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March 1997

Reserving for
Asbestos, Pollution,
and Other Mass Tort
Liabilities

A Report on Recent Surveys
of Chief Financial Officers,
Consulting Actuaries,
and State Regulators



AMERICAN ACADEMY *of* ACTUARIES

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The American Academy of Actuaries is the public policy organization for all actuaries of all specialties within the United States. In addition to setting qualification standards and standards of actuarial practice, a major purpose of the Academy is to act as the public information organization for the profession. The Academy assists the public policy process through the presentation of clear, objective analysis. The Academy regularly prepares testimony for Congress, provides information to senior federal elected officials and congressional staff, comments on proposed federal regulations, and works closely with state officials on issues related to insurance. This report was prepared by the Academy's eight-member

Environmental Liabilities Work Group and presents findings from two surveys that the work group conducted in the last half of 1996. One survey asked chief financial officers in the insurance industry and consulting actuaries their opinions on a number of issues related to reserving for asbestos, pollution, and other mass tort liabilities. The other survey elicited the opinions of regulators. This report presents the opinions of these three groups of insurance professionals and examines areas of consensus as well as areas of disagreement. The intent is not to support any particular point of view, but to stimulate dialogue and assist the public policy process through a clear, objective analysis of the surveys' findings.

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Executive Summary

Since the early 1980s, asbestos and pollution have been major concerns to many insurers. More recently, these concerns have expanded to include other mass torts. Many articles, seminars, and panels have proposed various estimates of the ultimate liabilities, as well as multiple technical approaches to developing those estimates. However, relatively little has been done to explore other less technical, but equally important, issues associated with these liabilities: When should they be separately reserved? What is “reasonably estimable”? What issues are important to insurers and state regulators? Should these reserves be discounted? How should actuarial opinions treat them? What actions will improve our understanding of them?

To help answer these questions and encourage dialogue, the Environmental Liabilities Work Group of the American Academy of Actuaries has undertaken two surveys, one of property/casualty insurance chief financial officers (CFOs) and consulting actuaries, and one of state insurance regulators.

Some of the more important results can be summarized as follows:

- A majority of CFOs surveyed asserted that they have reserved both their asbestos and pollution exposures to ultimate levels. Regulators, while generally comfortable with the adequacy of asbestos and pollution reserves of companies domiciled in their own states, expressed concern about the reserves of companies domiciled in other states.
- There is strong consensus among CFOs that their companies’ liabilities for asbestos are estimable, while half of the CFOs believe that their pollution liabilities are not.
- There is fairly strong consensus among CFOs and consulting actuaries that the magnitude of the U.S. insurance industry’s ultimate asbestos losses (including paid losses to date)

are in the \$30 billion to \$50 billion range. There is less consensus about the U.S. insurance industry’s ultimate pollution losses, with estimates ranging from less than \$30 billion to more than \$100 billion.

- Both CFOs and consulting actuaries strongly favor discounting both asbestos and pollution reserves for the time value of money. The state regulators interviewed generally oppose the idea, although a minority did express support, sometimes with qualifications.
- There is no consensus about when losses for a mass tort should be separately reserved or how the reserving should be done in the very early stages of a mass tort. However, there is consensus that if the arising mass tort is removed from the data, a separate reserve should be made.
- None of the groups expressed significant concern about the effects of mass torts other than asbestos and pollution on the U.S. insurance industry. Tobacco, breast implant, and lead paint exposure were mentioned most often as requiring ongoing monitoring. In addition, CFOs and regulators both indicated that other mass torts, to the extent that they are a problem, are a greater problem for others—other companies or other states—than for them.
- Each of the three groups indicated that additional data would assist in reserving for mass torts, as would further work on actuarial techniques and better dissemination of data.

As the major findings indicate, there is substantial diversity of opinion among the three constituencies surveyed on a number of important issues relating to reserving for mass torts. At the report’s conclusion, the work group comments on areas where improvements could be made and greater consensus might be sought.

Description of Surveys

Asbestos and pollution liabilities have received unparalleled attention in the 1990s. Although their existence has been known for more than a decade, the property/casualty industry has, until recently, set aside minimal reserves for such exposures. In the last two years, increased pressure from regulators and rating agencies, coupled with their own desire to survive, has caused many companies to take unprecedented reserving actions.

The American Academy of Actuaries Environmental Liabilities Work Group recently surveyed three groups of insurance professionals regarding the process of reserving for asbestos, pollution, and other mass tort liabilities. Surveyed separately were the chief financial officers of 22 property/casualty companies, nine consulting actuaries and 12 state insurance regulators. The survey results offer insight into the issues each group has faced in dealing with the reserving process.

CFO and Consulting Actuary Survey

In June 1996, the chief financial officers (CFOs) of 38 companies were invited to participate in a survey that asked a wide range of questions regarding asbestos and pollution exposures and other potentially emerging mass tort exposures. In addition, nine large actuarial consulting firms were contacted. The insurers were expected to have the major share of the exposure to A&E¹ based on historical premium share, although some smaller companies were also included, along with some of the large personal lines companies.

In all, 22 of 38 CFOs contacted responded. Responses were often prepared with assistance from the companies' chief actuaries. All nine of the actuarial consulting firms responded.

TABLE 1
Number of respondents by type of entity

Type of entity	Number of respondents
Primary/direct excess insurer	17
Reinsurer	5
Actuarial consulting firm	9

All of the responding CFOs were from fairly large companies, as indicated by their total net property/casualty reserves as of December 31, 1995.

TABLE 2
Distribution of total net P&C loss and loss adjustment expense reserves (for all lines as of December 31, 1995)

Total reserves	Number of companies represented
\$500 million to \$2 billion	5
\$2 to \$5 billion	8
More than \$5 billion	9
Total	22

All 22 companies reported loss reserves for asbestos and pollution liabilities in their 1995 Statutory Annual Statement Notes to Financial Statements (Footnote #24). Approximately one-third reported other mass torts as part of the asbestos or pollution reserves reported in Footnote 24. All but one company included IBNR reserves (questions 4a and 4b).²

Although the number of companies in the sample is small, it provides a good representation of companies with substantial A&E liabilities. All except two of the companies were in the top 50 property/casualty insurance groups ranked on the basis of December 1995 A&E reserves in Footnote #24, and the 20 responding companies in the top 50 accounted for a little more than 60 percent of the total net asbestos and environmental reserves held by that group.³

The nine actuarial consulting firms contacted for the survey include the major firms that practice in the area of A & E liabilities. One consulting actuary from each firm responded to the survey. Although in some cases the consulting actuary's response was based on input from other actuaries in the firm, responses should not be interpreted as representing the opinions of all casualty actuaries or even all consulting actuaries.

The CFOs were asked a series of 10 questions about their companies' current reserves and reserving methods. Both CFOs and consulting actuaries were asked an additional set of questions ranging from the estimability of pollution and asbestos costs, to the magnitude of industry losses and possible actions for improving reserving and estimability.

¹Throughout the text, asbestos and environmental pollution liabilities are frequently referred to using the common insurance industry term of A&E liabilities. The "A" denotes asbestos and the "E" denotes environmental pollution. The terms environmental and pollution are used interchangeably throughout the report.

²Tables are included with text to illustrate major findings. Citations in parentheses refer to the survey questions and accompanying tabulations in Appendix A.

³Estimate based on data from A.M. Best Week, P/C Supplement, "Footnote 24 Ushers in a New Era of A&E Disclosure," July 8, 1996, Exhibit 6, pages P/C-6 and P/C-7.

Interviews with Regulators

To gain insight into the regulatory perspective regarding mass torts, the work group developed a second questionnaire to elicit the views of state insurance department examiners. The objective was to gain insight into the full range of regulatory concerns regarding mass torts.

Regulators in 12 states were selected for interviews. Most were their state's senior examiner. Examiners frequently invited the department's actuaries or other department officials to join the interview. In one case, the primary respondent was a commissioner. Although the survey included knowledgeable and experienced state insurance regulators, it was not designed to produce a statistically valid sample. Thus, any response percentages for this group should not be interpreted as a representative cross section of opinions of

all state insurance regulators.

The regulators received copies of the questions and, rather than submitting written responses, were interviewed by telephone. The interviews were conducted between early October and late November 1996.

Confidentiality

The surveys of CFOs, consulting actuaries, and regulators were all confidential. Detailed findings are documented in two appendices. The CFO and consulting actuary questionnaire appears in Appendix A, along with tabulations of their responses. The questions asked of regulators and summaries of their responses appear in Appendix B. The sections that follow summarize the major findings.

Findings

Treatment of Emerging Mass Torts

When the CFOs and consulting actuaries were asked under what circumstances a separate projection for a mass tort is indicated, it was obvious that the industry has established no clear rules to govern such situations (question 34). The most common responses made reference to the size of the mass tort. Examples of responses in the "other" category included comments such as "large estimable impact" and "once it becomes of significant magnitude."

TABLE 3
Circumstances under which a separate projection for a mass tort is indicated

Circumstance for separate projections	CFOs	Consulting Actuaries
Loss data pertaining to the mass tort is removed from normal reserving data	3	2
Industrywide estimates are in the billions of dollars	1	0
The particular type of claim is assigned to a mass tort unit of the company	4	2
Other/multiple responses	12	2
No response	2	3

Similarly, various responses were given regarding what to do before separate projections are possible for new mass torts. While most respondents said that the data should either be left in the normal loss data triangulations or removed with a separate reserve established, three respondents noted that the data could be removed without establishing a separate reserve (question 33).

TABLE 4
Procedure used before a separate projection is possible for a new mass tort

	CFOs	Consulting Actuaries
Data pertaining to the mass tort is left in the normal loss data triangulation	12	2
Data is removed from the normal triangulation, but no separate IBNR reserve is established	2	1
Other	8	2
No response	0	4

Current Estimability of Asbestos and Pollution Liabilities

Two key issues in dealing with a mass tort are its estimability at a given point in time and its perceived magnitude. Estimability is necessary before an insurer can establish a meaningful reserve and regulators can judge its impact on an insurer's financial strength. The perceived magnitude of the

liability determines the degree of attention that the particular exposure requires at both the company and regulatory level.

CFOs and consulting actuaries were asked whether they believe asbestos and pollution costs are reasonably estimable and what is required to make these costs estimable (questions 14-20).

The majority of CFOs thought their own company's asbestos liabilities are currently estimable, but slightly more than a quarter (6 of 22) thought they are not. CFOs split 50-50 on whether they thought pollution liabilities are currently estimable for their company (question 14). Of those who thought A&E liabilities are not yet estimable for their company, most expect that it will be more than 5 years before these costs are reasonably estimable (question 15).

TABLE 5
Whether CFO believes own company's A&E costs are "reasonably estimable"

Whether costs are reasonably estimable	Type of exposure	
	Asbestos	Pollution
Yes	16	11
No	6	11
Companies represented	22	22

CFOs and consulting actuaries were also asked about other companies in general. There is general consensus among consulting actuaries and CFOs that liabilities for asbestos exposures are now reasonably estimable for most primary insurers (question 16), although more consulting actuaries believe this to be true. Eight of the nine consulting actuaries believe asbestos exposures are reasonably estimable for most primary insurers. In contrast, sixty percent of the CFOs believe these liabilities are estimable for most or all primary insurers.

TABLE 6
Portion of companies with material exposure for which respondents believe asbestos costs are reasonably estimable

Portion	Primary insurers		Reinsurers	
	CFOs	Consulting Actuaries	CFOs	Consulting Actuaries
None	3	1	3	1
Some	3	0	8	1
Half	2	0	3	1
Most	11	8	6	6
All	1	0	0	0
Number responding	20	9	20	9

Consulting actuaries and CFOs disagreed about the estimability of asbestos liabilities for reinsurers. Two-thirds of the consulting actuaries believe asbestos liabilities can be estimated for most reinsurers, but less than a third of the CFOs believe this to be true. Interestingly, CFOs from the five reinsurers in the survey all think their own companies' asbestos liabilities are currently estimable. However, they are less certain about other

reinsurers as a whole, with two of the five believing that asbestos liabilities are not estimable for most reinsurers.

The consulting actuaries and CFOs agreed that pollution liabilities for the industry as a whole are less likely to be estimable than those for asbestos. However, consulting actuaries are more likely than CFOs to believe that pollution costs can be reasonably estimated. Two-thirds of consulting actuaries said that reasonable estimates for pollution are possible for most primary insurers, and four of the nine said that reasonable estimates can be made for most reinsurers. In contrast, only one-third of the CFOs (seven of 20) agreed that reasonable estimates can be made of the pollution costs of most primary insurers, and only 15 percent (three of 20) believe that costs are reasonably estimable for most reinsurers with material pollution exposure.

TABLE 7
Portion of companies with material exposure for which respondents believe pollution costs are reasonably estimable

Portion	Primary insurers		Reinsurers	
	CFOs	Consulting Actuaries	CFOs	Consulting Actuaries
None	5	1	5	1
Some	5	0	10	4
Half	3	2	2	0
Most	7	6	3	4
All	0	0	0	0
Number responding	20	9	20	9

Of the reinsurance company CFOs, four of the five thought their own companies' pollution costs are estimable. However, only one thought that these liabilities are estimable for most other reinsurers.

Perceptions of "Reasonably Estimable"

To gain insight into CFOs' and consulting actuaries' notions of estimability, they were asked what it meant for reserves not to be reasonably estimable (question 19).

