12. (3 points)

An insured is considering an incurred loss retrospective rating plan and a paid loss deductible plan with the following characteristics:

Incurred Loss Retro	
Per Occurrence Limit	\$150,000
Maximum Ratable Loss	\$500,000
Paid Loss Deductible	
Per Occurrence Deductible	\$150,000
Aggregate Deductible	\$500,000
The following apply to both plans:	
Expected Ultimate Losses	\$450,000
Expected Ultimate Losses limited by occurrence	\$350,000
Expected Ultimate Losses limited by occurrence and aggregate	\$325,000
Fixed underwriting expenses including commission & profit	\$100,000
LAE as a percentage of Loss	8.0%
Tax Multiplier	1.030

a. (1.5 points)

Compare the expected total cost of insurance of the two plans, taking into account both premium and deductible payments, from the perspective of the insured.

b. (0.5 point)

Recommend and briefly justify one of the two plans above from the perspective of the insured.

c. (1 point)

Propose two changes to the recommended plan in part b. above and briefly explain why each would be beneficial for the insured.

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QUESTION 12	
TOTAL POINT VALUE: 3	**LEARNING OBJECTIVE(S): B6**
SAMPLE ANSWERS	
Part a: 1.5 points	
Sample 1 Paid Loss Deductible = (Deductible Payments) + (Premium) = 325,000 + [(450,000 – 325,000) + 450,000 × 0.8 + 100,000] × 1.03 = 593,830 Incurred Loss Retro R = [100,000 + (450,000 – 325,000) × 1.08 + 325,000 × 1.08] × 1.03 = 603,580 593,830 < 603,580 so paid loss deductible is lower *Sample 2* Retro Plan Expected insured claims = 450,000 E[R] = GCP = (450,000 × 1.08 + 100,000) × 1.03 = 603,580 Deductible Plan: Exp ded payments = 325,000 Premium = [(100,000+ 0.08 × 450,000 + (450,000 – 325,000)] × 1.03 = 268,830 Total Cost = 268,830 + 325,000 = 593,830 Ded is 9,750 cheaper	
Part b: 0.5 point	
Sample responses recommending paid large deductible plan: • The total cost (total premium + reimbursed losses) are lower (dependent on candidate's answer to part a) • Lower total cost from not paying taxes on deductible payments • Cash flow benefit from delayed payments for deductible losses versus up-front premium in the retro plan / the premium paid up front is lower providing a cash flow advantage *Sample responses recommending incurred retrospective rating plan:* • The total cost (total premium + reimbursed losses) are lower (dependent on candidate's answer to part a) • Less credit risk so the insured has a lower cost of posting security/collateral • Higher premium tax deductibility	
Part c: 1 point	
Sample responses assuming paid large deductible plan recommended in part b: • Increase the aggregate deductible: this would lower premium while not significantly increasing risk to insured. • Lower the aggregate deductible -> More certainty as less riskiness in the total cost for the whole PY. • Increase the per-occurrence deductible. This would lower the premium + provide a bigger cash flow advantage to the insured.	

- Lower the per-occurrence deductible. The insured would need to retain less of each loss, leading to less uncertainty.
- Change to incurred losses -> Pay more claims earlier, but less need to post collateral.
- Evaluate on an incurred basis -> Losses are more stable.
- Change from large dollar deductible to XS policy with self-insured retention. Insured can handle all claims below deductible and save on expenses built into insurer's policy while still getting XS loss protection.
- Structure as an SIR plan with same risk transfer structure -> Insured is charged less for LAE and has more control over claim adjusting. And the insurer may require less profit due to no credit risk and fewer services.
- Include LAE with loss and subject to deductible. This will reduce insured's loss share.

Sample responses assuming incurred retrospective plan recommended in part b:
- Propose a minimum ratable loss. The basic premium can be reduced.
- Adding a minimum premium or ratable loss would reduce swings in the retro premium.
- Lowering the max ratable loss would put less pressure on the insured if they had extremely high losses.
- Can opt for a retro development factor to limit premium swings.
- They could use a holdback which delays premium adjustments which will lower the back and forth between premium payments.
- Paid basis – If the insured wanted a cash flow advantage, they could use a paid loss basis instead of incurred loss basis.
- Use a multi-year plan to minimize rate fluctuations year over year.
- Multi-year plan to lock in low premium when market is soft.
- The retro plan can include a higher LCF (go above 1.08). This will give a cash flow advantage since insured will be paying less in basic premium.
- Have an additional dividend plan component where the insured will get dividend if the insurer's profit is over certain threshold.

EXAMINER'S REPORT

Candidates were expected to understand the pricing of loss sensitive rating plans, both retrospective rating and large deductibles. They were expected to compare the costs of the two plans with calculations, and to recommend one of the plans to the insured. Candidates were also expected to make suggested changes to their recommended plans and explain why they would be beneficial to the insured.

Part a

Candidates were expected to calculate the total cost of insurance for both the retro and deductible outlined, and compare the two. For the retro plan, this meant calculating the expected ultimate premium. For the deductible plan, this included calculating the upfront deductible premium and then adding the expected deductible reimbursements to the premium.

There were multiple ways to calculate the retro premium that received full credit. Candidates could:

- Calculate the basic premium and then use the LCF, ratable losses and tax multiplier to calculate the expected ultimate premium

- Calculate the ultimate premium directly by adding up all of the components (UW expenses, excess losses, insurance charge, ratable losses, LAE on each of the loss components and tax)
- Calculate the expected retro premium assuming it was equivalent to a guaranteed cost plan

Common mistakes included:

- Treating the 100,000 given in the problem for "Fixed underwriting expenses including commission and profit" as 'e', the expenses underlying a guaranteed cost plan, which includes LAE(LAE was given separately in the question)
- Neglecting to accurately identify the expected excess losses and/or insurance charge to be included in the basic premium / deductible premium
- Neglecting to apply the LAE % to correct loss amount, or not including LAE at all
- Calculating only the deductible premium and not adding the deductible reimbursements, or the incorrect amount of deductible reimbursements
- Applying the tax multiplier and/or LAE % to the reimbursements for the deductible plan
- Neglecting to compare the total cost of the two plans
- Not showing any calculations but attempting to compare how the two plans differ qualitatively

Part b

Candidates were expected to be able to make a recommendation of which plan was preferred and provide one item of support. An explicit plan recommendation was required for full credit.

Candidates had the option of referring to plan total costs calculated in part a for their justification, discussing the general characteristics of a retrospective rating plan versus large deductible plan (or vice versa), or some combination of both.

Common errors included:

- Giving support for the plan recommendation that was either relevant to a discussion of a guaranteed cost versus loss-sensitive plan
- Providing a description that was too general or vague
- Providing a benefit for the insurer rather than the insured.

Part c

Candidates were expected to list and justify two changes to the insurance plan they recommended in part b that are beneficial for the insured.

If candidates failed to recommend any plan in part b, credit was awarded provided they clearly stated which plan the changes were for.

Common mistakes included:

- Proposing changes that are benefits to the insurer rather than the insured
- Proposing changes that don't apply to the plan recommended in part b
- Proposing to change the underwriting expenses including profit and commission to either be

variable or negotiating a lower fixed dollar load

- Listing only one change
- Lack of or insufficient support for why the suggested change is beneficial for the insured
- Confusion in the directions of premium changes when deductible (either per-occurrence or aggregate) changes in an LDD plan
- Stating that changing the minimum/maximum ratable losses would lead to a change in ultimate premium in a retro plan