Summary 5M

Coverage Modifications

Deductibles

A deductible is the amount of each claim that the policyholder is responsible for paying before the insurer will pay a claim.

- **Fixed dollar deductibles** - A fixed dollar deductible has a fixed dollar amount, regardless of the loss size.

$$Y = \max(0, X-d) = \begin{cases} 0, & X \le d \\ X-d, & X > d \end{cases}$$

It is also known as an **ordinary deductible** or a **deductible**.

- **Fixed percentage deductibles** - A fixed percentage deductible can be a percentage of the loss or the policy limit. It is usually paired with a minimum dollar deductible so that the insurer does not need to handle small claims.

$$D = \max(d, \delta X) = \begin{cases} d, & X \le \dfrac{d}{\delta} \\ \delta X, & X > \dfrac{d}{\delta} \end{cases}$$

$$Y = \begin{cases} 0, & X \le d \\ X-d, & d < X \le \dfrac{d}{\delta} \\ (1-\delta)X, & X > \dfrac{d}{\delta} \end{cases} \qquad (1.2.1.3)$$

- **Disappearing deductibles** - A disappearing deductible decreases linearly within a specific loss range.

$$D = \begin{cases} d, & X \leq a \\ d\left(\dfrac{b-X}{b-a}\right), & a < X \leq b \\ 0, & X > b \end{cases}$$

$$Y = \begin{cases} 0, & X < d, \\ X - d & d \leq X \leq a \\ X - d\left(\dfrac{b-X}{b-a}\right), & a < X \leq b \\ X, & X > b \end{cases}$$

- **Franchise deductibles** - A franchise deductible is also known as a **cliff disappearing deductible**. It decreases to 0 as soon as the loss exceeds the deductible.

$$Y = \begin{cases} 0, & X \leq d \\ X, & X > d \end{cases}$$

- **Fixed dollar deductibles per calendar year** - The fixed dollar deductible per calendar year can have an amount for an individual coverage, and then another amount for the family coverage. The insurance coverage will kick in when **either** the individual's deductible or the family deductible has been met.

- **Elimination periods** - The elimination period is the period of time between the date of a disability/accident and the date that benefits begin.

Policy Limits

A policy limit is the maximum amount the insurer will pay for a single loss.

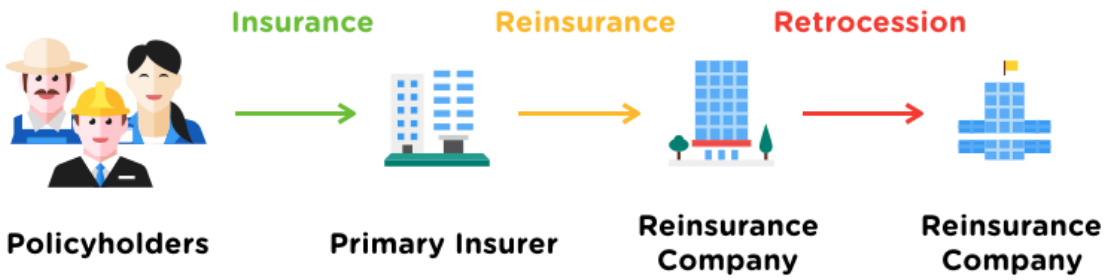
$$Y = \min(X, u) = \begin{cases} X, & X \leq u \\ u, & X > u \end{cases}$$

Coinsurance

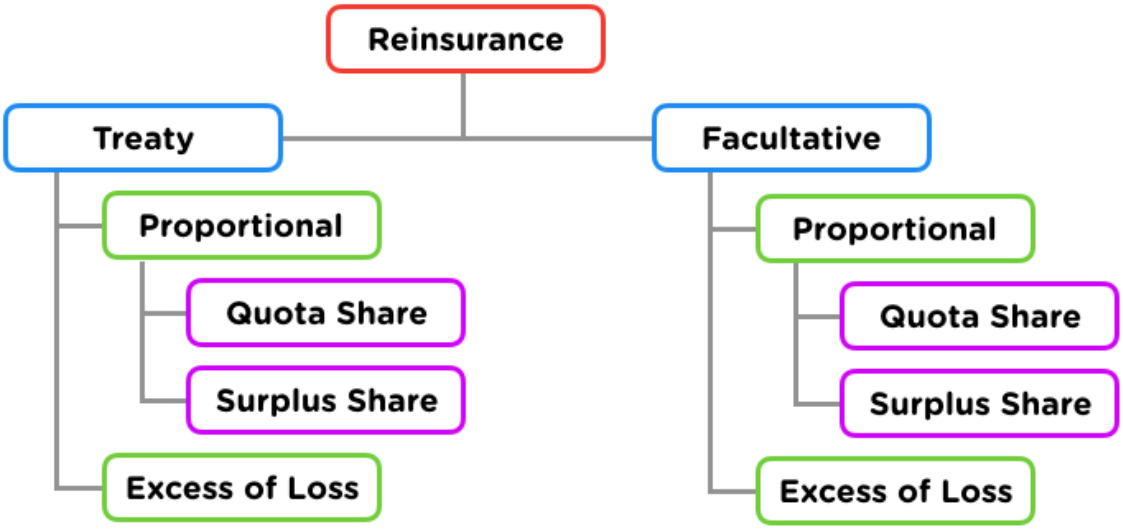
A coinsurance is the proportion of loss the insurer is responsible for.

$$Y = \alpha X$$

Reinsurance



Reinsurance can be categorized as either facultative or treaty and as either proportional or excess of loss.



- **Facultative**: Used for ceding individual risks.
- **Treaty**: Used for ceding all risks in a specific line or class of business.
- **Quota share**: Both parties share a percentage of the total risk.
- **Surplus share**: Both parties share a percentage of the total risk above the retention limit.
- **Excess of loss**: Reinsurer is responsible for claim amounts exceeding the retention limit.