

Insights

Summary of U.S. Property & Casualty Insurers' Asbestos Claim Reserves at Year-End 2012

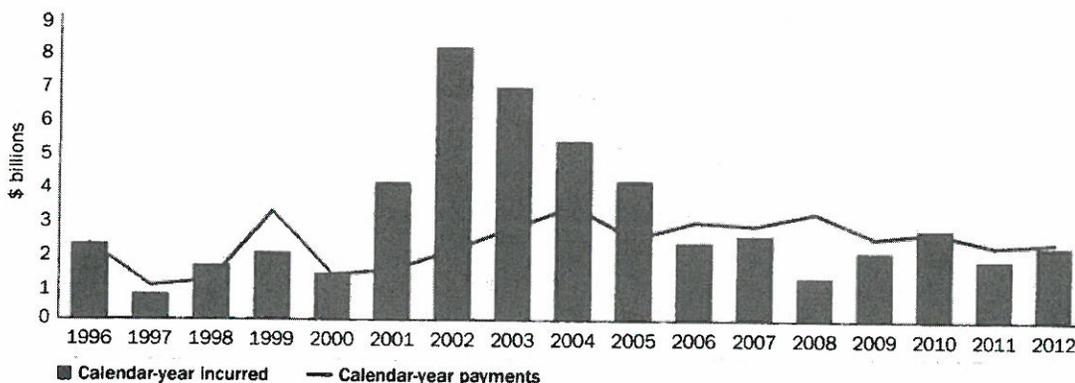
Industry losses through year-end 2012

Asbestos claims continued to bedevil the U.S. property & casualty (P&C) insurance industry in 2012. The industry incurred \$2.2 billion of additional asbestos losses* during 2012, similar to the increase in each of the preceding three years. Annual incurred losses have varied between \$1.8 billion and \$2.7 billion since hitting a low of \$1.3 billion in 2008 (Figure 1).

Loss payments for 2012 totaled \$2.3 billion, about the same as the \$2.2 billion paid during 2011, but less than the \$2.8 billion paid per year, on average, from 2003 through 2010.

On a cumulative basis, the industry has paid \$52 billion through 2012. Combining this with the \$23 billion in held reserves produces cumulative incurred losses of \$75 billion at year-end 2012 (Figure 2, page 2). In recognition of the continuing upward development of the industry's incurred losses, A.M. Best increased its estimate of the industry's ultimate asbestos claim costs from \$75 billion to \$85 billion in December 2012.

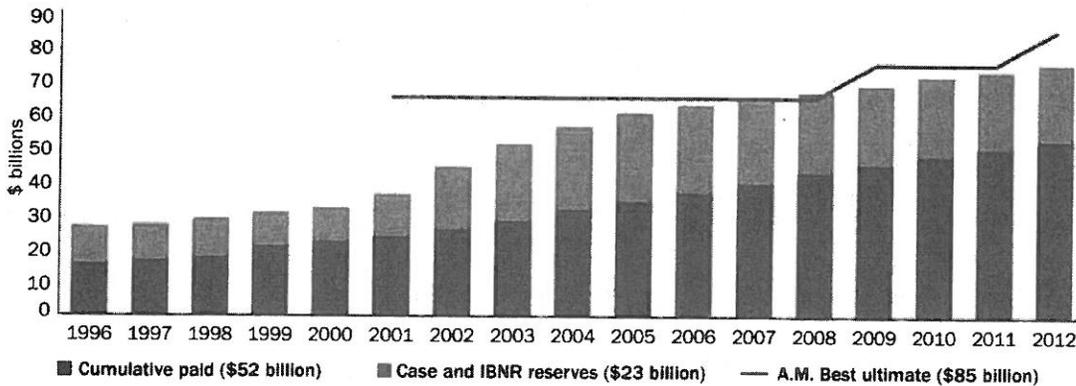
Figure 1. Annual incurred losses



Source: Towers Watson analysis of annual statement data compiled by A.M. Best and other industry data