Among CFOs, there is fairly strong consensus that "not estimable" means that reasonable assumptions can yield widely different estimates. While approximately half of the consulting actuaries subscribe to this notion, the other half have a range of views. One consulting actuary agreed that reserves are not reasonably estimable if reasonable assumptions produce widely different estimates, but added that reserves are also not reasonably estimable if estimates differ widely at different points in time or when using different methods. Another said that not being able to define reasonable assumptions is the primary concern in defining reasonably estimable. Still another said that not being able to construct an actuarial/statistical model is the defining issue, while one consulting actuary said that having no upper bound to the estimate was the defining point.

TABLE 8
Respondent's understanding of "not reasonably estimable"

	CFOs	Consulting Actuaries
No upper bound	1	1
Widely different estimates using reasonable assumptions	14	4
Widely different estimates using different methods	1	0
Widely different estimates at different points in time	1	0
Other	5	3
Number responding	22	8

When CFOs were asked how much estimates can vary within a range and still be reasonably estimable, there was no clear consensus (question 20). Responses varied from a range (from top to bottom) of 10 percent of the midpoint to a range with no limit. Approximately half the CFOs (10 of 21) said that a range of 50 percent or more of the midpoint is reasonably estimable. But a similar number (11 of 21) believe that estimates have to be within a range of 30 percent or less. Only three believe a range of 100 percent or more is acceptable for a reserve estimate to be considered reasonably estimable.

TABLE 9
Maximum acceptable width of reasonably estimable range

Full width (low to high) as % of range midpoint	CFOs	Consulting Actuaries
0%	0	0
5%	0	0
10%	2	0
20%	5	0
30%	4	1
50%	7	4
100-150%	1	1
No limit	2	2
Other	1	1

NOTE: Respondents were asked to check the highest that applies of the full width, from low to high, as a percent of the range midpoint.

TABLE 10
Opinions on how insurers should carry reserves for asbestos and pollution liabilities

How should reserves be carried?	CFOs	Consulting Actuaries
At minimum of a reasonable range of ultimate values.	3	2
At midpoint of a reasonable range of ultimate values.	6	0
At midpoint of a reasonable range of ultimate values plus margin for uncertainty	3	0
At present value of the midpoint of a reasonable range of ultimate values	6*	5**
Other	4	2

*Two CFOs explicitly qualified their responses, one by saying "Present value of the midpoint plus a margin for uncertainty" and the other by saying "Present value of a representative estimate" (i.e., not necessarily the midpoint).

**One consulting actuary explicitly qualified the response by saying "Present value of the midpoint plus a margin for uncertainty."

In contrast to CFOs, a greater proportion of consulting actuaries think that a wider range of estimates is acceptable in reasonably estimating a reserve. Only one consulting actuary thought that a range as narrow as 30 percent of the midpoint is required. With two exceptions, the consulting actuaries agreed that an appropriate range can be at least 50 percent, and three of the nine thought a range of 100 percent or more does not, a priori, lead one to conclude that the reserve is not reasonably estimable.

It is difficult to know how to interpret the differences between CFOs' and consulting actuaries' perceptions of what constitutes "reasonably estimable." CFOs may be sensitive to the demands of the investing and regulatory publics that expect definitive statements of financial results and condition. Consulting actuaries, on the other hand, are sensitive to the uncertainty in all reserve estimates, even ones for fairly standard coverages, and hence may be more comfortable with estimates where the range is currently wide but will narrow over time with more experience and information.

Regulators were not asked direct questions on estimability. They were asked, however, if they believed that companies had a good handle on their asbestos and pollution reserves (question 3 of the regulatory survey). In general, the regulators thought the companies domiciled in their state had a good handle on their A&E liabilities and generally had reserves for A&E liabilities that were in the correct range. Despite their lack of anxiety regarding domestic companies, approximately half of the regulators interviewed expressed concern that companies not domiciled in their state, and the industry as a whole, are not yet adequately reserved.

Selection of an Estimate from a Range

Both CFOs and consulting actuaries were asked where in the reasonable range of estimates companies should carry reserves for A&E liabilities (question 11). Among the CFOs, there was not strong agreement on where in a range of estimates (the midpoint, low end, high end, etc.) a company should carry reserves for asbestos and pollution liabilities. However, most CFOs preferred a value based on a midpoint rather than the bottom of the range of ultimate values.

It is possible that CFO responses on where in a range a reserve should be established are related to their opinions on the maximum acceptable width of a reasonably estimable

range. If a range is relatively narrow (e.g., 30 percent or less), a midpoint may be reasonable and non-controversial. For wider ranges, the choice of a particular value may be less obvious and can have significant financial implications.

In contrast to the varied opinions of CFOs, more than half of the consulting actuaries indicated that companies should carry reserves on the basis of a present value of the midpoint of a reasonable range of ultimate values.

Current Methods of Estimation

Nearly half the CFOs said that their companies use a variety of methods of estimation. The full range of comments on particular methods in use are recorded in Appendix A, question 10. Overall, companies appear to be developing estimates by comparing the results from a number of methods.

TABLE 11
Method used to estimate the companies' asbestos and pollution reserves (method is as of December 31, 1995)

Estimation method used	Asbestos	Pollution	Mass Tort
Survival ratio	2	2	2
Potential exposure for each insured estimated by claims professionals	3	3	4
Actuarial model	6	6	2
Market share	0	0	0
Case reserves only	0	0	4
Other/combination of above	11	11	6
Total companies represented	22	22	18

Views on the Magnitude of Ultimate Losses

When asked for an estimate of the ultimate asbestos losses of the U.S. insurance industry, there was fairly good consensus among CFOs and consulting actuaries that losses are in the \$30-\$50 billion range. No CFOs said the ultimate asbestos losses are under \$30 billion, and only five thought they will exceed \$50 billion (question 21).

TABLE 12
Magnitude of ultimate asbestos losses for the U.S. insurance industry

Estimate	CFOs	Consulting Actuaries
Under \$30 billion	0	1
\$30-50 billion	12	5
\$50-70 billion	4	0
\$70-100 billion	0	2
Over \$100 billion	1	0
No response	5	1

⁴Estimates of paid losses are from A.M. Best Week, "PC Industry Begins to Face E&A Liabilities" January 29, 1996, page P/C-5. Estimates of outstanding liabilities are from A.M. Best Week, P/C Supplement, "Footnote 24 Ushers in a New Era of A&E Disclosure," July 8, 1996, page P/C-2.

There is less consensus about the ultimate cost of pollution losses to the U.S. insurance industry (question 22). CFO estimates ranged from less than \$30 billion to more than \$100 billion. However, as a group, 15 of 19 CFOs responding said that the ultimate loss will exceed \$50 billion (question 22). Consulting actuaries' estimates ranged from \$30 billion to more than \$100 billion, with three saying \$30 to \$50 billion and an equal number saying more than \$100 billion.

TABLE 13
Magnitude of ultimate pollution losses for the U.S. insurance industry

Estimate	CFOs	Consulting Actuaries
Under \$30 billion	1	0
\$30-50 billion	3	3
\$50-70 billion	6	0
\$70-100 billion	5	2
Over \$100 billion	4	3
No response	3	1

Numbers taken from two 1996 A.M. Best publications help put these estimates into some perspective.⁴ According to A.M. Best data, at the end of 1995, financially recognized asbestos losses (paid losses plus outstanding liabilities) for the U.S. insurance industry totaled \$27 billion. Thus, the industry had virtually reached the minimum of the \$30 to \$50 billion range that two-thirds of CFOs and consulting actuaries believe is the value of the undiscounted ultimate industry losses for asbestos.

For pollution claims, financially recognized losses at the end of 1995 for the U.S. insurance industry were \$26 billion, according to A.M. Best's compilation. This is well below the estimate of more than \$50 billion of ultimate industry pollution losses offered by most (75 percent) consulting actuaries and CFOs in the survey.

The Academy's survey also asked about the discounted exposure of the insurance industry to asbestos and pollution liabilities taken together (question 23). Discounting reduces the diversity of opinion about the total exposure to asbestos and pollution among the CFOs, with no responding CFOs

TABLE 14
Magnitude of total discounted asbestos and pollution exposure for the U.S. insurance industry

Estimate	CFOs	Consulting Actuaries
Under \$30 billion	2	0
\$30-50 billion	4	4
\$50-70 billion	3	1
\$70-100 billion	8	1
\$100-150 billion	0	0
\$150-200 billion	0	2
Over \$200 billion	0	0
No response	5	1

believing the total net discounted exposure to be greater than \$100 billion. Consulting actuaries' opinions on this matter are not as cohesive. Two of eight consulting actuaries responding estimated the discounted A&E exposure to be between \$150 billion and \$200 billion, notably higher than any other respondents.

Discounting of Reserves for A&E Liabilities

CFOs and consulting actuaries were asked a number of questions about current discounting practices and their opinions about discounting for mass torts in general (questions 9c, 11 and 25-27).⁵ The majority of CFOs (15 of 21 responding) agreed that discounting these liabilities for the time value of money should be permitted. Similarly, seven of the eight consulting actuaries responding agreed (question 25).

TABLE 15
Opinions on circumstances under which accounting standards should allow for discounting loss reserves

Circumstances	CFOs	Consulting Actuaries
To reflect the time value of money	15	7
To reflect the uncertainty of loss amounts	0	0
Other	2	0
Discounting should not be permitted	4	1
No response	1	1

About three-quarters of CFOs and two-thirds of consulting actuaries also agreed that both case and IBNR reserves should be so discounted (question 26). A minority of CFOs (five) and consulting actuaries (two) said that if companies were allowed to discount for the time value of money, significantly more of them would make estimates and book reserves (question 27).

Eight of 12 regulators surveyed clearly stated their opposition to discounting A&E liabilities (questions 6-8 of the regulatory survey). Regulators who opposed discounting said that reserves are understated already and either said or implied that discounting would only lead to further understatement. They also pointed to the uncertainty of the ultimate liability and the

need for a margin of safety, which some clearly believe is provided by requiring undiscounted reserves. Others argued that some insurers are, in some sense, already implicitly discounting by estimating ranges of ultimate losses and then setting reserves at the bottom of the range. Accordingly, permitting discounting would only encourage reserve weakening at a time when the regulators are becoming comfortable with the A&E reserves of companies domiciled in their state, these regulators said.

A few of the regulators surveyed did show some support for discounting A&E reserves, and one who opposed discounting stated a willingness to review individual cases to determine if discounting of some magnitude is appropriate. One examiner said that actuaries have become sophisticated enough so that all reserves could be discounted, and that the state's department could go further than its current policy of discounting only for fixed and determinable liabilities. Another examiner, who expressed concern that reserves are understated currently, called for discounting and questioned how companies could possibly carry A&E reserves to ultimate if they do not discount. Finally, two regulators expressed strong, unqualified support for discounting. One said that to put nominal dollars on the books for long-tail liabilities is not an accurate picture of a company's financial condition. The other regulator said that not discounting because the ultimate liability estimates may be in error is like making two mistakes in opposite directions and hoping they more or less balance out.

It seemed clear to those conducting the telephone interviews that there is significant, strong opposition to discounting among state regulators, even for long-tail liabilities of property and casualty companies. Overall, it was clear that regulators who do, or might possibly, support discounting want companies to come up with realistic ultimate loss estimates before they would accept discounting and that the companies would need to convince the regulators that those realistic ultimate loss estimates are not likely to be subject to major upward change.

Actions to Improve Estimability

CFOs and consulting actuaries were asked about possible actions to improve the estimability of mass tort liabilities and who should play major roles in improving the current situation (questions 28-30). Regulators were also asked for their suggestions (questions 5 and 10 of the regulatory survey).

⁵In the following discussion "discounting" refers to the specific recognition of the timing of an insurer's future payments for a liability. It is not intended to include any discounting done by a policyholder presenting a claim to its insurer. In other words, an estimate reflecting expected future claim settlement costs is not "discounted" in our terminology, even though the settlements may explicitly reflect the policyholders' time value of money. Only reserves explicitly reflecting the timing of those settlement payments by the insurer would be "discounted" in our terminology.

TABLE 16

Areas where further development is necessary to make currently inestimable costs reasonably estimable

Areas for development	CFOs		Consulting Actuaries	
	Asbestos	Pollution	Asbestos	Pollution
Accounting guidance	2	2	1	2
Actuarial methodologies	8	11	3	3
Additional data	16	19	8	8
Company resources	6	6	4	4
Consulting services	0	0	1	1
Data clearinghouses	8	10	5	5
Further court rulings	9	17	3	5
Insureds' disclosure of data	9	10	1	1
Management commitment	4	4	6	6
Passage of time	12	15	6	7
Other	2	4	0	0
Number responding	19	22	9	9

The majority of CFOs and consulting actuaries agreed that the passage of time and more data would significantly reduce the difficulty of estimating asbestos and pollution liabilities. Both also agreed that court rulings would help the estimation of pollution liabilities (question 28). While the majority of consulting actuaries thought that further management commitment and data clearinghouses are necessary for both

asbestos and pollution liabilities, fewer than half the CFOs indicated that these developments were required.

