



Discussion of RAA Workers Compensation Loss Development

Seminar on Reinsurance

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Overview

- Reinsurance Association of America (RAA) Historical Loss Development Study (2007 Edition) – Workers Compensation
- Towers Perrin RAA WC Benchmark Selections
- Comparison of RAA to NCCI



RAA 2007 Study – Workers Compensation

- Intent of Study
- Towers Perrin Roles
- Data Call
- WC Total Observations
- WC Range Observations
- Limitations/Considerations

Intent of Study

- Intent of study is to reinforce awareness of historical loss development patterns:
 - in companies writing U.S casualty excess reinsurance business
 - In primary companies writing high deductible or umbrella insurance.

Towers Perrin Roles

- Drafting of data call and questionnaire
- Data accumulation – data sent directly to us and accumulated after checking for unusual data points (outliers, negative numbers, etc...)
- Mechanical calculation of graphs and charts (no development beyond last point)
- Write-up of findings
- Discussions with subcommittee throughout the process and with the full committee at the beginning and end of the process
- Any comments during this presentation, while founded in the study, are my opinions and not those of the RAA

Data Call

- Incurred loss and allocated loss adjustment expenses (ALAE) for 21 of the 21 participants
- Paid loss and ALAE for 19 of the 21 participants
- Segmentation – treaty, automatic facultative, individual risk facultative and indivisible
- Data includes additional case reserves (ACRs) for 17 of the 21 participants
- Data excludes incurred but not reported (IBNR)
- Many participants report their losses gross of retrocessions and gross of aggregate deductibles
- Most participants are able to exclude assumed and ceded loss portfolio transfers and commutations
- Data is supplied on an accident year basis

WC Total Observations

	Workers Compensation Treaty and Facultative Combined	
	Incurred	Paid
Number of Companies	21	19
Accident Years	1962 – 2006	1973 – 2006
Volume (Last Diagonal)	\$11.9 Billion	\$3.5 Billion

- Number of companies reporting - ranges from minimum of 3 companies (1960's) up to maximum of 17 companies (1995)
- Reported losses - ranges from minimum of \$5 million (AY1962) up to maximum of \$1.7 billion (AY2000)
- ACR/Case Incurred %: 16.1% simple average and 7.5% median

WC Range Observations

- WC Range Incurred
 - Range into which excess claim is placed is determined by ground-up attachment point which is sum of:
 - cedant's reinsurance retention
 - underlying self-insured retention (SIR) on policies written by cedant
- AY2005 and AY 2006 attachment points
 - Range 1: \$1 – \$190,000
 - Range 2: \$190,001 - \$450,000
 - Range 3: \$450,001 - \$1,850,000
 - Range 4: \$1,850,001 - \$5,000,000
 - Range 5: Greater than \$5,000,000

