, without defaulting to the known minimum.

- Known minimum should only be allowed to be disclosed ONLY when no other estimate can be developed.

d. For any estimates, disclose critical assumptions used in the estimation.

e. Regardless of whether or not an estimate of the contingent liability amount is disclosed, the following additional item shall be disclosed to the extent feasible:

- Total number of claims pending and average loss per claim

- Where significant numbers of claims are being handled on a similar issue over the course of years, include tabulated information on related claims pending, claims settled and loss per claim on a year by year basis.
• State the nature of the contingency and items that trigger this, for example:
  
  • Environmental cleanups: number of sites, acreage, and type of contaminants
  
  • Contractual liabilities: number of contracts, nature of contingencies, etc.
  
  • Total number of individuals reasonably likely to suffer harm as a result of the company’s activities and portion of those individuals expected to pursue claims.

• Where there is a record of similar claims at other companies, require benchmarking of estimates against other companies litigating the similar issue, and a brief discussion as to the extent to which such claims records are a reasonable reflection of the likely outcomes for the preparer.

f. Disclose long term estimates of claims made to insurers or other parties, or otherwise known to the company, not just short-term liability estimates. Disclose instances when estimates of liability provided to investors diverge significantly in time horizon or magnitude from those provided to insurers or other parties such as in the course of a purchase or sale.
KEY PRINCIPLES FOR REDELIBERATION

Respect the rights and needs of both short-term and long-term investors.
While accounting rules traditionally focus heavily on the current accounting period and the short-term, many investors are looking increasingly towards longer-term issues. Many investors are interested in more than the gains and losses that may occur over the next quarter or year. They want to know about longer-term risks that a company is taking, and be in a position to decide whether or not they wish to include those risks in their portfolio. Fiduciaries such as pension fund managers also have a duty to inquire as to such longer-term risks, because they may be trustees of longer-term beneficiaries. Such trustees have a duty of impartiality — a legal obligation to be impartial as between those who may benefit from the near term returns and value of an investment, and the longer-term beneficiaries of that investment. The duty of impartiality requires a balanced approach between short-term and long-term obligations. This means that long-term, even inter-generational, risks must be identified and identifiable by those who are making investments as fiduciaries.¹ Financial accounting rules, including the contingent loss disclosure requirements, must meet the needs of these investors as well as those with only shorter term financial interests in mind.

Ensure that estimates are provided to investors on potentially material liabilities. Do not shift the burden and cost of generating such estimates to the investing community.
In the recent Roundtable, there was some discussion and advocacy by representatives of financial statement preparers suggesting that required disclosures under FAS 5 should be limited to factual matters, and should not include any "predictive" disclosures. It was

¹ Keith L. Johnson and Frank Jan de Graaf, Modernizing Pension Fund Legal Standards for the 21st Century, February 2009, Network for Sustainable Financial Markets. Keith Johnson is the former General Counsel of the Wisconsin State Investment Board. The duty of impartiality is summarized in official comments to §79(1) of the Restatement of Trusts, Third, as follows: "In what might be called the 'substantive' aspects of impartiality . . . Subsection (1) directs trustees . . . to make diligent and good-faith efforts to identify, respect, and balance the various beneficial interests when carrying out the trustees' fiduciary responsibilities in managing, protecting, and distributing the trust estate, and in other administrative functions."
suggested that major shareholders could hire consultants to conduct external assessments of liability, based on the factual disclosures that would be required under the revised FAS 5. This approach would actually reduce the amount of information available to shareholders compared with the current FAS 5, in which many preparers make a good-faith effort to disclose estimates. Furthermore, it would dramatically increase the cost to the investing community if assessment of the magnitude of liabilities at particular companies occurs on a decentralized and redundant basis. We propose an alternative approach, which would require financial statement preparers to seek external assessments, not relying on attorney-client privileged information, for estimation and disclosure of potentially material liabilities. Finally, it should be noted that the logic of shifting the burden onto investors to conduct these assessments defeats the logic of having a regulatory system; we do not shift the burden of conducting the core analyses of other elements of valuation onto the backs of shareholders; it makes no sense to require shareholders to pay for liability estimations on a decentralized basis.

**Liability estimates useful to investors can most readily be achieved by working around the strictures of Attorney-Client privilege, and requiring disclosure of estimates that do not utilize privileged information.**

To begin with, communications between an attorney and client for purposes of legal advice, and documents prepared by attorneys for litigation which relate to their “mental impressions, conclusions, opinions, or legal theories” are strictly privileged against requirements for forced disclosure as long as the privilege is not waived. For instance, legal opinions or memoranda provided to a firm as advice in anticipation of a settlement could lose privileged status if disclosed to an auditor in relation to a financial report. Separately, an attorney may be asked for his or her assessment of the prospects or likely outcome of a case for purposes of disclosure in financial reports. This is the scenario addressed under the American Bar Association Statement of Policy Regarding Responses to Auditors’ Requests for Information, (known as “the Treaty”). However, under the Treaty, lawyers are required to sharply limit the kinds of judgments they can make and provide to auditors for purposes of FAS 5 disclosure and estimation.
Under the ABA policy, in the vast majority of cases an unfavorable outcome is deemed “reasonably possible” and there is no further qualification of the “probability of success.” With regard to the likelihood of an existing claim resulting in a loss, the Treaty groups claims into three categories – probable, reasonably possible, and remote. The vast majority of cases fall into the middle category of reasonably possible, and therefore in most cases there is no real qualification of the “probability of success.”

Moreover, the Statement of Policy guides attorneys, in most cases, to avoid making estimates of potential liabilities: “The lawyer also may be asked to estimate, in dollar terms, the potential amount of loss or range of loss in the event that an unfavorable outcome is not viewed to be 'remote.' In such a case, the amount or range of potential loss will normally be as inherently impossible to ascertain, with any degree of certainty, as the outcome of the litigation. Therefore, it is appropriate for the lawyer to provide an estimate of the amount or range or potential loss (if the outcome should be unfavorable) only if he believes that the probability of inaccuracy of the estimate of the amount or range of potential loss is slight.”

By contrast, a consulting industry has developed to provide companies with projections of potential liability. These consultants are able to provide the range of liability projections without reliance on privileged information, and which therefore can be readily disclosed. The revision to FAS 5 should effectively tap these services on behalf of investors who seek more information about the magnitude of liabilities facing companies. In addition, by avoiding the need for reliance on privileged information, the single largest objection to the exposure draft can be overcome, while still providing more useful information for investors. To the extent there is nonprivileged information held by companies relevant to the assessment of liabilities, (such as lists of sites, statistical information on claims, number of items sold) that information should be provided to the consultants for purposes of these assessments.
The disclosure standard must be enforceable and enforced.
Consideration should be given to ensuring that a new standard will be both enforceable and enforced. The failure to enforce a disclosure requirement creates a perverse incentive in which those who are compliant may be punished by the market, while those who are not in compliance maintain artificially elevated stock prices. For example, the Securities and Exchange Commission has a rule requiring filers to disclose environmental enforcement cases in excess of $100,000. In 1998, the United States Environmental Protection Agency's Office of Enforcement and Compliance Assurance conducted a study which determined 74 percent of corporations failed to report environmentally related legal proceedings with possible monetary sanctions over the $100,000 threshold. A new study from the University of Arkansas found that the rate is still 73% noncompliance. This is a clear rule that does not require a judgment call like "reasonably likely to experience a loss..." It is a relatively objective disclosure standard, based solely on the amount of pending enforcement cases. The researcher concluded that the compliance rate did not improve over the intervening decade because enforcement of the rule by the Securities and Exchange Commission remains lax. The researcher also found that when companies disclosed their environmental enforcement proceedings there was, on average, a 1% drop in stock price. This 1% "punishment by the marketplace" occurred because these companies strictly followed legal disclosure guidelines. One can extrapolate that this means stock prices may be at least 1% inflated on the other 73% of the noncompliant companies.\(^2\) The lack of enforcement means a lack of effective motivators for compliance, and possibly, market punishment of those who comply.

OVERVIEW OF EARLY AND LATE STAGE LIABILITY DISCLOSURE ISSUES
The problem of contingent liability disclosure and estimation is logically divided between early and late stage development of liabilities; we believe rules changes are needed to ensure adequate disclosure during both stages.

\(^2\) Andrea M. Romi, Determinants of Environmental Sanction Disclosure: Firm Fears of Impairment to Reputation and Legitimacy, Univ.of Arkansas, December 31, 2009.
Early stage: the future looks “remote”

In the early stage of liability developments, there may be few if any claims filed against the preparer. Instead, what characterizes the early stage are facts and circumstances that could reasonably be expected to lead to eventual claims. These are typically characterized by companies as remote, long-term concerns. In some instances, limited disclosures regarding these concerns may appear in SEC filings in the “Risk Factors” section of a Prospectus, or in the Management Discussion and Analysis of periodic filings. However, our review demonstrates that the existing disclosures, especially for scenarios involving the potential for severe long term liabilities, are inadequately detailed, even for the publicly traded companies governed by those SEC rules. We will propose refinement of these narrative disclosures through additional footnote disclosures under FAS 5.3

While contingent liability disclosure has largely focused on what will happen over the short term, many investors are aware of the need to evaluate the long term prospects and sustainability of their investments. Some long-term loss contingencies are typically characterized as “remote” and are poorly disclosed, if at all, in financial statements and SEC filings until much later -- when they are realized as losses due to mounting claims.

