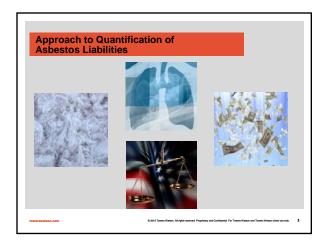


### Agenda

- Approach to Quantification of Asbestos Liabilities
- Industry Background and Trends

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### How to Quantify An Insurer's Asbestos Liabilities? • Traditional actuarial methods (e.g., accident year loss development projections) are sub-optimal • Significant calendar year effects (along diagonal) Significant changes in the litigation environment (e.g., tort reforms) An individual claim is typically allocated across multiple accident years · Epidemiological component Claim emergence is a function of exposure dates and long disease latency • Methods for projecting asbestos liabilities Aggregate techniques using industry rules of thumb Best Practice: Exposure-based analysis **Aggregate Techniques** Aggregate benchmarks and industry rules of thumb Survival ratio techniques IBNR to case ratio Market share · Calendar year loss development · Comparisons to peer companies (e.g., significant reserve additions) **Exposure-Based Analysis** • Exposure-based analysis improves understanding of ultimate A&E • For an insurer or reinsurer, it considers Mix of insureds Types of coverage Policy wording Attachment points and limits Years of coverage Claims handling and settlement activities • Greater understanding equips the insurer to deal strategically with its exposure

### **Exposure-Based Asbestos Analysis – Data Examples** • Coverage details • Term Attachment (ground-up) 100% Layer Percentage participation Expense treatment Exclusions • Specific account experience Filed and closed claims · Paid indemnity and expense · Cost share agreements or coverage blocks • Comments (e.g. state mix, coverage disputes, etc.) **Overview of Exposure-Based Analysis** Identify insurer's potential exposures and assign insured defendants to Towers Watson Tier (major v. peripheral defendants) Claims, log files, underwriting records • Project ground-up ultimate loss of defendant (for major defendants) · Allocate defendant costs to year Compare defendant costs by year to insurer's coverage terms to estimate insurer's gross liabilities • Estimate cessions to determine net liabilities Review historical net-to-gross ratios Best Practice: Apply specific terms of outward reinsurance protections to gross insured loss estimates to determine estimates of cessions Can evaluate collectibility of cessions by reinsurer **Exposure-Based Asbestos Analysis** • Develop ground-up ultimate loss and expense for each individually reviewed insured account · For direct business, more data is often available Obtain ground-up experience (e.g., historical # claims filed and closed, \$ indemnity and expense paid) Perform F x S projection Future claim frequency reflecting epidemiology Future claim severity reflecting changes to litigation environment and trends For reinsurance, rely more on industry information Use public Information (e.g. SEC Form 10-K's) to estimate ground-up costs Towers Watson projections also rely on tier assignment and distributions of underlying defendant claim F x S that vary by tier

### **Exposure-Based Asbestos Analysis**

- Total insured loss estimate is sum of:
- Estimated losses for individually reviewed accounts with known asbestos exposure
- Individually review all major accounts
- Individually review all (or a sample of) open peripheral defendant accounts
  - If needed, extrapolate results for individually reviewed accounts to non-reviewed accounts
     Consider re-opening potential
- IBNR
- Potential expansion of recognized exposed limits
- Emergence of new accounts with asbestos claims
- Provision for other costs e.g., DJ

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### **Industry Background and Trends**

- Key uncertainties in evaluating asbestos liabilities
- The litigation environment has changed dramatically
- Future experience will be subject to societal and legal influences
- Mesothelioma claims will drive future costs
- Who pays?
- Solvent defendants
- Bankruptcy Trusts
- Insurers
- Reinsurers

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### **Key Uncertainties in Evaluating Asbestos Liabilities**

- The litigation environment has changed dramatically
- Total claim volume surged from 2000-2003
- Most of the surge was nonmalignant claims arising from mass screenings
- Malignant claims also reached historic highs
- Total claim volume has since dropped
  - Nonmalignant claims dropped sharply beginning in 2004
    - Very little mass screening activity
    - Decrease in bankruptcy filings
    - Federal trust fund bill failed
  - State tort and judicial reforms enacted
- Malignant claims also eased from peak levels
- Trends vary by defendant

