The future of reserving

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Agenda

• Future of reserving market review
  1. Firms’ top reserving objectives
  2. The ideal reserving process
  3. Key barriers to change
  4. Priorities for 2020

• Setting your “levelling-up” path

• Case study: Earlier identification of trends
About the future of reserving market review

Interviewed over 80 people across 36 insurers to discuss:

- The reserving status quo
- The ideal
- Barriers to change

Included interviews with Chief Actuaries, CFOs, CROs, Heads of Reserving and reserving practitioners
### 1. Firms’ top reserving objectives

We asked which of the following are top priority and which firms could (at a push) live without.

<table>
<thead>
<tr>
<th>Earlier identification of trends</th>
<th>Avoiding reserving surprises</th>
<th>More time for value added analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quicker results</td>
<td>What are your objectives?</td>
<td>Reduce expenses</td>
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<td>Reduce mundane work</td>
<td>Improve management information</td>
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Key:
- Top priority
## 1. Firms’ top reserving objectives

We asked which of the following are top priority and which firms could (at a push) live without.

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<th>Objective</th>
<th>Top priority</th>
<th>Could live without</th>
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<tr>
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<td>67%</td>
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Key:
- Top priority
- Could live without
2. The ideal reserving process

We asked firms to describe their ideal reserving process covering six main areas.
2. The ideal reserving process

Reserving calculations:

**Data**
- Single reliable source
- Ability to “drill down” or “slice and dice”
- Enriched with external data

**Process**
- Automation to give focus on value add
- Faster process, but few targeting “real time”
- Early warning flags for trends and anomalies

**Analysis**
- Majority satisfied with traditional methods
- Easier sensitivity testing and what-if scenarios
- Ability to drill down (into results as well as data)
2. The ideal reserving process

Wider reserving process:

**Communication**
- Increased focus on story behind the numbers
- Use of scenarios to explain uncertainty
- Some firms targeting a reserving dashboard

**Feedback loops**
- Quicker identification of drivers of performance
- Reserving linking to other business functions, incl. pricing, claims, strategy and risk

**Governance**
- Most firms satisfied governance working well
- Majority of challenge by sub-committees
- Board focus is then on what numbers mean
## 2. The ideal reserving process

Avoiding some of the potential pitfalls of automation:

<table>
<thead>
<tr>
<th>Potential benefit</th>
<th>Potential pitfall</th>
<th>Ways to manage this</th>
</tr>
</thead>
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<tr>
<td>Real time results</td>
<td>Overly focused on short term</td>
<td>Retain quarterly reserving cycle</td>
</tr>
<tr>
<td>Instant output from automated process</td>
<td>Overconfidence in results</td>
<td>Ongoing training of algorithms (and the team)</td>
</tr>
<tr>
<td>Reduction in manual processing</td>
<td>Junior team de-skilled</td>
<td>Keep maximum 80% automated and 20% manual</td>
</tr>
<tr>
<td>Ability to drill into reserving dashboard</td>
<td>End user misusing the results</td>
<td>Manage who has access to each level of detail</td>
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</table>
3. Key barriers to change

We asked firms what the key barriers to change are in their reserving process.

- Competing priorities: 75%
- Data availability: 61%
- Cost: 47%
- Software: 44%
- Anchoring to traditional techniques: 33%
- Business engagement: 31%
4. Priorities for 2020

We asked firms’ about their priorities for the coming year.

Top priorities

- Good data quality
- Identifying emerging trends
- Communicating uncertainty
- Robustness of reinsurance estimates

Other high priorities

- Overall efficiency of processes
- Real insight from actual vs expected analysis
- Effective coordination of reserves (TPs, GAAP, IFRS17 etc.)

Satisfied with status quo

- Quality of external input
- Pre-empting challenge
- Ease of incorporating new classes of business
- Quality of interaction with claims, pricing and underwriting teams
The future of reserving

Bringing everything together, what could the future of reserving look like?

- Slicing and dicing
- Earning warning flags
- Scenarios and sensitivities
- Stronger links with the business
- More time to focus on the story

Single reliable data source

Automatic 1st cut results and diagnostics

Prioritisation engine

Stay with 1st cut

Specific human input

Manual override

Specific external data
Setting your “levelling-up” path for reserving

**TRENDS**
- Monitoring external changes
- Case reserving early warning system
- Individual claims diagnostics
- Automated triangle diagnostics

**DATA**
- Enriched with external data
- Reliable claim codes and descriptions
- Claim by claim data and policy data
- Reliable, quick triangulated data

**CALCULATIONS**
- Prioritisation engine
- Automated 1st cut results
- Assisted assumption selection
- Streamlined calculations

Increasing sophistication
Traditional

- Manual review of triangles
- Time consuming (ie, hours) to review all triangles, so typically consider a selected sample
- Potential to miss features

Enhanced

- Automated approach, which prioritises top triangles to review
- Quick (ie, minutes), scalable and ability to drill down
- More time to understand the “why?”
What are we looking for?

“Fanning out”

“Sticking out”
What are we looking for?

“Fanning out”

Drift ratio

Fan direction

Consistency

Number of cohorts in fan

Feature engineering:

Using domain knowledge of the data to create features that make machine learning algorithms work
Using dashboard to review whole account

24 September 2019
Drilling down into sub-classes

Key questions:

- Do ULRs increase towards recent years as the trend would suggest?
- Do business plan IEULRs for these sub-classes sufficiently allow for the trend?
Any questions?

- Slicing and dicing
- Earning warning flags
- Scenarios and sensitivities
- Stronger links with the business
- More time to focus on the story
Any questions?

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