The current financial crisis, and the product liability case studies reviewed in this report, demonstrate well the tendency of corporate managers to underestimate the probability and magnitude of losses. Liabilities treated as “remote” often turn out to be among the largest losses facing a company. This includes numerous instances in which companies failed to disclose issues known to the management which eventually bankrupted those companies.

Under accounting rules, the determination of whether a potential loss is “remote” is made by the preparer. This judgment is subject to enormous financial and institutional incentives to find potential liabilities to be of low probability and/or low magnitude. Disclosures by public companies of loss contingencies affect both near and long-term stock prices, including the value of holdings and options of corporate decisionmakers.

---

3 These could alternatively be addressed by improvements to Securities and Exchange Commission Reg. S-K, but since the subject matter here is the FASB FAS 5 revisions, here we address this in terms of improvements to footnote disclosure.
When liabilities will only resolve in the long-term, a manager may reasonably conclude that the long-term loss will only happen after they have moved on and are no longer affected by the loss. This leads to the designation of many issues as “remote” even though an outside observer might see them as “reasonably probable” or “reasonably possible.”

In the Roundtable, there was general agreement from financial statement users that if a liability is viewed by a company as “remote,” but the consequences could be severe, then disclosure should be required regardless of the timeline on which the liability would be resolved. Furthermore, it was also the general sense of the participants that the more remote that a liability appears, and the longer term it will take to resolve, the less detailed the disclosure obligation might be.

In our prior comments to the Board we presented our proposal on this issue: The revised FAS 5 should require the disclosure of remote but severe impact risks regardless of the time horizon on which they would be resolved. In order to address the concerns regarding the relative costs and benefits of such disclosure, we proposed a compromise approach -- that for disclosures of remote, severe losses that may take more than a year to resolve, the disclosure could entail a narrative description of the severe impact contingency, without quantification.

**Late stage: disclosure and estimation deferred**

The late stage of liability disclosure entails the conversion of “potential” liabilities into a series of likely claims, lawsuits, and in many cases into a queue of related claims. In this stage, estimates are made by companies and their counsel towards the eventual settlement of claims. Disclosures are complicated by attorney-client privilege, and by the question of whether disclosure may give an unfair advantage to plaintiffs in ongoing or potential litigation. Our research indicates that current disclosures in this late stage are frequently misleading, and can be expected to lead to material missteps by investors, and that current disclosure standards inadequately guide financial statement preparers to disclose better information. We will propose a framework for disclosure of liabilities during the late stage to arm investors with the information that they need through effective estimation and disclosure, while allowing protection of attorney-client privilege.
Throughout these comments, we will examine product liability case studies, including the historical and recent history of asbestos liabilities, and the emerging issue of potential liabilities associated with certain nanotechnologies.
Disclosures are often minimized until after the liabilities resolve.

and accurate estimations of liability become more possible over time.

Potential for liability is viewed by management as more

Judicially

1. Record summary
   Judgment and settlement

2. Case file
   Multiple

3. Pending
   First case

4. Lawsuits
   First
CASE STUDY 1. ASBESTOS: THE FAILURE OF CONTINGENT LIABILITY DISCLOSURE RULES TO PROTECT INVESTORS.

According to the RAND Institute for Civil Justice, through the end of 2002 companies had paid $70 billion in response to 730,000 personal injury claims, and 66 companies had been driven into bankruptcy due to asbestos related liabilities. Another estimate notes, "Six thousand independent entities have been named as asbestos liability defendants, 61 companies have filed for bankruptcy due to asbestos claims and 1.1 million claims have been issued. It is estimated that the total cost to insurers has been between $200 and $275 billion." 


Both early and later in the development of asbestos liabilities, disclosures to investors were inadequate.

At the outset, asbestos was used widely because of its durability and fire-resistance – it was promoted as a miracle product. Despite the increase of incriminating asbestos research beginning from the 1920s, Johns-Manville neither disclosed asbestos’ harmful potential to its workers and their families, nor enacted safety regulations.

1928-1931: Asbestos and lung damage linked. Investigations on asbestos-textile workers showed clear and consistent links between exposure to asbestos and lung damage. Dr. E.R.A Merewether examined 363 workers and found 25% with evidence of pulmonary fibrosis. This study also found that workers who had been employed in the industry the longest had the highest incidence of pulmonary fibrosis. This study led the English Parliament to require improvements in ventilation and dust suppression and increased medical examinations, and made asbestosis a compensable disease.

1931: Asbestos companies are warned. The Metropolitan Life Insurance Company finished a study that was commissioned by firms representing the US asbestos industry, titled “Effects of the Inhalation of Asbestos Dust Upon the Lungs of Asbestos Workers.” After measuring occupational asbestos dust concentrations and conducting X-rays on workers, the report authors concluded that “prolonged exposure to asbestos dust causes a pulmonary fibrosis...” The report, received in 1931 by the asbestos companies, recommended that Johns-Manville and Raybestos-Manhattan “seriously face the problem of dust control in asbestos plants,” as well as provide chest x-rays and periodic physical examinations to employees of these factories.

1962-1963: Definitive study of asbestos mortality. Epidemiological studies on the health and mortality of asbestos-insulation workers by Dr. Selikoff (of Mount Sinai) revealed the mortality of asbestosis. In a carefully controlled study, the death rate of 632 asbestos workers was found to be 25% higher than expected. The study showed that these men “had succumbed to lung cancer at seven times the expected rate, and to gastrointestinal cancer at three times the expected rate.” These studies “furnished
incontrovertible evidence that industrial exposure to asbestos was extremely hazardous, and they marked a turning point in the views held by doctors and health officials around the world.”

Until 1964, Johns-Manville maintained that it was unaware of the toxicity of asbestos, and that no documents existed to disprove this statement. However, a 1988 memo by lawyer David T. Austern clarifies the existence of documents that “are evidence of a corporate conspiracy to prevent asbestos workers from learning that their exposure to asbestos could kill them.” The collection of documents establishes an extended timeframe for Manville’s nondisclosure.

Johns-Manville first suffered an asbestos-related loss in 1966, when courts ruled against the company along with ten others. Subsequent lawsuits from former employees mounted at a rate of 6,000 a year.9

Just as Johns-Manville employees were not informed of potential health risks of asbestos, shareholders were also blindsided by the stock’s value collapse and the absence of an accurate warning from the corporation. The company’s last quarterly report filed with the SEC prior to its August 1982 bankruptcy implied a total cost of settling asbestos-related claims of around $350 million. However, upon filing for bankruptcy, Johns-Manville estimated the amount to be closer to $2 billion.10

As shown by the recent asbestos related bankruptcies, lawsuits of this nature continue to persist, impacting a company’s financial viability long beyond a product’s market life. In

---

10 Martin S. Fridman and Fernando Alvarez, Financial Statement Analysis, John Wiley & Sons (New York, 2002): 18 accessed on December 17, 2008 at http://books.google.com/books?id=l1ha4OzyPN48C&pg=PA18&lpg=PA18&dq=manville-corp-stock+1982&source=web&ots=zwO0zyvN9L&sig=Nvpg0GNeI_Yzdu69m6DFLmN0F3pl&hl=en&sa=X&ei=rniApya9O8L9uAaY9hE8DQ&ved=0CCgQ6AEwCQ#v=onepage&q&f=false
fact, the rash of bankruptcies in the years 2000 and 2001 point to the latency of these liabilities. Where health effects take years to develop, financial impacts of liabilities may not be seen for decades.

**Lawyers influence projections downwardly, deferring bankruptcy**

One of the first major late-stage tests of FAS 5 occurred in 1981, when Johns-Manville was under increasing pressure to better estimate its liabilities under the growing body of litigation. As documented in detail in *Outrageous Misconduct*, author Paul Brodeur describes how the company effectively minimized anticipated claims estimates. (See enclosed Exhibit 1 for excerpt). In 1981, strategists from Johns-Manville commissioned a study of future incidence of asbestosis, including an estimation of the potential number of claims and lawsuits. The first estimates came from Dr. Nancy Dreyer of the consulting firm Epidemiological Resources, who estimated that 49,000 lawsuits would stem from an estimated 230,000 cases of asbestosis by the year 2000. The comparatively low estimates of lawsuits versus disease incidence are explained by a caveat found in the Epidemiological Resources report: “The actual number of lawsuits might easily be as low as half or as much as twice the number our calculations suggest.” A lawyer for Johns-Manville met with Dr. Alexander Walker, an associate epidemiologist at Epidemiology Resources, and after this meeting, Dr. Walker revised “his original estimate in such a way as to lower the projected number of people who might develop lung cancer as a result of exposure to asbestos.” He did this by lowering the risk for lung cancer that had been calculated by Mt. Sinai asbestos expert Dr. Selikoff (who had found a fivefold risk increase in asbestos-insulation workers who smoke versus those who did not, and a similar fivefold risk increase in nonsmoking asbestos-insulation workers compared with the general nonsmoking public.)