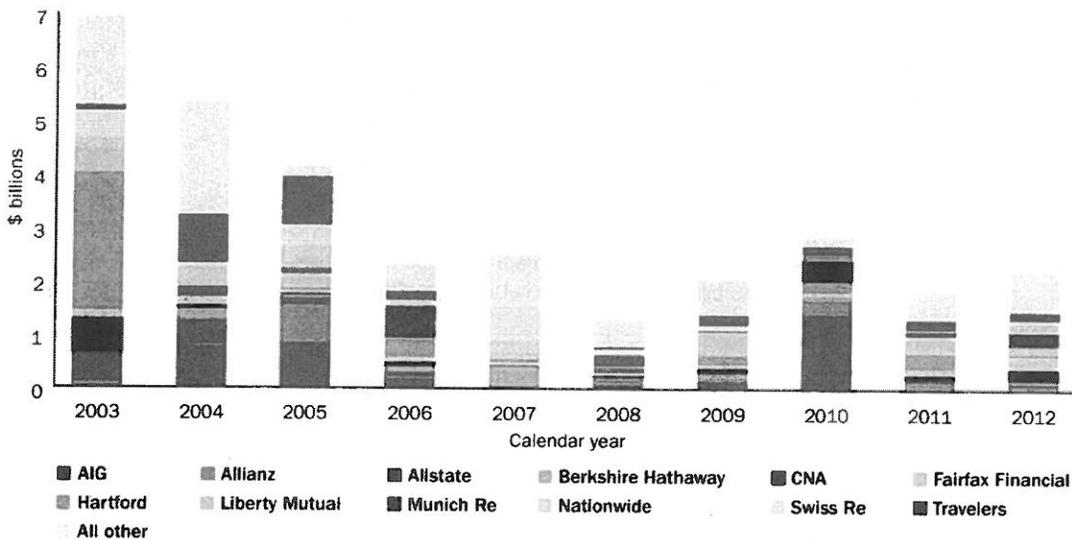
*This article uses the term "loss" to refer to loss and loss adjustment expense combined, unless otherwise specified. Also, figures in this article do not include workers compensation claims, as insurers typically do not include workers compensation claims in their reported asbestos losses. All loss figures in this article are calculated by Towers Watson based on analysis of financial statement data compiled by A.M. Best, as well as industry data from various other sources.

Figure 2. Cumulative incurred losses



Source: Towers Watson analysis of annual statement data compiled by A.M. Best and other industry data

Figure 3. Top 12 A&E insurers — Change in recognized asbestos net ultimate losses 2003 – 2012



Source: Towers Watson analysis of annual statement data compiled by A.M. Best and other industry data
Grossed up for amounts ceded by Fireman's Fund, Munich Re America and Swiss Re America to respective non-U.S. parents

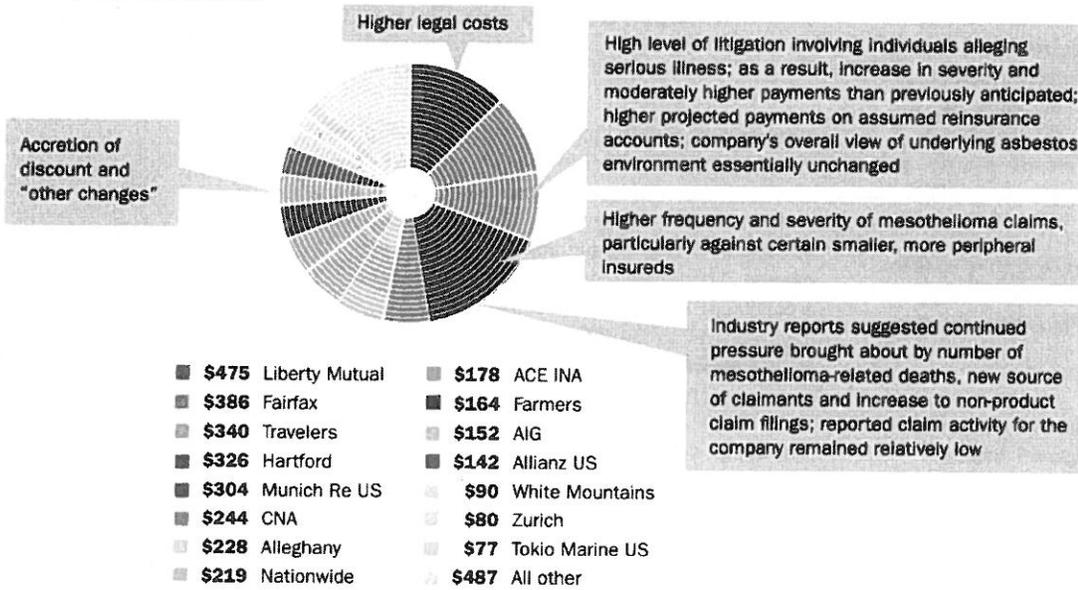
Since insured asbestos losses relate almost exclusively to legacy business underwritten in the 1980s and before, the incurred losses in recent years signify deterioration of prior years' loss reserves rather than the addition of new exposures. The continuing deterioration in the industry's asbestos loss reserves has taken place against a backdrop of relative stability in the external asbestos litigation environment in recent years. In a stable claim environment, one would expect no further development in incurred losses once reserves reach adequately funded levels. While the industry's annual incurred losses did drop sharply from 2003 to 2008, they subsequently rebounded somewhat

