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Non - Life Insurance - PPP (Assignment 1)

(1)
Ans. The premium collected by an insurance company for the portion of a policy that has expired is called.
c) Earned premium

(2)
Ans. How is surplus reinsurance similar to quota share reinsurance?
a) The reinsurer and reinsured's share of the claim is proportionate.

(3)
Ans. An individual loss on an insured risk triggers the reinsurance coverage if it exceeds the deductible, is described as an excess of loss per risk treaty.
a) True.

(4)
Ans. Non-proportional reinsurance is usually expressed as a percentage of the risk a reinsurer is taking from the primary insurer.
b) False

(5)
Ans. A reinsurance contract is a contract of indemnity.
a) True

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(6)

Ans (a) Reinsurance is like an insurance for insurance companies

(b) Reinsurer is a financial company that provides financial protection to insurance companies

(c) In the case of reinsurance, the primary insurer purchasing reinsurance is referred to as the ceding company and the company providing financial protection is referred to as the reinsurer.

(d) In the case, when it becomes difficult for the primary ~~risk~~ insurer to handle the risks, then the reinsurer pays for the excess or proportional loss depending upon the type and terms of the reinsurance contract.

(e) In this way, reinsurance is a second level of insurance.

(f) Reinsurance can be bought for the same terms and risk for which the primary insurer had a contract with the policyholder

(h) Types of reinsurance are as follows:

- Reinsurance
  - Proportional Reinsurance
    - Quota share reinsurance
    - Surplus loss reinsurance
  - Non-proportional reinsurance
    - Individual excess of loss reinsurance
    - Stop loss reinsurance

(i) The two main types of reinsurance are:
(a) Proportional reinsurance
(b) Non proportional reinsurance
(j) <u>Proportional reinsurance:</u>
In the case of proportional reinsurance, both the ceding company and the reinsurer share the cost of all risks proportionally. A proportional premium is paid for a proportional sum assured.
The two main types of proportional reinsurance are:
(a) Quota share reinsurance
(b) Surplus loss reinsurance
(k) <u>Quota share reinsurance:</u>
In quota share reinsurance, the proportion i.e. the share of the ceding company and reinsurer is the same for all the risks in the portfolio.
If Y is the amount that the ceding company will pay for a claim, Z is the amount that the reinsurer will pay for the same claim of total amount X and α is known as the retained proportion or retention limit then,

$$Y = \alpha X \quad \text{and} \quad Z = (1-\alpha)X$$

eg. If Kotak life insurance company has quota share reinsurance contract with Munich Re with retained proportion as 80%, then for a claim of ₹5 lakh, Kotak life insurance will pay ₹4 lakh and Munich Re will pay ₹1 lakh i.e. 20% of ₹5 lakh.
(l) <u>Surplus loss reinsurance:</u>
In the case of surplus loss reinsurance, the proportional

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loss share between the ceding company and the reinsurer can be determined on an individual risk level. Here, only those losses will be shared which are being issued over the retained proportion.

eg: Kotak life insurance company has a surplus loss reinsurance treaty with Munich Re. Kotak life insurance determines a maximum retained proportion of ₹30,000.

Suppose, Kotak life insurance issued 3 policies.
Person A issued for ₹ 30,000 for a premium with ₹ 500
Person B issued for ₹ 100,000 for a premium with ₹ 1500
Person C issued for ₹ 150,000 for a premium with ₹ 2500
There are claims incurred for these three policies as follows:
Person A = ₹5,000 , Person B = ₹ 15,000 , Person C = ₹ 35,000

	Kotak life insurance	Munich Re	Total
Person A →			
Amt. of insurance	30,000	0	30,000
Premiums	500	0	500
Claims	5,000	~~5,~~ 0	0
Person B →			
Amt. of insurance	30,000 (30%)	70,000 (70%)	1,00,000
Premiums	450	1050	1500
Claims	4500	10500	15,000
Person C →			
Amt of insurance	30,000 (20%)	120,000 (80%)	150,000
Premiums	500	2000	2500
claims	7000	28,000	35000

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(m) Non-proportional reinsurance

The two main types of non-proportional reinsurance are as follows:

(a) Individual excess of loss reinsurance.

(b) Stop loss reinsurance

(n) Individual excess of loss reinsurance

In individual excess of loss reinsurance, any claim amount about a certain ~~or~~ excess point or retention limit is being paid by the reinsurers.

eg Kotak life insurance company has an individual excess of loss reinsurance with Munich Re with retention amount as 3 lakh. Say, that Munich Re has the reinsurance layer from 3 lakh to 10 lakh. Kotak life insurance company received two claims of amounts 4 lakh and 14 lakh.