Consulting actuaries and CFOs nearly unanimously agreed that the insurance industry and the actuarial profession should play active, if not aggressive, roles in making costs reasonably estimable for pollution, asbestos, and other potentially emerging mass torts (questions 29). However, while a

TABLE 17

Opinions about the roles various parties should play in making costs reasonably estimable

	CFOs		Consulting Actuaries	
	Passive role	Active role	Passive role	Active role
Asbestos				
Your company	9	12	0	6
Insurance industry	0	22	1	8
Actuarial profession	0	22	0	9
Accounting profession	9	13	2	7
Insurance regulators	10	11	3	6
SEC	12	9	5	4
Pollution				
Your company	9	12	0	6
Insurance industry	0	22	0	9
Actuarial profession	0	22	0	9
Accounting profession	9	13	2	7
Insurance regulators	10	11	2	7
SEC	12	9	4	5
Mass Torts				
Your company	8	12	0	6
Insurance industry	1	20	0	9
Actuarial profession	1	20	0	9
Accounting profession	9	11	2	7
Insurance regulators	10	10	3	6
SEC	11	9	5	4

majority of consulting actuaries support an active role for the accounting profession and regulators, roughly half did not believe that the Securities and Exchange Commission (SEC) should play an active role. CFOs were even less supportive of active roles for these three parties.

The regulators said that insurance companies should be more forthright in disclosing their A&E liabilities and more cooperative in sharing information about liabilities with regulators. They also said that actuaries and insurance companies could do a better job of estimating these liabilities. Regulators are no longer comfortable with actuarial opinions that do not reflect an estimate for A&E.

Most regulators say the actuaries have done an adequate job to date, but more effort is required from both actuaries and companies. The regulators want clearer opinions from actuaries. From the companies, they want candor, honesty, and information that the regulators consider persuasive.

All three groups—CFOs, consulting actuaries, and regulators—indicated that estimability continues to be a major, if not the major, issue. Moreover, there is general agreement that actuaries and companies need to do most of the work in addressing this issue.

Potential Emergence of Other Mass Torts

The CFOs, consulting actuaries, and regulators were all asked about the potential emergence of other mass torts (questions 24, 31-34).

Most CFOs expressed little concern that other mass torts, such as tobacco or tainted blood, will impose costs on the industry of the magnitude of asbestos and pollution (question 32). Nonetheless, many CFOs said these other mass torts would be more of a problem for other companies than their own. Tobacco was singled out as having the most potential to emerge as a significant mass tort liability for the industry in the future, even though few CFOs believed tobacco will be significant for their company.

The consulting actuaries agreed with the CFOs, but added that breast implants are likely to have a material, though not a serious, impact on the industry.

The regulators did not note any emerging mass torts in their examinations of companies. To the extent that regulators do have a concern, it is the possible emergence of liabilities related to the use of tobacco.

Work Group Comments

Having reviewed the results of the surveys, the work group has the following comments:

- Estimability continues to be an issue, especially for pollution reserves. There appears to be a perception that uncertainty equates with inestimability. Improvement can be achieved in this area through ongoing research and overcoming data limitations.
- There are clear differences of opinion on an acceptable range of estimates. Regulators and CFOs appear to want a tighter range than actuaries are able to produce with available data and tools. These differences between actuaries, on the one hand, and CFOs and regulators, on the other, may have to be overcome before improvements can be achieved in the recognition and estimation of A&E liabilities.
- By a large majority, CFOs and consulting actuaries favor discounting, while a majority of the regulators are opposed. The regulators are opposed to discounting for a multitude of reasons, including removal of safety margin, optimistic reserve estimates, runoff expenses that are not carried realistically on the balance sheet, etc. For A&E reserves to be dis-

counted, these concerns need to be overcome. Among other things, this will require a continuing dialogue among accountants, regulators, and actuaries.

- The survey results indicate that insurance companies take varying approaches regarding when to start reserving for new mass torts and how to reserve for them. Consistent with most CFO responses, the work group is of the opinion that it is inappropriate to remove claims for an emerging mass tort from a company's data and not provide reserves for the exposures so removed. When analyzing reserves for an emerging mass tort, it is best to use a variety of methods, the specifics of which would depend upon available tools, the materiality of the exposure, and available data.

In conclusion, it is apparent that there is substantial diversity of opinion among the three constituencies surveyed on a number of important issues relating to reserving for mass torts. The work group hopes that the results of this survey will facilitate a continuing dialogue on issues faced in the reserving process so that at least some of these differences will diminish, if not disappear, over time.

Appendix A

Tabulation of Responses for Survey of CFOs and Consulting Actuaries

This appendix shows the questions contained in the questionnaire completed by chief financial officers of insurance companies and actuaries from the major actuarial consulting firms, along with a question-by-question tabulation of responses.

Question 2 through 10 were asked only of CFOs. The raw counts for the 22 CFOs that responded are shown next to the response categories. Questions 11 through 35 were asked of both CFOs and actuaries at nine major actuarial consulting

firms. Responses of the CFOs and consulting actuaries are shown separately for these questions, with tabulations next to the response categories.

Immediately following the counts for the predefined response categories, the written responses for those who checked “other” are recorded. The “other” responses are followed by any marginal notes, qualifications or other written comments respondents provided related to the question.

N-R is used to indicate no response.

Survey

Survey Instructions

Throughout the survey, questions will be asked about Environmental Liabilities (“Env. Liab.”), Asbestos, and Other Mass Torts (“Mass Torts”). Other Mass Torts are meant to include items such as Breast Implants, Electromagnetic Fields (“EMF”), Tobacco, Tainted Blood, and Lead Paint.

Environmental and asbestos liabilities arising out of policies intentionally written to cover environmental cleanup, asbestos abatement and pollution legal liability should not be considered in your responses, unless specifically asked. Pollution liabilities are defined as the liabilities arising out of exposure at hazardous waste sites (NPL and non-NPL).

General Background

1. This company is predominantly a (check one):

- 17 Primary/Direct Excess Insurer
- 5 Reinsurer
- 0 Captive
- 9 Consulting Firm

QUESTIONS 2-10 WERE ADDRESSED ONLY TO CFOs

2. The total net loss and loss adjustment expense reserves (for all lines) as of December 31, 1995 for this company are:

- 0 Less than \$500 million
- 5 \$500 million to \$2 billion
- 8 \$2 to \$5 billion
- 9 More than \$5 Billion

3. Which of the following components does your company consider to be Environmental Liabilities? (check all that apply)

- 21 Site remediation (inactive sites)
- 22 Site remediation (active sites)
- 22 Pollution cleanup (including marine and land transportation accident-related)
- 22 Third party liability from environmental pollution
- 21 Natural resource damages
- 22 Defense costs and coverage litigation associated with environmental pollution
- 21 Cleanup and decontamination of buildings
- 11 Intentionally written EIL coverage
- 0 Other

4(a). Did the company report loss reserves in the Statutory Annual Statement Notes to Financial Statements Note #24 (“Asbestos/Environmental or Mass Tort Reserves”)?

Environmental	Asbestos	Mass Tort
22 Yes	22 Yes	2 Yes-reported as asbestos
0 No	0 No	6 Yes-reported as environmental
		12 No
		2 No response

One CFO who answered “yes” to reporting loss reserves for environmental and asbestos exposures said that the reserves were “aggregated across the two categories.”

4(b). How are IBNR reserves treated in Footnote 24 disclosures?

- 21 IBNR reserves are part of the total reserves shown for asbestos and environmental
- 0 IBNR reserves are not part of the total reserves shown for asbestos and environmental, but the extent of such IBNR reserves was disclosed.
- 1 IBNR reserves are not part of the total reserves shown for asbestos and environmental, and the extent of such IBNR reserves was not disclosed.

4(c). Were any of the liabilities arising out of EIL policies intentionally written to cover asbestos and environmental losses included in Footnote 24 disclosure?

- 8 Yes
- 10 No
- 4 Not applicable

Company Reserving Information

5. What percent of the company’s net loss and loss adjustment expense reserves as of December 31, 1995 were from these items?

	Less than 5%	5 to 10%	More than 10%	No response
Pollution	12	7	3	0
Asbestos	13	6	3	0
Mass Torts	18	0	0	4

Four CFOs did not check a box for other “Mass Torts.” One of them noted in the margin that these liabilities are “not evaluated separately from Other Liability.”

6. What portion of these reserves are assigned to accident years 1985 and prior (i.e., the “Prior” row in the latest Schedule P)?

	Less than 50%	50 to 90%	More than 90%	No response
Pollution	3	4	15	0
Asbestos	1	3	18	0
Mass Torts	3	6	7	6

Two of the CFOs who checked “less than 5%” for other “Mass Torts” in question 5 did not respond to the “Mass Torts” portion of question 6. One of these CFOs put a note on the “Mass Torts” line of question 6 which said “needs a clear definition.”

7. What categories of reserves do you hold for these items? (check all that apply) (Note: Bulk reserves are aggregate reserves for currently reported cases. IBNR reserves, as used here, refer strictly to not-yet-reported cases.)

	Pollution	Asbestos	Mass Tort
Case reserves			
Coverage litigation	10	10	9
Defense of insured	12	12	11
Resolved settlement cost	18	18	15
Unresolved settlement cost	19	19	16
Bulk reserves			
Coverage litigation	3	3	3
Defense of insured	3	3	3
Resolved settlement cost	4	4	4
Unresolved settlement cost	4	4	4
IBNR reserves			
Coverage litigation	4	4	3
Defense of insured	5	5	4
Settlement cost	5	5	4
Combined IBNR and bulk reserves			
Coverage litigation	17	17	13
Defense of insured	19	19	14
Resolved settlement cost	18	18	14
Unresolved settlement cost	19	19	15
No response	2	2	4

One CFO who checked “Combined IBNR and Bulk reserves” for each of the categories (pollution, asbestos and mass tort) noted that “Combined IBNR and Bulk reserves are not separately identified by category.” Another CFO who did not respond said that the information is “not available in this detail. We maintain case reserves, additional reserves (bulk) and IBNR reserves for these types of claims similarly to other types of claims.”

8. Which of the following best describes your approach toward developing asbestos, pollution and other mass tort reserves as of December 31, 1995?

Approach	Asbestos	Pollution	Mass Tort
Maintain parity with the U.S. insurance industry using survival ratio or other benchmarks. (Skip Question 9)	2	2	2
Maintain parity with peer companies using survival ratio or other benchmarks. (Skip Question 9)	0	0	0
Based on ultimate loss as described in question 9. (Answer Question 9)	11	11	4
Fact-based case reserves. (Skip Question 9)	2	2	5
Other/combination of above	7	7	7
No response	0	0	4

The CFOs who checked “other” responded as follows:

- For all three exposures said, “All of the above.”
- For all three exposures said, “All of the above plus actuarial extrapolation.”
- For all three exposures said, “Fact-based case reserves plus maintain parity with U.S. insurance industry.”
- For all three exposures said, “Fact-based case reserves plus provision for IBNR and unpaid loss adjustment expenses.”
- For all three exposures said, “Fact-based case reserves and based on ultimate loss as described in question 9.”
- For asbestos and pollution said, “All of the above are considered and judgment is applied.”
- For asbestos and pollution said, “All of the above except ultimate loss as described in question 9.”
- For mass tort said, “Fact-based case reserves and judgment plus a combination of techniques.”
- For mass tort said, “Judgment.”

Additional comments:

- One CFO commented on questions 8-10: “Mass Torts covers a wide range of exposures. For some categories of mass torts, we have reasonable ultimate projections of loss. On others—for example lead—any projections we have made must be regarded as speculative. Therefore, we have treated the mass tort category taken on the whole as not carrying projections of ultimate loss.”
- One CFO who responded “based on ultimate loss” added marginally that the company monitors parity with US insurance industry and peer companies.

• One CFO who checked “fact-based reserves” for mass torts added, “Our answer assumes that wording for fact-based reserves has been modified as follows: “Fact-based case reserves for loss, plus bulk provisions for adjustment expense on reported cases (again, on those ‘difficult’ mass torts, such as lead; ultimates, including IBNR, are carried for the less difficult mass torts).”

9(a). Ultimate loss includes provisions for which of the following amounts (check all that apply)?

Amount	Asbestos	Pollution	Mass Tort
Indemnity	16	16	9
Declaratory judgment action expenses	14	14	8
Unallocated loss adjustment expense	9	9	4
Allocated loss adjustment expense	16	16	9
Number of CFOs responding	16	16	9

9(b). The ultimate loss estimate includes which of the following types of claims (check all that apply)?

Type of claim	Asbestos	Pollution	Mass Tort
Reported claims	16	16	9
Unreported claims	16	16	9

9(c). Ultimate losses:

	Asbestos	Pollution	Mass Tort
Are discounted for the time value of money only	1	1	0
Recognize potential settlements / buybacks with policyholders (i.e. include implicit discounting)	8	8	4
Have no element of discounting at all	8	8	5

For asbestos and pollution, the total is 17 rather than 16 because one CFO checked both discounting boxes for asbestos and pollution and struck the word “only” from “are discounted for the time value of money only” and noted marginally: “The two different responses are applicable, i.e., both types of discounting are used in at least some instances. Further, we should point out that reserves for asbestos and pollution are discounted on a statutory basis but not for GAAP.”

One CFO who checked “recognize potential settlements/pay-backs with policyholders” noted marginally, “Historical payments include implicit discounting; reserves are not discounted.”

10. Which of these best describes the method used to estimate your company’s asbestos and pollution reserves as of December 31, 1995?

Method	Asbestos	Pollution	Mass Tort
Survival ratio	2	2	2
Potential exposure for each insured estimated by claims professionals	3	3	4
Actuarial model	6	6	2
Market share	0	0	0
Case reserves only	0	0	4
Other/combination of above	11	11	6
Total CFOs responding	22	22	18

In question 10, a large number of companies fell into the “other” category because 10 CFOs did not select a single method as best describing their approach. The “other” responses are as follows:

For all three exposures:

1. Case reserves plus IBNR, where IBNR is estimated with the balance of GL, commercial multiperil, homeowners and workers compensation claims.
2. Adequate case reserves that are conservatively set; IBNR that makes comparisons comparable to industry standards (survival ratios).
3. All of the above.

