

EXAMINATION MEMORANDUM AND REPORT

12 May 2026

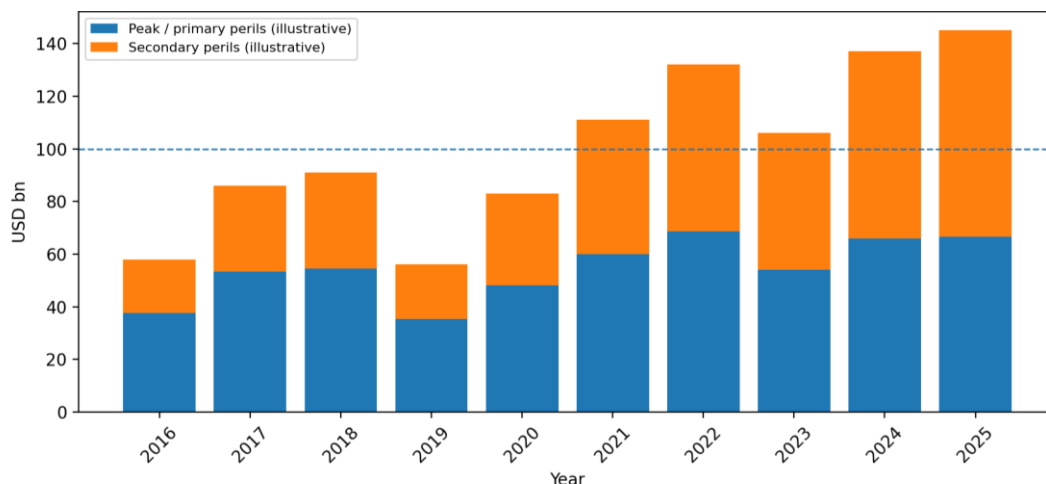
Subject F203 — General Insurance Fellowship Applications

QUESTION 1

Overall candidates struggled here although the concepts were not complicated. Evidence of time pressure and lack of commitment in particular to part (v), Lack of planning and reading of the question quite clear.

Over the last 10 underwriting cycles, industry-wide catastrophe losses have shown a shift in composition, with secondary perils contributing a growing proportion of insured losses.

Exhibit 1.1: Global insured natural catastrophe losses



** Secondary perils refer to smaller but more frequent weather events (e.g. hail, floods, wildfires), whereas primary perils are less frequent but high-severity events such as major hurricanes and earthquakes. Secondary perils are increasingly discussed in the context of climate change, but they are also influenced by exposure growth, urbanisation, infrastructure vulnerability and insurance penetration.*

Exhibit 1.2: Catastrophe Market Commentary:

- Market capacity for catastrophe risk transfer is generally adequate; risk-adjusted rates have stabilised or softened in several segments.
- Cedants are seeking improved earnings stability: more focus on aggregate/frequency protection and tighter event definitions.
- Alternative capital (Insurance-linked securities/catastrophe bonds) remains significant, offering additional capacity but with structuring considerations.

Exhibit 1.3: Insurance Market:

- Following a period of relatively favourable loss ratios, competitive conditions in several short-term lines have increased, with evidence of decreased pricing discipline in parts of the market.
- Broader economic growth remains subdued in South Africa, limiting premium growth opportunities.
- Inflation has moderated, interest rates are declining and credit conditions are improving. This may encourage greater investment risk appetite across the market.

Exhibit 1.4: Past three financial years' company performance:

- Premium growth is in line with the market, reflecting stable but low growth economic conditions.
- Loss ratios have been favourable, consistent with broader market experience.
- Expense ratios have gradually increased, with the cost-to-income ratio rising to approximately 35%. This is driven by technology investment, regulatory compliance costs and general operating pressures in a low-growth environment.
- Reinsurance costs have increased materially over the past five renewal cycles, driven by global catastrophe experience and repricing in international markets. Terms have shown signs of stability in the most recent renewal.

The Board Risk Committee has requested an interim update assessment as part of the 2027 planning cycle.