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# The Litigation Environment Has Changed Dramatically Malignant vs. Nonmalignant Claim Filing Trends Manville Trust - Injury by Year Filed US Only Manville Trust data with details by disease is not publicly available after 12/31/2006

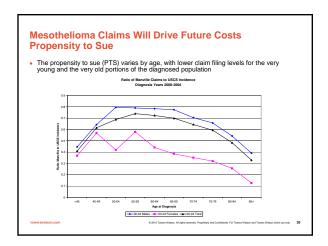
## The Litigation Environment Has Changed Dramatically Claim Filling Trends • New fillings have fallen to a fraction of prior levels \*\*The Litigation Environment Has Changed Dramatically Trends • New fillings have fallen to a fraction of prior levels \*\*The Litigation Environment Has Changed Dramatically Trends • The Litigation Environment Has Changed Dramatical Trends • The Litigation Environme

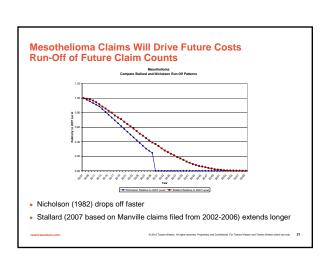
### The Litigation Environment Has Changed Dramatically Lung Cancer Claim Filing Trends • General increase through early 2000s, then marked decline

## The Litigation Environment Has Changed Dramatically Other Cancer Claim Filing Trends a. As with lung cancer, marked drop in new claim filings in recent years 1.000 1.

### Evaluation Asbestos Liabilities Future experience will be subject to societal and legal influences Legislative and judicial reforms have reduced nonmalignant claims Unfavorable jurisdictions for defendants remain Going forward, the cost driver is expected to be mesothelioma claims Large exposed population, spanning multiple industries and decades Signature disease links injury to asbestos exposure With long latency, exposure continued for decades Epidemiological studies can predict the number of future diagnoses Union organized efforts increase the propensity to sue Mesothelioma claims now represent 80-90% of total payments Mesothelioma claim values are high Especially for peripheral defendants, the following issues are important in managing liabilities: Traditional tort defenses (e.g., component part and government contractor) Apportionment of damages

### Mesothelioma Claims Will Drive Future Costs Diagnosis and Claim Filing Trends • Annual incidence count relatively flat (with females increasing), but fairly large swings in annual claim filing counts • Mesothelioma claims increased in last few years





### Mesothelioma Claims Will Drive Future Costs Summary of Claim Filing Trends

- ~3,050 new diagnoses of mesothelioma in U.S. in 2006
- Annual count ranged from 3,000 to 3,200 during 1999-2006
- More than 2,500 annual deaths linked to mesothelioma in U.S. in 1999-2006
  - Number may be somewhat under-reported
- Incidence and death counts both dropped from 2005 to 2006
- Counts have finally peaked? Or just a blip in data?
- 1,500 to 2,000 mesothelioma claims filed per year since 2000
- Claim filings dropped in 2006-2007, but rebounded in 2008-2009
- Propensity to sue is lower for females and the very young and very old
- Many of the newer wave of claims relate to premises and "second hand" exposure
- Projected 2010-2055 mesothelioma claim filings = ~ 30,000.
- ~50% in next ten years (2010 2019)

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### Mesothelioma Claims Will Drive Future Costs Claim Values

- Less than 1% of cases go trial, but verdicts influence settlements
  - 2007: 30 verdicts, 15 defense, average of 21 awards = \$5.5M
  - 2008: 45 verdicts, 20 defense, average of 27 awards = \$5.1M
  - 2009: 30 verdicts, 9 defense, average of 23 awards = \$5.6M
  - 2010: 10 verdicts, 6 defense, average of 4 awards = \$6.1M
  - 2007+: 11 verdicts >\$10M
- Average claim values and trends for individual defendants vary
- Major vs. peripheral defendants
- Defenses
- Use of matrix agreements

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### **Bankruptcies Muddy the Picture**

