

6.1 Summary

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This section discusses the components of unpaid claims, key relationships and dates in unpaid claim estimation, and the importance of accurate estimates for internal management, investors, and regulators. It highlights regulatory compliance requirements, such as maintaining adequate reserves and providing a Statement of Actuarial Opinion. Additionally, it covers how actuaries can improve estimation accuracy by grouping similar claims to balance data granularity and credibility.

Components of Unpaid Claims

IBNR is made of the following 4 components:

1. An amount for claims incurred but not reported (**pure IBNR**).
2. A provision for claims reported but not recorded.
3. A provision for future development on known claims, a.k.a. **incurred but not enough reported (IBNER)**.
4. An estimate for reopened claims.

Key Relationships and Dates

$$\text{Unpaid Claims} = \text{Case Outstanding} + \text{IBNR (broad definition)}$$

$$\text{Unpaid Claims} = \text{Ultimate Claims} - \text{Paid Claims}$$

$$\begin{aligned} \text{Ultimate Claims} &= \text{Paid Claims} + \underbrace{\text{Case Outstanding} + \text{IBNR}}_{\text{Reported claims}} \\ &= \text{Reported Claims} + \text{IBNR} \end{aligned}$$

- **Accounting date:** This date separates paid versus unpaid claim amounts.
- **Valuation date:** The date through which transactions are included in the estimate. This date can be before, on, or after the accounting date.
- **Review date:** The cutoff date for information known to the actuary.

Importance of Accurately Estimating Unpaid Claims

- **Internal Management:** Estimating unpaid claims is essential for decision-making in areas such as pricing, underwriting, and finance. Inaccurate estimates of unpaid claims can lead to poor decisions that can negatively impact an insurer's financial strength.
- **Investors:** Accurate unpaid claims estimates are crucial for decision-making, and inaccurate estimates could lead to misleading financial metrics.
- **Insurance Regulators:** Inaccurate unpaid claims estimates can result in misrepresenting an insurer's actual financial position.

Regulatory Compliance

New York insurance law mandates that insurers maintain reserves in an estimated aggregate amount to pay for all losses or claims incurred on or before the settlement date.

Currently, countries around the world require an annual **Statement of Actuarial Opinion** signed by a qualified actuary commonly referred to as the **Appointed Actuary**, containing the actuary's opinion on the reasonableness of the reserve for carried loss and loss adjustment expense (LAE).

Homogeneity and Credibility of Data

Actuaries can improve the accuracy of estimating unpaid claims by grouping similar types of claims together based on characteristics such as:

- Consistent coverage
- Claim count volume
- Reporting patterns
- Ability to develop appropriate case estimates
- Settlement patterns
- Likelihood of reopening claims
- Average settlement value

An actuary must balance the trade-off between the granularity of the analysis and the sufficiency/credibility of the data.