Address each of the following areas, focusing on material risks and trade-offs. Your advice should reflect the insurer's recent performance, competitive environment and risk appetite.

i. Assess the following aspects of **pricing and portfolio steering**

- rate adequacy in the context of the rising expense ratio and a softening market
- secondary-peril catastrophe loading in property pricing
- portfolio steering actions to manage concentration risk

[7]

- *Since loss ratios have been favourable, we can assess that the company is in a good position despite the softening rates.*
- *Rate adequacy must be assessed on a normalised basis: strip out the effect of benign weather and any prior-year releases to determine whether current premiums are genuinely adequate, not just favourably reported.*
- *Secondary perils (hail, flood, wildfire) require an explicit catastrophe load in property pricing that reflects growing frequency.*
- *Historical experience may understate the risk given urbanisation and climate trends — an upward adjustment to the expected catastrophe load is defensible.*
- *With market pricing softening, the insurer must resist following rates downward if the underlying risk cost is unchanged or increasing.*
- *Pricing below technical minimum to retain volume needs to be balanced with expected losses as a result.*
- *The 35% expense ratio is the key constraint: premium adequacy assessments must carry the full cost base. A rate review that focuses only on claims trends while ignoring expense creep will produce an inadequate indicated rate.*
- *Portfolio steering: consider reducing concentration in the highest-severity catastrophe-exposed property (by accumulation zone); apply PML limits by region; ensure motor and liability books are not cross-subsidising property.*

- *Monitor mix shift in SME commercial where adverse selection may emerge as market softens.*
- *Monitoring: track rate change index by class vs claims cost inflation; flag any line where rate-on-line is declining while claims trend is elevated.*

Most candidates gave a decent attempt, with fewer good considerations of approaches to concentration management.

ii. Evaluate the following aspects of **reinsurance programme structure**

- adequacy of current retentions given the shift toward secondary peril frequency
- aggregate and stop-loss protection considerations
- cost-benefit of the program given rising reinsurance costs.

[6]

- *Per-occurrence retentions may be adequate for severity protection but leave the insurer exposed to the accumulation of smaller secondary peril losses that fall below XL attachment. This frequency exposure is the primary gap and hence retention needs to be lowered to make recoveries.*
- *Number of reinstatements and their cost is key in managing multiple losses per year to the layer.*
- *Aggregate / frequency protection: market commentary confirms demand for aggregate cover. This insurer should model whether an aggregate XL layer (covering cumulative losses above a defined annual threshold) would protect earnings from secondary peril frequency.*
- *Given the favourable prior years this may be cost-effective at current market pricing.*
- *Stop loss could be considered but is generally expensive if available at a reasonably likely attachment point.*
- *Reinsurance costs have risen materially. The cost-benefit of each layer should be reviewed: layers that are infrequently triggered at high premium cost erode margin without providing real economic protection.*
- *Prioritise layers that address the insurer's actual concentration risk. This will need to be balanced with capital protection of which the calculation is driven by the SAM 1-in-200*
- *Event definitions: tightened wording in global XL contracts may leave losses from complex multi-day or multi-location events inadequately covered.*
- *Back-test the current programme against the insurer's own property loss history.*
- *Alternative capital / ILS: provides capacity and pricing competition. Conditions may differ from those in the traditional market.*
- *Key consideration is basis risk — parametric structures may not respond to the insurer's actual loss. Indemnity-based ILS is preferable but costlier.*
- *Confirm reinsurer credit ratings and programme diversification. No single counterparty should represent more than 30–40% of recoverable exposure.*

Most candidates gave the basic considerations, very few gave sufficient commercial considerations or explained cost benefit analysis in a convincing way.

iii. Explain the following aspects of **capital and earnings management**

- risk appetite metrics related to a combined ratio target range
- maximum tolerable net catastrophe loss
- one specific stress or scenario test relevant to this insurer
- the impact of expected investment income on the insurer.

[5]

- *Combined ratio operating range (e.g. target 90–95%, maximum tolerable 105% in any single year) which governs overall profitability across loss ratio, expense ratio and commission ratio. This is calibrated to exceed ROE in a normal year.*
- *Maximum tolerable catastrophe loss will be that loss which can be sustained (after recoveries and reinstatement premium) that will still result in an SCR coverage exceeding 1 (or exceeding a buffer over the SCR)*
- *One relevant stress test: a combined scenario of a 1-in-50 secondary peril event (e.g. a severe hailstorm season) occurring in the same year as a 10% adverse loss development on the prior year's reserves. This is more reflective of the insurer's actual risk profile than a standalone 1-in-200 primary peril event.*
- *Investment income context: with interest rates declining, investment income relief is diminishing. This increases the insurer's dependency on underwriting profit to support returns.*
- *Depends on the current portfolio, but any exposure to fixed interest instruments will be sensitive to this on reinvestment.*
- *The Board must understand that the investment income tailwind that partially offset elevated combined ratios in prior years may not persist — any further margin compression on the underwriting side has a direct impact on ROE.*

Poorly answered. Lack of evidence of understanding concepts or wider thought.

iv. Identify the following aspects of **monitoring, governance and conduct**

- three key risk indicators (KRI)s with escalation triggers
- catastrophe model risk controls
- one customer conduct consideration relevant to a softening market.