and have stubbornly remained in the \$1.8 billion to \$2.7 billion range since 2009.

Figure 3 breaks out the industry's annual incurred asbestos losses from 2003 through 2012 for each of the top 12 asbestos and environmental (A&E) insurers as of year-end 2012, as ranked by held A&E net reserves at year-end 2012.* This chart demonstrates a seeming shift in the pattern of the industry's reserve increases over time. In earlier years, we typically see a small number of insurers take very large reserve increases that drive the overall pace of industry incurred losses in those years (for example, Hartford in 2003, Travelers in 2004 – 2005 and Munich Re in 2006).

*Figures for Allianz, Munich Re and Swiss Re are restated to include estimated amounts ceded by Fireman's Fund, Munich Re America and Swiss Re America to their respective European parents.

Figure 4. Asbestos reserve strengthening during 2011 – 2012 (\$ millions)
Publicly disclosed reasons



Source: Towers Watson analysis of insurer annual reports and other public disclosures

During 2011 and especially 2012, however, the industry's incurred asbestos losses were spread remarkably evenly, with almost all major A&E insurers taking a modest increase. This suggests that the forces affecting the industry's asbestos reserves in the last two years were global in nature rather than company-specific.

Some limited insight into the factors driving the asbestos reserve increases may be gained by inspecting insurers' annual reports and other public disclosures. Figure 4 shows that among companies incurring substantial asbestos losses during 2011 and 2012, only five insurers provided public commentary on their reserve increases. Two of these five insurers, Hartford and Munich Re, cited a high level of activity on the most serious type of claim, mesothelioma, and a third company, Travelers, more generally cited "individuals alleging serious illness." One insurer, Liberty Mutual, mentioned "higher legal costs" as a driving force for its reserve increase. And finally, one insurer, Hartford, stated that the higher-than-expected claim activity was particularly notable against "smaller, more peripheral insureds." Notwithstanding the reserve increases, one of the insurers, Travelers, noted that its "overall view of the underlying asbestos environment is essentially unchanged" and another, Munich Re, stated that its "reported claim activity remained relatively low."

The above public statements are generally consistent with remarks made to Towers Watson by other companies.

The industry consensus view is that while the overall asbestos claim environment has been largely stable over the last several years, it has been worse than expected for defendants and insurers in a few specific areas.

Most notably, there have been more new mesothelioma claims than expected. Many of the new claims relate to claimants alleging bystander or secondhand exposure to asbestos. Claim forecasts based purely on early epidemiological models such as Nicholson* may underestimate the number of current and future asbestos claims, as the early models were based on studies of workers becoming ill through occupational exposure. Some industry practitioners attempt to remedy the omission of bystander claims from the early models by rescaling their claim forecasts to the actual level of current claim filings. This may still result in under-projections of future claims, however, if bystander exposures and claims drop off more slowly than occupational exposure claims.

"The industry consensus view is that while the overall asbestos claim environment has been largely stable over the last several years, it has been worse than expected for defendants and insurers in a few specific areas."

*Nicholson WJ (1982). "Occupational Exposure to Asbestos: Population at Risk and Projected Mortality 1980 – 2030." *American Journal of Industrial Medicine* 1982; 3:259 – 311

Another often-cited reason for increased costs in recent years is higher legal costs. We observed legal expenses increasing for defendants and insurers in the mid- to late 2000s as they adapted their defense strategy to a transformed litigation environment that focused on individual adjudication of claims. We believe the upward trend in legal costs has flattened in the 2010s, though some insurers may only now be adjusting their reserves for the cost increase of the prior years.

A third factor driving up costs in recent years appears to be the plaintiff bar's success in obtaining large claim awards from previously low-profile defendants.

