EXAMINERS' REPORT

November 2025 examinations

Subject F108 — *Health, Social and Employee Benefits*

Fellowship Principles

INTRODUCTION

The attached report has been prepared by the subject's Principal Examiner. General comments are provided on the performance of candidates on each question. The solutions provided are an indication of the points sought by the examiners and should not be taken as model solutions.

QUESTION 1

i.

Distribution channel

- Identify channels of business that have lower risk business and/or younger healthier lives
- These channels should be used more for attracting new business as this would be expected to increase the proportion of the book that are low risk
- This would decrease expected claims
- Distribution channel can be used to encourage prevention and early screening measures
- Distribution channel may be used to check if other insurers are experiencing similar trends
- As this will suggest appropriate next steps

Underwriting

- Ensure underwriting process is adequately setup to identify higher risk lives for cancer claims so that appropriate underwriting decisions can be made
- This may mean including certain health questions, family history questions, lifestyle questions
- Distribution channel needs to be supportive of any changes to underwriting/training may be required to get buy-in
- If the intention is simply to reduce cancer claims can exclude cancer claims from more lives at risk
- Can choose to decline cover to lives that have too high risk

ii.

- Treaty reinsurance is done on an overall basis where the reinsurer automatically accepts a predefined proportion of all policies.
- At a pre-defined rate
- Facultative reinsurance is done on a per claim basis with the cedant having flexibility as to whether to place the risk
- and the reinsurer has the option to accept or decline each risk at a price unique to that risk

iii.

- A treaty basis may be more appropriate because:
    - PrimeHealth are concerned about the overall experience more so than individual high-cost cancer claims.
    - Under treaty reinsurance the reinsurer may be more likely to provide underwriting advice and assistance which will improve the experience for both the insurer and reinsurer.
    - PrimeHealth would want the arrangement to be longer term and simple
    - Treaty reinsurance will allow PrimeHealth to consider adding any other risks beyond cancer into the arrangement
    - Treaty reinsurance is likely to be lower cost
    - which means that there is less pressure on the pricing which is already strained by the adverse claims experience

Examiner comment: Part (i) was well answered, with most candidates able to apply their bookwork on distribution channels and underwriting to the specifics of the question. Most candidates also provided sufficient distinct points given the mark allocation of the question.

Part (ii) was pure bookwork definitions. Most candidates scored well.

Part (iii) Very few candidates applied the details given in the question to the characteristics of treaty and facultative contracts to justify their answers. However, given the low mark allocation, many candidates were still able to score some marks from a basic justified decision toward treaty insurance. No credit given for general benefits of reinsurance – needed to be applied to decision between treaty and facultative. Some candidates also repeated points given for part (ii) – candidates needed to explain the benefit of that feature of that type of reinsurance in terms of the context provided to get credit.

QUESTION 2

The trick in this calculation is that premiums are at the start of the year while other cashflows are at the end.

Inflows

Year	1	2	3	4
Premiums	100	120	150	165
Probability in-force	1.0	0.9	0.8	0.7
Discount factor	1	(1.06)^-1	(1.06)^-2	(1.06)^-3
EPV	100	101.886792	106.799573	96.9760272

=405.662

Outflows

Year	1	2	3	4
Profit	= – 90 – 20 = -110	= – 80 – 20 = -100	= – 90 – 20 = -110	=– 100 – 20 = -120
Probability in-force	0.9	0.8	0.7	0.6
Discount factor	(1.06)^-1	(1.06)^-2	(1.06)^-3	(1.06)^-4
EPV	-93.3962264	-71.199715	-64.6506848	-57.0307438

Total = -286.277

NPV for each year = Profit x Probability in-force x Discount factor

NPV as a% of NPV premiums=(405.662-286.277)/405.662

Thus NPV/PVP = 29.43%

QUESTION 3

i.

