Topics to be covered

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<tbody>
<tr>
<td></td>
<td>CLIPS price and cost trends</td>
<td>US Reserve adequacy trends</td>
<td>Industry profitability outlook</td>
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<td>Use of predictive modeling</td>
<td>Trends in reserving practices</td>
<td>Inflation risk modeling</td>
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1. US Pricing Trends

Towers Watson’s CLIPS
(Commercial Lines Insurance Pricing Survey)

• Quarterly survey of writers of US commercial lines insurers
  – Price changes drawn from their price monitoring systems
  – Loss cost changes drawn from experience analysis
• Segmented by line, with breakout of specialty lines
• Segmented by account size
  – Small commercial segment is further segmented by region
• Currently 37 participants, who get back only what they provide
• Very useful in reserve analysis
Q1 2010 CLIPS shows nearly flat prices for five quarters, after five years of decline

Estimated Quarter Over Prior-Year Quarter
Change in Written Price Level
All Commercial Lines Combined

Prices are nearly flat for all account sizes

Estimated Quarter Over Prior-Year Quarter
Change in Written Price Level

Small Commercial  Mid-Market Commercial  Large Account Commercial
CLIPS indicates less severe deterioration in pricing than broker-based pricing surveys

Estimated Quarter Over Prior-Year Quarter
Change in Written Price Level
All Commercial Lines Combined

CLIPS indicates that commercial lines loss ratio deterioration will continue into 2010

Estimated Change in Accident Year Loss Ratios

Deterioration

Improvement

2007 – 2008
2008 – 2009
YTD 2009 – YTD 2010
Use of predictive modeling as a pricing and risk selection tool is exploding in the US

- Predictive modeling survey results
- Implications

Use of predictive models in pricing and underwriting is expanding beyond private motor

Do you currently use or plan to use predictive modeling in rating or underwriting for the following lines of business?

<table>
<thead>
<tr>
<th>Line of Business</th>
<th>Current Use</th>
<th>Plan to Use</th>
<th>Do not Use and No Plans to Use</th>
</tr>
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<tbody>
<tr>
<td>Personal automobile (n=63)</td>
<td>68%</td>
<td>24%</td>
<td>8%</td>
</tr>
<tr>
<td>Homeowners (n=60)</td>
<td>42%</td>
<td>46%</td>
<td>12%</td>
</tr>
<tr>
<td>Workers Compensation (n=58)</td>
<td>28%</td>
<td>43%</td>
<td>29%</td>
</tr>
<tr>
<td>Commercial property/BOP (n=66)</td>
<td>28%</td>
<td>36%</td>
<td>36%</td>
</tr>
<tr>
<td>Commercial automobile (n=65)</td>
<td>25%</td>
<td>44%</td>
<td>31%</td>
</tr>
<tr>
<td>General liability (n=63)</td>
<td>17%</td>
<td>29%</td>
<td>54%</td>
</tr>
<tr>
<td>Specialty lines (n=48)</td>
<td>13%</td>
<td>31%</td>
<td>56%</td>
</tr>
<tr>
<td>Other (n=4)</td>
<td>25%</td>
<td>75%</td>
<td>-</td>
</tr>
</tbody>
</table>

- Currently use
- Plan to use
- Do not use and no plans to use
There is a clear relationship between performance and price sophistication

Competitive Landscape — Personal Auto and Homeowners

There always will be competitors that are running fast — you don’t need to be the fastest, just faster than others

- The “fast runners” are seeking to accurately rate all segments of their books — they seek more granularity and refinement
Despite published reserve releases, the US industry is in a strong reserve position today.
Reserve strength varies by company

Indicated Reserve Margins at Year End 2009
(Held — Estimated) / Estimated

Average = +2.2%

Based on top 100 TW US client companies

Risks of material adverse deviation were cited in 26% of year-end 2009 US statutory opinions

- Weak reinsurance: 9
- Leveraged reinsurance: 18
- Low surplus: 21
- New company, new markets: 6
- High excess, policy limits: 13
- Concentrated exposures: 11
- Volatile or long-tailed lines: 10
- Change in operations: 4
- Rapid growth: 3
- Run-off status: 2
- Other: 9
- Low volume: 5
- Coverage disputes: 4
- Lack of data: 8
New developments in US reserving practices

- Performance testing: how do you know which method is the “best” method?
  - See paper in 2009 03/02 issue at www.variancejournal.org
- Skepticism of published stochastic reserving methods
  - Performance in predicting best estimates is poor
  - Ranges don’t validate against historical reserve errors
- Interest in inflation-adjusted methods
  - Structural stochastic simulation, separates inflation
  - See paper in latest issue of CAS eForum at www.casact.org

Overview of structural stochastic claim liability simulation model

1. Remove historical inflation; substitute constant-state expected inflation
2. Measure non-systematic risk from normalized data
3. Simulate future non-systematic risk
4. Overlay simulated future systematic risk
Validation results of the structural model look good!

- Overall run-off reserve risk generated by model compares reasonably well with historical observed reserve errors
- This is not always the case with stochastic reserving methods, for example Mack

Reserve Range Distributions – Workers Compensation
Classical Bootstrap

Proprietary and Confidential.
3. US P&C industry outlook

Not a pretty picture
• Strong base of capital
• Low investment returns
• Price cutting in commercial lines
• Highly competitive markets
• Increasing sophistication in pricing and risk selection
• No catalyst for turn in cycle
For the US industry as a whole, profit margins are now at or below the minimum

Fierce competition in personal auto will make the class unrewarding for the industry
Due to natural catastrophes, homeowners is volatile and unrewarding.

Price and cost trends imply that margins in workers compensation will disappear in 2010.
Standard liability pricing is already unrewarding, and is expected to deteriorate further

US Industry Combined Ratios
General Liability - Occurrence

Questions or comments?

Expressions of individual views by members of The Actuarial Profession and its staff are encouraged.
The views expressed in this presentation are those of the presenter.