

## Impact of Current Tort Environment on Asbestos Reserves

CAS 2010 Annual Meeting  
November 8, 2010

Charlie Mullin

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Are insurers under or over reserved for asbestos losses?

Insurance Industry	Dollars
Paid prior to 2000	\$20 B
Paid 2000 to 2009	\$25 B
Reserves (2010+)	\$23 B
Incurred-to-Date	\$68 B

Opinion	Ultimate Net Loss (UNL)	Implied Shortfall
AM Best	\$75 B	\$7 B
Milliman	\$85 B	\$17 B
Bates White	Less than \$65 B	Surplus

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Expectations for future tort losses and trust funding underlie difference in UNL projections

Asbestos expenditures	Milliman	Bates White
Paid prior to 2000	\$50 B	\$50 B
Paid 2000 to 2009	≈ \$85 B	\$85 B
Projection 2010+	≈ <b>\$140 B</b>	<b>\$60 B</b>
Total	\$275 B	\$195 B

- Paid prior to 2000: RAND study
- Paid 2000 to 2009: \$55B tort payments plus \$30B trusts funding
- Projection 2010+: Milliman and Bates White projections

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Agenda

- Factors that drive asbestos litigation
  - Economic incentives
  - Epidemiology
- Current litigation environment
- Expected future litigation environment
- Implications for reserves
  - IBNR for individual accounts
  - Portfolio Reserves

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The rise and fall of mass recruitment

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What can we learn from this experience—what would have lead someone in 2003 to predict the collapse in non-malignant claims?

Year	Number of Claims (Approximate)
1985	1,000
1987	2,000
1989	4,000
1991	5,000
1993	5,000
1995	7,000
1997	12,000
1999	10,000
2001	15,000
2003	21,000
2005	10,000
2007	3,000
2009	2,000

Source: Bates White

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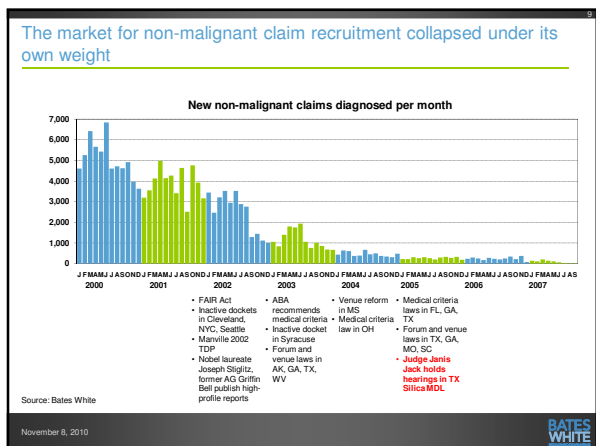
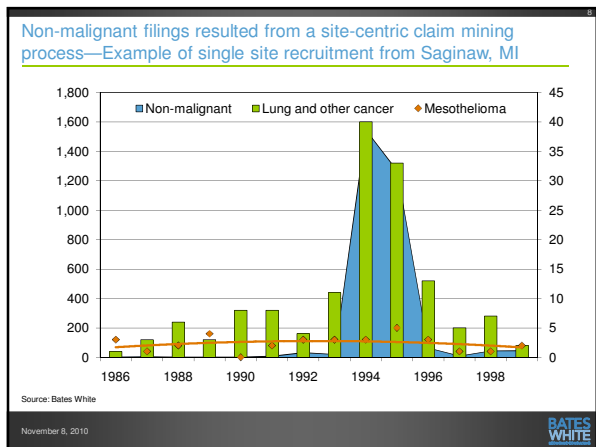
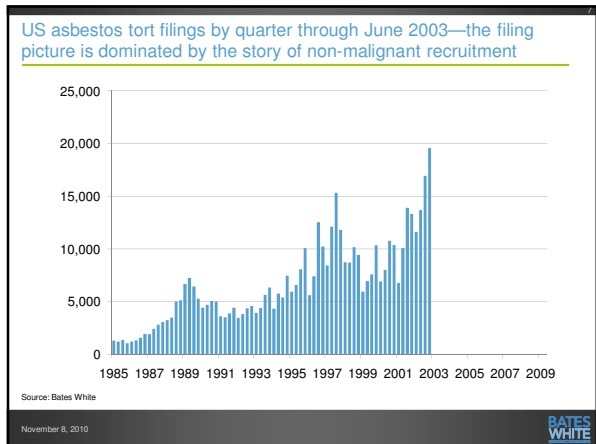
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Takeaways from our mass recruitment discussion