Experience Investigation	Private Medical Insurance (PMI)	Gap Cover
Claims Frequency & Severity	PMI requires a detailed claims analysis, including incidence rates, average claim sizes, and trends across different benefits (e.g., hospitalization, chronic conditions, outpatient services).	Gap Cover focuses on the shortfall between medical scheme rates and actual provider charges. The analysis includes claim patterns by procedure type and excess levels.
Provider Tariff Analysis	Essential to assess trends in healthcare inflation, provider billing practices, and the impact of contract negotiations.	Key focus on the gap between medical scheme reimbursements and actual provider charges, particularly for specialists and hospital fees.
Morbidity & Demographic Profile	PMI experience is strongly linked to age, gender, and pre-existing conditions, requiring detailed risk pooling analysis.	Since Gap Cover does not underwrite pre-existing conditions✓, risk pooling is different, and experience is more linked to healthcare provider pricing trends rather than underlying morbidity.
Persistency & Lapse Rates	PMI policies require lapse and renewal rate analysis to understand policyholder retention and anti-selection risk.	Lapse rates are crucial since policyholders may switch to cheaper products if premium inflation exceeds perceived benefit value.
Product Design & Benefit Utilization	Experience studies focus on cost drivers like chronic conditions, maternity benefits, and elective procedures.	Gap Cover analysis considers the frequency and severity of tariff shortfalls, and whether members are using designated service providers (DSPs) where gap risk is lower.
Regulatory & Compliance Impact	PMI may be subject to regulatory constraints that could require adjustments in experience investigations.	Different regulations could apply to Gap Cover, affecting pricing and claims reserving methodologies.

ii.

Factor	Private Medical Insurance (PMI)	Gap Cover
IBNR (Incurred But Not Reported) Reserve	PMI claims follow a relatively stable development pattern. For example, medication claims are reported quickly, while hospital claims take longer.	Gap Cover claims have a delayed reporting pattern due to the time taken for medical schemes to process reimbursements before patients claim from the insurer, particularly if a different PMI provider is used.
	Required for late-reported claims, particularly for specialist consultations, diagnostics, and chronic disease treatments.	Higher IBNR reserves due to delayed policyholder claims submission after medical scheme adjudication.
IBNER (Incurred But Not Enough Reported) Reserve	Necessary due to claim adjustments (e.g., provider disputes and claim shortfalls from PMBs).	Required to account for changes in medical scheme reimbursement levels affecting shortfalls.
Claims Development Method	Typically uses the chain-ladder method or Bornhuetter-Ferguson (BF) method for hospital and medical claims.	Uses a similar approach but with a longer development tail due to medical scheme adjudication delays.

iii

Factor	Private Medical Insurance (PMI)**	Gap Cover**
Other timing	Sudden increase before benefit year end (use it or lose it)	Subject to sudden spikes due to tariff changes or scheme benefit alterations.
Seasonality Adjustment	Claims in PMI can exhibit seasonality (e.g., higher hospitalization rates in winter).	Less seasonal variation

Examiner comment: For part i it was important for candidates to apply the list from their notes. For part ii, other acceptable reserve types include: variations of not-yet-paid reserves (such as reported-not-yet-paid, assessed-not-yet-paid, approved-not-yet-paid), catastrophe reserve, reopened claims reserve.

QUESTION 4

i.

- As this is a balance of cost scheme, if there is adverse experience on the DB Fund, BA must fund it
- Conversely, if experience is good, surplus may accumulate in the fund which may, regulation permitting, be attributed to BA
- Credit for one example of a specific relevant risk
- Because of this relationship, the DB Fund can only continue if BA is willing and able to take on this financing risk.
- Longevity risk can be a particular issue as the longer the expected lifespan of the pensioners, the greater the duration of the liability and the more sensitive the valuation result is to market movements.
- In addition, in BA's own financial statement the liability in respect of the fund will be greater.
- As the original sponsor of the fund, BA may need to play an active role in shutting the DB Fund down if they choose to do so.
    - Although this depends heavily on the legislative and regulatory environment.
- As an employer of the members of this fund, BA may have a paternalistic interest in their member's welfare
- And the DB Fund may contain employees who BA particularly want to retain
- But at the same time, new employees are going into the DC fund and BA needs to be seen to be fair to these members too
- Reputationally, poor treatment of pensioners may be extremely problematic for the airline, even though they are distinct from the fund.
- From a payroll perspective, BA will need to facilitate contributions to each fund.
- And the benefits provided by the fund will need to be considered by their HR staff in defining benefit packages.

ii.

- What is fair?
    - Should the benefits be actuarially neutral from the DB fund?
    - Or should the member have a good probability of achieving approximately the same replacement ratio?
    - Do regulations provide any guidance?
    - Should members get a guarantee in the new fund (ie a DB underpin)
    - Presumably the members will have the same contributions as other DC members
    - But this may reduce their total cost to company
    - Which can have HR implications
- What are the rights of the DB members?
    - It might not be possible to force members out of the DB fund (legal position will need to be checked)
    - If one or two members remain behind the fund will be even more difficult to manage/sub-economic
    - Reputationally may be difficult to get all members to move
    - Particularly if key individuals on this fund.
    - Are there any contingency reserve accounts due in full or part to members?