[6]

- *Three specific KRIs with escalation triggers:*
 - (a) *Catastrophe loss-to-plan ratio — escalate if cumulative catastrophe losses exceed 120% of budget by end of Q2;*
 - (b) *Rate change index vs claims cost trend — escalate if the gap between rate change and claims inflation exceeds 5 ppt for two consecutive quarters;*
 - (c) *SCR coverage ratio — escalate if coverage falls below 145%.*
- *Model risk controls: catastrophe vendor models carry significant parameter uncertainty, particularly for secondary perils (thin data). Required controls: (i) independent model validation at least annually; (ii) sensitivity testing of key parameters (e.g. frequency load, correlation assumptions); (iii) documented rationale where model output is overridden by management judgement. Over-reliance on vendor output without local calibration is a model risk that must be disclosed.*
- *Conduct consideration: in a softening market, competitive pressure may lead to relaxation of claims handling standards (faster settlement to retain customers) or policy terms being diluted to match competitor pricing. Monitor complaint ratios, repudiation rates, and time-to-settlement as conduct indicators. These directly affect the insurer's TCF obligations under FSCA guidance.*

Poorly answered. Lack of evidence of understanding concepts or wider thought.

The insurer could alternatively be part of a banking group prioritising earnings stability and capital protection, **or** a venture-capital backed insurtech pursuing rapid ‘hockey-stick’ growth (i.e. slow initial growth followed by a sharp acceleration in scale and market share).

- v. Complete the table below by stating how recommendations in your update assessment (i. to iv. above) would differ under each ownership model, with reference to the insurer’s context.

In the Rationale column, briefly explain your reasoning.

[10]

Category	Banking group	VC-backed insurtech	Rationale for difference
<i>Pricing & portfolio steering</i>	<i>Tight risk selection; low catastrophe concentration; stable, predictable lines prioritised.</i> <i>Maintain pricing discipline; do not chase volume below technical rate.</i>	<i>Broad appetite; willing to take on emerging or complex risks (cyber, SME) to build market share.</i> <i>Price aggressively or below technical rate to acquire customers.</i>	<i>Bank parent prioritises earnings stability and capital preservation to protect group credit rating.</i> <i>VC funders value growth metrics (GWP, policy count) over short-term profitability.</i>
<i>Reinsurance programme structure</i>	<i>Higher cession; prefer certainty of net loss; aggregate protection prioritised; conservative retention.</i>	<i>Lower cession to preserve margin; retain more risk.</i>	<i>Reinsurance cost erodes margin; VC investors expect capital-efficient deployment.</i> <i>Bank parent cannot tolerate earnings surprises.</i>
<i>Capital and earnings management</i>	<i>High SCR buffer (e.g. 150–160% target); conservative investment portfolio; low volatility tolerance.</i>	<i>Operate closer to SCR minimum; deploy capital into growth; accept higher earnings volatility.</i>	<i>VC runway is finite; capital tied up in buffers reduces growth capacity.</i> <i>Regulator may impose group supervision; dividend upstream depends on solvency.</i>
<i>Monitoring, governance and conduct</i>	<i>Formal governance; frequent Board reporting; low escalation thresholds; strong model validation..</i>	<i>Leaner governance initially; faster decision cycles; may rely on external data vendors.</i>	<i>Regulatory scrutiny higher in a banking group; group risk appetite frameworks impose discipline.</i> <i>VC speed-to-market is critical; formal governance built progressively as business scales.</i>

Many candidates left this question out. This is an easy question, most reasonable attempts at explaining possible differences between a bancassurer and startup were given credit.

[Total 34]

QUESTION 2

Overall a mixed question with some easy marks, more complex topics were not really well handled.

Exhibit 2.1: Cyber Liability gross provisions — Year End (YE) 2025 valuation (R million)

Accident Year (AY)	Incurred Claims	Selected CDF
2021	120	1.05
2022	150	1.10
2023	180	1.25
2024	200	1.45
2025	160	1.80

Exhibit 2.2: Cyber Liability gross provisions — Year End (YE) 2026 valuation (R million)

Accident Year (AY)	Incurred Claims	Selected CDF
2021	126	1.01
2022	170	1.06
2023	230	1.18
2024	300	1.55
2025	250	2.05
2026	190	2.60

Exhibit 2.3: Cyber Insurance Market

A global cyber-security bulletin reports a sharp increase in coordinated malware campaigns and “double-extortion” incidents (data encryption plus threats of public leak). Several jurisdictions report heightened disruption from attacks on supply chains and managed service providers. The bulletin notes:

- More mid-sized corporate targets;
- Increasing costs of breach response, legal defence and regulatory notification;
- Evidence of unlawful ‘facilitation’ payments and coercion to suppress disclosure.