- Mass recruitment of tort claims has ceased and is unlikely to return
  - 95% decline in non-malignant claims
  - 60% decline in lung and other cancer claims
- Major shifts have occurred and will happen again in the tort environment
  - These shifts can be detrimental to defendants and insurers
  - These shifts can be beneficial to defendants and insurers
- The recent historical tort environment has always been a poor predictor of the likely future tort environment
  - Extrapolating the recent history is not a forecast
  - Forecasts should be scenario based and model for likely changes in the tort environment

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The current litigation landscape

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Known and agreed upon facts

- Mesothelioma claims dominate the current landscape
- No one party observes all of the information
  - Defendants know their spend and only some disclose
  - Plaintiff law firms know the recoveries of only their claimants
  - Insurers observe a patchwork quilt
- All data sources indicate the following trends
  - Non-mesothelial expenditures have declined
  - Mesothelioma expenditures (indemnity + defense) have increased
  - Total expenditures for the largest defendants have declined
  - Many new defendants have emerged
  - Wealthy 524(g) trusts have emerged

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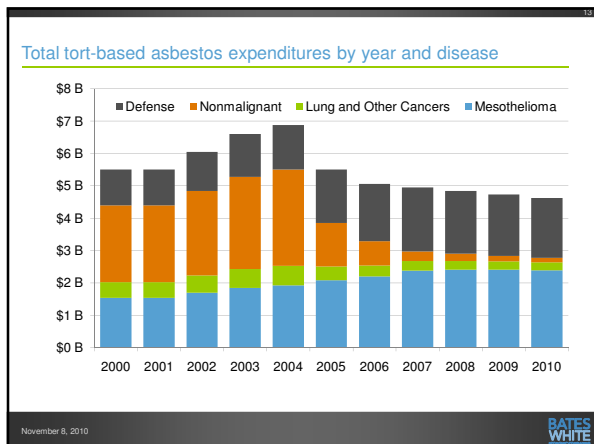
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- ### Building blocks of total tort expenditure
- Building blocks
    - Distribution of defendant indemnity payments by disease
    - Defense-to-indemnity ratio
    - Number of mesothelioma claims
    - Value of a mesothelioma claim
  - Sanity checks
    - 10-K data
    - Verdicts
    - Insurance industry expenditures
    - Profits of plaintiff law firms
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### Distribution of defendant indemnity payments by disease

Year	Mesothelioma	Other cancer	Non-malignant
1985 to 2000	35%	10%	55%
2001	35%	10%	55%
2002	35%	10%	55%
2003	35%	10%	55%
2004	35%	10%	55%
2005	55%	10%	35%
2006	65%	10%	25%
2007	80%	10%	10%
2008	82%	10%	8%
2009	84%	10%	6%
2010	85%	10%	5%

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Defense costs relative to indemnity payments

Year	Defense-to-Indemnity Ratio
2000	25%
2001	25%
2002	25%
2003	25%
2004	25%
2005	45%
2006	55%
2007	65%
2008	65%
2009	65%
2010	65%

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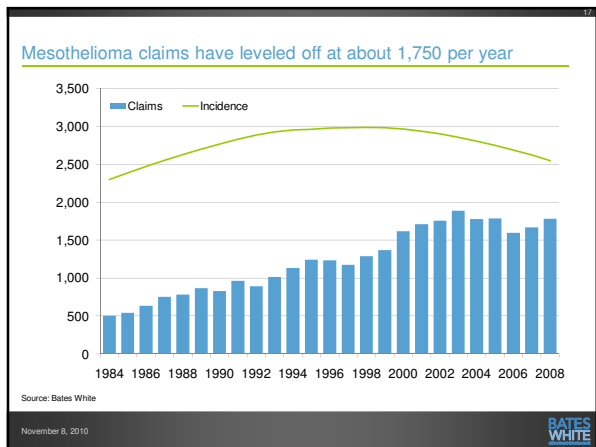
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In 2000, mesothelioma claims received about \$1 million on average