	Claim = ₹4,00,000	Claim = ₹14,00,000
Amount paid by Kotak life insurance (Retention)	₹3,00,000	₹3,00,000
Amount paid by Munich Re (Reinsurance layer)	₹1,00,000	₹7,00,000
Amount paid by Kotak life insurance (Above reinsurance layer)	₹0	₹4,00,000
Total	₹4,00,000	₹14,00,000

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(6) Stop loss reinsurance
In stop loss reinsurance, the reinsurance is not on individual risk basis, but it's trigger point is based on aggregarte amount of loss. It is related to loss ratio. If the ceding company exceeds a pre-determined loss ratio, then any excess amount is paid by the reinsurer.

eg. Kotak life insurance company has a stop loss reinsurance with Munich Re for a loss ratio of 75%. Thus, whenever the loss ratio goes above 75%, the excess claims are paid by Munich Re.

(7)
Ans (a) Stop loss reinsurance and excess of loss reinsurance, both are types of non-proportional reinsurance.
(b) In stop loss reinsurance, the trigger point is based on aggregate losses, whereas in excess of loss reinsurance, it is based on individual losses.
(c) In stop loss reinsurance, the limit is expressed as a percentage of something such as the loss ratio.
(d) whereas, in individual excess of loss reinsurance, any losses above a retention amount is paid for by the reinsurer.
(e) Generally, in the case of stop loss reinsurance, if the loss ratio goes above a certain determined point, then any excess amount is paid by reinsurer. Generally, there is no upper cap unless otherwise specified.
(f) whereas, in excess of loss reinsurance, there is a

reinsurance layer which starts with the retention limit of the ceding company and may have an upper cap or else infinity

(8)

Ans (a) The various ratios used in profit analysis of reinsurance are as follows:

(i) Net loss ratio
(ii) Net expense ratio
(iii) Net ~~cor~~ commission ratio
(iv) Net combined ratio

(b) Net loss ratio

$$\text{Net loss ratio} = \frac{\text{Net incurred claims (NIC)}}{\text{Net earned premium (NEP)}}$$

- Net incurred claims are the amounts that are obtained after subtracting the reinsurance recoveries from gross incurred claims
- Net earned premium is gross written premium plus unearned reserve at the beginning minus ~~co~~ unearned reserve at the end of the period

(c) Net expense ratio

$$\text{Net expense ratio} = \frac{\text{Expenses}}{\text{Net written premium (NWP)}}$$

- Expenses = Amounts incurred by insurer on marketing, operations, etc. types of expenses

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- Net written premium is gross written premium minus the premiums ceded to reinsurer plus any reinsurance assumed.

(d) <u>Net commission ratio</u>

$$\text{Net commission ratio} = \frac{\text{Commission}}{\text{Net written premium (NWP)}}$$

- Commission = Amounts paid to the distribution channels for bringing business to the insurance company.

(e) <u>Net combined ratio</u>

$$\text{Net combined ratio} = \text{Net loss ratio} + \text{Net expense ratio} + \text{Net commission ratio}$$

Generally, this is the ratio which is used in determining the profitability in daily operations.

(9)

Ans (a) <u>Marine insurance</u> is considered to be the <u>oldest form</u> of insurance in India.

(b) It's beginning can be traced back when the <u>sailors</u> suffered <u>losses</u> due to <u>storms</u>, <u>tides</u>, <u>natural calamities</u>, etc. while transferring goods from one place to another.

(c) Thus, each <u>sailor</u> put in some money and a <u>pool of money</u> was collected.

(d) And then whenever, a sailor experienced losses, it

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would be compensated from the pool of money
(e) Triton insurance company was the first insurance company in India established in calcutta in 1850 AD with the British having the major share.
(f) Indian Mercantile insurance company ltd was the first Indian insurance company established in Bombay in 1906 - 07.
(g) 107 insurers were amalgamated and grouped into four companies namely Oriental insurance company ltd, National insurance company ltd, the New India Assurance company ltd and the United India insurance company ltd
(h) The general insurance corporation of India (GIC) was incorporated as a company in 1971 and started it's business on 1st January, 1973.
(i) The general insurance industry was a public sector monopoly until 1999, after which private players were permitted to enter the market.
(j) The general insurance market was a ~~tro~~ tariff market until 2007. The detariff phase 1 started on 1 January 2007 and phase 2 on 1 March 2008.
(k) Currently, third party liability insurance is the only tariff insurance product in India

(10)
Ans: Given that:
Expenses = \$ 8500
Commission = \$ 5700

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Net incurred claims (NIC) = \$ 150,000
Net written premium (NWP) = \$ 50,000
Net earned premium (NEP) = \$ 75,000

To calculate: Net combined ratio.

Solution:

$$\text{Net combined ratio} = \text{Net loss ratio} + \text{Net expense ratio} + \text{Net commission ratio}$$

$$= \frac{NIC}{NEP} + \frac{\text{Expenses}}{NWP} + \frac{\text{Commission}}{NWP}$$

$$= \frac{150{,}000}{75{,}000} + \frac{8500}{50{,}000} + \frac{5700}{50{,}000}$$

$$= 228.47$$

Net combined ratio = 228.47.