Industry commentators warn that cyber loss patterns may exhibit delayed reporting and claims inflation, with legal and regulatory environments evolving rapidly.

Exhibit 2.4: Capital and risk appetite

- The Board risk appetite target is to operate between 140% and 170% of SCR (coverage ratio). The YE2026 forecast (before any reserve strengthening) is 150% SCR coverage.
- A 10% increase in net technical provisions reduces SCR coverage by 8 percentage points (all else equal). Consider the Cyber Liability portfolio to represent a material proportion of total net technical provisions and apply this sensitivity directly.
- Dividends may not be paid if the insurer fails (or is likely to fail) to maintain financial soundness (SCR/MCR compliance), and governance requires early warning and escalation where deterioration is likely.

Exhibit 2.5: Reinsurance (current) on Cyber Liability

- Quota share (QS): 20% ceded on Cyber Liability (ceding commission 25%).

- Excess of loss (XL): R50 million in excess of R10 million per risk, one reinstatement, annual aggregate limit R200 million.
- Reinsurance premium is forecast to increase by 12% at renewal unless programme terms change.

i. Explain why both IBNR and case reserves (OCR) are particularly relevant for Cyber Insurance.

[3]

- *OCR: Cyber claims are individually complex and costly to estimate and pay.*
- *Legal defence, forensic investigation, regulatory notification, and business interruption combine to make initial case estimates unreliable and almost always subject to upward revision.*
- *OCR must be set at a realistic expected ultimate for each open claim, governed by iterative FNOL process*
- *IBNR: Cyber breaches are frequently not discovered for months after occurrence (low discovery latency).*
- *The reporting tail is long and uncertain, making the pure IBNR component large relative to OCR. This is compounded by claimants suppressing notification (see Exhibit 2.3), further distorting the reporting pattern.*
- *Further IBNER may be required in so far as case estimates have been inadequate in the past although need to assess whether case estimate methodology has changed if the claims team is aware of this.*

Easy question which was mostly well answered.

ii. Explain how these liabilities would be presented under IFRS 17.

[4]

- *Under IFRS 17, there is no separate balance sheet line for IBNR or OCR. Both are subsumed within the Liability for Incurred Claims (LIC), measured as fulfilment cash flows*
- *These cash flows would be represented as the best-estimate future cash flows + risk adjustment for non-financial risk.*
- *A best estimate would represent probability weighted expected cashflows with no margins for uncertainty.*
- *Best estimate would be discounted at an appropriate discount rate, which would reflect the liquidity characteristics of the liabilities. This is likely to exceed the risk-free discount rate if not perfectly liquid.*
- *Cyber liabilities are more sensitive to the discount rate assumption than short-tailed lines. Since cyber liabilities are expected to be paid more than 1 year into the future, a non-discounted simplification is unlikely to apply.*
- *The risk adjustment would be expected particularly material for Cyber given the high uncertainty in the tail.*
- *The risk adjustment can be calculated using any method, however the confidence level would need to be disclosed in line with the company's stated risk appetite.*
- *For the LIC typically a VaR method corresponding to a bootstrap percentile could be used, allowing for diversification between lines of business. With a cyber liability book however we may have a very sparse triangle which may make a bootstrap unreliable.*

Very poorly answered. This is bookwork.

Question was specifically related to these liabilities ie IBNR and OCR.

- iii. Explain why setting the reserving assumptions for the cumulative development factors (CDFs) in Exhibits 2.1 and 2.2 requires the application of professional judgement.

[3]

- *The CDF can not solely be relied upon as this is an immature line with limited internal data.*
- *The actuary must judge the appropriate weight to give to internal vs external benchmarks.*
- *It is uncertain whether the historical development pattern will persist — changing cyber threat environments, legal frameworks, and claims management practices all affect future development differently.*
- *This requires independent professional judgement, not formulaic application.*
- *Professional standards (ASSA APNs) require the actuary to form and communicate an independent opinion on the adequacy of provisions.*
- *It is imperative that the actuary understands the selections made and the resulting reserves, which will be highly sensitive to small changes in the CDFs.*

Reasonably well answered, could have referenced more of regulation/professional guidance.

- iv. Using the data in Exhibits 2.1 and 2.2, calculate the total ultimate provision for years ending 2025 and 2026.

