

Reinsuring Workers Compensation

2010 CARE Seminar

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Topics For Discussion

- Correlation With Other Lines
- Effects of Trend on QS versus XOL Contracts
- Alternative Funding
- Catastrophe Covers

Workers Compensation at TRC

- Niche portfolio
 - Single state quota share and working layer XOL
 - Part of regional multi-line treaties
 - Catastrophe covers

Correlation With Other LOBs

- Industry Gross Schedule P Comparisons
 - Workers Compensation Linear Correlation Coefficients Paired With:
 - Other Liability – Occurrence: 97%
 - Other Liability – Claims Made: 96%
 - Commercial Auto Liability: 89%
 - Medical Malpractice – CM: 88%
 - Private Passenger Auto Liability: 83%
 - Commercial Multi-Peril: 79%
 - Homeowners: 27%
 - Special Property: 17%
- Based on company booked loss ratios
- Accident/Report Years 1995-2009
- Source: S&P Financial Statutory Data
- Other Considerations
 - Primary versus Reinsurance results
 - Specific Portfolios
 - Internal Models

Impact of Loss Trend on Reinsurance Results

- Quota Share
 - Similar to cedant
 - Emphasis on pure premium trend
 - Lately frequency has been negative
- Excess of Loss
 - Relative share of premium depends on severity trend
 - Ignoring the time value of money
 - Effect varies by layer
- Significant Variation By State

Impact of Severity Trend on XOL

- Illustration using a generic severity curve
 - Purpose: to isolate the impact of severity trend
- Refer to Excess Factors published by the rating bureaus for actual changes over time
 - Affected by multiple factors
- Basic Assumptions:
 - 2 Parameter Pareto Severity Distribution
 - B = Scale Parameter = 100,000
 - Q = Shape Parameter = 1.5
 - 3-Year time horizon
 - 5% and 10% annual severity trend

Useful Formulas for Pareto(B,Q)

- $E(x) = B/(Q-1)$
- $E(x;L) = ((B^Q)/(1-Q)) * (((L+B)^{1-Q}) - (B^{1-Q}))$
- If Trend Factor = t, Pareto (B,Q) Becomes Pareto (tB,Q)

Example: Severity Impact on XOL

Annual Severity	Base	5%	10%
3 Yr Trend Factor	1.000	1.158	1.331
B	100,000	115,763	133,100
Q	1.5	1.5	1.5
Limit	Limited Severity	Limited Severity	Limited Severity
250K	93,096	101,274	109,293
500K	118,350	131,139	144,143
1M	139,698	156,950	174,965
2M	156,356	177,369	199,705
5M	171,994	196,697	223,335
10M	180,099	206,757	235,691
Unlimited	200,000	231,525	266,200

Example: Impact on Different Layers

Layer	Loss Allocation	Loss Allocation	Loss Allocation
250 x 250	12.6%	12.9%	13.1%
1M x 1M	8.3%	8.8%	9.3%
5M x 5M	4.1%	4.4%	4.6%
Layer		Increase Over Year 1	Increase Over Year 1
250 x 250		2.2%	3.7%
1M x 1M		5.9%	11.6%
5M x 5M		7.2%	14.5%

Example: Implications

- If Reinsurance rates as percent of premium are flat, XOL reinsurers are losing ground
- The higher the layer, the greater the impact
- Medical Trend in WC is particularly important for XOL
 - Especially above \$1M
 - Overall, medical now 60% of total WC losses
 - 20 years ago, medical accounted for 45% of the total
 - For Permanent Total, the medical share is 70%
 - Both these numbers are growing

Challenges

- This impact may seem obvious, but excess rates have remained flat or decreased over the last several years
- Direct premium is down by as much as 25% over the last several years, making it harder to improve reinsurance terms
 - Payrolls are lower (the unemployment rate has doubled in the last 2 years)
 - Filed loss costs and rates have been decreasing for several years
 - Coverage is mandatory but there are alternatives to purchasing traditional insurance policies

Alternatives to Purchasing WC Policies

- Captive or Large SIR
 - Purchase High Excess or Cat only
- Texas-style Opt Out
- Medical Portion via Healthcare Coverage
- Self Insurance / Corporate Surety Bond
 - Cantor-Fitzgerald WTC Loss

Catastrophe Covers in Workers Comp

- Three Basic Coverages
 - Terrorism
 - Natural Peril (i.e., Earthquake, Sudden Storm)
 - Industrial Accidents (1991 fire in Hamlett, NC)
- NCBR Usually Excluded
 - Included if terrorism-only
- ROL Approach v. Cat Models
 - Cat models in early stages
 - Little historical data to build on
- Cat Covers in the Market
 - Layer range from x \$10M to x \$500M
 - Layers generally correlate with company size and geographic range
 - Recent increase in MAOL from \$5M to \$10M
