



INSTITUTE OF ACTUARIAL
& QUANTITATIVE STUDIES

Non-Life Insurance

1: Introduction to General Insurance

Presentation

Terminology in GI

All insurance excluding life insurance falls under general insurance. Non-life insurance is a broad category, including protection on both people and things. Non-life insurance is also called General Insurance.

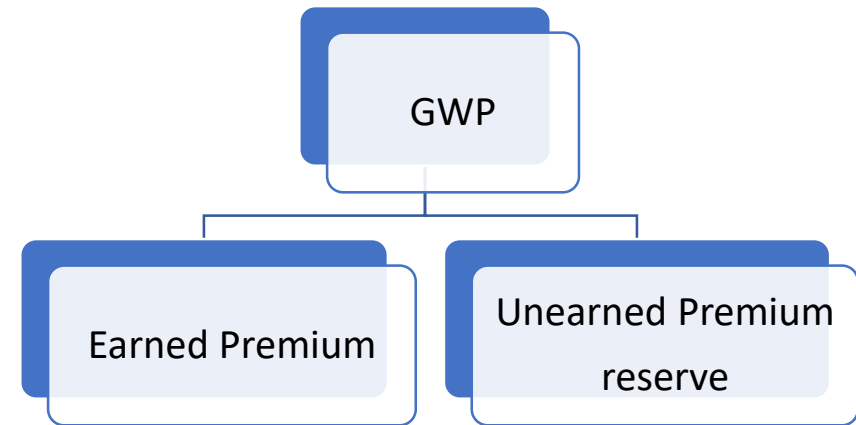
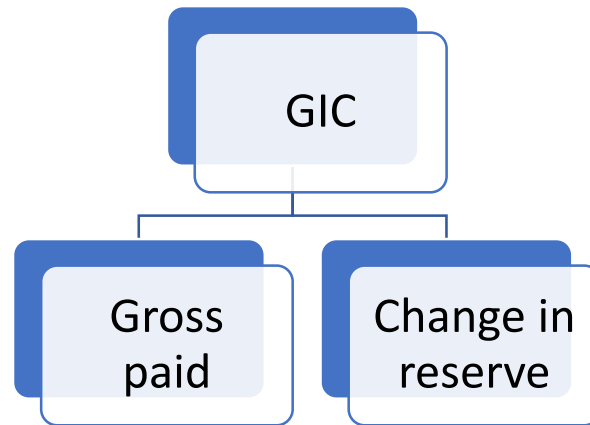
Items in Balance Sheet

GWP: Gross written Premium

Gross written premiums are the total revenue from a contract expected to be received by an insurer before deductions for reinsurance or ceding commissions.

GIC: Gross Incurred Claim

Gross claims incurred comprise all payments made in respect of the financial year plus the provision for the **claims** but minus the provision for **claims** for the preceding financial year.



Expenses : incurred by the company like renewal, claim settlement expense, underwriting cost

Expense ratio =

$$\frac{\text{Expenses}}{\text{GWP (Gross Written Prem.)}}$$

Commission : agent's commission

Commission ratio =

$$\frac{\text{Commission}}{\text{GWP (Gross Written Prem.)}}$$

Underwriting Profit: It consists of the earned premium remaining after losses have been paid and administrative expenses have been deducted. It does not include any investment income earned on held premiums.

Underwriting profit = GWP- GIC- Expenses- commission

$$\text{Loss Ratio} = \frac{\text{GIC}(\text{gross incurred claim})}{\text{GWP}(\text{Gross Written Prem.})}$$

Combined Ratio : is a measure of profitability used by an insurance company to gauge how well it is performing in its daily operations.

$$\text{Combined Ratio} = \frac{\text{GIC} + \text{expense} + \text{commission}}{\text{GWP}(\text{Gross Written Prem.})}$$

GWP is earned throughout the period.

With reinsurance

Reinsurance is a form of insurance purchased by insurance companies in order to mitigate risk. With reinsurance, the company passes on some part of its own insurance liabilities to the other insurance company.

Insurers purchase reinsurance for four reasons: To limit liability on a specific risk, to stabilize loss experience, to protect themselves and the insured against catastrophes, and to increase their capacity.

GWP

NWP: Net Written Premium

Net premiums written is the sum of **premiums written** by an insurance company over the course of a period of time, less **premiums** ceded to reinsurance companies, plus any reinsurance assumed

Earned Premium :the **premium** collected by an insurance company for the portion of a policy that has expired. In other words, the **earned premium** is what the insured party has paid for a portion of time in which the insurance policy was in effect, but has since expired.

Net Earned Premium: means the **Net Written Premiums** recorded during the Experience Period, plus the unearned **premium** reserves at the beginning of the period, minus the unearned **premium** reserves at the end of the period.

Net Expense ratio

Net Commission Ratio

Net Combined Ratio

Understand

Start date

End date

Accident year

Financial year

Claim Incurred

Claim reported

IBNR – Incurred but not reported

Example 1 - where reserving is based at inception on actual claim activity

Assume

- All claims are reported within 4 months of the loss event.
- Earned premium for the month is \$100.
- Each claim is worth \$10, half paid in the month of reporting, half in the subsequent month.
- Case reserves are established at \$10 once the claim is reported
- The initial IBNR is set based on 30% of earned premium, run off evenly over the following three months.
- No bulk reserve is necessary (beyond that which may be implicit in the IBNR calculation).

<u>Accident Month</u> a	<u>Accounting Month</u> b	<u>Reported Claims</u> c	<u>Paid</u> d	<u>Case Reserves</u> e	<u>IBNR</u> f	<u>Ending Reserves</u> g (g) = (e) + (f)	<u>Beginning Reserves</u> h	<u>Incurred Losses</u> i (i) = (d) + (g) - (h)
Jan. 06	Jan. 06	3	15	15	30	45	0	60
Jan. 06	Feb. 06	2	25	10	20	30	45	10
Jan. 06	Mar. 06	0	10	0	10	10	30	-10
Jan. 06	Apr. 06	1	5	5		5	10	0
Jan. 06	May 06		<u>5</u>	0		0	5	<u>0</u>
			60					60

The above displays the life-cycle for a particular accident month. The financials for a particular accounting month will reflect various accident transactions or outstanding reserves during that month.

Thank You