For asbestos and pollution:

4. A combination of the methods described above are used.
5. Case reserves, historical development, and IBNR based on discussions with the claims department.
6. CFO checked “potential exposure for each insured estimated by claims professionals” and “actuarial model.”
7. CFO checked “survival ratio,” “potential exposure for each insured estimated by claims professionals,” and “actuarial model,” and said “actuarial judgment.”
8. CFO checked “potential exposure for each insured estimated by claims professional” and “actuarial model.”
9. CFO checked all boxes except “case reserves only” and wrote “we use several methods to help us determine our exposure to A&E claims.”
10. CFO checked “survival ratio,” “potential exposure for each insured estimated by claims professionals,” and “market share,” and said “based on a combination of techniques.”
11. CFO checked “potential exposure for each insured estimated by claims professionals” and “actuarial model.”

For Mass Tort:

12. Case reserves plus additional bulk and IBNR.
13. CFO checked “potential exposure for each insured estimated by claims professionals” and said “judgment.”
14. CFO checked “potential exposure for each insured estimated by claims professionals” and “actuarial model.”

Two CFOs added marginal comments:

- One added the following: “Potential exposure for each insured estimated by claims professionals based on extensive sampling.”
- A second who checked “survival ratio” added: “Prior to 1996 the company used a benchmark approach to develop asbestos and environmental reserves. During 1996, the company completed a study of its liabilities and will use actuarial methods to develop the reserves.”

QUESTIONS 11-35 WERE ASKED OF BOTH CFOs AND CONSULTING ACTUARIES

11. In your opinion, how should P/C industry and reinsurance companies carry reserves for asbestos and pollution liabilities?

CFOs	Consulting Actuaries	
3	2	Minimum of a reasonable range of ultimate values.
6	0	Midpoint of a reasonable range of ultimate values.
3	0	Midpoint of a reasonable range of ultimate values plus margin for uncertainty.
6	5	Present value of the midpoint of a reasonable range of ultimate values.
4	2	Other

The four CFOs who checked “other” responded as follows:

1. Value within a reasonable range of ultimate. Individual company value to depend on likelihood of estimates within range.
2. In our opinion, a “reasonable range of ultimate values” does not exist. Companies should provide the most accurate reserve possible and furnish appropriate disclosures documenting the reserving approach.
3. Reasonable estimate within a reasonable range.
4. Within the range of reasonable estimates.

The two consulting actuaries who checked “other” responded:

1. Management’s best estimate.
2. Minimum if no point in the range is better than another. Otherwise, best estimate.

Other comments were:

- One CFO checked “Minimum of a reasonable range of ultimate values,” and wrote: “Reasonable value within the range at discounted value.”
- Another CFO checked “Midpoint of a reasonable range of ultimate values” and wrote: “Discount midpoint if there is a wide range.”
- One CFO and consulting actuary who checked the present value of the midpoint of a reasonable range of ultimate values added “plus a margin for uncertainty,” and one CFO added “present value of a representative estimate.”
- One consulting actuary added: “The present value of the midpoint of a reasonable range of ultimate values for market leaders, but for most companies (non-market leaders) industry benchmarks are appropriate.”

12. In your opinion, what time horizon of payments should IBNR reserves reflect?

CFOs	Consulting Actuaries	
2	0	Claims to be reported in the next 10 years.
19	9	Claims to be reported in and beyond the next 10 years.
0	0	Given the uncertainty associated with these claims, no provision for IBNR is needed.
1	0	Other

The one CFO responding “other” said, “As the survival ratio approaches 14, the exposure becomes fully funded on a present-value basis. The secret is in estimating future payments.”

One consulting actuary added the following qualification: “Although from a practical point of view, it may not be feasible to estimate claims many years hence.”

13. Should a difference exist between statutory and GAAP reserves? If so, what?

CFOs	Consulting Actuaries	
2	0	Yes, there should be a difference
18	9	No, there should be no difference
2	0	No response

The two CFOs who said there should be differences offered the following comments:

- Given the size and long-term nature of these liabilities, discounting for the time value of money should be permitted for GAAP.
- Statutory reserves should not be discounted.

Two CFOs who said there should be no difference commented:

- In an ideal world, accounting rules for statutory and GAAP with respect to the discounting of reserves, reserve standards, etc. should be the same. In the current regulatory environment, it is possible and appropriate that companies might have differences between statutory and GAAP reserves.

- All reserves should be based on the present value of the midpoint of a reasonable range of ultimate values plus a margin for uncertainty.

Two consulting actuaries who said there should be no differences commented:

- Both should reflect best estimates of ultimate costs, discounted to present value. There are difficult issues to resolve in determining the appropriate interest rate: (a) Should the interest rate be based on actual assets of the company or on risk-free assets with cash flows matched to the expected loss cash flows? And (b) should the interest rate be adjusted downward for risk so as to estimate “fair value” (FASB’s term for approximate market value if there were a market)? My view is that the same value should be used for both statutory and GAAP and that this liability and all other liabilities and asset items should be accounted for on a best-estimate (expected value) basis in concept. Solvency regulation could focus on determining surplus needed based on uncertainties in asset and liability best estimates, rather than building conservatism into individual liability and/or asset lines.

- Values should be clear whether they are nominal or discounted and the rate and amount of discount. Gross and net values should be clearly disclosed.

Estimability of Pollution and Asbestos Costs

14. Do you believe these costs are “reasonably estimable” for your company?

	CFOs			Consulting Actuaries		
	Yes	No	N-R	Yes	No	N-R
Pollution	11	11	0	5	3	1
Asbestos	16	6	0	6	2	1
Breast implants	13	8	1	6	2	1
EMF	5	16	1	0	8	1
Lead paint	6	15	1	5	3	1
Tainted blood	10	11	1	4	4	1
Tobacco	7	14	1	0	8	1

15. If not currently reasonably estimable for your company, when do you believe they will be?

	Pollution		Asbestos	
	CFOs	Consulting Actuaries	CFOs	Consulting Actuaries
Estimable already	11	5	16	6
1 to 2 years	0	0	0	0
2 to 5 years	3	1	0	1
More than 5 years	6	2	4	1
Never	0	0	0	0
Don’t know	2	0	1	0
No response	0	1	1	1

16. For what portion of the industry do you believe these costs are reasonably estimable (for the companies with material exposure)?

CFO Responses

Portion	Primary/ Direct Excess Insurers		Reinsurers	
	Pollution	Asbestos	Pollution	Asbestos
None	5	3	5	3
Some	5	3	10	8
Half	3	2	2	3
Most	7	11	3	6
All	0	1	0	0
N-R	2	2	2	2

Consulting Actuary Responses

Portion	Primary/ Direct Excess Insurers		Reinsurers	
	Pollution	Asbestos	Pollution	Asbestos
None	1	1	1	1
Some	0	0	4	1
Half	2	0	0	1
Most	6	8	4	6
All	0	0	0	0

One of the non-responding CFOs stated, “I believe asbestos may be reasonably estimated at this time. Pollution, at this time, is too uncertain.” The other non-responding CFO said, “The pro-rata portion of reinsurers’ business is not reasonably estimable.”

One consulting actuary noted: “Components of each category are, in my opinion, reasonably estimable, albeit with a wide range of reasonable estimates today. However, significant other components exist (i.e., non-products asbestos, NRD claims, etc.) for which the costs are not yet reasonably

estimable. We need to move forward, component by component, with additional disclosure and qualification.”

17. If not currently reasonably estimable for the industry, when do you believe they will be? (Respondents were asked this question separately for primary insurers and for reinsurers.)

For Primary/Direct Excess Insurers

	CFOs		Consulting Actuaries	
	Pollution	Asbestos	Pollution	Asbestos
Estimable				
for most/all	7	12	6	8
1 to 2 years	0	0	0	0
2 to 5 years	5	3	1	0
More than 5 years	7	4	2	1
Never	0	0	0	0
N-R	3	3	0	0

For Reinsurers

	CFOs		Consulting Actuaries	
	Pollution	Asbestos	Pollution	Asbestos
Estimable				
for most/all	3	6	4	6
1 to 2 years	0	0	0	0
2 to 5 years	2	2	1	1
More than 5 years	11	9	4	2
Never	1	0	0	0
N-R	5	5	0	0

“Estimable for most/all” includes those who answered “most” or “all” to question 16. “N-R” corresponds to those who did not answer this question and did not select “most” or “all” for question 16.

18. If you believe that companies cannot reasonably estimate these costs, what factors do you think are responsible? (check all that apply)

	CFOs		Consulting Actuaries	
	Pollution	Asbestos	Pollution	Asbestos
DAMAGES				
lack of data on:				
<i>underlying damages per claim/claimant</i>	5	8	6	3
<i>number of claims/claimants</i>	13	13	6	4
COVERAGE				
uncertainty regarding:				
<i>general coverage applicability</i>	16	7	5	2
<i>specific case coverage applicability</i>	15	8	5	2
Insured’s liability for damages:				
<i>whether insured liable</i>	14	7	4	2
<i>degree of insured’s liability</i>	17	9	6	3
Cost of developing estimates	2	1	4	4
Management decision	3	2	4	4
Impact on surplus	2	1	4	4
Other	1	0	1	1
Non-response	0	0	2	3

“Other” responses were:

1. One CFO inserted “standards for clean-up” as a reason companies cannot reasonably estimate pollution costs.
2. One consulting actuary inserted “lack of policy data” for both pollution and asbestos costs.

19. Which of the following best matches your understanding of “not reasonably estimable”? (check one)

CFOs	Consulting Actuaries	
1	1	No upper bound
14	4	Widely different estimates using reasonable assumptions
1	0	Widely different estimates using different methods
1	0	Widely different estimates at different points in time
5	3	Other
0	1	No response

Two CFOs checked more than one box. Their responses were coded as “other.” Including these two responses, the “other” responses for CFOs were:

1. No convergence in any methods.
2. No reasonable basis for estimation.
3. No data or substantially reliable data.
4. Widely different estimates at different points in time, using reasonable assumptions, and/or using different methods.
5. All of the reasons apply.

The following “other” responses were give by consulting actuaries:

1. Unable to define reasonable assumptions.
2. Not being able to construct an actuarial/statistical model.
3. Items 2, 3, and 4 above (ie., widely different estimates using reasonable assumptions, different models, and at different points in time).

20. How wide can a range of reasonable reserve estimates be and still have the reserve be considered reasonably estimable? (Check highest that applies of the full width from low to high as a percent of the range midpoint.)

Full width (low to high) as % of range midpoint	CFOs	Consulting Actuaries
0%	0	0
5%	0	0
10%	2	0
20%	5	0
30%	4	1
50%	7	4
100-150%	1	1
No limit	2	2
Other	1	1

The CFO recorded “other” stated that the reasonable range “varies based on available information and type of reserve (i.e., asbestos versus tobacco).”

The consulting actuary recorded “other” stated that “the size (width) of the range is not a sufficient criterion to determine ‘reasonably estimable.’”

Three CFOs added comments:

- One CFO who responded 50% added: “We believe the range of reasonable reserve estimates can be greater than 50% of range midpoint, but not without limit. In fact, the appropriate answer to the questions, as expressed, should be viewed as non-symmetric. For example, it might be reasonable for the range to be from 1/3 of midpoint to 3 times midpoint, whereas plus or minus 200% would produce non-meaningful ranges, due to negative values.”

- One CFO who responded 20% added: “20% is a benchmark that does not serve all purposes. It is currently an impossible-to-attain standard. Practically speaking, companies won’t record any ‘reasonable’ reserve estimates which impair their RBC, much less render them insolvent. However, to be reasonable, the range must be narrow enough to support informed management decisions.”

- One CFO who responded 10% added: “But it depends on materiality to overall reserve. For example, a 50% range might be reasonable if only a small fraction of overall reserves were involved.”

One consulting actuary who circled 50% added “or perhaps no limit.”

U.S. Insurance Industry Ultimate Loss

21. What is your best ballpark estimate as to the total ultimate losses (including losses already paid) of the U.S. property/casualty insurance industry for asbestos (net of reinsurance/retrocession to non-U.S. companies)?

	CFOs	Consulting Actuaries
Less than \$30 billion	0	1
\$30–50 billion	12	5
\$50–70 billion	4	0
\$70–100 billion	0	2
More than \$100 billion	1	0
Unknown/no response	5	1

22. What is your best ballpark estimate as to the total ultimate losses (including losses already paid) of the US property/casualty insurance industry for pollution (net of reinsurance/retrocession to non-US companies)?

	CFOs	Consulting Actuaries
Less than \$30 billion	1	0
\$30–50 billion	3	3
\$50–70 billion	6	0
\$70–100 billion	5	2
More than \$100 billion	4	3
Unknown/no response	3	1

23. What is your best ballpark estimate as to the total discounted exposure of the property and casualty insurance industry to asbestos and pollution liabilities (net of reinsurance/retrocession to non-U.S. companies) as of December 31, 1995?

	CFOs	Consulting Actuaries
Less than \$30 billion	2	0
\$30–50 billion	4	4
\$50–70 billion	3	1
\$70–100 billion	8	1
\$100–150 billion	0	0
\$150–200 billion	0	2
More than \$200 billion	0	0
Unknown/no response	5	1

24. What is your best ballpark estimate as to the total ultimate losses (including losses already paid) of the U.S. property/casualty insurance industry for mass torts (net of reinsurance/retrocession to non-U.S. companies)? In your response to this question, only breast implants, lead, EMF, tobacco, and tainted blood should be considered mass torts.