In sworn testimony, Dr. Walker revealed, “I was asked...that whenever I had to choose between two equally plausible assumptions, I should choose the assumption which led to a smaller number of cases of disease.” These changes in risk assumptions allowed Dr. Walker to estimate that a total of only 139,000 cases of asbestos disease would occur between 1980 and 2009. Just months before, Dr. Walker’s colleague at Epidemiological Resources, Dr. Dreyer, had estimated 230,000 cases of asbestos related diseases in that
timeframe. However, Paul Brodeur points out that the firm’s epidemiology was generally questionable, making both of these estimates too low. Dr. Selikoff and his associates at Mount Sinai (who were considered the world’s leading experts on the subject of asbestos disease) had estimated 270,000 excess deaths from asbestos-related cancer alone by the year 2010. Other asbestos related diseases that were presumably not factored into that estimation include inflammation of the pleura (lining of the lungs), and asbestosis (widespread scarring of the lungs). All of the commercial forms of asbestos have been linked to both cancerous and non-cancerous lung disease. 14

Thus, Johns-Manville lawyers successfully minimized the projected number of anticipated asbestos cases by encouraging scientists to use the low-end assumptions whenever a range of possible assumptions existed. The number of associated lawsuits was projected in a similarly unscientific way, by applying Dr. Walker’s altered data to a mathematical formula created to predict the propensity for people with asbestos-related disease to sue. Ultimately, Corporate Counsel for Johns-Manville, Richard Von Wald, estimated that 52,000 additional lawsuits would come from the 139,000 cases of asbestos related disease. Paul Brodeur points out that the company was, at this point “compounding a series of errors” in its estimates of risk.

These compounded underestimations help to explain why the company eventually found it was subject to much more liability than it had projected. And accordingly, investors who relied on the company’s disclosures were eventually stung by the firm’s ultimate bankruptcy.

This example also demonstrates some important lessons that should be applied to the revision of FAS 5:

• It is essential to require disclosure of critical assumptions when estimates are given.

• Use of the known minimum is highly problematic, and in many instances where such a minimum is described, a range has also been developed and should be required to be disclosed.

Liability estimates filed with insurers are typically larger and over longer timelines than for investors

In the later stages of liability disclosures, there may be a widening gulf between what companies know internally about the magnitude of their liabilities, or discuss with their lawyers and insurers, and what they choose to disclose to investors. When insured companies seek recovery of substantial claims from their insurance carriers, such as a body of asbestos claims, the insurers typically require a long-term estimate from the claimants of the amount of liabilities anticipated. These estimates may project liabilities as much as 50 years into the future. The insured and the insurer sometimes utilize such projections to analyze current liability defense and coverage strategies or to negotiate a near term buyout of the liability claims of the insured. By contrast, the disclosures to investors may consist only of an amount accrued for the current accounting period or projected for only a few years. As a result, the same company may tell its insurer to expect liability claims of $2 billion while telling investors that it expects liabilities of $200 million over the subsequent five years, and that the future beyond that is too uncertain to project further.

FAS 5 leads some companies to contract for externally produced liability estimates

Existing accounting rules, as well as requirements of insurance and other transactions, have built an industry of consultants who are hired to produce liability estimates. Here are a few sample quotes from some of these consulting firms:

Navigant: Economics & Statistical Consulting/Liability Forecasting12

Defective or tainted products are not new to the global marketplace, but recent events with high visibility consumer products reaching our pets and kids are bringing new scrutiny and attention to product liability, product recall and corporate risk governance. Navigant has over 20 years of liability estimation and forecasting experience. Our approach provides clients with answers beyond those of traditional estimation methodologies. We offer clients the flexibility to explore “what if?” questions during the planning and decision process for strategies and investments. We combine state-of-the-art research from medicine, epidemiology and demographics with knowledge of the history and current status of litigation and our client’s specific liability experience. We also use well-accepted statistical

12http://www.navigantconsulting.com/services/claims_services/economical_statistical_consulting_estimation_liability/
and econometric methods to investigate analytical benchmarks and test key hypotheses related to the forecast problem.

Navigant has been retained by companies considering strategic alternatives in managing liabilities for financial reporting purposes; investors engaged in the due diligence process; debtors and creditors involved in bankruptcies; industry groups evaluating the potential impact of legislative initiatives; affirmative and rebuttal testimony; and insurers assessing exposure to policyholders. The diversity of our client base reflects the flexibility and broad applicability of our approach. We provide:

- Estimates of numbers, disease types and timing of future claims
- Evaluation of the efficiency of prior claims experience
- Projection of disease incidence and analysis of medical outcomes, latency and exposure rates
- Estimates of the value of pending and future claims
- Estimates of gross and net liabilities for pending future claims
- Long-term forecasts of liabilities under various scenario assumptions
- Analysis of jurisdictional, legal and company defense strategy changes
- Analysis of cash flows and liabilities net of insurance recoveries
- Evaluation of strategies to settle versus litigate claims
- Identification of factors influencing settlement amounts in various jurisdictions (e.g., punitive damage awards, jurisdiction and disease type)

The Brattle Group

Our expertise in product liability and mass tort litigation includes statistical and economic expert testimony on damages issues, litigation risk assessments for liability and damages, identification of optimal litigation strategies, structuring of complex settlements, valuation of potential insurance recovery, testimony on discount rates, and identification and coordination of expert witnesses.

We have appeared before federal and bankruptcy courts and in alternative dispute resolution proceedings involving numerous products, such as asbestos, lead, pharmaceuticals, medical devices, construction, chemicals, and tanker ships.

Our expertise includes:

- We conducted statistical modeling and applied decision analysis to value breast implant liability and damages claims.
- Members of The Brattle Group projected the timing and magnitude of future asbestos claims and analyzed potential insurance recovery.
- We estimated the level of funds required to cover future Dalkon Shield claims.

http://www.brattle.com/
* We provided expert analysis concerning the economic damages resulting from asbestos in state buildings.
* The Brattle Group analyzed trends in product liability and bodily injury claims to project potential future claims related to a manufacturing firm.

The Brattle Group has experience in environmental cost estimation efforts in which the risks of future liabilities are transferred between parties. Members of our staff developed a decision analysis approach to environmental liability estimation for the U.S. Environmental Protection Agency (EPA) to support settlement negotiations at the four Cannons Engineering Superfund sites.

Subsequent projects have analyzed future liabilities in the context of facility and/or company acquisitions and divestitures, fraudulent conveyance, environmental disclosure bankruptcies, and insurance recovery claims. We have estimated expected costs for over 1,000 sites. The Brattle Group has also been involved with the American Society for Testing and Materials (ASTM) in the development of environmental liability estimation standards, and one of our principals serves as the technical contact for the current standard.

Bates White, LLC

Bates White provides services to estimate the financial impact of environmental and product liability for clients requiring a comprehensive understanding of potential liability. Our forecasts have withstood scrutiny from a number of major creditors and insurance underwriters and include a detailed assessment of important risks under a variety of possible scenarios. Our analyses of environmental and product liability valuation have been critical to clients for meeting Securities and Exchange Commission (SEC) disclosure requirements, addressing creditor concerns, and managing market perceptions.

In addition to the above consulting companies, there are numerous other specialized firms within this industry helping clients to estimate the expected value of liabilities, for example, ARPC on asbestos, and ERM and ENSR on environmental remedial liability.

The impact of this consulting industry can be observed in the evolution of some financial reports. For instance, Enpro Industries, facing at least 118,800 asbestos claims, reported in its form 10-K for 2002 that it provided estimates of liability only in a very short window – once claims have reached advanced stages:

14 http://www.bateswhite.com/
In accordance with internal procedures for the processing of asbestos product liability actions and due to the proximity to trial or settlement, certain outstanding actions progress to a stage where the cost to dispose of these actions can be reasonably estimated. These actions are classified as actions in advanced stages. With respect to outstanding actions that are in preliminary procedural stages, as well as any actions that may be filed in the future, insufficient information exists upon which judgments can be made as to the validity or ultimate disposition of such actions, thereby making it impossible to estimate with any degree of accuracy or reasonableness what, if any, potential liability or costs may be incurred. Accordingly, no estimate of future liability has been included for such claims.\textsuperscript{15}

Subsequently, Enpro began a different procedure for estimation, hiring the consultant Bates White, LLC to estimate liabilities. As it reported in subsequent financial reports:

Prior to mid-2004, the Company maintained that its subsidiaries' liability for unasserted claims was not reasonably estimable. The Company estimated and recorded liabilities only for pending claims in advanced stages of processing, for which it believed it had a basis for making a reasonable estimate. The Company disclosed the significance of the total potential liability for unasserted claims in considerable detail. During 2004, the Company authorized counsel to retain Bates White to assist in estimating the Company's subsidiaries' liability for pending and future asbestos claims. Bates White's first report, dated February 17, 2005, provided an estimate of the liability as of December 31, 2004 for the following ten years, which represented a time horizon within which Bates White believed such liability was both probable and estimable within a range of values. Bates White has updated its estimate every quarter since the end of 2004. Each quarter until the fourth quarter of 2006, the Company adopted the Bates White estimate and adjusted the liability to equal the low end of the then-current range.\textsuperscript{16}