    - How active the unions are as a stakeholder
    - What is going to happen to the pensioners?
- Conflicts of interest
    - The Board members may themselves be members of the DB fund and conflicts between their personal interests and that of the sponsor must be carefully monitored.
    - Managing the dynamic of BA Board members who are also trustees of either the DB and DC fund will be challenging
    - Any conflicts the advisers have e.g. can the same actuary give advice to the fund and the sponsor
- Who is paying for what?
    - In cases like this the sponsor may need to appoint their own actuary to assist in negotiations
    - Can any money in the sponsor surplus account be used for this?
    - Usually members require a sweetener to move from DB to DC
    - Is there money in the fund that can be used for this purpose or will BA need to fund this?
- What is the upside to BA?
    - Both in the short and long term
    - Impact on BA balance sheet?
    - Governance cost savings (e.g. not having execs in board meetings)
    - Reaction of shareholders?

Examiner comment: Part i of this question was very poorly answered by many candidates who were distracted by the words "operated" and "Board". Key to this question was appreciating that BA is both a sponsor and an employer and better candidates covered both aspects. For clarity, the Board of the Sponsor and the Board of the Fund are different entities and the decision-making power for the Fund lies with the Fund Board, which would usually have Sponsor-appointed trustees on it.

Part ii required candidates to think of questions that would need to be asked when carrying out this exercise, they were not required to find all the solutions as well. The marks for part ii were better mainly because many marks could be earned for very practical considerations.

QUESTION 5

i

a

- Term – benefits are paid for life so term is uncertain, both in terms of start date of payments
    - as well as term of payment stream
- This longer time horizon increases uncertainty around future costs of benefit payments/makes the liability profile more sensitive to the inflation assumption/Results in wide range of possible future payments, when payments do start

If indemnity based

- When benefit payments start they will depend on the future costs of care
- This may be modelled based on current costs of care increased by more than inflation
    - (as medical inflation is typically higher than consumer price inflation)
- Benefits in payment will not be constant
- For indemnity option that will depend on the incidence and progression of illness and the reason for needing long term care
- Most likely pattern involves a substantial increase in costs as illness or disease develops

For regular income option

- Benefits are likely to increase with at least inflation
- But there are many ways this could be configured

b.

- These variables will be challenging to model as there are multiple states to consider *{award marks for mentioning various states to be modelled}*
- Benefits may not be paid at all if the covered life dies before a benefit trigger occurs – this also needs to be modelled
- Mortality rates will need to be modelled, as benefit payments end on death
- Changes in future mortality rates and morbidity rates will also need to be modelled

c.

- Immediate needs LTCI liabilities are easier to model as benefit payments start immediately
- So term is shorter which reduces uncertainty
- And benefit costs, although still uncertain, are easier to model as they are based on current assumptions projected forward through the life expectancy of the insured
- Immediate needs LTCI benefits are certain to be paid, compared to pre-funded which may not result in benefit payments if the beneficiary dies before reaching a trigger event
- The product providing an income stream may be easier to model than the indemnity option, as indemnity payments may be irregular while the income stream will be constant
- Currency of liabilities likely only local currency

ii

- Liabilities are long term in nature and so will be substantially affected by changes in long term interest rates
- Liabilities will decrease if valuation discount rates increase
- Which are in turn based on long-term interest rates particularly for a product of this duration
- Assets may also decrease
- most likely highly exposed to bonds as matching assets
- As asset valuations in the market based on discounted cashflow method use interest rates as a discount rate/ Bond yields rise as interest rates rise, meaning bond prices fall
- But depends on extent of matching – a mismatched position will mean that assets will move differently to liabilities in changes in interest rates
- Also, if this change was anticipated it may already be reflected in bond prices and asset values
- Assets likely to be shorter duration so less sensitive to interest rates
- If assets have significant exposure to other (non-matching or uncorrelated) assets such as equities or offshore assets the impact of rising interest rates is less certain on the assets
- And may even result in an increase in asset prices
- Increase in interest rates might reflect broader weakness or stress in the economy, which may result in lapsed policies (for pre-funded LTCI) – this will decrease both assets and liabilities

iii

In the case of a surplus

- Strategy might be made more conservative/ more closely matched
- By rotating out of equities or real assets/alternatives and into bonds / cash(likely using bonds/inflation-linked bonds)
- As the surplus means the strategy doesn't need to target higher returns
- Or the strategy might be made less conservative as higher free assets allows more risk to be taken
- Which will earn higher returns
- Which would be allocated as profits to the insurer

In the case of a deficit

- Strategy could be made more conservative to prevent further losses
- Or made less conservative to try to close the deficit with higher risk assets to earn higher investment returns
- Or simply remain the same in order to avoid crystalising losses if the strategic asset allocation is sound