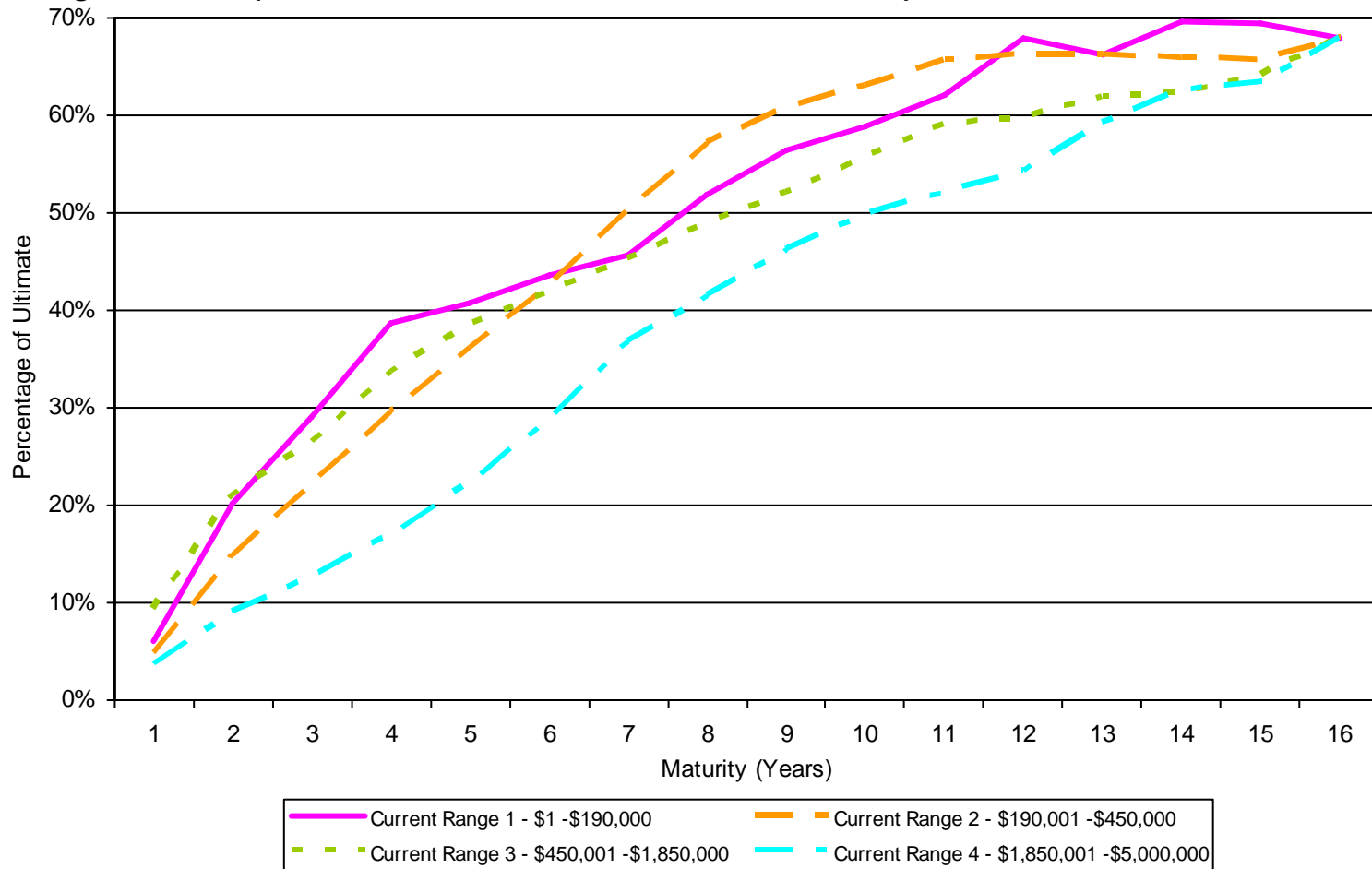
RAA 2007 Study – Workers Compensation

WC Range Observations (contd.)

	Workers Compensation Treaty and Facultative Combined		
	Incurred	Paid	Range Incurred
Number of Companies	21	19	Range 1: 3 to 5 Range 2: 3 to 8 Range 3: 4 to 9 Range 4: 4 to 7
Accident Years	1962 – 2006	1973 – 2006	1986 – 2006
Volume (Last Diagonal)	\$11.9 Billion	\$3.5 Billion	\$2.3 Billion

WC Range Observations (contd.)

- Development is erratic: the higher attachment point ranges sometimes exhibit longer development and sometimes shorter development



Source: Exhibit F-3 from RAA Historical Development Study (2007)

Limitations/Considerations

- Changing retentions - underlying cedants and/or reinsurer
- Geographic markets
- Underwriting rules/restrictions
- Case basis reserving practices
- Unwinding of discount