However, their practice of only including the low end of the range was revised in the fourth quarter of 2006. The company explained this in the following disclosure:

In 2005 and the first three quarters of 2006, we recorded a liability related to asbestos claims at the low end of a broad ten-year range of equally likely estimates provided by the firm of Bates White, LLC ("Bates White"), a recognized expert in the field of estimating asbestos-related liabilities. Due to the uncertain nature of the estimated liability, we and Bates White believed that no single amount in the range was a better estimate than any other amount in the range. In accordance with the applicable accounting rules, we recorded a liability

\textsuperscript{15} Enpro, SEC Form 10-K for the fiscal year ended December 31, 2002.
\textsuperscript{16} Enpro, SEC Form 10-K for fiscal year ended December 31, 2008.
for these claims at the low end of the range of estimated potential liabilities. In the fourth quarter of 2006, based on our experience during the preceding two years and other factors, we identified a best estimate within the Bates White range and adjusted the liability accordingly. The significant assumptions underlying the material components of the estimated liability include: the number and trend of claims to be asserted; the mix of alleged diseases or impairment; the trend in the number of claims for non-malignant cases; the probability that some existing and potential future claims will eventually be dismissed without payment; the estimated amount to be paid per claim; and the timing and impact of large amounts that will become available for the payment of claims from the 524(g) trusts of former defendants in bankruptcy. The actual number of future actions filed per year and the payments made to resolve those claims could exceed those reflected in our estimate. With the assistance of Bates White, we periodically review the period over which we can make a reasonable estimate, the assumptions underlying our estimate, the range of reasonably possible potential liabilities and management's estimate of the liability, and adjust the estimate if necessary.

Changing circumstances and new data that may become available could cause a change in the estimated liability in the future by an amount that cannot currently be reasonably estimated, and that increase could be significant and material.  

Thus, the company went from only integrating imminent results of near term liabilities to an increased projection of liability that included unasserted claims. It is apparent that the company, following existing accounting rules, still has not disclosed the range of possible liabilities, and still appears to use only the ten-year projection of liabilities, but at least after several years experience, they have stopped using only a low end calculation.

**Failure to examine comparable cases in late stage liability disclosure**

The choice of when and how to estimate and disclose major liabilities on the scale of the large asbestos cases may involve a choice by management about when and how to file for bankruptcy. A pattern emerges in the filings, and in literature about asbestos cases, in which companies and their lawyers worked to drive down estimates of the number of cases that would eventually be filed, and the cost per case. In many of these cases, a more accurate estimate might have necessitated an earlier bankruptcy filing. Despite the existence of FAS 5, such gaming of the estimation process appears to be the rule rather than the exception. Investors are typically the losers of this game – because they are the last to know that the company's assets and income will not cover its liabilities, as the

---

preparer finally surrenders to the inevitable, bumps up its estimates and declares bankruptcy.

An example of this deferred estimation of eventually bankrupting liabilities occurred at Kaiser Aluminum, a subsidiary of Maxxam Corporation, which underestimated its asbestos liabilities in the mid-1990's. In its 10-K report for 1995, Kaiser estimated that future cash payments in connection with asbestos litigation would be approximately $13 to $20 million for each of the years 1996 through 2000, and an aggregate of approximately $78 million thereafter through 2008. The company noted there was no reasonable basis for estimating such costs beyond 2008. One could have predicted much greater asbestos liability, however, by comparing the amount per case that Kaiser was using to calculate its liabilities against the much greater amounts that were being paid out per case by other comparable companies in the course of their asbestos settlements. For example, asbestos cases against the Johns-Manville trust had, by 1990, paid an average of $43,500 each on the first 24,000 claims. Maxxam, by contrast, had accrued only $160 million for 59.7 thousand cases pending mentioned in its 1995 10-K. If Kaiser had multiplied those 60,000 cases by the average Johns-Manville settlement figure of $43,500, they would have calculated a total potential loss of $2.5 billion – and disclosed potential liability more than 15 times the amount accrued.

By 1999, the Kaiser estimates had risen to $387.8 million until 2009, more than double the previous estimate. In 2000 Kaiser’s parent Maxxam made a third quarter charge for an increase in the net asbestos liability, and Kaiser’s senior unsecured and subordinated debt were downgraded by Moody’s Investor Services. According to a report in Dow Jones news service, after completing a thorough review, Moody's decided to lower Kaiser’s ratings on a series of notes. Moody's noted that the inherent uncertainties surrounding the asbestos liability, coupled with Kaiser's high leverage, vulnerability to volatile aluminum prices, and fairly high operating costs could adversely affect the company’s ability to refinance certain notes.


26
By 2002, Moody’s assessment proved true; Kaiser and 24 subsidiaries filed for bankruptcy. The company reported in its 2003 10-K, filed March 2004, that:

"[t]he necessity for filing the Cases by the Original Debtors was attributable to the liquidity and cash flow problems of the Company and its subsidiaries arising in late 2001 and early 2002. The Company was facing significant near term debt maturities at a time of unusually weak aluminum industry business conditions, depressed aluminum prices and a broad economic slowdown that was further exacerbated by the events of September 11, 2001. In addition, the Company had become increasingly burdened by asbestos litigation and growing legacy obligations for retiree medical and pension costs. The confluence of these factors created the prospect of continuing operating losses and negative cash flows, resulting in lower credit ratings and an inability to access the capital markets."^{19}

Another example of the failure to undertake such estimates at the time of significant transactions occurred in the acquisition of Union Carbide by Dow Chemical. Dow did not report any asbestos liabilities when it acquired Union Carbide in 2001. But two years later, Dow reported a $2.2 billion asbestos liability associated with the acquisition, a figure arrived at by finally looking at comparable lawsuit outcomes at other companies. The company’s 2002 form 10-K explains:

"At the end of 2001 and through the third quarter of 2002, Union Carbide had concluded it was not possible to estimate its cost of disposing of asbestos-related claims that might be filed against Union Carbide and Amchem in the future due to a number of reasons, including its lack of sufficient comparable loss history from which to assess either the number or value of future asbestos-related claims. During the third and fourth quarters of 2002, Union Carbide worked with Analysis, Research & Planning Corporation ("ARPC"), a consulting firm with broad experience in estimating resolution costs associated with mass tort litigation, including asbestos, to explore whether it would be possible to estimate the cost of disposing of pending and future asbestos-related claims that have been, and could reasonably be expected to be, filed against Union Carbide and Amchem."^{20}

**Summary of recommendations based on asbestos experience for late stage disclosure and liability estimation**

FASB should adopt guidelines to ensure that financial statement preparers:

---

^{20} Dow Chemical, SEC Form 10-K for fiscal year ended December 31, 2002.
a) Contract for and disclose consultants' liability projections for potentially material liabilities, providing the consultants with any nonprivileged information relevant to liability projections;

b) Disclose long term estimates of claims made to insurers and other third parties (such as in a merger or acquisition), not just short-term liability estimates or accruals;

c) Disclose instances when estimates of liability provided to investors diverge significantly in time horizon or magnitude from those provided to insurers and other third parties;

d) Benchmark disclosures against industry average estimates for claims that have a broader record, such as asbestos, allowing preparers to also provide additional information as to why such benchmarks may or may not apply to their liabilities.

e) Do not disclose only the “known minimum” in the face of uncertainty about which part of a range is most probable – require that the range be disclosed in the absence of a probability weighted estimate.
CASE STUDY 2. NANOTECHNOLOGY: INNOVATIVE TECHNOLOGIES RAISE EARLY STAGE LIABILITY DISCLOSURE ISSUES.

Promising innovations, emerging long term risks
Nanotechnology can be defined as “molecular manufacturing,” the science of manipulating matter at the molecular and even subatomic scale to build structures, tools, or products. Nanomaterials are particles smaller than 1,000 nanometers (nm). For a sense of scale, a human hair measures 100,000 nm across. Nanotechnology is a rapidly growing force in the marketplace, with worldwide sales of nanotechnology-based products doubling annually. According to Lux research, the medical, pharmaceutical, materials, coatings, catalysts, food and food processing industries, as well as green energy organizations, will spend more than $1 trillion developing products based on nanotechnology by 2015.\(^2\) Current annual worldwide investment in nanotechnology research is over $9.6 billion, and more than 2 million people work in the development, production, or use of nanomaterials. Manipulations at the nano-scale can alter such factors as color, electrical conductivity, chemical reactivity or tensile strength. In addition, nano-particles are often more chemically reactive than their larger scale counterparts. These new qualities are creating opportunities for innovation in fields such as biotechnology, materials science, chemicals and plastics, cosmetic, health care, energy, and the food industry.

The new properties exhibited by nanomaterials are also responsible for novel toxicity risks for human health and the environment. Because of these toxicity characteristics and the rapid deployment of these materials, nanotechnology is regarded by some experts as having the potential to create a liability scenario on par with asbestos.