Additionally, quantify how much of the increase in ultimate provision is attributable to changes in Incurred versus changes in CDFs. Show your workings.

[7]

Ultimate Calculation

Ultimate YE2025 (AY2021–2025):

$$AY2021: 120 \times 1.05 = 126.0$$

$$AY2022: 150 \times 1.10 = 165.0$$

$$AY2023: 180 \times 1.25 = 225.0$$

$$AY2024: 200 \times 1.45 = 290.0$$

$$AY2025: 160 \times 1.80 = 288.0$$

Total YE2025 Ultimate: R1,094.0 million

Ultimate YE2026 (AY2021–2026):

$$AY2021: 126 \times 1.01 = 127.3$$

$$AY2022: 170 \times 1.06 = 180.2$$

$$AY2023: 230 \times 1.18 = 271.4$$

$$AY2024: 300 \times 1.55 = 465.0$$

$$AY2025: 250 \times 2.05 = 512.5$$

$$AY2026: 190 \times 2.60 = 494.0$$

Total YE2026 Ultimate: R2,050.4 million

Decomposition

AY	2025 Incurred	2026 Incurred	Change Incurred	2025 Factor	Incurred effect on Ultimate
2021	120	126	6	1,05	6,3
2022	150	170	20	1,1	22
2023	180	230	50	1,25	62,5
2024	200	300	100	1,45	145
2025	160	250	90	1,8	162
				Incurred effect on Ultimate	397,8
				Overall change ultimate (2025 and prior)	462,4
				Change in CDF	64,6

Calculation question, first part (calculation of ultimates) was good whilst the attribution was less well done.

- v. Identify four plausible drivers for the deterioration in Cyber Liability reserves over the year, referencing Exhibits 2.1, 2.2, and 2.3.

[4]

- *Delayed claim reporting: Exhibit 2.3 notes supply chain attacks and MSP disruptions — these are often discovered months after the initial breach, explaining why CDFs are increasing (development is slower than initially assumed) and IBNR continues to emerge late.*
- *Claims cost inflation: breach response, legal defence, regulatory notification and ransom-related costs are escalating (Exhibit 2.3: double-extortion incidents). Incurred is rising sharply across all AYs, indicating that prior case estimates were systematically understated.*
- *Worsening cyber threat environment: the shift to mid-sized corporate targets and managed service provider attacks changes the frequency-severity profile materially. Initial pricing and reserving assumptions may have been calibrated on a different risk environment.*
- *Suppressed disclosure / facilitation payments: Exhibit 2.3 notes coercion to suppress disclosure. Claims that were under-reported in earlier periods may emerge later, distorting the observed development pattern and inflating IBNR in later valuations.*

Reasonably well answered, Exhibits could have been referenced more throughout.

The CFO pushes back on your analysis, arguing that the deterioration is temporary and that growth and spending less on reinsurance will dilute the problem.

- vi. Explain why the best-estimate reserve cannot be set with reference to financial targets, describing the appropriate approach to communicating uncertainty to the Board.

[3]

- *The best-estimate obligation is not discretionary i.e. reserves must be set without regard to financial targets. Deferring or minimising reserve strengthening to protect reported earnings is a breach of professional standards.*
- *Given data immaturity and the observed acceleration in CDFs, an explicit margin above the central estimate is warranted. Under IFRS 17, the risk adjustment must reflect the uncertainty in the tail - it cannot be mechanically reduced.*
- *The risk adjustment will reflect a specific confidence level and calculation thereof should produce a distribution of results which can also be used for communication of uncertainty.*
- *Assumption governance: any change to CDF selections or reporting pattern assumptions must follow the formal assumption change process: documented, reviewed by an independent peer, and approved at Chief Actuary level.*

- *Communication to the Board: present a range of scenarios (optimistic / central / adverse) with the corresponding impact on provisions and SCR coverage. This gives the Board the information needed to make an informed decision on capital action.*

Reasonably well answered, communication to the Board point could have been improved on.

- vii. Using Exhibit 2.4, quantify the approximate impact of a material reserve strengthening on SCR coverage, and explain the governance implications.

[3]

- *SCR coverage is currently 150% (pre-reserve strengthening). This within the 140–170% range but with limited headroom.*
- *A 10% increase in net provisions reduces coverage by 8 ppt to 142%, close to the risk appetite floor.*
- *The reserve strengthening indicated by the YE2026 analysis (material increase in ultimates) could reduce coverage further, potentially triggering the risk appetite floor.*
- *This must be quantified and escalated to the Board before the reserve review is finalized.*
- *Management options: (i) capital injection; (ii) retention of earnings with suspension of dividends; (iii) quota share expansion to reduce net reserves; (iv) proactive communication with the Prudential Authority if breach is likely.*

By and large not well answered, a bit more thinking required regarding both the mechanics and the implications.