Towers Perrin RAA WC Benchmark Selections

Towers Perrin RAA WC Benchmark Selections

- Medium curve
- Range of curves around medium

Towers Perrin RAA WC Benchmark Selections

Medium Curve

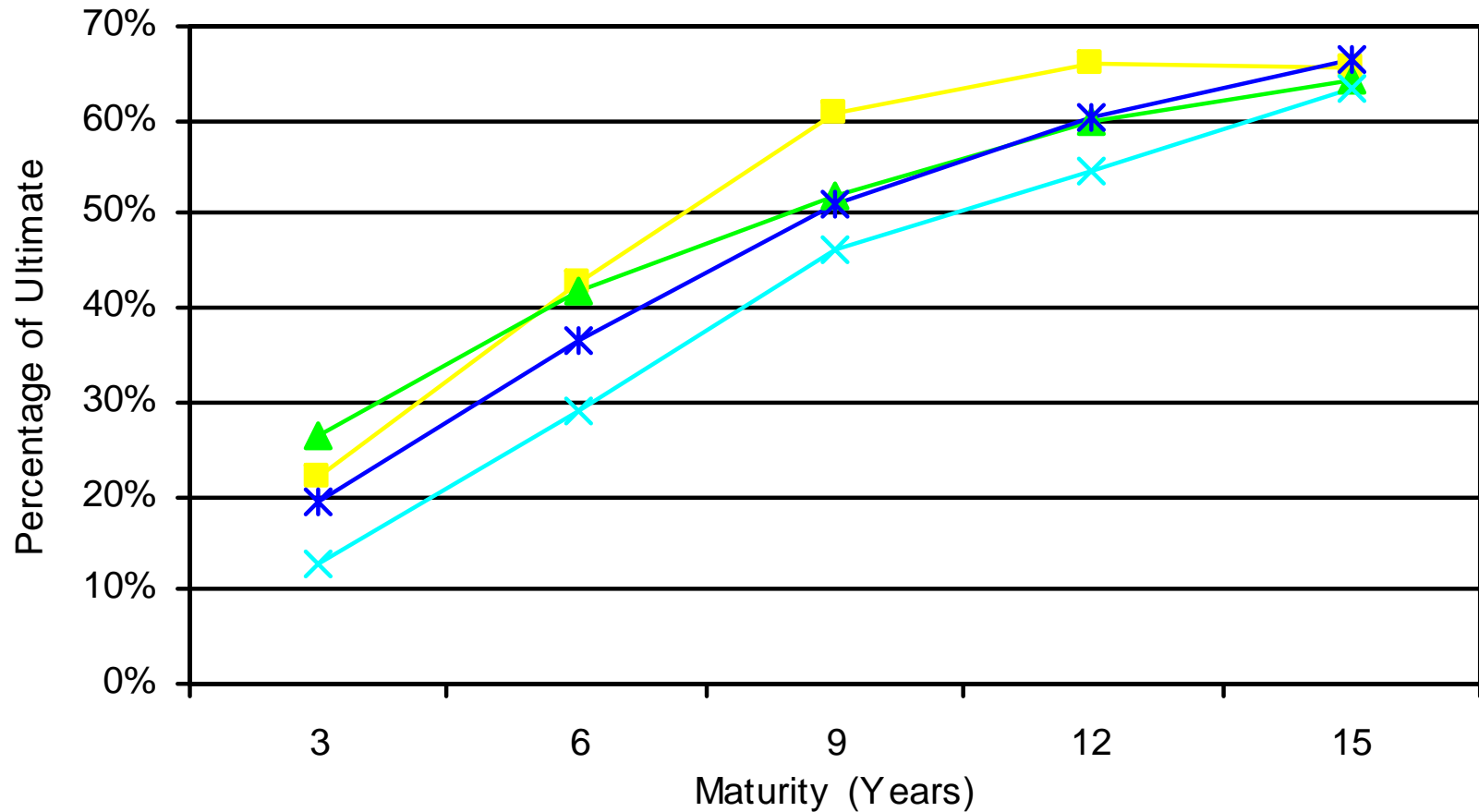
- We use the total treaty & facultative combined reported triangle as our medium curve due to the volume of data and number of years of experience
- Paid losses are only shown for AY1973-2006 and for 19 participants
 - Rely on paid to incurred ratios for tail factors

Paid to Incurred Ratios	5	10	15	20	25	30	35	40
Latest 5 - All Data								
Simple Average	0.326	0.533	0.708	0.771	0.769	0.751	0.805	0.958
Weighted Average	0.310	0.460	0.744	0.794	0.688	0.715		
25th Percentile	0.232	0.385	0.648	0.682	0.684	0.659	0.768	0.937
50th Percentile	0.271	0.576	0.705	0.752	0.779	0.770	0.874	0.949
75th Percentile	0.397	0.640	0.799	0.891	0.894	0.844	0.894	0.974
Latest 15 - All Data								
Simple Average	0.313	0.580	0.725	0.754	0.753	0.753	0.819	
Weighted Average	0.332	0.552	0.710	0.697				
25th Percentile	0.262	0.538	0.633	0.663	0.671	0.657	0.765	
50th Percentile	0.285	0.590	0.700	0.769	0.791	0.777	0.874	
75th Percentile	0.331	0.662	0.787	0.815	0.881	0.854	0.960	

Source: Exhibit J-3 from RAA Historical Development Study (2007)

Towers Perrin RAA WC Benchmark Selections

Range of Curves around Medium Curve



—■— Current Attachment Range 2: \$ 190,001 - \$ 450,000

—▲— Current Attachment Range 3: \$ 450,001 - \$ 1,850,000

—×— Current Attachment Range 4: \$ 1,850,001 - \$ 5,000,000

—*— All Attachment Ranges Combined

Source: Exhibits A-1.2 and F-3.2 from RAA Historical Development Study (2007)

Range of Curves around Medium Curve (Contd.)

- RAA total treaty & facultative combined reported triangle most resembles attachment range 3 after 9 years. Our general view is that our medium curve is most representative of contracts with attachment points from \$450,000 to \$1.85 million
- Our fast and medium/fast benchmark patterns are constructed by:
 - Using the observed development from attachment point ranges 1 and 2
 - Relationship between undiscounted triangles and total triangles from prior studies
 - Main assumption is that the higher the attachment the slower the development
 - Clearly other factors also have an impact
- Once we have selected the fast and medium/fast curves we can then develop the medium/slow and slow curves based on the relationship between the fast and medium/fast curves to the medium curve



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Comparison of RAA to NCCI

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	RAA	NCCI
Loss Component	Case Incurred Loss + ALAE	Case Incurred Loss
Trigger	Per Occurrence	Per Claim
Geography	All States	NCCI States
Trend Procedure	Current attachment de-trended	Claim trended both 3% and 5% to AY2006
Discounting	Mixture	Tabular
Tails	No	No
ACRs	Yes	No
Reinsurance Reporting Lags	Yes	No
Minimum attachment point	\$100,000 or less	\$2 million