	CFOs	Consulting Actuaries
Less than \$10 billion	2	1
\$10–20 billion	6	3
\$20–30 billion	3	1
\$30–50 billion	0	2
More than \$50 billion	2	0
Unknown/no response	9	2

Discounting of Asbestos and Pollution Loss Reserves

25. In your opinion, should accounting standards allow for the discounting of loss reserves (booking amounts less than the nominal value of reserves) under the following circumstances?

	CFOs	Consulting Actuaries	
15	7		To reflect the time value of money
0	0		To reflect the uncertainty of loss amounts (i.e. future loss amounts, being more uncertain, should be further discounted in addition to the time value of money)
2	0		Other
4	1		Discounting should not be permitted
1	1		Non-response

The two “other” responses of CFOs were:

1. Allow for discounting workers compensation claims.
2. No more than 2% to reflect uncertainty of loss.

One CFO that checked “to reflect time value of money” added “conservative discounting.” And one consulting actuary said, “If discounted (for the time value of money only), require accrual to the midpoint of the reasonable range.”

26. In your opinion, do you believe that these liabilities should be discounted for the time value of money (on a broader basis than is currently allowed in accounting rules) for the following situations?

	Asbestos	
	CFOs	Consulting Actuaries
Only currently reported claims	0	0
Only claims with a fixed horizon of payments	2	1
All claims (including IBNR)	15	6
No discounting	4	1
No response	1	1

	Pollution	
	CFOs	Consulting Actuaries
Only currently reported claims	0	0
Only claims with a fixed horizon of payments	2	1
All claims (including IBNR)	15	6
No discounting	4	2
No response	1	0

27. Do you believe that if companies were allowed to discount for the time value of money, then significantly more companies would be able to make estimates and book reserves?

	Asbestos		Pollution	
	CFOs	Consulting Actuaries	CFOs	Consulting Actuaries
Yes	5	2	5	2
No	17	6	17	6
N-R	0	1	0	1

Two CFOs wrote in comments.

- An earlier question suggested that some companies felt it was inestimable because the estimate would hurt statutory surplus too much.
- Discounting would help, but too much legal uncertainty still exists to make “reasonable” estimates.

Possible Actions

28. In which of the following areas is further development necessary to make currently inestimable costs reasonably estimable? (Check all that apply. Double-check the most important item.)

	CFOs		Consulting Actuaries	
	Pollution	Asbestos	Pollution	Asbestos
accounting guidance	2	2	2	1
actuarial methodologies	11 (2)	8 (2)	3 (2)	3 (2)
additional data	19 (3)	16 (3)	8 (1)	8
company resources	6	6	4 (1)	4 (1)
consulting services	0	0	1	1
data clearinghouses	10	8	5	5 (2)
further court rulings	17 (5)	9 (2)	5 (1)	3
insureds' disclosure of data	10 (1)	9 (1)	1	1
management commitment	4 (1)	4 (1)	6	6
passage of time	15 (3)	12 (3)	7 (1)	6 (2)
other	4 (1)	2	0	0

Parentheses indicate the number ranking the area most important. A number of respondents did not indicate which factor they thought was most important.

The "other" responses for CFOs were general references to legislation and legislative action.

29. What role do you believe should be played by the following parties in making these costs reasonably estimable?

	CFOs (Consulting Actuaries)				
	None	Passive	Active	Aggressive	N-R
Pollution					
<i>your company</i>	2	7	9 (3)	3 (3)	1 (3)
<i>insurance industry</i>		18 (6)	4 (3)		
<i>actuarial profession</i>		19 (4)	3 (5)		
<i>accounting profession</i>	4 (2)	5	12 (4)	1 (3)	
<i>insurance regulators</i>	5	5 (2)	8 (3)	3 (4)	1
<i>SEC</i>	8 (1)	4 (3)	7 (2)	2 (3)	1
Asbestos					
<i>your company</i>	2	7	9 (4)	3 (2)	1 (3)
<i>insurance industry</i>		(1)	18 (5)	4 (3)	
<i>actuarial profession</i>			19 (3)	3 (6)	
<i>accounting profession</i>	4 (1)	5 (1)	12 (3)	1 (4)	
<i>insurance regulators</i>	5	5 (3)	8 (1)	3 (5)	1
<i>SEC</i>	8 (1)	4 (4)	7 (1)	2 (3)	1
Mass Torts					
<i>your company</i>	2	6	10 (4)	2 (2)	2 (3)
<i>insurance industry</i>		1	17 (6)	3 (3)	1
<i>actuarial profession</i>		1	16 (4)	4 (5)	1
<i>accounting profession</i>	3 (1)	6 (1)	10 (4)	1 (3)	2
<i>insurance regulators</i>	3	7 (3)	9 (2)	1 (4)	2
<i>SEC</i>	7 (1)	4 (4)	9 (1)	(3)	2

The numbers in parentheses are the responses of consulting actuaries.

One CFO included the following marginal notes: "The insurance regulators acted well in getting Footnote 24 put in place," and "The SEC was first in getting companies to disclose."

30. If you answered active or aggressive to any of the choices in the previous question, explain briefly what should be done.

CFOs

Three CFOs made no suggestions. The unedited comments of the other 19 CFOs have been organized into broad categories and listed below:

Legal and Legislative Activities

- Superfund reform and active work to clarify law and clean up standards.
- Legal uncertainties need resolution. In the political arena, Superfund reform and reforms of joint and several, strict liability.
- Insurance industry: Lobbying efforts to obtain laws that are more clear than current laws.
- Industry: push for Superfund reform; get standards of clean defined.

- Insurance industry: Aggressively lobby for open disclosure on arbitration and for greater consistency in allocation of cost versus stacking.
- The actuarial profession should continue analyzing and evaluating public pronouncements, estimates, and proposed solutions as in the American Academy of Actuaries' Superfund monograph.

Enhanced Data-Related Activities

- More detailed data needs to be made available for aggregate industry research on methodologies.
- Industry: Effort to centralize data compilation.
- Sharing of information
- Actuarial profession: Data analysis and compilation.
- Ongoing research to more closely identify existing liabilities.
- The Federal EPA and state departments should be encouraged to compile and disseminate information regarding sites and costs.
- Active and aggressive means, taking a cooperative and dedicated approach to data collection and analysis and responding by establishing credible, sustainable loss provisions.
- Should establish an industry clearinghouse.
- Actuarial profession: Gather additional information from all sources (i.e., legal, medical, claims) and provide guidance in standards of practice.

Modeling and Methodological Activities

- Actuarial profession: Continue to provide a forum to discuss actuarial approaches to test A&E reserves and make ideas available at actuarial seminars and other gatherings.
- Those companies with a material exposure should avail themselves of sound data and modeling techniques to estimate ultimate exposure for known cases and identify potentially unreported claims. The actuarial profession should continue improving this technology.
- Company, industry, and actuarial profession should try to ensure that estimation basis reflects economic reality (time value of money, uncertainty).
- Development of new actuarial methodologies.
- Actuarial profession: improved modeling.
- Actuarial profession: continue activity on researching methodologies and understanding emerging data.
- More thorough investigation of exposures; models that produce range estimates under reasonable assumptions.
- Actuarial Profession: continue to publish new methods that provide effective ways of estimating costs.

Regulatory and Accounting Activities

- Accounting profession: Clarify the rules for establishing liabilities and enforce the application of the rules through the audit function.

- Accounting profession: Provide guidance on meeting regulatory disclosure standards..
- The accounting profession could assist in helping establish special rules or guidelines to deal with a least a portion of the liability that may be estimable.
- Regulators and accountants: Demand reasonable consistency.
- Regulators and SEC: Provide appropriate disclosure standards and monitoring of information disclosed.
- SEC and insurance regulators should try to force some reasonable accrual of that which is reasonably estimable.
- Steps should be taken to require appropriate disclosure.
- Keep pressure on for more disclosure.
- Making financial statements valuable.

Other Actions

- More dedicated claims personnel to A & E.
- Company and Industry: Allocate resources and give priority to addressing material issues involving A&E.
- Industry: Cease using the notion that the liabilities are inestimable as a means to avoid establishing reserves.
- Education of legislators and regulators.

Consulting Actuaries

Consulting actuaries made the following suggestions:

Legal and Legislative Activities

- The insurance industry has a vested interest in resolving these issues, and should continue their lobbying efforts in the area of tort reform.
- Insurance industry aggressively pursue legislative/judicial rules at federal level.
- Insurance industry aggressively pursue consistency of state rulings.

Enhanced Data-Related Activities

- Companies should compile loss and policy data.
- Data compilation/clearinghouse.
- The actuaries should continue efforts to quantify these liabilities, with particular emphasis on the state and local site level.
- Access to the cumulative knowledge of the industry would facilitate making reasonable estimates.
- Companies: Collect information/data.
- Industry: Research issues and publish.
- Insurance industry aggressively pursue collaborative efforts toward common data sources.
- Obtain more data.

Modeling and Methodological Activities

- Actuarial profession: Develop techniques to further enhance reliability/quality of analysis.
- Improved methodology.
- Accountants and actuaries should work with regulators to develop methodologies.
- Obtain more methods.

Regulatory and Accounting Activities

- Obtain more guidance.
- Actuarial profession should develop practice note (ultimately standard of practice).
- Regulators should maintain "level playing fields" (e.g., stocks vs. mutuals).
- The regulators should establish guidelines for more consistent funding of these liabilities among companies, as for example, permitting companies to discount reserves for mass tort liabilities or establishing requirements for acceptable reserving methodologies.
- Regulators should force greater attention in examination process.
- Accounting profession: Clarify accounting standards.
- Accountants (and actuaries) need to address the reporting of these liabilities in light of historical reserve strengthening.
- The SEC, along with insurance regulators, should review companies with adverse runoff and require from those companies more comprehensive disclosures on the funding of these liabilities.

Other Actions

- Management commitment to understand exposures and develop best estimates.
- Improve operational handling of claims.
- There could be a major effort on the part of all the interested parties, similar to what has been done at Lloyd's in the Equitas project.
- All should take a closer look at asbestos liabilities as they aren't fully recognized by most companies.

Other Mass Torts

31. Please rank from 1 to 5 (1 = not important, 5 = very important) how important you think the issue of mass tort liabilities other than asbestos or pollution is to the U.S. property/casualty insurance industry.

Consulting CFOs	Actuaries	Ranking
1	0	1 (not important)
7	3	2
10	2	3
1	3	4
3	1	5 (very important)

Two consulting actuaries who checked "2" included notes. One said "currently," and the other added: "In total a 2, but for some companies a 5. For most companies this is a non-issue. It is an issue for the top 20!"

32. Rank each of the following current or possible future mass torts in terms of their impact on the financial condition of your company and the insurance industry (1 = negligible, 5 = very significant).

CFO Responses

	Effect on Industry						Effect on Your Company					
	1	2	3	4	5	N-R	1	2	3	4	5	N-R
Breast implants	3	10	5	2	0	2	11	7	2	0	0	2
Electromagnetic fields (EMF)	7	6	5	1	0	3	13	4	2	0	0	3
Lead paint	2	7	10	0	1	2	6	9	3	1	0	2
Tainted blood	4	8	8	0	0	2	11	7	2	0	0	2
Tobacco	2	1	10	6	1	2	13	1	4	1	0	3
Other	0	2	1	0	0	2	0	2	0	0	0	0

Consulting Actuary Responses

	Effect on Industry					
	1	2	3	4	5	N-R
Breast implants	0	0	8	0	0	1
Electromagnetic fields (EMF)	3	4	0	1	0	1
Lead paint	0	6	2	0	0	1
Tainted blood	2	6	0	0	0	1
Tobacco	2	1	2	3	0	1
Other	0	1	0	0	0	1

Three CFOs added other torts not listed. Their additions were: Medical devices, medical implants, and DES. One consulting actuary wrote “Fiberglass insulation” in the “other” category.

One CFO wrote in the margin “Tobacco is very uncertain and risky.” This CFO rated the potential impact on the industry of tobacco a “4” and the potential impact on the company a “3.”

33. What does your company do during the period of time before a separate projection is possible for a new mass tort?

Consulting CFOs	Actuaries	
12	2	Data pertaining to the mass tort is left in the normal loss data triangulation.
2	1	Data is removed from the normal triangulation, but no separate IBNR reserve is established
8	2	Other
0	4	No response

The eight “other” responses of CFOs, five of which were similar, were:

1. Data removed and separate IBNR established.
2. Data is removed and separate IBNR estimated.
3. Data is removed from the normal triangulation and a separate bulk and IBNR reserve is established.
4. For known material mass torts, we would typically remove from our triangles and set a separate IBNR.
5. Data is removed if it distorts results, and, as possible, some provision is made, not necessarily qualifying as a separate actuarial-based projection.
6. Have claim department identify issue with response and make rough estimate.
7. Nothing.
8. Not applicable.

The two “other” responses by consulting actuaries were:

1. Remove data; estimate some IBNR.
2. Review triangles with and without the mass tort data; possibly use a slower benchmark pattern.

One CFO who checked “Data pertaining to the mass tort is left in the normal loss data triangulation” added “Loss reports are monitored.”

One consulting actuary who checked box “1” added: “but indicated reserves not necessarily earned.”