- viii. Recommend specific pricing, underwriting and operational actions required before new Cyber business is written, including practical steps to improve data quality and claims management.

[5]

- *Writing new Cyber business at current rates, given the demonstrated loss experience means each new policy is written at a significant loss.*
- *Remediation: immediate rate increase on renewals, tighten risk selection (mandatory cyber hygiene standards as underwriting criteria); reduce line size on accumulation-prone segments; pause new business until a revised pricing basis is approved.*
- *New business must be priced using the updated loss assumptions from the existing portfolio, not the original pricing basis.*
- *Claims management: ensure handlers have appropriate cyber-claims expertise.*
- *Late or inadequate OCR setting on complex claims is a primary driver of adverse IBNR development. Invest in claims capability.*
- *Data capture: implement granular cause-code, coverage-trigger, and claim-type recording from this renewal cycle forward. This is the foundation for more credible future reserving and pricing.*
- *Without it, the insurer remains reliant on external benchmarks that may not reflect its specific portfolio.*

The basic points were in most cases provided, but again lack of wider thought - maybe influenced by time.

Following your reserve review, the CFO approved a 30% rate increase on Cyber renewals. However, Q1 2027 is still running at a 95% loss ratio, which is above the revised pricing assumption.

ix. Applying the actuarial control cycle to the situation, identify the following:

- a. The two most critical objectives given the new information.
- b. Two internal and one external stakeholder that are most directly affected.
Explain their expectation of the actuarial function.
- c. A relevant capital constraint under SAM and a relevant reporting constraint under IFRS 17.
Explain how each limits your options.
- d. Two measurable criteria by which you would judge whether the remediation strategy succeeds.
- e. Two specific external developments (regulatory or otherwise) that could materially change your reserving or pricing assumptions.

[8]

(a) Revised objectives — two most critical given new information:

- 1. Determine whether the 30% rate increase is sufficient: the Q1 2027 LR of 95% against the revised pricing assumption means rates are still inadequate. The primary objective is to quantify the residual gap and determine whether a further rate correction is needed before the portfolio can be written profitably.
- 2. Stabilise the reserve basis: Q1 emerging experience must be incorporated into the YE2026 reserve; if the development pattern is accelerating, CDFs need further upward revision. The objective is a defensible provision by the Q2 2027 reporting date.

(b) Stakeholders — two internal, one external:

- CFO (internal): needs to understand the capital impact of continuing losses and whether further reserve strengthening is required in the H1 2027 financial statements. The actuarial function must provide a written quantification of the provision range.
- Underwriting / Product team (internal): needs the updated frequency and severity assumptions to decide whether to pause new business, impose risk selection restrictions, or restructure the SME Shield Cyber extension.
- Reinsurer (external): the Q1 experience affects their view of the programme at the next renewal. Proactive data sharing and a narrative on the remediation strategy strengthens the negotiating position and avoids adverse repricing surprises.

(c) Binding constraints:

- Capital constraint: SCR coverage is likely approaching or below the 145% early-warning threshold following Q1 deterioration. Until coverage is restored above the risk appetite midpoint (~155%), the insurer's options are constrained — it cannot absorb further adverse development without either a capital action or dividend restriction.
- Regulatory constraint: IFRS 17 requires provisions to be updated at each reporting date on a fulfilment cash flow basis. The Q1 2027 data must be incorporated in the H1 2027 reserve — there is no basis for deferring recognition of adverse development.

(d) Success criteria — two measurable criteria after 18 months:

- Loss ratio: rolling 12-month ultimate LR on post-remediation new business (written after the 30%+ rate increase and tightened risk selection) at or below 75% by end of Q3 2028, consistent with the revised pricing assumption.

- *Reserve stability: quarter-on-quarter movement in the central estimate of total Cyber provisions within $\pm 5\%$ of the prior quarter's estimate for at least three consecutive quarters, indicating that the development pattern has stabilised..*

(e) External developments — two specific examples:

- *POPIA: if the Information Regulator increases enforcement activity or imposes higher penalties for data breach notification failures, severity assumptions will need upward revision. Monitor regulatory enforcement actions and update the severity load in the pricing model quarterly.*
- *AI-enabled attacks: the rapid proliferation of AI-assisted phishing and automated vulnerability exploitation is likely to increase claim frequency beyond what current trend lines show. The pricing model should incorporate a scenario where frequency doubles over 24 months, and reserving CDFs should be stress-tested against this scenario.*

Not well answered. Evidence of lack of application to the question and willingness to be guided by the question here. Evidence of time pressure for longer questions.