- Approximately 40 confirmed bankruptcy trusts have reported
  - Assets:
  - 2009 report indicates \$26.9B of trust assets currently available
  - Payments:
    - 2006: all Trusts paid out \$283M
  - 2007: all Trusts paid out \$1.10B
  - 2008: all Trusts paid out \$2.89B
- As bankruptcy plans are confirmed and begin to pay claims, return of cash flow to plaintiff firms provides even more incentive for advertising, affecting mesothelioma claim filing levels
- Concern that lack of transparency of bankruptcy payments exacerbates issue of allocation of bankrupt shares of liability to solvent defendants

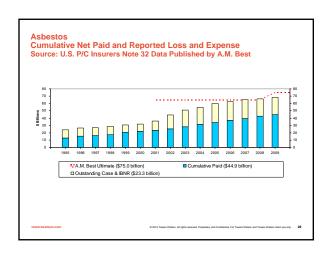
### **Anticipated Bankruptcy Trust Payments**

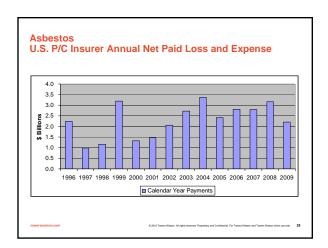
			Unimpaired		Impaired					
	Pay %	Paymt. Ratio	Nonmalignant (Level II)		Nonmalignant (Level III)		Mesothelioma			
Trust										
			Sched. Value	Actual Paymt.	Sched. Value	Actual Paymt.	Sched. Value	Actual Paymt.	Avg. IE	Actual Paymt.
ACandS	20*	62.5/37.5	4,000	800*	10,000	2,000*	225,000	45,000	265,000	53,000
Armstrong	20	65/35	3,700	740	9,700	1,940	110,000	22,000	130,500	26,100
B&W	34	62/38	5,000	1,700	10,000	3,400	90,000	30,600	120,000	40,800
Celotex	14.1	N/A	12,500	1,763	25,000	3,525	100,000	14,100	Not given	16,215***
CE	44	87/13	1,800	792	4,800	2,112	75,000	33,000	95,000	41,800
Congoleum	20*	?	1,000	200*	3,000	600*	60,000	12,000	150K	30,000
DII w/o H-W	100	60/40	400	400	900	900	21,500	21,500	28,700	28,700
DII w/ H-W	100	60/40	1,400	1,400	2,700	2,700	51,300	51,300	68,400	68,400
Fed'l-Mogul	TBA	?	TBA	?	TBA	?	TBA	?	TBA	?
Fibreboard	25	65/35	4,500	1,125	11,500	2,875	135,000	33,750	180,000	45,000
G-I	TBA	?	TBA	?	TBA	?	TBA	?	TBA	?
Kaiser	39.5	70/30	700	277	4,850	1,916	70,000	27,650	104,000	41,080
Manville	5	N/A	12,000	600	25,000	1,250	350,000	17,500	Not given	20,125***
Narco	20*	60/40	1,200	240*	7,500	1,500*	75,000	15,000	200,000	40,000
NGC	55.6	N/A	500	278	1,000	556	22,500	12,510	45,000	25,020
OC	40	65/35	8,000	3,200	19,000	7,600	215,000	86,000	270,000	108,000
PC	23.7	60/40	5,500	1,304	11,750	2,785	175,000	41,475	200,000	47,400
Plibrico	20*	65/35	1,500	300*	15,000	3,000*	350,000	70,000	425,000	85,000
Quigley	20*	65/35	250	50*	2,000	400*	100,000	20,000	120,000	24,000
USG	20*	85/15	2,625	525*	8,300	1,660*	155,000	31,000	225,000	45,000
WR Grace	TBA	?	TBA	?	TBA	?	TBA	?	TBA	?
Total**				15.293		39.819		562.885		756,940

Phyment percentage not yet announced for mese trusts — conservative assumption of 20% used nere "Assumes DII with Harbison-Walker exposure "" Where TDP does not set average IE value for mesothelioma, assumes 15% above scheduled value Source: Mealey's Asbestos Conference Feb. 8-9, 2007, David Austern

