Anti-Patterns in P&C Reserving Series
Getting the Numbers Right: Strengthening Analysis and Governance in Reserving

Introduction

Ever feel like your reserving team is working in a vacuum, crunching numbers without ever sharing the "why" or the "how" with the rest of the business? When actuaries are tucked away in their corner, and every presentation feels like decoding a secret formula, everyone loses.

In my previous whitepaper, "[Modernizing Reserving: Escaping Inefficiency and Manual Traps](#)", we explored 3 common anti-patterns that quietly sabotage reserving processes from within.

In this whitepaper, we'll tackle three additional anti-patterns that all stem from poor collaboration and communication:

- **Silo Mentality,** where actuarial insights never make it beyond the team's desk
- **Lost in Translation,** where technical results go over executives' heads
- **Black Box Syndrome,** where nobody outside a couple of "power users" can trace how the numbers were born

Through real-world scenarios, you'll learn how these pitfalls take root. More importantly, you'll see how simple shifts in meeting rhythm, documentation, and storytelling can overcome them. Whether it's embedding actuaries in claims huddles, swapping dense slide decks for clear dashboards, or keeping an "assumptions book" that everyone can access, the goal is to open the doors on your reserving process. Because when data, context, and narrative flow freely, reserving stops being a mystery and starts driving smarter decisions across the whole company.

Silo Mentality: Isolating Actuarial Knowledge and Inputs

Scenario

In a mid-size insurer, the reserving team works largely on its own island. They rarely consult the claims department about emerging litigation, or the underwriting team about policy changes. Each quarter, the actuaries produce reserve estimates and hand them off to finance without much discussion. Over time, a knowledge silo forms, where reserving actuaries have deep statistical insight into losses, but lack qualitative context.

Meanwhile, claims managers and underwriters often view the reserving process as a "black box" - one that occasionally delivers surprises, like unexpected reserve strengthening, with little explanation. **This separation is an anti-pattern that undermines both the quality of the reserving process and stakeholder buy-in.**

Pitfall

When actuaries operate in a silo, vital information flows are cut off. Loss reserving is not purely a mathematical exercise; it benefits from context. For example, if the claims department has been piloting faster closure practices, or if underwriting tightened coverage last quarter, these real-world changes will affect loss development patterns. In a siloed workflow, these insights may not reach the reserving team in time. Conversely, actuarial findings (like noticing a spike in claims severity) may never make their way back to underwriting or claims.

Best practices call for conversation and knowledge transfer between the reserving team and other key departments to inform the reserving process (Brown et al.). When that dialogue is missing, it becomes a clear anti-pattern. The result is avoidable surprises, where actuaries might misestimate because they "didn't know what they didn't know," while business units are blindsided by reserve changes because they weren't kept in the loop.

Recognizing the Signs

- **Delayed Awareness:** Actuaries learn about operational changes (like new claim handling protocols or product shifts) only after the impact is seen in the data.

- **Siloed Communication:** Few or no regular meetings between reserving actuaries and claims, underwriting, or finance teams.

- **Cross-Department Disconnect:** Other departments express confusion or frustration about how reserves are set. ("We have no idea how the actuaries came up with these numbers.")

- **Knowledge Concentration:** Reserving knowledge is concentrated in just a few people, with little cross-functional discussion.

Mitigation Strategies

- **Shared Data & Tools:** Create reports accessible to both actuaries and business units. For example, a shared dashboard of key reserve metrics and claims KPIs fosters transparency and joint problem-solving, rather than finger-pointing.

- **Embed or Liaise Roles:** Some companies designate a "claims liaison" actuary or embed an actuary within the claims department to provide real-time visibility into claims operations. In our hypothetical insurer, having an actuary attend claims meetings could bridge knowledge gaps. An industry survey found that a number of companies have a dedicated claims actuary to develop indicators and communicate changes in the claims process to reserving actuaries (Brown et al.).

- **Structured Cross-Department Meetings:** Establish routine touchpoints between actuaries, claims and underwriting leaders. Use these to exchange observations: actuaries share quantitative trends, claims share qualitative developments. Even brief discussions can provide valuable context that shapes more accurate reserving assumptions.

- **Promote a Culture of Inquiry:** Leadership can set the tone by encouraging departments to ask questions of each other. Actuaries should feel comfortable asking claims about puzzling trends, and claims managers should feel equally comfortable questioning and understanding the reserving analysis. Over time, this breaks down walls and builds trust.

Outcomes of Improvement

Breaking the silo mentality leads to a more informed reserving process. Actuaries with frontline insights can adjust models proactively, such as recognizing earlier that a new litigation trend may slow claim payouts. When claims and underwriting are looped into the reserving rationale, they gain confidence in the numbers and can plan accordingly. Collaboration ensures that reserves reflect both the art and science of insurance: blending data with expert judgment from across the organization. Ultimately, this approach fosters a team-based mindset for tackling challenges, rather than reserving being seen as the actuary's problem alone.

