6.1.2 Importance of Accurately Estimating Unpaid Claims   🕐 **10m**

Accurately estimating unpaid claims is critical for insurers because they may not know the true cost of claims until years later, yet they are required to regularly report their financial results.

Consider the perspective of three major stakeholders:

- **Internal Management:** From an internal management perspective, 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 underwriting decisions, as well as strategic and financial choices that can negatively impact an insurer's financial strength.

- **Investors:** From an investor's perspective, accurate unpaid estimates are crucial for decision-making, and inaccurate estimates could lead to misleading financial metrics for investors. For example, underestimating unpaid claims could artificially inflate net income.

- **Insurance Regulators:** Insurance regulators rely on accurate financial statements to carry out their supervisory roles, and inaccurate estimates may result in misrepresenting an insurer's actual financial position.

Regulatory Compliance

The proper estimation of unpaid claims by insurers is not only important for the management, investment, and regulation of insurance companies, but it is also sometimes required by law and regulatory bodies.

For example, in the 1960s, New York insurance law mandated that insurers maintain reserves in an estimated aggregate amount to pay for all losses or claims incurred on or before the settlement date. This includes those that were unreported and unpaid as of that date.

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

Homogeneity and Credibility of Data

As previously mentioned, a key aspect of accuracy in estimating unpaid claims is *homogeneity*. Insurance claims behavior can vary depending on the line of insurance, even if the coverages are identical. Within a single line of insurance, claims can vary significantly by subcoverage.

For example, consider claims for automobile liability policies; claims involving only property damage have lower severity and settle quickly compared to claims arising from catastrophic spinal injuries, which can take years to settle and cost millions of dollars.

In short, 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

Increasing the homogeneity of the data group or expanding the volume of data tends to increase credibility. However, dividing the data into too many homogeneous groupings poses a risk of insufficient data volume for a reliable analysis.

Thus, an actuary must balance the trade-off between the granularity of the analysis and the sufficiency of the data. For example, analyzing claims by subcoverage may produce a more accurate estimate of unpaid claims, but if there is insufficient data for a specific subcoverage, a detailed analysis might not be more accurate than an analysis based on combined data. The grouping of data may also require adjustment as the relative volume of business changes between different lines of insurance.

In conclusion, actuaries must carefully consider the appropriate grouping of data to ensure that the analysis produces accurate and credible estimates of unpaid claims while also being efficient with time and resources.