Scientific issues
Nanomaterials can represent a special threat to health and safety because, as particle size decreases and reactivity increases, harmful effects can be intensified, and normally

harmless substances can take on hazardous characteristics. Laboratory studies indicate that some nanoparticles ingested from food or water, or breathed in, can pass through the intestinal walls or lungs and reach the bloodstream, allowing them almost unrestricted access to the human body. Some inhaled nanomaterials can access the brain, as they can pass the blood-brain barrier via the olfactory nerve. Nanoparticles can interrupt important chemical communication between enzymes and hormones, and can trigger immune responses. Many types of nanoparticles interfere with normal cellular function, causing oxidative damage and cell death.

Scientists currently do not clearly understand how a variety of nanoparticles are absorbed, how they move around in the body and bloodstream, or how they are excreted. However, both the scientific community and risk assessors have already raised serious questions about safety. This novel technology could revolutionize many markets, yet opportunities for growth in this field could be severely curtailed by the dearth of scientific research focusing on the health and environmental hazards of these materials.

Nanotechnology flagged as emerging risk
Various entities have begun to recognize nanotechnology in general as an emerging risk that needs to be monitored for its liability concerns. For instance, a recent report called Expert Forecast on Emerging Chemical Risks, written by the European Agency for Safety and Health at Work (EU-OSHA), identifies the main groups of substances which could pose new and increasing risks to workers, contributing to diseases which range from allergies, asthma, and infertility to cancers. This Expert Forecast on Emerging

---

Chemical Risks, established by 49 experts across Europe, puts nanoparticles at the top of the list of substances from which workers need protection.  

Insurers have also identified nanotechnology as a liability frontier and emerging risk. The following chart, from a 2004 Swiss Re report entitled “Nanotechnology: Small Matter, Many Unknowns” exploring the liability risks of nanotechnology, shows similarities between nanotechnology and asbestos. It highlights the fact that both have known manufacturers, a wide range of uses, and the potential for a series of claims, and loss accumulation. “Nanotechnology: Small Matter, Many Unknowns” concluded that companies involved in the research, development, manufacturing, marketing, retailing, distribution and disposal of products containing nanomaterials may be held liable if nanoparticles are found to cause health or environmental hazards.

<table>
<thead>
<tr>
<th>Aspect</th>
<th>Nanotechnology</th>
<th>Asbestos</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturer Known</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Defined substance</td>
<td>No</td>
<td>X</td>
</tr>
<tr>
<td>Worldwide dissemination</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Wide range of uses</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Acutely toxic</td>
<td>Unknown</td>
<td>No</td>
</tr>
<tr>
<td>Persistent</td>
<td>In some cases</td>
<td>X</td>
</tr>
<tr>
<td>Long-term effect</td>
<td>Conceivable</td>
<td>X</td>
</tr>
<tr>
<td>Risks</td>
<td>Unknown</td>
<td>Cancer</td>
</tr>
<tr>
<td>Claims series potential</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Loss Accumulation potential</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Agent analytically provable</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

Swiss Re also points out that “these artificially manufactured nanoparticles will be traceable back to the manufacturer, which makes the establishment of liability easier than

---

in the case of substances that are universally present, such as ultrafine particles from diesel exhaust fumes.”

Swiss Re notes a further parallel with the history of asbestos, “Risk arising out of the introduction of new products or innovative technologies need not reveal themselves immediately and may occur after an interval of years. Nanotechnology is set to spread to such a wide range of industries and in such a large number of applications and at such speed, that the individual claims conceivable on the basis of experience and resulting from defects can hardly expect to be long delayed. Things will become critical if systemic defects only emerge over time, or if a systematic change in behavior remains undetected for a long time. In that case, an unforeseeably large loss potential could accumulate, for example, in the field of health impairment.”

The dangers of chronic exposure to nanoparticles could take some time before the health toll is known. Yet, investment in nanotechnology companies is underway, in an investing environment defined by lack of disclosure and clarity about the risks involved in broad dissemination of these technologies in the market and environment. Lloyd’s of London has identified the emerging risk of nanotechnology as deserving close attention, risk evaluation and disclosure. An analyst for Lloyd’s commented regarding nanotech in the context of the current financial crisis:

…when you think that part of the reason behind the turmoil in our financial markets was the blithe acceptance of complex products that many didn’t understand, the importance of getting to grips with and quantifying complex sources of risk has never been more obvious.

28 Darragh Gray, Lloyd’s 360 Risk Insight.
Carbon nanotubes: the strongest nanotechnology/asbestos analogue

While many nanotechnology products are simply characterized as having unknown risks but raising general concerns, one particular group of nanomaterials, carbon nanotubes, raise special concerns because they are similar in shape and rigidity to asbestos fibers.

Multiple laboratories have already independently reported that carbon nanotubes cause progressive, irreversible lung damage in test rodents. Two 2003 studies conclusively showed lung damage from exposure to carbon nanotubes. Further studies on this topic have increasingly strengthened the link between carbon nanotubes and pulmonary damage.

The International Council on Nanotechnology's online resource "Nano-EHS" contains a searchable database of published articles that examine the health effects of nanoparticles. Searching this database for "carbon nanotube" provided a list of studies focused on the toxicity and activity of these particles. This database only contains eight studies focused on carbon nanotubes in 2003. In 2004, this number doubled to 16. It continues to increase with 22 studies in 2005, 48 in 2006, 53 in 2007, and 70 in 2008. Two of these 2008 studies attracted trade media attention, as they found that carbon nanotubes can cause lung damage similar to asbestos in laboratory animals. In 2009, the National Institute for Occupational Safety and Health revealed on a preliminary basis a study showing that

---


30 The International Council on Nanotechnology's online resource "Nano-EHS" contains a searchable database of published articles that examine the health effects of nanoparticles. Searching this database for "carbon nanotube" provided a list of studies focused on the toxicity and activity of these particles. http://icon.rice.edu/advancedsearch.cfm

carbon nanotube particles pierce the lung lining in roughly the same manner as asbestos particles.\textsuperscript{32}

**Current disclosure practices by producers of carbon nanotubes**

Given the state of science indicative of a substantial potential for health risks regarding carbon nanotubes in particular, we conducted a review of financial statement disclosures and SEC filings regarding companies that have disclosed that they are producing or using these materials.

In general, we found that many of the producers of carbon nanotubes disclose boilerplate statements on the scientific uncertainty surrounding nanotechnology and its health effects. However, none of the producers or users have yet disclosed the existence of emerging studies revealing the similarity to asbestos in the form and behavior of carbon nanotubes, nor what they are doing to limit the associated risks.

The typical disclosure is a boilerplate in the MD&A of a 10-K, or the Risk Factors section of a prospectus, which reads as follows:

"The health effects of nanotechnology are unknown. There is no scientific agreement on the health effects of nanomaterials in general and carbon nanotubes, in particular, but some scientists believe that in some cases, nanomaterials may be hazardous to an individual's health or to the environment. The science of nanotechnology is based on arranging atoms in such a way as to modify or build materials not made in nature; therefore, the effects are unknown. Future research into the effects of nanomaterials in general, and carbon nanotubes in particular, on health and environmental issues, may have an adverse effect on products incorporating nanotechnology. Since part of our growth strategy is based on sales of research equipment for the production of carbon nanotubes and the sale of such materials, the determination that these materials are harmful could adversely affect the expansion of our business."\textsuperscript{33}

While such disclosures may, in the assessment of the filers and their attorneys, be sufficient to meet disclosure requirements under current SEC and FASB standards, we believe that in the current circumstances investors are entitled to better disclosure.

\textsuperscript{32} Vincent Castranova, Ann Hubbs, Dale Porter, and Robert Mercer, "Persistent Pulmonary Fibrosis, Migration to the Pleura, and Other Preliminary New Findings after Subchronic Exposure to Multi-Walled Carbon Nanotubes." March 26, 2009. [http://www.cdc.gov/niosh/blog/nsb/31909_nwctn.html](http://www.cdc.gov/niosh/blog/nsb/31909_nwctn.html). (accessed April 2, 2009) (This is a report on preliminary findings, and has not yet been published in a peer-reviewed journal.)

\textsuperscript{33} Nano-proprietary, SEC Form 10-K for the fiscal year ended December 31, 2007.
Appropriate level of investor disclosure for long-term technology risk disclosures drawing upon carbon nanotube example

Reform of the FAS 5 standard could clarify the need for better disclosure of these early-stage risks that are long-term and potentially severe along the following lines.

1. **Describe the emerging science implying the potential for severe long-term liabilities associated with the preparer’s products or activities.**

In the instance of companies producing carbon nanotubes it is apparent that the science regarding their impact on lungs, and the resemblance of carbon nanotubes to asbestos, represent some specific developments that the reasonable investor would want to know. The following is a simple example of what such a disclosure might look like:

As a producer of carbon nanotubes, we may be exposed to potential long-term product liabilities associated with the changing scientific understanding of the health impacts of these products. Some peer reviewed laboratory studies have recently found that carbon nanotubes resemble asbestos structurally, cause a mesothelioma-like illness in laboratory rats, and may be capable of piercing the lung lining in a manner similar to asbestos. The management believes that the scientific community is a long way from resolving the extent of potential health effects from these materials, and that further studies are needed to resolve this issue conclusively. In addition, we believe that the patterns of potential exposure are not as extensive as the workplace and household exposures that occurred with asbestos.