Item	Value
<b>Total Costs</b>	<b>\$50 B</b>
Defense-to-indemnity ratio	25%
<b>Defense Cost</b>	<b>\$10 B</b>
<b>Indemnity Cost</b>	<b>\$40 B</b>
Mesothelioma share	35%
<b>Mesothelioma Indemnity</b>	<b>\$14 B</b>
Pre-2000 resolved mesothelioma claims	15,000
<b>Average value of a mesothelioma claim</b>	<b>≈ \$900,000</b>

- FAIR Act proposed a mesothelioma value of \$1.1 million (Plaintiffs' bar did not object to this value)

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Today, mesothelioma claims received no more than \$1.5 million on average

- “Show Me The Money”<sup>1</sup> documents this fact through multiple routes
  - Naming and settlement patterns
  - Disclosed defendant expenditure levels
  - Verdicts
  - Plaintiff law firm profits
- FAIR Act (2002 to 2005) proposed \$1.1 million per mesothelioma claim

[1] Charles E. Bates and Charles H. Mullin, “Show Me The Money,” MEALEY’S Litigation Report: Asbestos 22, no. 21 (2007) <http://www.bateswhite.com/insight.php?NewsID=11>

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Typical settlement pattern for active defendants and claimants

Defendant perspective	Percentage	Range	Average
Target	Less than 5%	More than \$250,000	\$600,000
Significant risk	15%-20%	\$50,000 to \$250,000	\$100,000
Non-core	40%	Less than \$50,000	\$15,000
Dismissed	40%	\$0	\$0

Claimant perspective	Low	High
Named defendants	20	50
Target	1	1
Significant risk	3	6
Non-core	8	20
Total recovery	≈ \$1 M	≈ \$1.5 M

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Future tort-based expenditure scenarios

Factor	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5
Mesothelioma value	\$1,250,000	\$1,250,000	\$1,250,000	\$1,500,000	\$1,500,000
Trust impact per claim	\$500,000	\$500,000	\$250,000	\$250,000	\$0
Net tort payment	\$750,000	\$750,000	\$1,000,000	\$1,250,000	\$1,500,000
Mesothelioma claims	25,000	27,500	30,000	30,000	30,000
Mesothelioma indemnity percentage	90%	85%	85%	85%	80%
Nominal Indemnity	\$20.8 B	\$24.3 B	\$35.3 B	\$44.1 B	\$56.3 B
defense-to-indemnity ratio	1-to-2	1-to-1	2-to-3	2-to-3	3-to-4
Nominal Defense	\$10.4 B	\$24.3 B	\$22.9 B	\$28.7 B	\$42.2 B
Nominal Total	\$31.3 B	\$48.5 B	\$58.2 B	\$72.8 B	\$98.4 B

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Verdicts do not equate to average compensation (2001 to 2008)

Characteristic	Mesothelioma	Lung Cancer	Other Cancer	Non-malignant
Average value	\$7.8 M	\$4.1 M	\$11.3 M	\$3.6 M
Median Value	\$4.5 M	\$1.1 M	\$3.4 M	\$1.6 M
Count	192	56	5	78

- Cases taken to verdict are not representative
  - Otherwise, other cancer claims receive the greatest compensation
- Among mesothelioma cases value is driven by age and law firm
  - Verdicts for claimants under 60 years of age average over \$12 million
  - Verdicts for claimants over 60 years of age average under \$2 million

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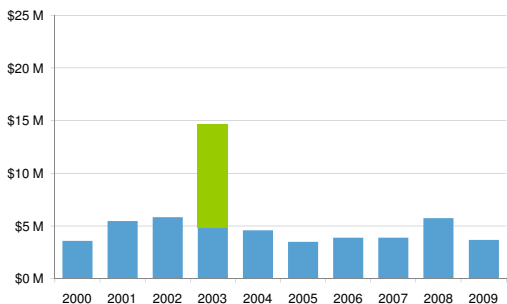
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Average value of mesothelioma verdict awards