- x. Explain how the reserve strengthening and related IFRS 17 technical provision changes could affect the insurer's taxable income and its capacity to pay dividends. In your answer address the interaction between IFRS 17 carrying values, the tax base of provisions, and the Companies Act solvency requirements.

[5]

- *Reserve strengthening increases incurred claims experience in the income statement, lowering underwriting profit and therefore taxable income in the year of strengthening.*
- *At the 27% corporate tax rate, a R100m reserve increase reduces taxable income by R100m and current tax by R27m.*
- *IFRS 17 vs tax base: where the IFRS 17 LIC (fulfilment cash flows) exceeds the tax base of provisions (SARS may allow a different deduction basis), a temporary difference arises, creating a deferred tax asset.*
- *An increase in the best estimate reserves may also increase the absolute level of the risk adjustment, without any change in assumptions which may further reduce profits and hence taxable income.*
- *This must be recognised and disclosed in the financial statements and represents a future tax benefit.*
- *There may be a knock on impact on the Loss Absorbing Capacity of Deferred Taxes in the SAM calculation to consider, which may affect base solvency further.*
- *Dividend capacity: under the Companies Act s46, dividends require a solvency and liquidity test.*
- *If reserve strengthening reduces distributable reserves and SCR coverage approaches the risk appetite floor, the Board must restrict or suspend dividends.*
- *Paying dividends while knowingly approaching SCR breach is a governance failure and a potential regulatory breach.*

Not well answered although there was a lot of scope for a solid answer here given the prompts. Again lack of greater thought evidenced.

[Total 45]

QUESTION 3

Overall the easiest question to score well on. Part (iii) was a key differentiator.

Your company plans to launch a new SME offering, “SME Shield”, combining Commercial Property cover with an optional Cyber extension. The product will be distributed via an underwriting management agency (UMA). The UMA has requested delegated authority to set premiums within agreed rating parameters and to settle claims up to R250,000.

Exhibit 3.1: Pricing assumptions provided by the product team for 2027 (per policy):

Item	Assumption
Expected annual claim frequency (Property)	0.08
Expected annual average severity (Property)	R120,000
Expected annual claim frequency (Cyber add-on)	0.03
Expected annual average severity (Cyber)	R180,000
Fixed expenses per policy	R450
Variable expenses (acquisition + admin) as % of premium	22%
Reinsurance costs (net of claims) as % of premium	4.5%
Target underwriting profit margin (on premium)	6%

Exhibit 3.2: 2026 year-to-date Cyber Liability portfolio snapshot (Gross, R millions)

Accident Year	GWP	Earned Premium	Paid claims	OCR	Ultimate Loss Ratio	Ultimate Combined Ratio	Budget Loss Ratio
2025	110	85	35	15	60%	85%	65%
2026	140	95	68	35	120%	150%	65%

- i. Using Exhibit 3.1, calculate the indicated gross premium per policy for SME Shield (including both Property and Cyber add-on), incorporating fixed and variable expenses, reinsurance costs and the target profit margin. State clearly any additional assumptions you make.

[6]

Expected Loss Cost

Property: $0.08 \times R120,000 = R9,600$

Cyber add-on: $0.03 \times R180,000 = R5,400$

Total expected loss cost: R15,000 per policy

Let P = gross premium per policy.

$P = \text{Claims} + \text{Fixed expenses} + \text{Variable expenses} + \text{RI Cost} + \text{Profit margin}$

*$450 + 0.22*P + 0.045*P + 0.06*P + 15\,000 = P$*

$15\,450 = 0.675P$

$P = R22\,888.89$

Frequency and Severity are Independent.

Property and Cyber are Independent.

Property and Cyber are both taken up and fixed cost and loadings applied on the combination.

Easy calculation question which was fairly well answered. Many cases used a very basic and incorrect premium formula. In many cases assumptions were not given.

The CFO insists SME Shield must be priced 12% below your indicated premium to hit growth targets.

- ii. Using your answer from (i), calculate the shortfall per policy and propose practical responses (across pricing, underwriting, product design, reinsurance, and expenses) that could reduce or close the gap. For each response, briefly note the key risk or trade-off.

