Reinsurance Reserving Issues

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Reinsurance Reserving Issues

- Why is reinsurance reserving so difficult?
- What happened in the late 1990’s?
- What must we do to establish prudent reinsurance reserves?
- What are the issues that we face in the future?

Why is reinsurance reserving so difficult?

- Reinsurance contracts are derivative contracts that are dependent on the underlying primary policies and the behavior of the ceding companies.
- Reserving for primary business is performed by analyzing homogeneous groups of policies, whereas each reinsurance treaty is a *manuscript* contract.
- Reinsurance data is more sparse than primary data. You have to dig deep.
- Reinsurance has a lag in reporting compared to primary business.
- Reinsurance has a longer tail than primary business.
- Reinsurance contracts often have significantly larger limits and lower frequency than net primary business.

What happened in the late 1990's?

- Soft primary and reinsurance market – no major event since hurricane Andrew
- Investor pressure - The insurance industry had a top line focus. If you could grow your company at a profit, you could sell your stake at a significant premium to book value and realize a terrific ROE.
- Lloyds' was bouncing back from the brink. It restructured with corporate "names" and established Equitas in1996 to "*ring-fence*" past liabilities from underwriting years 1930 – 1992.
- Consolidation was taking place in the reinsurance market:
  - 1996 - Munich Re acquired American Re;
    - Swiss Re purchased M&G.
  - 1998 - Berkshire acquired General Re.
- Managing general agent relationships expanded utilizing significant reinsurance support.

What happened in the late 1990's?

- Primary limits were expanding. Professional liability limits grew to the $50M - $100M range. Larger limits induced larger claims.
- The loss development tail expanded.
- Primary risk selection softened.
- Multi year policies were offered at a discount.
- Multi year extensions were offered on claims made policies.

What happened in the late 1990's?

- Multi year reinsurance terms were provided to clients.
- Ceding companies reduced retentions.
- Extra contractual obligations (ECO) & excess of policy limits (XPL) provisions were expanded.
- Aggregate stop loss reinsurance contracts became popular.

- **Opinion: Reinsurance pricing decisions relied on historical data and missed the "turning point" of qualitative softening.**
- **A false sense of optimism crept into pricing decisions.**

What must we do to establish prudent reinsurance reserves?

- <u>Reinsurance reserving starts with pricing.</u>
- Reinsurance pricing models used today are virtually the same as in the ‘90’s.
- The key is to get reliable information – *No data, no deal!*
- Actuaries should participate in audits.
- Become engaged with the client underwriting and actuarial staff.
- Always ask the client for their estimate of ultimate loss and combined ratios. Ask for support.
- Challenge subject premium forecasts – a key driver in establishing adequate reinsurance premiums.
- Use sampling to understand real rate changes. Determine rate levels actually achieved versus prior assumptions.
- Look for trends in changes in business mix.

Reinsurance reserving starts with pricing

- Use claim audits to find changes in adjuster workload.
- Assign a grading system to underwriting and claim audit findings.
  - This will improve accountability and quality of audit.
- Assign a grading system to actuarial data quality and quantity.
- Develop estimates by class or line of business and roll up for total treaty projections.
- Understand and quantify the impact of treaty features: loss caps, loss corridors, sliding scale commissions, profit sharing, credit/deficit carry forward provisions.
- Use aggregate loss distribution modeling techniques to establish expected values and downside risk.
- Understand the impact of data reporting lags.
- **<u>Retroactively re-estimate original pricing at subsequent renewals.</u>**

Build an integrated database

- Reinsurance pricing data must be integrated with reserving and financial planning systems.
- Capture robust data used in the pricing of the treaty.
- Include paid and incurred loss development factors and subject premium development used in pricing.
  - This provides for expected versus actual analysis in future periods.
- Reserving software that accesses the database should be flexible to easily analyze individual treaties as well as grouping treaties.
  - Quota share versus excess
  - Segregate working layers from clash treaties
  - Ability to break certain treaties into sub-lines

Create a feedback loop.

- How do the original pricing assumptions compare to actual at renewal?
- How do expected results for a treaty two years later compare with actual results?
  - Are subject premiums greater than expected?
  - Are loss payments or incurred losses greater than expected?
  - Are variances due to poor assumptions, change in conditions or luck?
- How does a roll up of ultimate projections from treaty pricing assumptions compare to projections from corporate development triangles?

What are the issues that we face in the future?

Monetary inflation is a significant enterprise risk

- Inflation will increase with an increase in consumer demand as the economy recovers or if the dollar weakens considerably.
  – Current U.S. unemployment is 9.7% (Additional estimates are as high as 16% - *Mortimer Zuckerman*)
  – Many economists believe that consumer demand won't fuel inflation until unemployment drops to 5%.
  – This may occur in two to five years.
  – **Timing, severity and duration of inflation is unknown.**
  – **Future inflation will impact prior accident years.**
- **What are we to do?**

Scenario testing is one answer. Measure extreme outcomes.

- Select various inflation scenarios and when they will occur.
- Examples:
  - A 10% spike in four years that decays to 5%.
  - A 10% spike in three years that sustains for ten years.
  - Alternatively, a prolonged deflationary scenario.
- Measure the impact on current and future pricing and that balance sheet.
- Adjust historical paid and incurred development factors for the particular scenario.
- How will that impact the underwriting margin in current and future pricing? Should current pricing be adjusted for future activity?
- What is the impact on future loss liabilities?

Other forms of inflation

- **Legal Inflation** – court decisions influence prior accent years.
- **Social inflation** – consumer attitudes may change.
- **Medical cost inflation**
  - How will medical costs move relative to monetary inflation?
- **Emerging risks inflation**
  - "Technology developments may change the nature of liability claims completely and lead to new injuries and diseases."

Source: *Guy Carpenter Capital Ideas, September 2009*

Political (Binary) Risk

The risk to the balance sheet that the federal government changes the legal landscape or the way insurance and reinsurance companies operate in the U.S.

You decide….

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Thank you for your time.