Lost in Translation: Poor Communication of Results and Uncertainty

Scenario

After completing their complex analysis, the actuarial team at an insurer presents the reserve indications to senior leadership. The slide deck is 30 pages of triangles, tables, and technical jargon about development factors and coefficients. The Chief Financial Officer, always pressed for time, skips to the bottom line: "So, are we adequately reserved or not?"

The chief actuary responds with a dense explanation, leaving the CFO and other executives feeling more confused than assured. They receive a point estimate for reserves but little insight into the range of possible outcomes or key risk drivers. A few months later, when actual losses deviate from expectations, management is angry: "Why didn't we know this could happen?" The anti-pattern here is a failure to communicate results clearly and actionably, in a way that bridges the gap between technical analysis and business decision-making.

Pitfall

Even the best analysis can fall flat if its message doesn't reach the audience. "Lost in translation" happens when actuarial teams communicate in overly technical terms, omit uncertainty, or fail to highlight the practical implications of their findings. Leaders and other stakeholders need reserving insights put into understandable language and context so they can make informed decisions. Simply dumping data or model output on busy executives is an anti-pattern. Providing information isn't enough if decision-makers can't understand or act on it (Brown et al.).

Best practices emphasize the importance of communicating information in a way that is accessible and actionable for both actuaries and non-actuaries, while also clearly conveying any uncertainty in the results (Brown et al.). When this doesn't happen, management might misinterpret the reserves as a single precise number, unaware of potential variability. Without a clear narrative, leadership may miss which parts of the business are driving reserve changes and why. These crucial insights often remain buried in actuarial worksheets.

Recognizing the Signs

- **Comprehension Gap:** Senior leaders frequently ask basic questions after a reserve presentation ("What caused this change?" or "What does this term mean?"), indicating the message did not land.

- **Technical Overload:** Reserve reports default to technical detail (thousands of triangles, extensive parameter tables) with minimal executive summary or explanation of business relevance.

- **Uncertainty Blind Spot:** Little to no discussion of uncertainty, ranges, or "what could go wrong" scenarios in communications to management or the Board.

- **Communication Disconnect:** Business unit leaders express surprise at results that, had they been explained clearly, would have been anticipated (being shocked by variability that actuaries considered but never articulated).

Mitigation Strategies

- **Tell the Story, Not Just the Numbers:** Frame reserve results as a narrative that explains why the numbers are what they are, and what they mean for the business. Instead of just stating, "*Reserves increased by $10M this quarter,*" explain, "*Reserves increased by $10M, primarily due to higher-than-expected injury severity in auto claims, driven by more severe accidents, which we believe is due to increased highway traffic.*" Providing causes and context makes information actionable. Remember that anecdotes and stories can be far more compelling than figures alone (Brown et al.). A real-world illustration or a specific case can help drive the point home to a less technical audience.

- **Use Visuals and Summaries:** Leverage clear charts, infographics, or dashboards that boil down complex data into digestible visuals. A well-designed chart showing reserve levels by line of business with a few callout notes often delivers more value to an executive than a dense spreadsheet. Modern actuarial teams increasingly use data visualization tools to explain trends, making changes and patterns immediately apparent (Brown et al.). Always include an executive summary that spells out key takeaways, drivers of change, and any recommendations.

- **Communicate Uncertainty and Assumptions:** Don't shy away from discussing uncertainty. Provide a reasonable range or at least some qualitative indication of confidence. For instance, "*Our best estimate is $50M, but actual losses could plausibly be $45M or $55M under different scenarios. We've assumed moderate inflation. If inflation spikes higher, we'd expect reserve needs to increase accordingly.*" Educate leadership on what key assumptions underlie the reserves. This prepares them for deviations and demonstrates that the actuarial team is proactively considering risks. Some teams even present alternative scenarios, such as the impact of higher inflation, or a severe claims spike, to illustrate how reserves might change, which can be powerful for boards and audit committees to grasp the true range of outcomes (Brown et al.)

- **Iterative Dialogue:** Treat communication as a two-way street. After presenting, solicit questions and feedback. If an executive is consistently asking, "What does this mean for us?" then refine the messaging next time to answer that upfront. Consider educational sessions for non-actuarial stakeholders (a "Reserving 101" for new board members or executives) so they become more comfortable with actuarial concepts (Brown et al.). An informed audience will get more value from the communication and be better partners in the process.

Outcomes of Improvement

Effective communication can transform the reserving process from a cryptic actuarial exercise into actionable business intelligence. When leadership truly understands reserve indications, they can make better strategic decisions based on those insights. They also gain more realistic expectations. Viewing the reserves as estimates with ranges and not destiny, prevents shock or distrust when actual results differ. By clearly conveying where reserves changed and why, actuaries help management focus on the underlying drivers (for example, "rising claim severity in product X is contributing to the reserve increase. Do we need to adjust underwriting?"). This elevates the conversation to business solutions rather than just reporting numbers. In short, fixing the "lost in translation" anti-pattern builds credibility for the reserving team and ensures that analysis genuinely informs leadership decisions, as it should.