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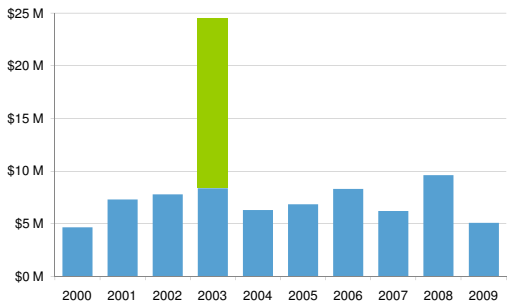
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Average value of mesothelioma plaintiff verdict awards



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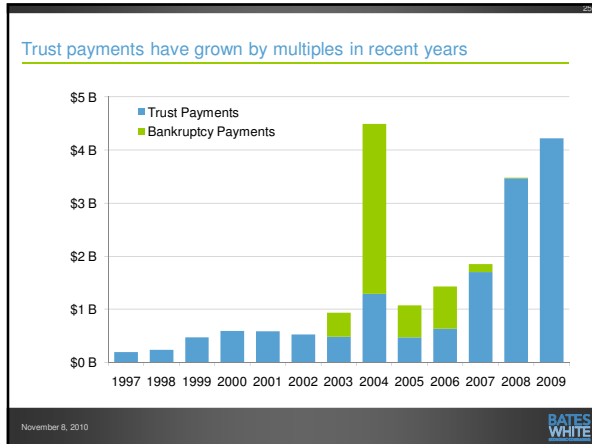
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524(g) trusts assets are sufficient to cover the former tort liability of the reorganized defendants

Era	Trust assets	Average payment per mesothelioma claim
Historically	\$4 B	\$50,000
Today	\$25 B	\$1,000,000
Tomorrow	\$40 B	\$1,600,000

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Implications for reserves

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2010 and forward litigation environment

- Slow down in large defendant bankruptcy filings
  - Subsequent slow down in trust funding
  - Corresponding slow down in new defendants
  - There will not be another bankruptcy wave akin to 2000-2002
- Large cash distributions from trusts
  - Eventually more than \$1 million per mesothelioma claim on average
  - Net present value of trust assets are sufficient to cover the several shares of their predecessor companies

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A typical profile of "new" tort defendant

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How will trust payments affect tort defendant payments?

- CMOs
  - West Virginia (defendants won)
  - Madison County (defendants lost)
- Legislative efforts
  - GAO investigation of trusts
  - State-level efforts
- Discovery in individual cases
  - Request for already filed trust claims
  - Request for not yet filed trust claims
  - Request for admissions
  - Expert testimony—Bates White trust-based exposure reports

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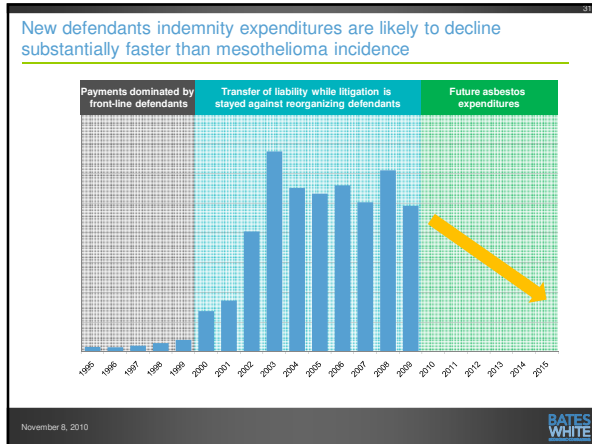
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- Account-specific IBNR: Scenario-based analysis
- Define the scenarios
    - Develop a family of future expenditure forecasts
    - Forecast future dates of first exposure
    - Build the policy chart(s)
    - Determine the potential allocation methods
  - Use software to run all combinations of scenarios
    - Can be hundreds or thousands of scenarios
    - Low cost with proper software
  - Analysis of all interactions
    - Specify a probability distribution for each unknown factor
    - Probability distributions yield expected allocated loss to each policy through time and a distribution about that expectation
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Define scenarios and assign probabilities

Allocation parameters			
Expenditure stream		Probability	
Low		30%	
Medium		50%	
High		20%	
Allocation		Probability	
Carter-Wallace		50%	
Pro Rata		50%	
Occurrences		Probability	
One		80%	
Many		20%	
Product Percentage		Probability	
85%		80%	
88%		20%	
Coverage cutoff		Probability	
1982		10%	
1985		90%	
Trust Impact		Probability	
0%		20%	
25%		50%	
50%		30%	
Dofe		Probability	
Aged Dofe		50%	
Unaged Dofe		50%	
Discount Inputs		Value	
Present value year		2009	
Discount Rate		5.50%	