[5]

$$\text{Shortfall per policy} = 12\% * R22\ 888.89 = R1\ 546.67$$

Practical responses to reduce the gap

- *Expense reduction: negotiate lower variable acquisition costs with the UMA; reduce fixed expense allocation by sharing infrastructure with other product lines. Risk: reduces UMA service quality or cross-subsidises from other lines.*
- *Reinsurance design: the stop-loss at 4.5% with 0% ceding commission is costly. A quota share with a 20–25% ceding commission would reduce net cost. Risk: transfers profitable tail to reinsurer, reducing upside.*
- *Product design — deductibles: increase policy excess/deductible to reduce frequency loading. Risk: adverse selection if only low-risk customers accept higher excesses, distorting the portfolio mix.*
- *Sublimits on Cyber extension: reduce the maximum Cyber severity assumption by capping the cover limit. Risk: product becomes less attractive to customers with genuine exposure; may not be competitive.*
- *Volume leverage on fixed expenses: at higher policy counts, R450 fixed expense per policy is diluted across a larger base. If fixed costs are genuinely fixed (not step-fixed), this reduces the per-policy loading. Risk: overstated unless true cost behaviour is confirmed.*

Overall reasonably good spread of points. Trade offs in most cases were not fully explained.

- iii. Using Exhibit 3.2, diagnose the key drivers of the adverse combined ratio versus budget for the existing Cyber Liability portfolio, and propose an action plan for the next two quarters. Your answer must cover:
- a. Analysis approach and metrics
 - b. Specific management actions
 - c. Key performance indicators (KPIs) you would monitor going forward, with escalation triggers
 - d. How you would incorporate findings into pricing, reserving and capital models

[10]

(a) Analysis approach and metrics:

- *Quantify the deterioration: FY2026 ultimate LR 120% vs budget 65%. The starting point is to decompose this into rate, frequency, severity, mix and expense components.*
- *Rate adequacy: compare premium per unit of exposure (e.g. per R1m of insured value or per policy) in FY2026 vs FY2025. If GWP grew 27% (110 to 140) while EP grew from 85 to 95 (12%), the book is growing faster than it is earning.*
- *Frequency/severity: compare claims count and average cost on settled claims vs the pricing assumptions (0.03 frequency, R180,000 severity).*
- *Mix shift: as GWP grew from 110 to 140, is the book shifting toward higher-risk segments (larger MSPs, healthcare, financial services) that were priced as if they were typical SME?*

- *Expense analysis: with paid claims $68 + \text{OCR } 35 = 103$ vs EP 95, the loss ratio alone is 108% (paid + case) before any IBNR. The CR of 150% implies expenses of ~R40m on EP of 95. This is very high and may reflect UMA commissions and admin costs that need to be addressed.*

(b) Management actions:

- *Immediate: implement rate increase of 30–40% on all Cyber renewals; suspend new Cyber business until the revised pricing basis is approved by the Chief Actuary.*
- *Underwriting: mandate minimum cyber hygiene standards (MFA, patching cadence, incident response plan) as preconditions for cover; reduce line sizes on high-risk segments; exclude or sublimit supply chain and MSP exposures.*
- *Claims: convene a claims review on all open Cyber claims >R100,000; reassess OCR adequacy; ensure forensic, legal and regulatory notification costs are being captured in full and reserved promptly.*
- *UMA governance: given the UMA has delegated authority to settle claims up to R250,000, review the adequacy of the UMA governance framework — are settlements being properly reported and reserved? If not, the OCR may be understated.*

(c) KRIs/KPIs with escalation triggers:

- *Monthly: claims frequency vs prior year by segment; average claim cost vs pricing assumption. Escalate to Chief Actuary if frequency exceeds pricing assumption by >20% for two months.*
- *Quarterly: ultimate LR by accident year vs budget. Escalate to Exco if quarterly LR exceeds 100% on earned premium.*
- *UMA monitoring: quarterly claims settlement review; UMA combined ratio vs agreed targets. Escalate to Underwriting Director if UMA CR exceeds 110% for two consecutive quarters.*

(d) Feedback into pricing, reserving and capital:

- *Pricing: update frequency and severity assumptions at the next rate review using the FY2026 internal experience as the primary data source. Recalibrate Cyber add-on loading; do not rely on the original product team assumptions.*
- *Reserving: update CDF selections at the next quarterly reserve review to reflect the emerging Q1 2027 development pattern. Consider whether a higher margin above best estimate is warranted given the degree of tail uncertainty.*
- *Capital (ORSA): replace the generic Cyber stress scenario in the ORSA with the FY2026 actual experience as the calibration event. If the ORSA Cyber stress was previously a 1-in-20 scenario, the FY2026 experience may be recalibrating it to a 1-in-5.*

Fairly basic explanations given without insights or prospective focus. Evidence of time pressure for longer questions.

[Total 21]

[Grand Total 100]