### **Key Uncertainties in Evaluating Asbestos Liabilities Insurance Recoveries**

- Rules regarding allocation of losses to coverage vary by jurisdiction
- Definition of Occurrence
- Pro Rata vs. All Sums
- Coverage Trigger
- Several court decisions have expanded coverage
- All sums allocation
- Interpretation of individual policies is often subject to dispute
- · Limits for non-annual coverage
- Interpretation of SIRs / deductibles
- Wording of exclusions
- Treatment of expense
- Also need to consider insurer solvency and creditworthiness





	Travelers	Swiss Re	American International Group	Hartford	Nationwide	CNA
d 2007-2009	2,755,461 1,514,663	1,254,181 392,854	1,293,570 696,254	1,618,869 618,191	1,440,958 370,876	1,138,087 428,303
Survival Ratio	5.46			7.86	11.66	7.97
	ACE	Liberty Mutual	Berkshire Hathaway	Allstate	All Other	Total
d 2007-2009	433,273	619,588	1,469,054 168,967	1,179,111 210,806	6,806,113 1,989,122	21,251,374 7,442,897 8.57
compilation of p	reliminary Note			10.70	10.20	0.07
	purchase of Sa	e 12/31/2009 2,755,461 d 2007-2009 1,514,663 Survival Ratio 5.46 ACE e 12/31/2009 1,132,803 d 2007-2009 433,273 Survival Ratio 7.84 complation of preliminary Notepurchase of Safeco.	e 12/31/2009 2.755,461 1.254,161 42007-2009 1.514,663 392,854 40urwhal Ratio 5.64 9.85 Liberty ACE ACE Mutual e 12/31/2009 1.132,803 1.163,167 42007-2009 433,273 619,583 compiliation of preliminary Note 32 data as of purchase of Safeta.	Travelers   Swiss Re   Instructional   Corup	Part   Part	Travelers   Swiss Re   International   Travelers   Swiss Re   Group   Hartford   Nationwide

### Conclusions Great strides have been made in tort reform that have reduced the number of claims, especially nonmalignant Recent favorable court decisions will serve to limit the liability of some defendants However, challenges to tort reform continue Annual mesothelioma claims have increased and these claims are costly New claims include take-home exposure, contract workers (premises exposure), and possibly international exposure Expenses (at least per claim) may increase Bankruptcy trust money will influence filing levels Advertising Cancer and nonmalignant claims are especially elastic with recruitment activities Resurgence of normalignant claims are especially elastic with recruitment activities

While the pendulum has swung more toward defendants recently ...
 Volatile economy and new public mood may affect litigiousness

Volatile economy and new public mood may affect litigiousness

Insurers/defendants fighting against rollback of tort reforms

Also pursuing transparency in claim process

Also pursuing transparency in claim process
 Risk transfer deals may increase when economy improves and capital is available

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Direct Dial: 908 879 9254

Ms. Santomenno has extensive experience with valuing asbestos liabilities for asbestos defendants, reinsurance and insurance clients. Project work includes loss portfolio pricing, arbitration support and due diligence portfolio reviews, as well as government asbestos legislation, regulatory and rating agency reviews. She also has significant experience placing and developing reinsurance programs.

Before joining Towers Watson, Ms. Santomenno served as senior actuary at GE Insurance Solutions, where she was responsible for the reserve management of more than \$900 million in net global asbestos, polliution and other discontinued operations reserving.

net global asbestos, poliution and other discontinued operations reserving.

Prior to that, she was president of a consulting and reinsurance brokerage subsidiary of Munich Re, Munich American Services (MAS). She oversaw all of the MAS consulting activity, which included actuarial, accounting, claims and underwriting consulting activities along with client marketing and development. As president of the MAS Intermediary Company, she oversaw all intermediary and brokerage activities.

She was also a manager with Ernst & Young's New York actuarial and risk management consulting practice responsible for business development and consulting activities.

Ms. Santomenno began her career at Aetna Life & Casualty where she held a variety of actuarial positions in both commercial and personal lines pricing and reserving through a series of job rotations in the actuarial training program.

Ms. Santomenno has a B.A. in mathematics from Cornell University. She is an Associate of the Casualty Actuarial Society and a Member of the American Academy of Actuaries, serving on its Program Planning Committee. She is a frequent speaker on asbestos and reinsurance topics.

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