Impact on earnings

The industry's continued asbestos woes have adversely impacted earnings. Figure 5 displays the drag on earnings from 2008 to 2012 caused by asbestos losses. Earnings drag is defined as calendar-year net incurred asbestos losses divided by calendar-year net earned premium. The inherent mismatch between the numerator and denominator in this formula, where the losses arise from policies written decades ago but reduce income earned in the current year, illustrates the unique hurt to insurers' earnings caused by asbestos losses. The

“Claim forecasts based purely on early epidemiological models such as Nicholson may underestimate the number of current and future asbestos claims.”

earnings drag for the industry averaged a half point in that five-year period. Seven of the top 12 A&E insurers experienced an average earnings drag of one point or more per year during that period. While a half- or one-point earnings drag in any one year may seem modest, it becomes more significant when viewed as a continuing impact over an extended period. P&C insurers have added significant amounts each year to their asbestos reserves for over 15 years, and the trend appears likely to continue.

Survival ratios

Industry analysts often use the survival ratio metric to assess insurers' asbestos reserve adequacy. The survival ratio is calculated as held reserves divided by annual paid losses, where the annual paid losses are typically determined by averaging the payments from the preceding three years. The industry paid \$2.4 billion per year, on average, from 2010 through 2012, thus the year-end 2012 reserves of \$23 billion produce a survival ratio of 9.7.

Figure 5. Top 12 A&E insurers — Earnings drag caused by asbestos losses from 2008 – 2012

	Earnings drag (calendar-year incurred losses/calendar-year earned premium)					
	2008	2009	2010	2011	2012	2008 – 2012
AIG	0.3%	0.7%	6.7%	0.7%	0.1%	1.6%
Allianz	1.4%	0.8%	5.0%	1.2%	1.7%	2.0%
Allstate	0.0%	0.0%	0.0%	0.1%	0.1%	0.0%
Berkshire Hathaway	0.3%	0.5%	0.5%	0.0%	0.3%	0.3%
CNA	0.5%	1.3%	0.0%	0.9%	3.3%	1.2%
Fairfax Financial	1.7%	2.5%	2.2%	3.7%	6.5%	3.4%
Hartford	0.8%	1.6%	2.2%	2.9%	0.4%	1.6%
Liberty Mutual	0.1%	2.2%	-0.5%	1.5%	0.6%	0.8%
Munich Re	5.5%	0.0%	8.5%	1.4%	5.5%	4.2%
Nationwide	0.3%	0.3%	0.8%	0.3%	1.1%	0.6%
Swiss Re	3.2%	2.6%	-2.0%	-2.2%	2.2%	1.0%
Travelers	0.2%	0.9%	0.7%	0.8%	0.8%	0.7%
All other	0.2%	0.2%	0.1%	0.2%	0.2%	0.2%
P&C industry	0.3%	0.5%	0.6%	0.4%	0.5%	0.5%

Source: Towers Watson analysis of financial statement data compiled by A.M. Best and other industry data
Grossed up for amounts ceded by Fireman's Fund, Munich Re America and Swiss Re America to respective non-U.S. parents