Black Box Syndrome: Lack of Transparency and Documentation

Scenario

At XYZ Insurance, the Chief Risk Officer requests an independent review of the reserving process. When the reviewers arrive, they discover much of the analysis lives only in one actuary's personal files, and memory. There is no comprehensive documentation of how estimates are derived or what assumptions were made. The models (mostly spreadsheets and some custom code) lack clear annotations. When questions arise, such as "*Why were the liability reserves increased in Q2?*" or "*How was this selection made?,*" the answers depend on the one or two individuals who still remember. If those people leave the company, reproducing the last analysis would be nearly impossible. This is the black box syndrome in action: a workflow that lacks transparency and documentation, relying instead on individual memory and heroics.

Pitfall

Lack of documentation and process transparency is a serious anti-pattern that creates operational and even financial risk. If reserve calculations can't be easily understood by anyone but the original analyst, the process is effectively a "black box." Beyond violating the Actuarial Standards of Practice, this undermines trust and makes it difficult to validate or improve the approach. Without proper documentation and governance, errors or biases can hide in the model logic and persist unnoticed over time.

Best-in-class reserving departments ensure strong information and process governance, including appropriate documentation of methods and assumptions (Brown et al.). When such governance is missing, inconsistencies and mistakes proliferate. For example, an analyst might "tweak" a number in a poorly controlled spreadsheet, producing an incorrect result with no audit trail (Brown et al.). Lack of peer review or sign-offs can allow questionable assumptions to slip through. In short, the black box anti-pattern is characterized by opacity (no clear line of sight into how reserves were produced) which creates high risk for errors and misjudgments.

Recognizing the Signs

- **Lack of Documentation:** Critical decisions or assumptions in the reserving process are not documented in writing (or are buried in someone's email).

- **Onboarding Gaps:** New team members struggle to follow the workflow or replicate results due to missing or outdated procedure manuals.

- **Lack of Review Process:** There is no formal peer review or model validation step in the process, leaving leadership to "trust" the numbers without any independent check.

- **Opaque Communication:** Auditors or managers asking for explanations receive convoluted explanations or references to complex files instead of clear documentation or reports.

Mitigation Strategies

- **Document Assumptions and Methods:** Create an "assumptions book" or document each cycle to record key assumptions, methodology choices, and any expert judgment applied. Even a brief bullet-point list by segment creates a valuable record. Over time, these notes help the team recall why changes were made. This practice institutionalizes knowledge instead of leaving it locked in individuals' heads.

- **Standardize and Institutionalize the Process:** Develop a standardized workflow with clear steps and responsibilities, and document it. Flowcharts or checklists can help ensure each analysis goes through the same rigor. Many firms find that adopting a dedicated reserving software helps here, as it can force a consistent structure and provide built-in controls around data and calculations (Brown et al.). Standardization reduces the black-box nature because the process is known and repeatable.

- **Peer Review and Governance:** Institute a peer review for reserve analyses. Before results go to management, have a second qualified actuary review the work, challenge assumptions, and verify calculations. This internal audit not only catches issues but also ensures more than one person understands the model. Consider governance policies like model change logs and require sign-off from a chief actuary or reserving committee for significant judgment calls. These internal controls create accountability and transparency.

- **Knowledge Sharing and Succession Planning:** Rotate assignments or have team members present their work to each other. If one analyst always handles a segment, make sure another team member can step in or at least explain the reserving approach. Cross-training and succession planning prevent a "single point of failure" problem. The goal is to ensure the process continues smoothly even if one person is unavailable.

- **Leverage Tools for Transparency:** As much as possible, use tools that leave an audit trail. For example, if using coding languages (R, Python), use version control systems to track changes. If using spreadsheets, consider add-ins that can log changes or at least regularly archive versions. Some modern reserving software products also provide audit logs and documentation capabilities out-of-the-box.

Outcomes of Improvement

By shining light into the black box, the reserving function becomes more robust and audit-ready. Documentation and transparency give leadership and regulators confidence that the reserves are the product of a disciplined, repeatable process rather than one person's guarded secret. When questions arise, the team can point to clear documentation that explains methods, assumptions, and changes.

Greater transparency builds trust. It reassures executives and auditors that the process is under control and not vulnerable to hidden tampering or oversights. Transparency also supports knowledge retention. When experienced actuaries retire or move on, they leave behind a well-documented

process that successors can pick up, ensuring a seamless transition. Addressing this anti-pattern improves accuracy (through peer checks and error reduction), efficiency (less time wasted on deciphering someone's black box), and collaboration (shared ownership of the reserving process).

Conclusion

Breaking down silos and sharpening communication isn't just a "nice to have," it's what turns a back-office function into a true business partner. By creating structured cross-department touchpoints and shared dashboards, you ensure actuaries gain the qualitative insights they need, while claims and underwriting teams understand the numbers behind every change. Pair that with concise storytelling, complete with ranges and scenario notes, and you'll transform every quarterly report from a confusing tangle of triangles into a clear action plan.

Finally, shine a light into the black box by documenting assumptions, standardizing workflows, and instituting peer reviews. With transparent processes and accessible audit trails, you eliminate surprises, build trust, and safeguard institutional knowledge. The result? A reserving function that's not only more accurate and reliable, but also more collaborative, empowering your entire organization to anticipate risks, seize opportunities, and move forward with confidence.

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