In this sample disclosure the company could also disclose whether it is aware of other studies or circumstances that mitigate against the concerns about damage or harm. The disclosure would not require the company to weigh the evidence and determine who is right in the current scientific debate, but rather would reflect disclosure of some studies that would reasonably be of concern to investors because they may forewarn of long-term liabilities.

2. **Describe measures the company is taking to prevent, reduce, or mitigate the potential long-term liabilities.**

Secondly, we believe that investors want to know in the current circumstance whether the company is taking any specific steps to prevent, reduce, mitigate or cap these potential liabilities. These could include seeking insurance, promoting exposure controls, funding
research, testing or modifying the materials, etc. A sample disclosure for current carbon nanotube producers might read as follows:

We are currently participating in a consortium of nanotechnology companies that is funding research to assess the safety of carbon nanotubes. In addition, we are informing our customers of the existence of the laboratory studies, and providing guidance regarding workplace exposure prevention to minimize the potential for occupational health impacts. We have not obtained insurance to cover these potential liabilities, and do not intend to acquire such insurance within the foreseeable future.

In the instance of carbon nanotubes, one of the interesting issues is the question of insurance exclusions of product liability coverage. In 2008, Continental Western Insurance Group was the first insurer to publicly announce that it would not cover nanotechnology related risks. The firm specifically addressed the risks of nanotubes, stating "the intent of this exclusion is to remove coverage for the, as of yet, unknown and unknowable risks created by products and processes that involve nanotubes. The exclusion is being added to make you and your customers explicitly aware of our intent not to cover injury and/or damage arising from nanotubes, as used in products and processes..."34 Thus, it could be important to identify whether insurers have flagged these issues as an area of special risk or concern. Are there exclusions of these risks? Has the preparer been able to obtain insurance regarding these risks? Are there any special policy limits or extraordinary costs associated with the insurance?

3. **Qualitatively describe the scope of potential liability.**

As an early stage liability concern, it may be difficult to characterize the magnitude of potential liability. However, a few elements of this disclosure would seem evident. Taking the example of carbon nanotubes again, some elements of disclosure might include (a) characterization of the portion of a company's sales or production that the product line in question constitutes; (b) potential avenues of exposure to the identified risk, such as consumer ingestion or workforce inhalation; (c) traceability of products to

---

the individual manufacturer. Here is a sample of what a disclosure might look like on these points:

At present, carbon nanotubes represent 30% of our intended production output. Potential avenues for exposure might include inhalation during the fabrication process or ingestion of dust that occurs as a breakdown byproduct through consumer use of products fabricated with carbon nanotubes. Because carbon nanotubes may be of unique design for each manufacturer, it is likely that liability will be traceable to individual manufacturers.

Relationship to existing SEC disclosure requirements
In the Roundtable discussions, it was noted that existing Securities and Exchange Commission requirements, such as regulation S-K and the Risk Factors disclosures required to be included in a Prospectus, can be construed to require disclosure of severe long-term risks even if viewed as remote by the management.

However, review of the record of such disclosures in practice, on the nanotechnology example and others, demonstrates that existing requirements are not resulting in the needed disclosure to shareholders. For example, examining the disclosures undertaken by existing producers of carbon nanotubes as described above demonstrates that current disclosures failed to adequately inform shareholders.
ADDITIONAL NOTES REGARDING LATE STAGE LIABILITIES

Investors need both factual disclosures and estimates based on those disclosures

We support the idea of disclosures including links for shareholders to be able to access public documents, such as court filings. However, some of the financial statement filers and defense bar representatives at the Roundtable suggested that the best solution is to provide shareholders with access to those public documents, and to stop there. It was suggested that the largest investors would then contract for their own assessments and liability estimates using these data. This would leave smaller investors without access to estimates. This would be an unworkable arrangement, posing added costs and inefficiencies to the broader investing community in which each shareholding institution would be required to conduct or purchase their own assessments to comprehend the magnitude of the liabilities. On reflection it is clearly unworkable to not require the financial statement preparer to provide some form of estimation of potentially material liabilities.

While the development of estimates of liability may involve a new cost to some companies, this is a cost that is well worth the expenditure from the standpoint of investors. In the absence of these estimates, investors will often be misled into miscalculating the level of liability that companies face. The losses associated with the likely margin of error for investors is far in excess of the limited costs associated with developing and publishing new estimates. In addition, many of these estimates should be useful to the management of many companies in the conduct of their business, such as for purposes of risk management. Since attorney-client privilege may be forfeited where privileged information is freely distributed within the firm, the creation of a nonprivileged estimate may often prove useful to manage business and corporate risk.
A hierarchy of estimates and disclosures for late stage liability disclosures

The following is our attempt to describe the hierarchy of possible disclosures that can be made on a contingent liability. While the top choices are most preferable, in the event that a preparer is unable to provide that disclosure they could go down the list to the next items until reaching a disclosure that is achievable in their circumstance:

- Probability weighted estimate of the liability.
- The range of liabilities and the “most likely” estimate of the liability.
- Range of potential losses associated with the liability, without defaulting to the known minimum.
- Known minimum should only be allowed to be disclosed ONLY when no other estimate can be developed.
- For all of the above, critical assumptions used in estimation must be disclosed.

Other items that should be disclosed when available information allows these disclosures to be developed, regardless of whether or not an estimate of the contingent liability amount is disclosed:

- Total number of claims pending and average loss per claim
- Where significant numbers of claims are being handled on a similar issue over the course of years, include tabulated information on related claims pending, claims settled and loss per claim on a year by year basis.
- State the nature of the contingency and items that trigger this.
  - Example: Environmental cleanups: number of sites, acreage, and type of contaminants
- Example: Contractual liabilities: number of contracts, nature of contingencies, etc.

- Example: Total number of individuals likely to suffer harm as a result of the company's activities and portion of those individuals expected to pursue claims.

- Where there is a record of similar claims at other companies require benchmarking of estimates against other companies litigating the similar issue.

**Recoveries from insurance or other arrangements**

As a general matter, the existence or nonexistence of insurance to cover a category of losses should be disclosed. We agree that it may be inappropriate in the course of litigation to require disclosure of the amount of coverage present on an individual case. It may be appropriate to allow the prejudicial exclusion, in instances where the insurance disclosure, in the opinion of the management or counsel, could affect the outcome of the case. By contrast, the choice of a preparer to go without insurance, or the existence of exclusions which might mean that coverage might be in question, are items that should be required to be disclosed, and which would not as a general matter be prejudicial.

**Disclosure and estimation by private companies**

The disclosure obligations of private entities has become a pressing concern at a time when so many companies have been going private. It seems appropriate to retain the same standards for private companies as for public ones. If there are distinctions to be made, they might be made according to the scale of capitalization or sales. A smaller company, e.g. under $1 million capitalization, might reasonably have a lesser set of disclosure obligations. But a disclosure obligation distinction based merely on public versus private no longer seems viable.

Current Securities and Exchange Commission disclosure requirements that apply to public companies provide at least some level of disclosure request for the publicly traded
companies. Therefore, improved FAS 5 disclosure standards for contingent liabilities may prove even more important for a private company than for a public company when an investor is trying to ascertain the extent of contingent liabilities and long term risks of loss.
RECOMMENDATIONS

Early stage disclosures

The exposure draft for revision of FAS 5 proposed that potential liabilities viewed by the preparer as "remote" would only need to be disclosed if they were likely to be resolved within one year and the potential magnitude of loss would be severe. The Roundtable discussion agenda raised a question of the threshold for disclosure: "Are there some contingencies that are material to users of financial statements, and therefore should be disclosed, even though the likelihood of loss is remote? If so, do such loss contingencies require the same level of disclosure as those for which the likelihood of loss is more than remote (that is, at least reasonably possible)?"

In response, we note that there was strong support from financial statement users to require disclosure of severe, remote liabilities regardless of whether they would resolve within a year. We recommend that at a minimum the following disclosures be required under the revised FAS 5.

Require disclosure of circumstances that, in the case of an unfavorable resolution of future claims, may reasonably lead to a severe magnitude of loss, even if viewed as remote and/or long-term by the management. At a minimum, include a footnote disclosure stating:

a) In the case of potential for severe tort or product liability issues that may result from emerging scientific findings, briefly describe developments in the scientific literature that may indicate the potential for liabilities associated with the company’s products or activities, such as:

   i. The appearance of several, or substantial, peer-reviewed studies in respected scientific journals, or literature survey reports, that are indicative of potential hazards of the company’s products or activities.

   ii. Recognition given to such science by significant institutes, task forces, institutions or agencies anywhere in the world, such as
government research or regulatory bodies, insurers, reinsurers, think tanks, etc.

b) In the case of other uncertainties, such as severe contractual liability scenarios, describe other factual information or contingencies that may cause such contingent losses, for instance:

i. Government policies to set a cap on carbon emissions, currently under discussion, could dramatically increase the cost of certain existing contractual obligations held by an energy company;

ii. A decline in the value of home prices could lead to significant contractual losses.

c) Describe briefly measures the filer is taking to minimize or prevent any eventual liability, such as consumer education, research, materials modification, exposure reduction, public policy efforts, insurance, etc.

d) Provide brief indicators of the severity of scale of the possible liability – for instance, the percentage of the company’s expected sales volume that this product comprises, the possible extent of workplace exposures where materials are used in the fabrication of goods, significant exposures to elderly or young consumers, etc.