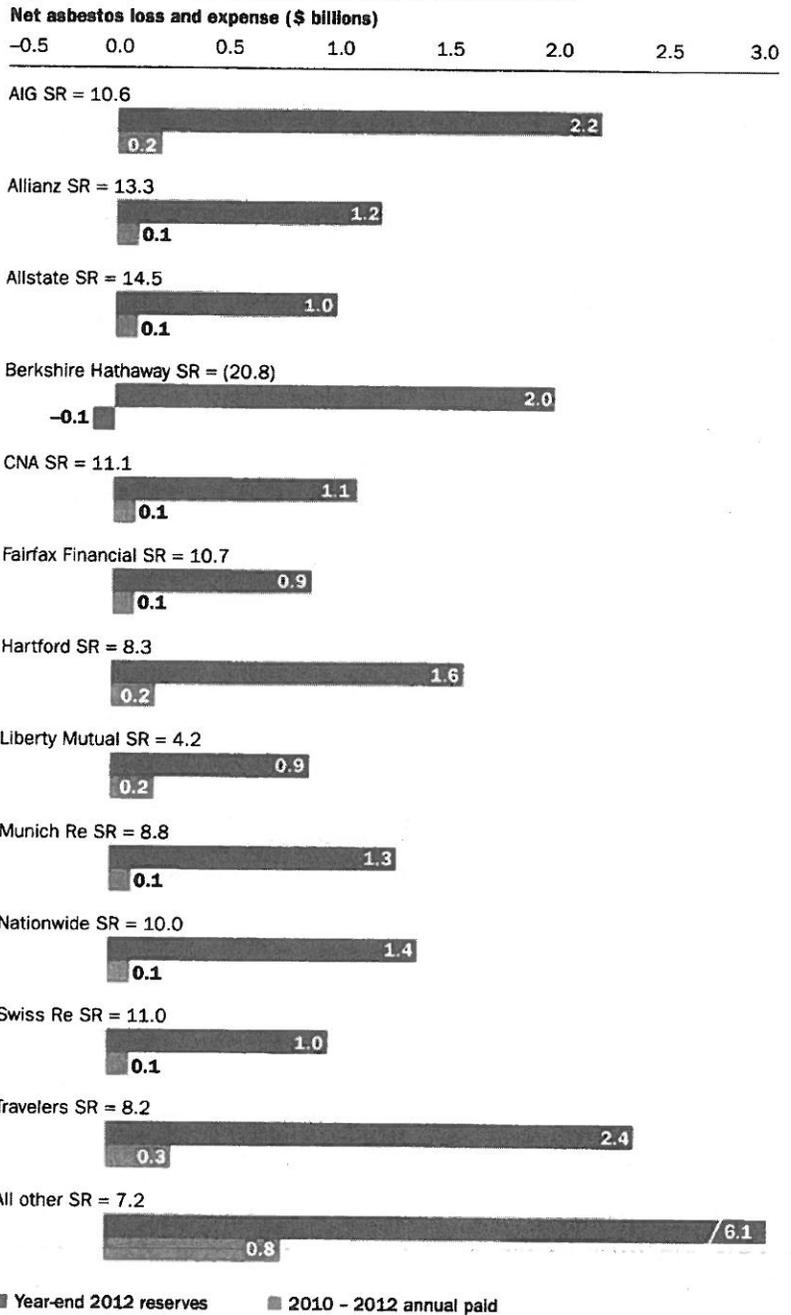
Survival ratios for individual companies vary widely (Figure 6) depending upon the insurer's book of business, reserving protocol and settlement practices, and therefore, the ratios must be interpreted with caution when used to assess relative reserve adequacy. **Notwithstanding these limitations, companies with low survival ratios are more likely to require reserve additions in the near future to fund continuing claim payments.**

Future payments

The survival ratio metric suffers from the shortcoming that it measures reserves against a constant rate of loss payment, when in fact, loss payments are expected to decrease over time as old claims are resolved and new claim filings taper off. To address this shortcoming, it is possible to generalize the survival ratio calculations by conceptualizing the unpaid liabilities as a function of the current level of annual payment, the life span of asbestos loss payments and the decline in payments over this life span (Figure 7, page 6).

In Figure 7, actual asbestos loss payments for the industry are displayed for 2007 through 2012, along with four illustrative scenarios with respect to future payments. Actual payments show a downward trend from 2007 to 2012; the future annual payments are assumed to begin in 2013 at amounts ranging from \$2.0 billion to \$2.3 billion, then decline through 2050 at various rates. The most optimistic scenario assumes the industry's future loss payments will exactly exhaust the held reserves of \$23 billion at year-end 2012. The other three scenarios assume shortfalls of \$4 billion to \$12 billion in the held reserves.

Figure 6. Top 12 A&E insurers' asbestos net survival ratios



Source: Towers Watson analysis of financial statement data compiled by A.M. Best and other industry data. Grossed up for amounts ceded by Fireman's Fund, Munich Re America and Swiss Re America to respective non-U.S. parents

The decline in annual payments is fundamentally driven by the decline in the number of claims. Figure 7 shows the projected drop-off in new mesothelioma claims from current levels for comparison to the decline in payments.* Insurers' payments are expected to decline more quickly than claim filings for two main reasons. First, policy limits serve to cap and therefore truncate loss payments above the limits. Second, insurers frequently negotiate buyouts and other settlements with their policyholders that involve bulk settlement payments relating to both past and future claims. Such settlements typically involve the liquidation of the defendants' insurance coverage assets for discounted payments from their insurers and the release of those insurers from future policy obligations. Without the acceleration of claim payments from these settlements, the insurers' liability to defend and pay claims would extend over several decades.**