34. Under what circumstances is a separate projection for a mass tort indicated?

Consulting CFOs	Actuaries	
3	2	Loss data pertaining to the mass tort is removed from normal reserving data
1	0	Industrywide estimates are in the billions of dollars
4	2	The particular type of claim is assigned to a mass tort unit of the company
12	2	Other
2	3	No response

The responses of the six CFOs who checked only “other” were:

1. Large estimable impact.
2. When claims reports appear that they will become significant.
3. When it becomes large enough to be separately identified in our data.
4. Once it becomes of significant magnitude.
5. Type of claim involves “mass” of insureds and claim has latency not contemplated by underwriters.
6. No general rule.

Three CFOs whose responses were recorded as “other” checked one of the predefined boxes and also checked the “other” category. Their full responses were:

1. One CFO checked “Loss data pertaining to the mass tort is removed from normal reserving” and then checked “other” saying: “When we believe we get a more meaningful estimate. Today, we pull out silicone breast implant claims for a separate reserve estimate, but not EMF, lead, blood, or tobacco.”
2. One CFO checked “Industrywide estimates are in the billions of dollars” and then checked “other” saying “Significant impact on company.”
3. One CFO checked “The particular type of claim is assigned to a mass tort unit of the company” and then checked “other” saying “Size and materiality of exposure warrant separate handling.”

Finally, three CFOs, whose responses were recorded as “other,” checked more than one of the predefined boxes.

1. One checked both “removed from normal reserving data” and “Industrywide estimates in billions.”
2. Two checked all three predefined boxes: Loss data removed from normal reserving data, industrywide estimates in billions, and claim type assigned to mass tort unit.

Among consulting actuaries:

1. The one checking “other” said: “Subject to credibility considerations when segregation of data leads to greater homogeneity.”
2. The second response recorded as “other” was for a consulting actuary who checked both “Loss pertaining to the mass tort is removed from normal reserving data” and “The particular type of claim is assigned to a mass tort unit of the company.”
3. One consulting actuary who checked category 1 added: “If the mass tort losses are a material percentage of the company’s total.”

35. Describe any issues on this general topic that you think are important.

The unedited comments of the eight CFOs who offered comments are as follows:

- The last 2 questions [Q33 and Q34] are important, when a portion of the data is excluded. The discipline needs to exist to perform a separate evaluation of that data, even if the estimate is speculative.
- I would encourage the American Academy to develop a standard of practice on the treatment of mass torts, large losses, and property catastrophes in reserving and ratemaking.

- No matter how much study, data, and methodology there is, it is not possible to forecast meaningfully actions of legislative or judicial bodies that would change liabilities retroactively.
- More evaluation distinguishing ALAE estimates from loss estimates.
- An industry-wide standard with respect to discounting should be established, especially in light of the recent actions by CIGNA and Equitas.
- The NAIC could take on a leadership role, rather than have the insurer rating agencies do it. Or create the database.
- Shouldn’t reserve for mass torts based on junk science if probability of liability is low. Don’t set up reserves based on 1% chance junk science holds up even if potential cost is in billions, i.e., do not take 1% of \$100,000,000,000.
- Actuarial opinions: AAA/CAS needs to provide better guidelines in terms of the “scope” part of the opinion. Most companies are not qualifying pollution in their scope. But the same companies admit elsewhere in the opinion that pollution/asbestos reserves are material and are not reasonably estimable or are subject to great uncertainty.

One consulting actuary offered comments, listing the following issues which are reproduced verbatim:

- Disclosure; liaison with accounting profession
- Accumulation by industry of pertinent data
- Information sharing across companies
- Process for dealing with new types of claims
- Data warehousing capabilities
- Impact on industry of estimation process (i.e., estimates historically initially high and moving down over time with the potential over-reaction of regulators.)

Please list a name and phone number which can be used by the staff of the American Academy of Actuaries in order to resolve any questions they may have in evaluating the responses to this survey. This sheet will only be used by AAA staff to clear up issues involved in the entry of survey responses into a database. Once data has been entered into the database, this page will be detached from the survey and discarded.

Name _____

Company _____

Phone Number _____

Appendix B

Interviews with Regulators

This appendix documents the responses of regulators from 12 state insurance departments to 10 questions related to asbestos, pollution, and other mass tort exposures of insurance companies. The questions were mailed to regulators in advance and were answered during telephone interviews.

With one exception, the questions were mailed to the department's chief examiner or deputy overseeing property/casualty company examinations. In most cases, the telephone interviews involved the examiner plus department actuaries or other staff that the examiner deemed appropriate. The questions were discussed in an open-ended format with a representative of the Academy work group and Academy staff members, who summarized the interviews from their notes.

The section below reproduces the questionnaire. The section that follows contains detailed descriptions of the responses. Unless otherwise noted, the responses for each question are in no particular order, and the order varies from question to question. Thus, the first response to question 1 is from a different regulator than the first response to question 2.

Throughout the interviews, regulators were encouraged to share their own opinions rather than the official positions of their departments. Both were often discussed and referred to.

QUESTIONS FOR DISCUSSION ON ASBESTOS, ENVIRONMENTAL AND OTHER MASS TORT EXPOSURES

1. How important a part of your department's work are reviews of reserves for asbestos and environmental exposures? Are many examinations initiated because of these exposures? If examinations are not initiated for this reason, are such exposures frequently an issue once an examination is underway?
2. If you had to rank issues that cause concern in examinations your department undertakes, where would you rank asbestos and environmental exposures? What issues would rank above these types of exposures?
3. Do you think most of the companies domiciled in your state (or most companies licensed in your state) have a good handle on the extent of their asbestos and environmental exposures? If not, why?
4. In reviewing financial statements and working with companies, what are the most common problems you and your staff have observed in reserve estimates for asbestos and environmental exposures?
5. What types of things do you think companies, regulators, or actuaries could do to solve these problems?
6. In surveying companies, we are finding that discounting these liabilities is mentioned as an important issue. Do you believe discounting these liabilities is reasonable? If not, what are your concerns?
7. Some have argued that discounted reserves for long-tail asbestos and environmental exposures are realistic because of the time value of money and because discounted reserves are not as volatile as nominal reserves. Under what conditions do you concur with or oppose such arguments?
8. Some have argued that companies would be willing to invest more resources in estimating their liabilities associated with environmental exposures if they could use discounting. What do you think of this argument?
9. Although asbestos and environmental exposures are the major mass tort liabilities of current concern, we are also interested in emerging exposures. Are any other mass tort exposures becoming a significant issue in your examinations?
10. Are there any issues that we haven't talked about that you would like to raise, or are there any concerns or opinions that you would like to make the Academy work group aware of?

Regulators' Responses

Question 1. How important a part of your department's work are reviews of reserves for asbestos and environmental exposures? Are many examinations initiated because of these exposures? If examinations are not initiated for this reason, are such exposures frequently an issue once an examination is underway?

- Our state does not have a lot of large property/casualty domestics, and the bulk of examinations over the last five years has focused on domestics because staff constraints limit participation in zone audits. Hence, asbestos and environmental exposures have not been a major concern for the state because there is only one domestic with significant asbestos and environmental exposure, and the state does not initiate examinations because of A&E. The department did participate in the examination of one major property/casualty insurer, but the examination was initiated by other states and was a joint examination. Domestically, even after examinations are initiated, asbestos and environmental exposures are not generally an issue.

• In the examination of all larger companies this is a major issue. Examinations do not get initiated because of A&E, although we will be doing a limited asbestos and environmental examination for one of the domestic insurers. We have called in companies that have made large increases in A&E reserves to have them explain what is going on and what the situation is. We have also done quarterly reviews for some companies on asbestos and environmental exposures. When an examination starts, A&E is a special issue. We hire a consultant and look at the data and the methodologies used. However, companies are reluctant to let consultants look at the data. This is a major stumbling block because companies claim client privilege for these files.

- A&E exposures are not very important to us. We have not initiated any examinations because of them, and they have not become important when an examination was underway. In fact, our state has no big companies with A&E exposure. A number of the larger companies have subsidiaries, probably to take advantage of local tax preferences.
- A&E is not that important because domestics don't have that much exposure. Only the national affiliates have exposure.
- A&E has grown in importance over the past five years because it has become common knowledge that there are reserve deficiencies in these areas. In general, A&E has not been an important part of the state's examinations of domestic insurers. In cases where A&E has been important, the state has hired outside consultants to examine the company's reserves because of inadequate expertise and manpower within the insurance department. We have not initiated our own examinations because of A&E, but the state has actively participated in examinations of companies with major A&E exposures that have subsidiaries in the state. For nondomestics, A&E has raised major concerns. But among domestics, A&E has not arisen as a primary issue during examinations. Most departmental review of A&E is not done in the context of an examination. Actuarial opinions and copies of work papers are reviewed as part of desk audits.
- To deal with the state's biggest companies with any probability of significant A&E development, the state has hired outside actuarial firms to represent the department. A&E are only a concern for these companies. For other companies, the department runs a 3-year examination cycle. Some other companies have A&E exposure, but it is not from large industrial risks and it is not of great concern.
- A&E are very important and very time consuming parts of examinations in some instances. However, most of our domestics do not have these exposures. The department has initiated a couple of examinations because a company has done significant reserve strengthening and the department has taken a look at what is going on. But, mostly we look at these exposures when an examination is underway for some other reason, and they do tend to be an issue when they are present because they are time consuming. Some of these losses are only a small piece of a much larger reserve, but a lot of

time is spent making sure that this smaller A&E part of the reserve won't be blown out of proportion.

- Overall, A&E reserves are not a large part of the department's work. The state has very few companies with large A&E exposures among a very large number of domestics. We don't initiate examinations because of A&E, but with all large P/C companies we hire an outside actuary to look at A&E and give an opinion on whether A&E reserves are adequate. Even on companies that write small commercial and personal lines, we hire an outside actuary to look at A&E. Even a pizza parlor owner can have an environmental liability and file a claim. The department is comfortable that two of its companies with major A&E exposures could handle any additional development. We have not yet done an A&E review for a third major company with A&E exposure but will do so during its next examination. In our experience, most departments are hiring outside actuaries for this work.
- Loss-reserve reviews are an important part of each examination performed by the department. We have found reviews of environmental exposures to be of moderate importance in some cases. The department has initiated no examinations because of these exposures. These exposures have been an issue only infrequently.
- A&E is very important. Not that it is frequent — it is not. We do not have many domestic companies that report significant A&E. But when a company does have A&E, it's very important. We have not initiated a complete examination based on A&E exposure. However, department actuaries decide when examinations are initiated if they will participate and, if A&E liabilities are involved, the actuaries do participate. In addition, the department has a system to look for qualified actuarial opinions, and nine out of ten qualifications are because of A&E. In these cases, the actuaries search for answers about the exposures through discussions with the actuary who signed the opinion and/or the CFO if the company is domestic. The department has identified about twenty companies licensed in the state that have A&E exposure and qualified opinions, of which only four or five are domestic. This is a small percent of the total number of domestic companies.
- The state has no domestics with significant A&E liabilities. One company that did is no longer in business. For this company, a significant part of the problem was that the department did not pick up on the A&E liabilities because information was withheld from the actuary. Examinations are not initiated because of A&E exposure. Domestics don't really have any significant exposure, and it has not become an issue when examinations are initiated.
- A&E are not significant exposures for most companies in the state. Those with such exposures are examined more frequently. However, in the past we have not initiated examinations because of A&E. A&E exposure is an issue, but it is not a stand-alone issue. Our domestic companies that have these exposures are affiliates or subsidiaries of larger companies that have the real exposure, and other states deal with these companies.

Question 2. If you had to rank issues that cause concern in examinations your department undertakes, where would you rank asbestos and environmental exposures? What issues would rank above these types of exposures?

- A&E is not important for our domestics. The important issues are type of business, reserving history, how good the company's underwriting experience has been, and asset quality.
- A&E is definitely a secondary issue. The state initiates examinations based on the overall trends in and history of reserve adequacy of a company. On a scale of 1 to 10, with 10 being a critical issue, A&E would rank about a 7.
- A&E is important because of all the unknowns, and it's been a major factor in many of the nondomestic examinations that the state has participated in. Generally, A&E is not a major issue in examinations of domestic companies. It has only been a major issue for one domestic company. The big issues are on the asset side and the adequacy of loss reserves for shorter-tail (rather than longer-tail) lines. The state has a large number of smaller companies that only conduct business in the state or are smaller regional companies. Reserve adequacy issues have arisen for auto insurance, restaurant covers, personal lines, and small commercial lines.
- A&E is low priority. Ranking above it are catastrophe exposures, workers compensation, reinsurance collectibility, and transfer of risk.
- For one company, environmental liabilities are a major issue because the solvency of the company depends on how these liabilities play out. We think the liabilities for our other large companies are reasonably estimable. For smaller companies, the core reserves are extremely important. Also, we are concerned with price adequacy, and this is one area where a regulator can really miss the mark. Financial reinsurance is also important because of the way companies use it to write down their liabilities.
- Most primary insurers with A&E are not domiciled in our state. So, we don't have many of the big players in A&E. We do have some of the big reinsurers. The big issues in our examinations are reserves generally, the quality of reinsurance, and the issue of reinsurance risk transfer.
- For major P/C companies, A&E is among the top concerns, but it is not necessarily number one, and the state has many large insurers. A&E is the top concern for those who have it, however. In the large P/C companies, reserves in general are the concern. Which aspect of reserves we are concerned about changes over time. It used to be workers compensation, but now it's environmental liabilities. Reinsurance is also a big concern, especially when the reinsurer is offshore. In life companies, assets are more of a concern. Much of this is due to derivatives in which one can't figure out the interaction of the risk associated with the assets. This is spreading to P/C companies. Derivatives may not be a concern, but we just don't know at this point.

