Swiss Re

Casualty accumulation

It is bigger than you might think!

"Industry capital models challenge insurance and reinsurance companies to put in place sophisticated property catastrophe risk management systems and controls and to provide stronger capitalisation to support the risk. However, casualty catastrophe risk could surpass property risk for many companies."

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Insurance portfolios are exposed to different forms of accumulation risk.

Classic clash

A variety of claims that follow a sudden event or occurrence, such as general liability, employer's liability and professional indemnity claims arising from a building collapse.

Serial aggregation

A defect in the design or manufacture of a product that triggers multiple losses which are all linked to the initial defect.

Business disaster

Multiple losses occurring as a result of a single failure or the disclosure of incorrect, misleading advice or information.

Systemic failure

A repeatable process, procedure or business practice resulting in a series of losses.

Insurance companies are exposed to a wide range of casualty accumulation scenarios, ranging from sudden and accidental events to systemic risk.

Casualty accumulation carries different threats to insurance

In the event of a large liability catastrophe, the following threats are considered to be the main dangers for insurance companies. The impact may differ depending on the given threat.

Threat	Impact on
Large reserve increase	▪ Capital ▪ Rating ▪ Profit
Continuous reserve increase	▪ Rating ▪ Capital ▪ Long-term earnings ▪ Reputation ▪ Profit
Large immediate payment	▪ Liquidity
Headline loss, after which no hard market follows	▪ Rating ▪ Reputation

Casualty catastrophe events are known from the past

- On 23 May 2004, the roof of Terminal 2E at Paris CDG airport caved in, bringing down the exterior walls and burying many people under the debris. There were four fatalities. The entire roof had to be replaced. The loss estimates run to roughly EUR 150 million. Various construction companies, architects and engineering firms were held liable for the collapse, as was the airport operator. Some 400 companies were parties to this case, their large number leading many insurers to report casualty clash losses.

- "Popcorn lung" was caused by the inhalation of the butter flavour compound diacetyl. Diacetyl caused lung disease identified in seven workers in a Jasper, Missouri popcorn factory. In 2001, the National Institute of Health found that diacetyl increased the likelihood of cumulative lung damage. Approximately 25 companies have been linked to to potential popcorn lung cases, some defendants have gone bankrupt and new cases of affected workers are still ongoing.

- When Enron Corporation went bankrupt in 2001, employees and shareholders filed multiple suits amounting to billions of dollars. Claims extended to other parties in the financial industry, through financial institutions D&O and professional indemnity claims, accountants and lawyers professional indemnity claims, and to a lesser extent non-financial D&O. Executive officers used accounting loopholes, special purpose vehicles and poor financial reporting to hide billions in debt from failed deals and projects. Shareholders filed lawsuits amounting to USD 40bn after the stock price plummeted.

How to mitigate loss scenarios?

Reinsurance solutions can help mitigate the risk for different forms of casualty accumulation

Cover	Scenario	Solution and benefit
Classic clash	A typical example would be the collapse of a bridge or a building. This could affect various insurance policies, such as contractor's liability, employer's liability, public liability and others.	■ Event-based reinsurance (clash excess of loss) ■ The insurance company avoids an accumulation of retentions per risk and is in a better position to manage individual retentions.
Serial aggregation	An insurance company may be affected by multiple claims from different insureds, stemming from one defect in design or manufacture of a product (eg a defect in turbines leading to blackouts in several power stations).	■ Common cause language (clash excess of loss) ■ Normally, losses linked to a single triggering event (act, error or omission, defect in the design or product) can be aggregated and result in a single net retention for the insurance company.
Frequency increase	An insurance company is affected by several large liability claims. Due to the size of the losses, the company reports an overall negative result in the profit and loss account and is downgraded by the rating agencies.	■ An aggregate excess of loss is a suitable reinsurance protection. ■ Reinsurance protection allows the insurance company to protect its profit and loss account and maintain its rating due to the capital protection provided. The annual deductible and the cover limit can be adjusted according to the needs of the client.
Reserve increase	An insurance company is forced to increase its reserves significantly, which leads to a severe deterioration of its solvency ratio.	■ Adverse development cover (ADC) provides protection against future deviations of the expected ultimate claims (reserving risk). Claims handling may be outsourced to a third-party provider or maintained by the insurance company. Structural features may include different attachment points, shares and loss corridors. Profit commission and commutation options are frequently used. ■ ADC provides economic protection against unfavourable reserve developments and immunizes net income against changing reserve estimates. The required capital for the internal model and rating agencies is reduced with an immediate impact at contract inception.

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