Future incurred

Similar to the previous analysis of expected future payments, where payments are decomposed into an initial payment level and a declining payment stream over time, an analogous approach can be used to analyze future incurred losses as a function of decreasing annual amounts. Figure 8 shows the industry's actual annual incurred losses from 2007 through 2012, plus four scenarios regarding possible incurred development in the future. The four scenarios assume annual incurred losses will range from \$1.0 billion to \$2.2 billion in 2013 and then taper to zero over different time horizons. Total future incurred losses range from \$0 to \$12 billion in the four scenarios. The disparate scenarios reflect different assumptions regarding the nature and cause of recent and future reserve increases, and correspond to the four scenarios of funding shortfalls in Figure 7.

Figure 7. U.S. P&C insurance industry — Illustrative future asbestos payments

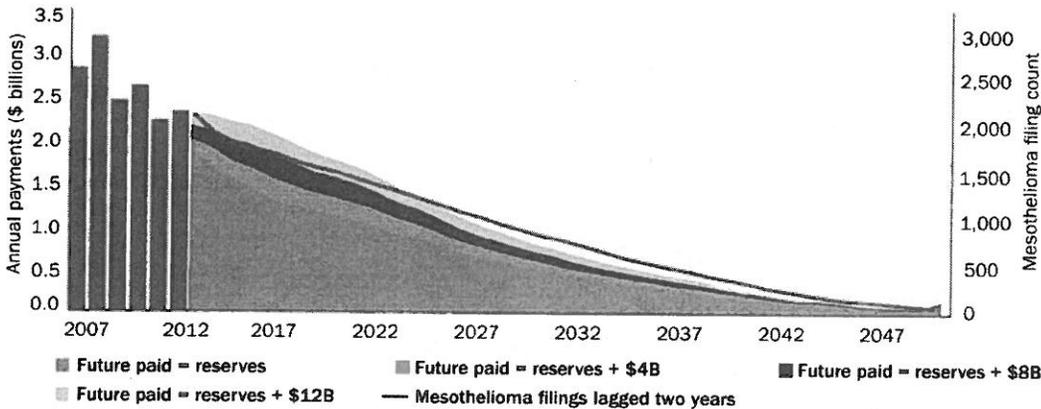
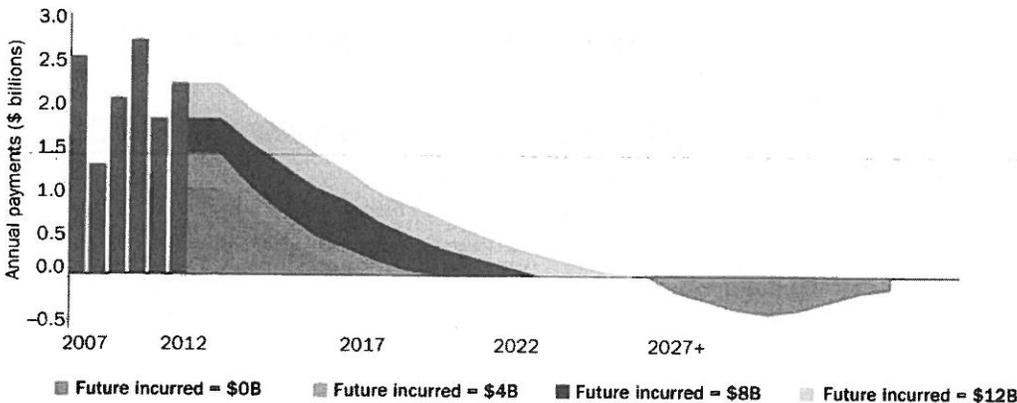


Figure 8. U.S. P&C insurance industry — Illustrative future asbestos incurred



*The claim filings have been shifted by two years to roughly approximate the time from claim filing to claim payment. For simplicity, our discussion ignores the impact of claim severity trend as well as non-mesothelioma claims.
 ** Reinsurers often enter into commutation settlements with their cedants that produce similar accelerations in loss payments.