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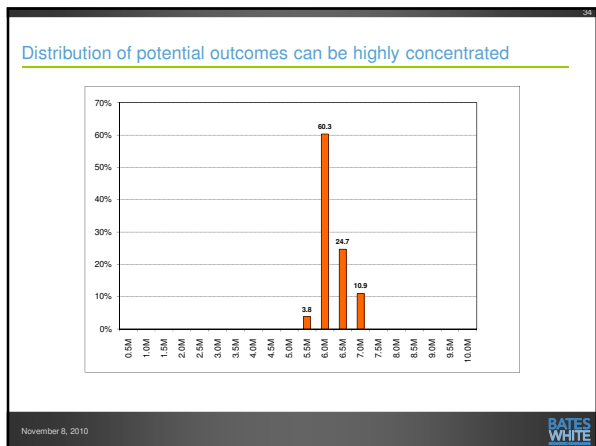
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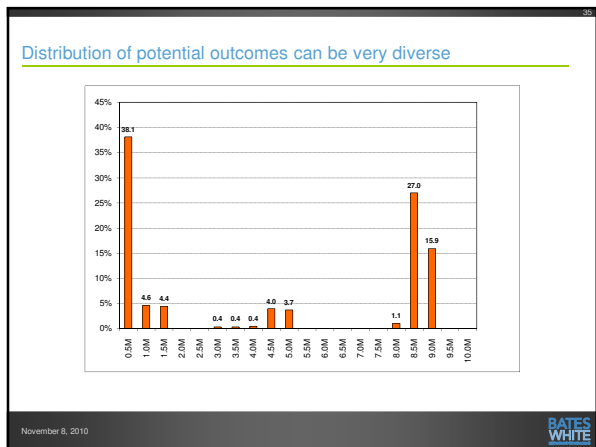
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- Portfolio reserves
- Expected loss on a portfolio
    - Individually model each account
    - Typically more cost effective to model a random sample of accounts
  - Variability in the portfolio is not the sum of the accounts
    - Law of large numbers does not apply
    - Distributions will not be normal
    - Systemic risks exist in asbestos litigation
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Modeling systemic risks to obtain robust reserves

- Systemic risks
  - Future incidence of mesothelioma
  - Propensity to sue (PTS)
  - Changes in the litigation environment
    - Interaction between trust payments and tort losses
    - Rogue venues
    - State-specific allocation law
- Simulation model of all sampled accounts
  - Low cost if scenario model is already done
  - Captures the systemic risk
  - Defines the distribution of potential outcomes
  - New accounts are positively correlated with adverse developments

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Charles H. Mullin is a recognized expert on asbestos-related matters. He provides advice and expert analysis on asbestos liability issues involving insurance coverage, reinsurance, bankruptcies, and due diligence for mergers, acquisitions, and spin-offs. Dr. Mullin has authored numerous expert reports and provided expert testimony in asbestos-related insurance matters, as well as provided due diligence reports for corporate transactions. He has designed and implemented statistically reliable claim file reviews both for asbestos defendants and for insurance companies.

In addition to Dr. Mullin's retentions as an expert, he regularly publishes articles on asbestos and insurance allocation topics. He also is frequently invited to speak at industry conferences on these topics.

Prior to joining Bates White, Dr. Mullin taught courses in advanced statistical economic analysis and labor economics while on the faculty in the Department of Economics at Vanderbilt University and at the University of California at Los Angeles. He published papers on applied and theoretical econometrics and labor economics in peer-reviewed journals with a focus on robust estimation techniques.

Prior to his academic career, Dr. Mullin worked for Quantum Consulting conducting demand-side management for utility companies. This work included intensive data analysis and micro-simulation modeling.

Dr. Mullin received his PhD in economics from the University of Chicago and his BA in economics and mathematics from the University of California at Berkeley. Dr. Mullin specializes in statistical analysis and economic modeling. He has more than 15 years of experience providing this expertise in both the private and public sectors.

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