Late stage disclosures and estimations

Significant attention was given in the exposure draft and the Roundtable regarding the circumstances in which estimates should be made, and the potential for disclosure of other information short of estimates. In particular, substantial complexity was added to the discussion by the issue of disclosure of estimates that may be prejudicial to the filer. In the agenda of the Roundtable, for example, the following questions were raised.

Paragraph 10 of FASB Statement No. 5, Accounting for Contingencies, requires entities to “give an estimate of the possible loss or range of loss or state that an estimate cannot be made.” Users have indicated a need for quantitative
information about loss contingencies and feel that entities too often provide no quantitative information and state that an estimate cannot be made. Preparers have indicated that, in fact, an estimate of the range of loss often cannot be made and even in circumstances in which an estimate can be made, disclosing that estimate may be prejudicial to the entity.

a. If an estimate of the possible loss or range of loss can be made, should disclosure of that estimate be required? Should there be a prejudicial exemption from providing such an estimate?

b. In circumstances in which an estimate of the possible loss or range of loss cannot be made (or would be prejudicial to the entity), what other relevant quantitative information that would be useful to users could be provided?

c. Is there a meaningful way to convey to users the potential magnitude of a contingency using qualitative information rather than quantitative information?

Our response to these questions necessitates a reframing of the type of disclosures to be made and the relative role of prejudicial information. We recommend that for contingent liabilities that are nonremote, and for which the magnitude of loss may be material either individually, or in the aggregate as a group of similar or related claims, FAS 5 should require:

a. Disclosure of factual information, documentation of the claims asserted, and links to pleadings in those cases.

b. An estimate of the range of potential liability. The financial statement filer should be encouraged to accomplish this estimation by one of the following two methodologies:

i. A professional third-party estimation of the range of potential liabilities utilizing publicly disclosed and available non-privileged
information. (The preparer should clarify whether the third-party consultant conducted this assessment without access to privileged information, and if so, how this affects the accuracy of the estimate.) The preparer should provide the consultant with any non-privileged information in its possession that is relevant to the assessment, such as number of sites, number of claims, number of items sold, etc.

ii. Where the filer chooses to, it may provide information based on the estimations or predictions by its own counsel. The filer is encouraged to work with its counsel and auditors to undertake such disclosures in a manner that eliminates or minimizes the impact on privileged information, including aggregation of estimates.

c. The estimate presented by the company should be one of the following, working from the top of this hierarchy in descending order, and using the form highest on the list that is feasible:

- Probability weighted estimate of the liability;

- The range of potential losses and the “most likely” estimate of the liability;

- Range of potential losses associated with the liability, without defaulting to the known minimum.

- Known minimum should only be allowed to be disclosed ONLY when no other estimate can be developed.

d. For any estimates, disclose critical assumptions used in the estimation.
c. Regardless of whether or not an estimate of the contingent liability amount is disclosed, the following additional item shall be disclosed to the extent feasible:

- Total number of claims pending and average loss per claim

- Where significant numbers of claims are being handled on a similar issue over the course of years, include tabulated information on related claims pending, claims settled and loss per claim on a year by year basis.

  - State the nature of the contingency and items that trigger this, for example:

    - Environmental cleanups: number of sites, acreage, and type of contaminants
    - Contractual liabilities: number of contracts, nature of contingencies, etc.
    - Total number of individuals reasonably likely to suffer harm as a result of the company’s activities and portion of those individuals expected to pursue claims.

  - Where there is a record of similar claims at other companies, require benchmarking of estimates against other companies litigating the similar issue, and a brief discussion as to the extent to which such claims records are a reasonable reflection of the likely outcomes for the preparer.

f. Disclose long term estimates of claims made to insurers or other parties, or otherwise known to the company, not just short-term liability estimates. Disclose instances when estimates of liability provided to investors diverge significantly in time horizon or magnitude from those provided to insurers or other parties such as in the course of a purchase or sale.
Our Proposal: FAS 5

Emerging Risks/Contingent Liability Disclosure Timeline

LATE:
EXHIBIT 1

Excerpt from

OUTRAGEOUS MISCONDUCT:
The Asbestos Industry on Trial

Paul Brodeur
Paul Brodeur

Trial Industry on

The Asbestos

Outrageous Misconduct

Resolution
The Zappling of America
Expansible Americans
Absenses and Enzymes

Knotchion
Downstream
The Smart Man
The Sick Fox

Trench

By Paul Brodeur

Other Books
To Ward Stephenson
During the next eight weeks, the assertion was one that would not be undermined by the study.

During the first eight weeks, if the assertion was true, it would not be undermined by the study. However, if the assertion was false, it would be undermined by the study. This means that the assertion cannot be both true and false at the same time. Therefore, the assertion must be true or false, but not both.

In addition to restating the company in order to protect the assets,

bankruptcy occlusion

The question of loss compensation had become extremely important.

The assertion that the company was large enough to be large was false.

During the first eight weeks, if the assertion was true, it would be undermined by the study. However, if the assertion was false, it would not be undermined by the study. This means that the assertion cannot be both true and false at the same time. Therefore, the assertion must be true or false, but not both.

In addition to restating the company in order to protect the assets,
During the winter of 1976, Welch was hired to bring the expert.

**Welsh, George for Bankruptcy,**

After leaving the Board of Education, Welch became the chairman of the American Bar Association's Committee on Legal Education. He left his position to join the litigation division at the Bank of America, but after six years, he returned to private practice. Welch worked for six years as the dean of the Graduate School of Business, and was later named dean of the Graduate School of Law and Business at the University of Pennsylvania. During his tenure at Pennsylvania, some alumni criticized the school, and Welch was forced to resign. He then joined the law firm of Morgan, Lewis & Bockius in New York City. Welch died in 1978.

For Welch and his associates at John-Memorial, we are sure to less world.

"The annual report of the Board of Education for 1977, in part reads: "

"The Board of Education for the City of New York, in the fiscal year ending June 30, 1976, shows an operating surplus of $4,000,000, after taxes. This is the third consecutive year of operating surplus for the Board, and represents a significant improvement over the previous years. The Board expresses its gratitude to the taxpayers of the City of New York for their continued support of the educational system."

The report also notes that the Board has made significant improvements in the quality of education, including the establishment of new programs and the expansion of existing ones. The Board also emphasizes the importance of funding for educational programs, and requests the support of the City Council and the Mayor for the fiscal year 1978.

The Board of Education for the City of New York, in the fiscal year ending June 30, 1976, shows an operating surplus of $4,000,000, after taxes. This is the third consecutive year of operating surplus for the Board, and represents a significant improvement over the previous years. The Board expresses its gratitude to the taxpayers of the City of New York for their continued support of the educational system.

The report also notes that the Board has made significant improvements in the quality of education, including the establishment of new programs and the expansion of existing ones. The Board also emphasizes the importance of funding for educational programs, and requests the support of the City Council and the Mayor for the fiscal year 1978.

The Board of Education for the City of New York, in the fiscal year ending June 30, 1976, shows an operating surplus of $4,000,000, after taxes. This is the third consecutive year of operating surplus for the Board, and represents a significant improvement over the previous years. The Board expresses its gratitude to the taxpayers of the City of New York for their continued support of the educational system.

The report also notes that the Board has made significant improvements in the quality of education, including the establishment of new programs and the expansion of existing ones. The Board also emphasizes the importance of funding for educational programs, and requests the support of the City Council and the Mayor for the fiscal year 1978.

The Board of Education for the City of New York, in the fiscal year ending June 30, 1976, shows an operating surplus of $4,000,000, after taxes. This is the third consecutive year of operating surplus for the Board, and represents a significant improvement over the previous years. The Board expresses its gratitude to the taxpayers of the City of New York for their continued support of the educational system.

The report also notes that the Board has made significant improvements in the quality of education, including the establishment of new programs and the expansion of existing ones. The Board also emphasizes the importance of funding for educational programs, and requests the support of the City Council and the Mayor for the fiscal year 1978.

The Board of Education for the City of New York, in the fiscal year ending June 30, 1976, shows an operating surplus of $4,000,000, after taxes. This is the third consecutive year of operating surplus for the Board, and represents a significant improvement over the previous years. The Board expresses its gratitude to the taxpayers of the City of New York for their continued support of the educational system.

The report also notes that the Board has made significant improvements in the quality of education, including the establishment of new programs and the expansion of existing ones. The Board also emphasizes the importance of funding for educational programs, and requests the support of the City Council and the Mayor for the fiscal year 1978.