- For a few companies, it's No. 1, but not for any of the substantial number of other companies. In general, reserving is the issue. The question is: Is it enough, or is it true that P/C companies, on average, are under-reserving? Our chief concern is whether our domestics adequately reserve.
- Overall, loss-reserve adequacy is important in our examinations. Adequate financial capacity and the ability to make payments when due is of utmost importance. We have found environmental reserve analysis to be of only moderate importance in the companies we have examined. On a scale of 1 to 10, environmental liabilities would be an 8. Three areas are more important than A&E: reserving methodologies used, not just for A&E or any single line, but for all lines of business; changes in reserving methodologies compared to those used in prior years; and changes which could impact reserve projections such as social changes, regulation, court decisions, inflation, and changes in reinsurance programs.
- For companies that have A&E, it is at the top of the list of concerns. But reserving is the main concern, and the specific issue varies greatly from company to company. The bottom line is that Schedule P is our No. 1 concern. Examples of other specific issues, depending upon the company, are reinsurance, assets, and affiliate transactions.
- Domestically, the biggest issues are on the asset side rather than on the measurement of liabilities. Domestics include many personal lines companies that have an easy time estimating liabilities. Asset issues tend to be unique to the company. Two examples are a company with related-company transactions and one with mortgage funding issues.
- For those few companies that have significant A&E exposure, the exposure is an issue, but not the only issue. More important issues for the department—ones that cause examinations to be initiated—are deterioration of reserves generally and issues related to holding companies.

Question 3. Do you think most of the companies domiciled in your state (or most companies licensed in your state) have a good handle on the extent of their asbestos and environmental exposures? If not, why?

- None of the domestics have significant exposure. So, for domestics the answer is yes, they have a good handle. For insurers domiciled in other states, the answer is no. We don't believe they have a good handle on A&E liabilities. Our belief is based mostly on the press and journal articles concerning A&E exposure with CIGNA and Lloyds.
- Domestic companies have a good handle because they don't have much A&E exposure. We're not so sure about licensed companies because we're not sure that actuaries have really come up with a way to reserve for A&E yet. However, we have noticed that fewer actuaries are excluding A&E from their opinions.
- We have a fair amount of confidence that the full degree of the exposures are known at this time. But, we believe compa-

nies set reserve levels optimistically. Five years ago, the companies said our reserves were OK, but the big companies have had increases in reserves of hundreds of millions of dollars since then. So, we don't have a lot of confidence in company valuation of the actual liabilities.

- Generally, every company that has A&E exposure has a much better handle on it than three or four years ago. Domestic companies have a good handle on their A&E exposures and licensed companies in the state also seem to have a fairly good handle. The domestics have solved their reserve problems in this area with infusions of new capital, which the department thinks is the best way to deal with this problem. The department is less enthusiastic about other methods, such as spinning off these liabilities through companies set up only to deal with the run-off and various methods other than capital infusions to bolster A&E reserves.
- For companies domiciled in the state, it varies. But generally, they get a better and better handle on A&E liabilities. As regulators, we have a good idea of how much work they have done estimating their liabilities here, and we feel comfortable. For companies licensed in the state, the variance is greater in how good a handle they have on their A&E liabilities. We believe some of them still have some big hits to take.
- Over the last eight to 10 years, more and more companies have developed actuarial staffs, and this has allowed them to address loss reserves in a strategic manner. As a result, companies have a good handle on their reserves and, if they are wrong, it's not significant and would not threaten the companies' solvency. One of our domestics with major A&E exposure has done substantial studies and believes it has a handle on its environmental liabilities. In fact, the company thinks its exposure is not as large as once thought and the actuaries that are reviewing the company tend to agree. A second domestic company is a large issue because it is in runoff.
- Of those with major A&E exposures, all appear to have a good handle on it.
- The companies think they have a good handle on these liabilities now, although one of our large domestics with A&E exposure has not yet done a major bottoms-up review. But we, the regulators, have concerns. If companies have a good handle, then why are they adding such large amounts to reserves for environmental liabilities so frequently? It seems that the reserves they are reporting are not a conservative estimate. It is true that they have a better handle than four years ago and that the industry as a whole is more knowledgeable than in the past. Also, major companies have separate environmental units so the issue is being addressed well. This leads to some comfort that they are knowledgeable, but whether they are really addressing the issue well in the actual reserves they are booking is still an issue.
- I don't think most companies have a good handle on A&E. My state has only five or six companies where the A&E reserve is more than 20 percent of surplus. I don't think the liabilities are quantifiable. Moreover, to try to get a better

handle on them takes a very large investment and I don't think most companies are making the investment.

- Insurers domiciled in the state currently have a reasonably good handle on reserves for environmental liability.
- The state's domestic companies have a good handle on A&E because they don't have any significant exposure.
- We think most companies should have a grip on A&E liabilities, which have been around for a long time now, and that most companies probably do have a good handle on it. We are considering not accepting in the future actuarial opinions that are qualified because of A&E.

Question 4. In reviewing financial statements and working with companies, what are the most common problems you and your staff have observed in reserve estimates for asbestos and environmental exposures?

- There are three common problems. The first is underestimating the legal and administrative costs of these liabilities. Our department wants allocated and unallocated expenses included, but the companies do not want to do this. Second is reinsurance. In particular, is it collectible? Third is the long amount of time it takes to resolve the underlying coverage and claim issues.
- One problem is finding companies that have A&E exposure that the state did not know about before reviewing Note 24. Another is the use by some companies and actuaries of a single method in estimating A&E reserve needs. Most companies and actuaries use several methods to analyze these exposures. However, when only one method is used, there is a problem. Examples are where only the survival ratio method is used, and where it is clear that the kind of actuarial work one would expect has not been done.
- The most common problem with reserve estimates for A&E is underestimation of the cost. Five years ago, one company said its reserves were OK, and within six months the company took an additional charge of \$160 million for A&E reserves. There is a continuous pattern of underreserving. However, at this point, companies are making meaningful increases in their reserves. Only time will tell if what has been thrown into reserves is getting close to adequate.
- Actuaries are just getting a handle on environmental liabilities, and we're relying on them. However, actuaries have kept putting in reports that environmental liabilities are not estimable. We know a lot now about the claims and about the sites, but the methodology to give good estimates does not seem to be there. For example, the range of estimates for one of our domestics under close examination is x million dollars to 10x million dollars, where x is a significant number.
- The most common problems in estimating A&E liabilities are net recognition (net of reinsurance) and lack of good historical data (that's what the companies tell us). In addition,

some companies say they don't want to have higher reserves for A&E because they don't want to lead the way in raising the survival ratio. There is also the uncertainty about Superfund, and we think reinsurance problems will be coming down the road because some of the old reinsurers won't be there, and companies' liabilities will be a lot greater on a net basis.

- The IBNR reserve is the most difficult problem associated with environmental reserves. The potential volatility of environmental claims makes it difficult to establish adequate reserves.

- The biggest problem is the massive disclaimers on these estimates. This means we, the regulators, really have no idea what the liability is. We think this may be a combination of the company not wanting to tell and of some companies not really having the information. We've heard it said that if the regulators let us discount, then the companies will do a better job of estimating the reserves. Although reserving for A&E is a very big issue, if we could get a handle on the exposure that would not change much. There would still be other major issues such as reinsurance, to name just one.

- In the past, we said you can't realistically estimate A&E exposures. But all the major sites are now identified, and insurers know if they have a risk for the sites. So, with no more major sites, people can't say there is not enough data. The unknown has been closed quite a bit. New sites won't add much. People can't say it's not estimable anymore. It's possible to provide a decent estimate.

- Direct experience here is based on the state's interest in one company and discussions with the company when it put up an enormous increase in reserves a few years ago. This raised concerns. In our opinion, companies cannot estimate the losses with any predictability.

- Management withholding information is the biggest problem. Liquidation laws can be another. Last year, our state amended its liquidation law so the department could settle the affairs of a company with A&E exposure without running it for the next 20 to 25 years. The state will settle with the reinsurers first and then make a final settlement with all policy holders.

- There is not yet much reliable data, so it's difficult to get a handle on projections.

Question 5. What types of things do you think companies, regulators or actuaries could do to solve these problems?

- Helpful things would be new notes to financial statements and throwing some of the burden back on the actuaries through stiffer requirements on Statements of Actuarial Opinion. Also, as actuarial techniques/models get better, the reserve estimates and reserves should get better, and the actuarial profession should see that this happens.

- We need several things. The first is to reform federal law. There should be no retroactive liability. Also, there is no

accepted methodology for estimating these liabilities and the width of the ranges is too wide. As regulators, we can't judge how sound a company really is. What we need most is to have the industry and actuaries determine the size of the problem, then have regulators work with the industry to develop long-term plans for a solution.

- There needs to be more cooperation among all constituencies. Regulators need to be able to go into a company and be given a better sense of the real exposure. To date, everyone has acted in his or her own best interest, which means companies limit the information they give to regulators. However, the regulators are dependent on the companies for information, and if there is not full disclosure, the regulators are hamstrung. The actuarial work gets better and actuaries keep trying to do a better job of estimating. But the actuaries have difficulty coming up with anything very definitive. Having finality for Superfund reform would help companies know what their liabilities will be.

- Developing a better database is one thing that comes to mind. Also, better communication between the parties would help. By this, I mean such things as continuing education programs with regulators, actuaries, and company executives, where these issues can be discussed so that everyone knows what the problem is, what methods are being used, etc. We are also concerned about actuarial opinions that do not make strong enough statements about A&E. We consider weakly stated opinions qualified and have written letters to the actuaries. Although these liabilities are not completely quantifiable, we can't let the actuarial profession off the hook because there is data out there and some methodology. I think the SEC's pushing companies has helped.

- Reserving methods need work. Our department has used two actuarial firms, one to do the estimates and one for peer review, and both have problems because of the proprietary nature of their methods. The actuarial profession should address this issue through its learned societies. Trade secrets are a real problem. In the A&E areas, one actuarial firm says it has to run side-by-side estimates using its model because it can't have access to another actuarial firm's software to do a peer review. Peer review is not a problem in other lines. It's a serious problem for regulators when actuaries can't peer review each others' work. Yet, another problem is that what actuaries will report privately they may not say publicly. They may tell us a company is insolvent, but when asked what they would say on the witness stand, they will testify in cross examination that the low side estimate may be OK and the company may not be insolvent. This is a real problem for regulators.

- A number of good things are already happening. For example, disclosure through Note 24 is good and more is needed here. This year, the NAIC will capture the data from the note or its successor. With more data from disclosure, companies can get a better idea of what's happening in the industry and do a better job on their own estimates. Also, next year our department is not going to accept actuarial opinions that exclude

A&E. The Casualty Actuarial Society has done several good sessions on A&E and this helps. Finally, there is improvement because of the rating agencies' emphasis on A&E. Rating agency pressure has caused companies to infuse more capital into these reserves. In fact, the market place reliance on the rating agencies has probably done more to improve A&E reserves than the regulators or regulation.

- Companies need to recognize that they need to do the bottom-up work. We know it's a big project, and they just have to do it.
- Regulators should push companies to do in-depth analysis. In our experience, stress testing is really important.
- Actuaries could be more open in their opinions about these exposures, and everyone should consider using the midpoint of the range, not the low point. "I have no way of estimating what it is, so I'll estimate nothing" is not acceptable on an actuarial opinion. The actuary must come up with an estimate. Companies should be encouraged to meet periodically with regulators to let the regulators know what is changing and where the company is with regard to changes. Finally, major insurers need to do a bottom-up analysis and should do these even though they are hampered by not having the money to put up the reserves.
- Much of the final determination of final liabilities will be through litigation and action in Congress. However, it would be important and could make a difference if there were better analysis of claim liabilities for A&E. This would at least let the regulators know the possibilities.
- Companies, regulators and actuaries can continue to monitor claim activity in order to maintain an appropriate best estimate of potential reserve liabilities.

Question 6. In surveying companies, we are finding that discounting these liabilities is mentioned as an important issue. Do you believe discounting these liabilities is reasonable? If not, what are your concerns?

NOTE: To assist the reader in understanding regulators' concerns, the responses have been roughly ordered from least favorably inclined to permit discounting to most favorably inclined.

- I do not believe discounting A&E liabilities is reasonable, and the statute in the state does not permit it. For the whole department, we do understand that there is some value in discounting because of the time value of money. However, discounting is just another factor in an equation that can already be manipulated. For A&E, for example, the companies come up with a number that is, at best, an estimate. If the number can then be discounted, that's just one more variable in the equation. The more variables you take out of the equation, the easier it is to solve. From our point of view, then, uncertainty plus discounting equals more uncertainty.
- Reserve levels keep going up because the final number is volatile. Therefore, discounting of this type of reserves is not

appropriate. We do not know if the ultimate reserve levels are adequate, and the payment pattern is unpredictable. Hence, there is no basis for discounting.