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The most optimistic scenario, where current held reserves are assumed to be adequate overall, assumes incurred losses of \$1.0 billion in 2013, followed by smaller amounts in 2014 through 2016. The amounts incurred in 2013 through 2016 are reversed by negative incurred losses after 2027, as loss reserves are eventually found to be redundant. Though the timing and amounts of the incurred developments in this scenario were selected judgmentally, the scenario illustrates the simple notion that if the industry's current reserves are adequate, any additional reserve strengthening will eventually be offset by reserve takedowns.

The other three scenarios in Figure 8 assume the industry's current reserves are inadequate overall. The most pessimistic of the scenarios assumes incurred losses of \$2.2 billion in 2013 and additional incurred losses each year until 2025, for total future incurred losses of \$12 billion. The two middle scenarios assume smaller incurred losses over shorter time periods.

The most optimistic scenario above, where current industry reserves are assumed to be adequate overall, appears intuitively unrealistic given the persistent and widespread reserve strengthening among insurers in recent years.

Final thoughts

As stated earlier, we believe pockets of deterioration in the claim environment have exerted upward pressure on the industry's asbestos losses in recent years. We now discuss two additional factors that we believe may help explain the industry's continued reserve increases.

The first alternative explanation for the industry's continued reserve increases is that the industry may be taking an optimistic view when assessing its asbestos liabilities. **The long time horizon of asbestos claims means that a part of the liabilities is many years away from payment and subject to great uncertainty.**

As a result, companies may differ significantly in their evaluation of the future trajectory of asbestos liabilities, especially in the far tail. Some companies may be reluctant to extrapolate from recent adverse developments, such as the **higher-than-expected mesothelioma filings and defense expenditures, to the future tail period.** Interestingly, A.M. Best commented recently that “asbestos loss payments have roughly approximated asbestos incurred losses since 2010... **As a result, it appears the industry is using a pay-as-you-go approach for asbestos claims.**”*

Another key factor contributing to the upward development in the industry's asbestos losses, in our view, is a **systematic low bias in the procedure used by insurers to estimate their asbestos liabilities.** We believe the technique used to estimate asbestos liabilities does not adequately consider the impact of adverse, low-probability tail events in many cases. Many companies perform an exposure-based analysis, where a liability estimate is developed for each individual policyholder account; the account estimates are then added to produce an estimate for the whole portfolio. In our experience, when developing the individual account estimates, it is common for companies to exclude from consideration extremely adverse outcomes deemed to have a low probability of occurring. However, an extreme event that is unlikely to occur on any specific account may, in fact, occur predictably on some unspecified account when considered over an entire portfolio of many diverse accounts. In such cases, an aggregate provision is needed to correct for the low bias in the individual account estimates. Otherwise, the company's total reserves will develop upward as the low-probability tail events emerge.

We believe the forces that have driven insurers' asbestos reserves upward in recent years are likely to continue for a number of years. As a result, the industry can expect to add several more billion dollars to its hefty tally for this vexing mass tort.

*Best's Special Report, “Asbestos Losses Fueled by Rising Number of Lung Cancer Cases” (October 28, 2013)

Towers Watson's Asbestos Practice

Towers Watson's Asbestos practice routinely estimates asbestos personal injury liabilities on behalf of reinsurers as well as individual corporations named as defendants in the underlying litigation. We also perform methodology studies. Asbestos liabilities can be a major consideration in both insurance-related and other corporate transactions. We have assisted both buyers and sellers of the liabilities. We have provided expert testimony in bankruptcy cases and other matters. Additionally, we have authored various papers and given numerous speeches regarding asbestos.

About the Author



Steve Lin is a Fellow of the Casualty Actuarial Society and a Member of the American Academy of Actuaries. He is a consultant in our San Francisco office. He has an M.A. in physics from Columbia University, as well as an M.A. in international relations from Johns Hopkins University. Since joining the company in 1996, Steve has been a member of the Towers Watson Asbestos and Environmental practice group. He

has spoken at various professional actuarial meetings and written articles for *Insights* and *Emphasis* regarding insurers' asbestos reserves and approaches to managing asbestos liabilities.

Steve's experience includes:

- Reviews of asbestos and other toxic tort liabilities of corporate defendants, as well as numerous insurance and reinsurance companies
- Assistance to state insurance regulators
- Assistance on bankruptcy reorganizations and other litigation support
- Development of Towers Watson's proprietary asbestos liability projection model

In addition, Steve has worked on general reserve evaluations and rate studies for a number of P&C insurers, reinsurance companies and self-insured pools, with a particular focus on construction defect and other unique claims.

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