The Board of Education for the City of New York, in the fiscal year ending June 30, 1976, shows an operating surplus of $4,000,000, after taxes. This is the third consecutive year of operating surplus for the Board, and represents a significant improvement over the previous years. The Board expresses its gratitude to the taxpayers of the City of New York for their continued support of the educational system.
that whenever I had to choose between two equally plausible assumptions, I would choose the assumption which led to a smaller number of claims. I should choose the assumption which led to a smaller number of claims.

Walker, an attorney for Manville's unsecured creditors, had presented at a LAG meeting in Washington, two days earlier. Walker's presentation was a demonstration of the remarkable work of the people at Epidemiology Resources, who had presented a model to the committee, a model which Walker believed could be used to predict the number of people who would develop lung cancer in the future. Walker had used a computer program to calculate the number of people who would develop lung cancer in the future, based on the data presented at the LAG meeting.

Walker's model was based on the assumption that the risk of developing lung cancer was increased by exposure to asbestos. Walker had calculated the risk of developing lung cancer in people who had been exposed to asbestos, and he had found that the risk was significantly higher in people who had been exposed to asbestos than in people who had not been exposed.

Walker had also calculated the risk of developing lung cancer in people who had been exposed to asbestos, and he had found that the risk was significantly higher in people who had been exposed to asbestos than in people who had not been exposed.

Walker's model was based on the assumption that the risk of developing lung cancer was increased by exposure to asbestos. Walker had calculated the risk of developing lung cancer in people who had been exposed to asbestos, and he had found that the risk was significantly higher in people who had been exposed to asbestos than in people who had not been exposed.
Once Mr. Walker had been removed from the propensit-to-sue project at the University of Maryland School of Medicine's Epidemiology Laboratory, he was unable to continue his research and his methodology. In a critique that was published in 1973, Dr. William J. Nicholson, associate director of the laboratory, pointed out that Walker's estimates were based on data that was not only statistically unverifiable but also contained a high degree of error. Walker's estimates were criticized as being a case of applying causation to prediction. His methodology, which was criticized as being statistically unreliable, was not taken into account in major asbestos-related studies.

When Mr. Walker had been removed from the project, the University of Maryland School of Medicine's Epidemiology Laboratory continued its research on asbestos-related diseases. The laboratory had estimated that there were 135,000 cases of asbestos-related diseases in the United States in 1960 and that there were at least 65,000 cases of clinically diagnosed mesothelioma in 1970. In his final report, he estimated that asbestos-related lung cancer and mesothelioma were responsible for 60% of all cancer deaths in the United States. He also estimated that there were at least 500,000 cases of asbestos-related diseases in the United States by the year 2000.

In 1978, the University of Maryland School of Medicine's Epidemiology Laboratory published a report estimating that there were at least 65,000 cases of asbestos-related diseases in the United States in 1970. This estimate was based on data from the National Cancer Institute and the National Institute for Occupational Safety and Health. The laboratory estimated that there were at least 500,000 cases of asbestos-related diseases in the United States by the year 2000. This estimate was based on data from the National Cancer Institute and the National Institute for Occupational Safety and Health.

When Mr. Walker had been removed from the project, the University of Maryland School of Medicine's Epidemiology Laboratory continued its research on asbestos-related diseases. The laboratory had estimated that there were 135,000 cases of asbestos-related diseases in the United States in 1960 and that there were at least 65,000 cases of clinically diagnosed mesothelioma in 1970. In his final report, he estimated that asbestos-related lung cancer and mesothelioma were responsible for 60% of all cancer deaths in the United States. He also estimated that there were at least 500,000 cases of asbestos-related diseases in the United States by the year 2000.

In 1978, the University of Maryland School of Medicine's Epidemiology Laboratory published a report estimating that there were at least 65,000 cases of asbestos-related diseases in the United States in 1970. This estimate was based on data from the National Cancer Institute and the National Institute for Occupational Safety and Health. The laboratory estimated that there were at least 500,000 cases of asbestos-related diseases in the United States by the year 2000. This estimate was based on data from the National Cancer Institute and the National Institute for Occupational Safety and Health.

When Mr. Walker had been removed from the project, the University of Maryland School of Medicine's Epidemiology Laboratory continued its research on asbestos-related diseases. The laboratory had estimated that there were 135,000 cases of asbestos-related diseases in the United States in 1960 and that there were at least 65,000 cases of clinically diagnosed mesothelioma in 1970. In his final report, he estimated that asbestos-related lung cancer and mesothelioma were responsible for 60% of all cancer deaths in the United States. He also estimated that there were at least 500,000 cases of asbestos-related diseases in the United States by the year 2000. This estimate was based on data from the National Cancer Institute and the National Institute for Occupational Safety and Health.

When Mr. Walker had been removed from the project, the University of Maryland School of Medicine's Epidemiology Laboratory continued its research on asbestos-related diseases. The laboratory had estimated that there were 135,000 cases of asbestos-related diseases in the United States in 1960 and that there were at least 65,000 cases of clinically diagnosed mesothelioma in 1970. In his final report, he estimated that asbestos-related lung cancer and mesothelioma were responsible for 60% of all cancer deaths in the United States. He also estimated that there were at least 500,000 cases of asbestos-related diseases in the United States by the year 2000. This estimate was based on data from the National Cancer Institute and the National Institute for Occupational Safety and Health.

When Mr. Walker had been removed from the project, the University of Maryland School of Medicine's Epidemiology Laboratory continued its research on asbestos-related diseases. The laboratory had estimated that there were 135,000 cases of asbestos-related diseases in the United States in 1960 and that there were at least 65,000 cases of clinically diagnosed mesothelioma in 1970. In his final report, he estimated that asbestos-related lung cancer and mesothelioma were responsible for 60% of all cancer deaths in the United States. He also estimated that there were at least 500,000 cases of asbestos-related diseases in the United States by the year 2000. This estimate was based on data from the National Cancer Institute and the National Institute for Occupational Safety and Health.

When Mr. Walker had been removed from the project, the University of Maryland School of Medicine's Epidemiology Laboratory continued its research on asbestos-related diseases. The laboratory had estimated that there were 135,000 cases of asbestos-related diseases in the United States in 1960 and that there were at least 65,000 cases of clinically diagnosed mesothelioma in 1970. In his final report, he estimated that asbestos-related lung cancer and mesothelioma were responsible for 60% of all cancer deaths in the United States. He also estimated that there were at least 500,000 cases of asbestos-related diseases in the United States by the year 2000. This estimate was based on data from the National Cancer Institute and the National Institute for Occupational Safety and Health.
...
to do so.

To do so, it became the interest and healthiest American corporation over
United States Bankruptcy Court for the Southern District of New
York, it became the interest of the
room of the

earlier, the

point of the

When

the

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When

When
EXHIBIT 2

CC LIST
Copies of this follow-up report sent to:

Richard LiCoff, Ph.D.
IEHN

Tim Little
Rose Foundation

Stephen Viederman
The Foundation Partnership

Robert Monks
LENS Investments

Carl Icahn

Nell Minnow
The Corporate Library

Mindy Lubber
CERES

George Soros

Mary Schapiro
Chairman,
Securities and Exchange
Commission

Stephen Davis
Davis Global Advisors

Damon Silvers
AFL-CIO

Neri Bukspan
Chief Accountant
Standard & Poor's

Jack Ciesielski
President

Michael C. Gyure
Accounting Research Analyst
FTN Midwest Securities

Adam Hurwich
Managing Member
Calcine Management, LLC

Mark C. LaMonte
Senior Vice President—Head
of Enhanced Analytics Group
Moody’s Investors Service

Jeffrey P. Mahoney
General Counsel
Council of Institutional
Investors

Rebecca McEnally
CFA Centre for Financial
Market Integrity
CFA Institute

Elizabeth Mooney
Accounting Analyst
The Capital Group

Mary Hartman Morris
Investment Officer
Corporate Governance—
Global Equities
CALPERS

Dane Mott, CFA, CPA
U.S. Accounting and
Valuation Equity Research
J.P. Morgan Securities Inc.

Lynn E. Turner
Member, Board of Trustees,
AARP Funds, and Colorado
Public Employees Retirement
Association

Margaret Weber
Adrian Dominican Sisters

Michael Passoff
As You Sow Foundation

Lauren Compere
Boston Common Asset
Management

Ellen Kennedy
Calvert Investments

Susan Vickers
Catholic Health Care West

Karen Shapiro
Domini Social Investments

Patricia Zereg
Evangelical Lutheran Church
in America

Emily Stone
Green Century Funds

John Harrington
Harrington Investments

Darryl Luscombe
Inhance Investments

Leslie Lowe
Interfaith Center on
Corporate Responsibility

Mark Regier
MMA Praxis

Valerie Heinonen
Mercy Investment Program

Bruce Herbert
Newground Investments

Andrea Reichert
Parnassus Investments

Molly Mahoney
Pax World Funds

Beth Williamson
Portfolio 21

Joanne Dowdell
Sentinel Investments

Neil Stallings
Sierra Club Mutual Funds

Nora Nash
Sisters of St. Francis of
Philadelphia

Shelley Alperr
Trillium Asset Management

Cathy Rowan
Trinity Health Care

Tim Smith
Walden Asset Management