- Our state statute does not permit discounting except for tabular and fixed and determinable liabilities. But, discounting is not a bad idea because of the long-tail nature of these liabilities. However, it's not a good idea if the numbers are too low to begin with. In fact, we think most long-tail reserves are inadequate already, so they are already discounted. If that's true, then discounting should only be used when a company is in runoff, that is, has no new business. Also, if there is a long-term agreement with a fixed payout pattern, then discounting would be OK. There are lots of problems that would have to be resolved before we could agree to discounting.
- If you could reasonably estimate reserves, discounting would be appropriate. But no one has demonstrated that reserves can be reasonably estimated. For example, medical malpractice reserves are subject to huge year-to-year swings. These seem too big to allow discounting.
- On one hand, it seems like an undue penalty on companies to have to recognize the full nominal value of liabilities. But the uncertainty is so great that if discounting were permitted, the regulators would lose their margin of safety.
- Unless the company is in runoff and not writing any new policies, there is no discounting. The department believes ultimate reserves are understated, so why would it ever permit discounting? No one has been able to prove there are redundant A&E reserves. Even in workers compensation, the state does not allow discounting except tabular.
- Our state has long been anti-discounting. The only discounting we permit is for long-tail workers compensation, when you know what the liabilities really are. In other areas, there is too much uncertainty to permit discounting, and we don't even permit it for medical malpractice insurance, where a lot of other states do.
- We do not believe the discounting of loss reserves is appropriate for environmental reserves. We would, however, be willing to view individual cases to determine whether discounting of some magnitude is appropriate.
- We personally believe that actuaries have become sophisticated enough so that all reserves could be discounted, and it's only a matter of time before that will happen. For the last three years, the department has explicitly said that only fixed and determinable liabilities can be discounted. But the department really could go further than this. For A&E, however, there is implicit discounting in most cases already.
- Discounting is a reasonable approach. The concern is that the reserves are understated on an undiscounted basis. But I think the correct approach is to do the best possible estimate of gross liabilities and then discount. In fact, I think there should be discounting for all lines not just A&E. How can

companies carry A&E reserves to ultimate if they do not discount? They must be discounting implicitly anyhow.

- It's reasonable to discount because payouts are long term and I think companies will do better work if they could discount. To put nominal dollars on the books is not an accurate picture of a company's financial condition if these liabilities will be paid out 20 or 30 years from now.
- The approach of the casualty actuaries of not discounting is only a partial answer to the problem, at best. We should not avoid discounting because reserves are understated. We should include specific margins in the reserves and, then, discounting across the board. Not discounting because the ultimate liability estimates are in error is like making two mistakes in opposite directions and hoping that they more or less balance out. Avoiding the fundamental issues is not a very satisfying approach.

Question 7. Some have argued that discounted reserves for long-tail asbestos and environmental exposures are realistic because of the time value of money and because discounted reserves are not as volatile as nominal reserves. Under what conditions do you concur with or oppose such arguments?

- There is merit to the arguments concerning time value of money and less volatile estimates. But by discounting, companies can hide what's only five years down the road. For example, if one company is discounting liabilities that they've estimated for only five years out, and another company is discounting reserves that they've estimated for the next 30 years, then the first company could be using discounting to hide a problem that will soon occur.
- I can't disagree with the basic argument about volatility. But the key concern is that the ultimate nominal costs are not well established. In going through cash-flow studies for two specific companies, we noted that there was no consensus on whether the payment pattern was 10 to 15 years or 40 to 45 years. The payout period makes a big difference in the reserves, and not knowing the period makes discounting a risky approach when regulating for solvency. If someone could convince us that they have the final liability number pegged and can argue convincingly that there is a narrow range of payment period patterns, then we would accept discounting.
- Not discussed with this regulator, who already had made clear that in his opinion all reserves should be discounted.
- We are not aware of this argument, and none of our companies have asked to discount reserves. In any case, there is no standard estimation methodology so the liabilities are much more judgmental than otherwise.
- Our hands are tied, since our statutes do not permit discounting.
- The state has many small domestics and it's very difficult to monitor them all. If discounting were allowed, some of these

companies would take advantage of the opportunity to use it to manipulate reserves. If discounting is not permitted, however, there is more of a cushion for these companies. This is really the same old traditional argument against discounting. For big companies, it's a different story and maybe under some circumstances discounting would be possible. But we would also have to be concerned about the pattern of payouts and whether these can really be estimated. Our experience with one insurance company during the first year after setting up a run off unit was that the results were very disappointing. There was a much bigger payout than expected for the year. It would really help if we could have some confidence in the payout pattern.

- Our question is how is anyone going to make a judgment about the payout patterns? So how can we discount? If someone could come to a conclusion on the speed of the payment pattern, then we would agree to consider changing the statute to permit discounting. But even if we could conclude about the speed of the payments, the federal government could change the payment pattern by changing the law.

• I agree with the benefits. But the other side of the coin is that discounting can remove the cushion from the reserve. Also, there is the judgment factor because of selection of the interest rate. Plus, there is the problem of adjusting the interest rate for uncertainty, which could even lead to a negative discount rate.

• If no one knows what the liability is, how can discounting be permitted? There is so much discretion in estimating the liability that discounting does not make sense. Most actuarial work papers have a huge range (e.g., \$50 million to \$150 million). The accuracy of the ultimate estimate is questionable, and the companies book near the bottom of the range.

• I haven't heard this argument. I can guess that the discounted reserve would be less volatile because it is smaller. But I don't think much of the argument.

• We don't think discounting is appropriate.

Question 8. Some have argued that companies would be willing to invest more resources in estimating their liabilities associated with environmental exposures if they could use discounting. What do you think of this argument?

• We think this argument is probably true, but we still don't like discounting. We know companies probably post the lower-end estimate because they can't post the midpoint on an undiscounted basis. And we believe companies probably don't finish studies on A&E liabilities if it becomes clear during the study that the company is not going to be able to deal with the undiscounted reserves implied by the completed work.

• This argument is specious. Companies should behave responsibly and put up the resources to obtain the best estimate they can. If they do not do this and inadequately estimate the liability, they will find themselves in receivership.

Being afraid of the answer is a failure to fulfill their fiduciary duties. The public's trust of the entire industry is on the line.

- We have heard the argument and think it has some validity. However, we don't like being put in the position of playing tit for tat—you give us discounting and we'll give you better estimates. The companies have a responsibility to produce the best possible estimates in any case. But, overall, there is a lot to be said for this argument and permitting discounting probably would make companies more willing to produce better reserve estimates here.
- I agree with the statement. But I don't agree that not being able to discount should keep companies from doing what they should be doing. So, in the end, I think the argument is just a smoke screen that's being used by companies.
- If companies could discount, they would be more inclined to find out what the answer is. How can they possibly carry undiscounted reserves? So, if they could discount, they might be willing to get their heads out of the sand. We have had two inquires, as I recall, but to my knowledge no one has yet actually explicitly discounted. I think this is because of problems with other states, which don't permit discounting, rather than a reluctance to do it in our state.
- I don't think it matters. Accountants are approaching the reserve issues, and there are many different pressures to compete in the marketplace. When A.M. Best says that reserves are 15 percent too low on an undiscounted basis, then the companies are already discounting. I don't think management says to itself, "We would do a better job if we could discount." Companies will behave the same, with or without discounting.
- We don't think discounting is appropriate for these liabilities.
- Companies already complain about how much they spend on estimating reserves, and we're not sure top management wants to keep spending more money on this. As a regulator, I don't want to make it easier for companies to reserve less. I want companies to do the right thing. I want companies to reserve so that they will be there tomorrow, to be solvent.
- This argument is hogwash. The company should spend the resources to do it right and discounting should not make a difference.
- Our state allowed discounting partially due to the same argument for certain workers compensation entities, and this allowed companies to write business on artificial surplus, thus creating larger problems. At the time discounting was allowed, regulators could see solvency issues in the future but could not act since, technically, the balance sheets of these entities were in compliance with the statutory guidelines. Our state is now having to deal with some of these problems from a retrospective outlook, which is several times more difficult than a prospective outlook.
- Companies already have dedicated staffs for A&E, so the argument is not valid. Those that have access to capital to put up the reserves have already done the analysis, and those without access to capital wouldn't do the analysis anyway.

- This seems to be a weak argument, because we don't believe the exposure can really be estimated. Even if a company doubled the amount it is willing to spend estimating its environmental exposure, the company could still not get the answer.

Question 9. Although asbestos and environmental exposures are the major mass tort liabilities of current concern, we are also interested in emerging exposures. Are any other mass tort exposures becoming a significant issue in your examinations?

- The important issue is, has the company identified the new exposure if it is emerging? We have one company that has an issue [the regulator did not say what], but they have identified it, so we are pretty comfortable as regulators. Identification is key.
- Tobacco is a concern generally and breast implants is a concern for one of our domestic companies. We have not seen tobacco turn up yet in examinations, but in mergers tobacco has been an issue, particularly the exposure to pesticides used in growing tobacco. We also have some concern over second-generation claims for environmental, like lead paint. Overall, nothing really big seems to be on the horizon.
- We don't see any new emerging mass torts in our domestics.
- Mass torts other than A&E are not a big issue.
- Our department's actuaries have not come across any other mass tort exposures that they believe will be significant in the near future. However, tobacco may be a possibility because the court cases seem to be shifting against the tobacco companies. I personally have no idea which insurers would have this type of exposure if it emerged as significant.
- We have noticed a little bit of lead paint for the smaller domestic insurers, but it's not a major issue.
- None stick out as being important, even on an emerging basis. But sexual harassment has shown up in some cases, and this could grow. Also, we expect there to be growing claims for surgical implants. Finally, as the court cases seem to be going, tobacco for reimbursement of health expenditures could become large.
- We have outside actuaries look at other possible mass tort exposures. The next one is going to be tobacco. Others are not showing up in a significant way in our examinations.
- We are aware of no other mass tort exposures that pose the concerns of asbestos and environmental liabilities.
- There are none that are becoming significant at this time, although we are aware that issues like noise pollution, tobacco, and EMF might be on the horizon.
- No other mass torts are becoming significant in our state to my knowledge. We know that other things will come along and take the place of A&E, but we do not know what they are.
- No other mass tort exposures are becoming a significant issue in our examinations.

Question 10. Are there are any issues that we haven't talked about that you would like to raise or are there any concerns or opinions that you would like to make the Academy work group aware of?

- Our biggest issue is the actuarial opinions. We view these as a real tool. We need more comfort, and we can't have confidence if actuaries won't opine on A&E or have large caveats. The actuarial opinion always has a disclaimer. The opinion is clean, but within a year, or even less, the company strengthens reserves, sometimes by hundreds of millions of dollars. So in this area, actuarial opinions are not credible. At least one state is now saying that the actuary is not meeting its regulations if an opinion is not given for A&E exposures. A second issue is the range of estimates. Our state typically hires a consultant to examine A&E reserves, and the consultant often gives us a range, for example, from \$600 million to \$1 billion. Such a gigantic range is not meaningful or helpful. We also have other concerns. Loss adjustment expenses are of concern, since they are often reserved at approximately one year's additional payments. And derivatives are a concern. People that are analyzing the statements are accountants, not actuaries, so things need to be put in more understandable language. At the NAIC level, the Life and Health Actuarial Task Force and the Casualty Actuarial Task Force don't get input from the financial people. It would probably help a lot if they did.
- Everyone should be talking about doing a bottom-up estimate of A&E exposures, and everyone should be pressuring companies to do real estimates and not just watch the development. Companies need to book a number that's good.
- Convince the IRS to let companies take a tax deduction for catastrophe reserves. We've learned how to manage A&E, but not catastrophes. The department is really worried about this exposure, and all types of it—floods, windstorms, tornados, earthquakes, etc. It's going to get worse with population increases and concentrations of building in areas most vulnerable to catastrophes of one type or another.
- The whole area of reserve discounting merits continuing study and debate. As the dollar amounts become greater and greater, the industry has an incentive to want to discount. However, as a regulator, I am not yet willing to accept discounting on a regulatory basis. If, five years ago, a company could have convinced us that \$200 million was an adequate A&E reserve, the same company would probably have reserves now at around \$1.0 billion.
- Europe and the U.K. may be an emerging problem, and there may be other issues on the international side. Also, reinsurance and counter party exposures are issues. I think this could be a big problem, especially a ways down the road. For example, how does Equitas really affect the reinsurance that will be available a few years from now?
- The legal/legislative issues are always of concern, since the courts can rewrite large numbers of policies at any time when they make their rulings in suits.
- We need an Actuarial Standard of Practice on estimating these types of liabilities (i.e., mass torts). If there were a standard, the companies might be less likely to duck their responsibilities.
- Runoff expenses are an important issue. In one recent case, a company's reserve was about \$10 million for unallocated expenses. When runoff was discussed at a hearing, it was estimated the cost would be \$50 million. Then, after only one year of runoff, the expenses were estimated at \$100 million or more.[Note: The numbers here were changed to protect confidentiality.] The issue is, should you establish expense reserves to runoff a company? At least one prominent regulator has argued against discounting because companies don't reserve for runoff expenses. This really cuts down on the margins you have to work with when runoff occurs. The bottom line issue is how to reserve for and fund liabilities. Companies say that environmental liabilities will be paid off over 50 years with 1 percent of premium, but you have to weather today and stay in business if it's going to work. Statutory accounting has gone a long way in classifying the quality of assets on the life side, but on the P/C side it has not made companies reserve adequately. We hear these aggregate ranges and wonder if there should be some disclosure of the actual range. As regulators we just see one number, but we don't know where in the range that number lies. Regulators need to see the range and know the opinion of the actuary. For P/C companies, there has been a lot of talk during codification of statutory accounting about inadmissible assets and similar issues. But what we really need to know about is the strength of the reserves. We also need actuaries to opine on the collectibility of reinsurance. That's been a denial all along for all P/C companies. It's not just an actuarial issue, its an accounting issue, too, because the accountants don't want to have to decide if reinsurance is collectible and only want to know about it if it's clearly not collectible.

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