Considerations

- Change in strategy will depend on the extent of the surplus or deficit –
- A smaller surplus/deficit may naturally correct and so a change in investment strategy would not be prudent
- Need to also consider trading costs, transition management costs
- Regulatory constraints or solvency requirements might limit the extent of mismatching allowed or require a minimum level of exposure to conservative assets

- The availability of assets in the market – there are usually not an infinite range of bonds available!
- The risk appetite of the insurer needs to be taken into account
- Especially in the case of a deficit as it puts the insurer at risk of having to provide capital
- Illiquid or unmarketable assets may restrict changes to the strategy
- If asset prices are depressed it may not be appropriate to disinvest and lock in losses (point made above, give credit only once)
- When last the ALM was done? This is costly but input from it could be useful particularly if investment conditions have fundamentally changed

Examiner comment: Part i was not well answered given it was mostly bookwork. Candidates are reminded that they are only given credit for each point once and no marks are awarded for answers dealing with aspects not asked for. Some candidates were too brief in their references to data issues or regulation to earn credit.

Part ii was very poorly answered with many candidates not knowing that future interest rates affect the discount rate at which liabilities are discounted to present value. Many candidates referred to assets in general as opposed to considering specific asset classes.

Most candidates got reasonable marks for part iii although some were too brief.

QUESTION 6

i.

- A type of alternative reimbursement often used in PMI
- *Or public healthcare (correct but not in the glossary definition)*
- Used for specific types of healthcare e.g. dentistry, GP (OH)
- Healthcare providers are paid a fixed amount per head per period
- Up-front
- For a group of individuals that the healthcare provider must service
- Regardless of utilisation
- Or actual cost of treatment
- The morbidity risk is hence transferred to the provider.

ii.

I **do not fully agree** with the statement./There are merits and demerits to this statement

Advantages of Capitation (i.e. YES…)/Merits of the argument:

- Cost Containment: Capitation encourages providers to manage costs effectively, regardless of service usage.
- Focus on Preventative Care: Providers have an incentive to keep patients healthy to avoid high-cost treatments, but this is better for the patient too.
- Strongly discourages the over-servicing prevalent with 3rd party funding
- Predictable Costs for Payers: Insurers and governments can budget more accurately.
- And predictable income for healthcare providers

Disadvantages of Capitation(i.e. BUT…)/Demerits of the argument:

- Risk of Under-provision of Care: Providers may limit services to save costs, potentially compromising patient care quality.
- Insurers or the government may need to introduce safeguards to make sure patient care is not compromised
- Provider Risk: Financial risk is shifted to providers, which can be unsustainable if patients require unexpectedly high-cost treatments.
- This risk is greater the smaller the number of patients/heads allocated to provider
- Which incentivises providers to fill up their books – patient care may be compromised
- Lack of Flexibility: Capitation is most frequently used to reimburse providers in the out of hospital setting (primary and preventative care). Capitation may not account for rare, high-cost conditions or emergencies that require extensive resources.
- The capitated fee needs to be calculated taking the underlying risk characteristics/disease burden of the covered population into account. This information may not be fully available in a public health setting.
- Requires covered population to be stable during the period
  - Creates difficulties if a very mobile population
  - Or if there is a sudden health shock

Key point (summarized): While capitation can be an effective reimbursement method in primary and preventative care, it is not universally ideal for all healthcare expenses.

iii.

1. **Fee-for-Service (FFS)***

- Description: Providers are paid based on the number of services delivered (e.g., consultations, tests, or procedures).
- Use Case: Common for outpatient consultations, diagnostic tests, private practices or for rare, high-cost conditions or emergencies that require extensive resources.
- Limitations:
  - Encourages overutilization, driving up costs.
  - Focuses on volume rather than care quality/coordination.
  - May lead to fragmented care.

2. **Negotiated Fee-for-Service***

- Description: A variation of FFS where payments are negotiated between providers and payers.
- Use Case: Often used in managed care systems or between insurers and contracted healthcare networks.
- Limitations:
  - Requires extensive negotiation processes.
  - May not effectively control overutilization.

** Candidate can be given credit for either FFS or negotiated FFS not both. These two methods are not distinct as per the question's requirements.*

3. **Per Diem**

- Description: Providers are reimbursed a fixed daily rate for each patient, regardless of the services provided.
- Use Case: Commonly used for inpatient hospital stays where the length of stay is predictable.
- Limitations:
  - Incentivizes longer stays to maximize revenue.
  - Does not encourage efficiency or cost control for individual services provided.

4. **Per Case/Episode of Care/Global Fee**

- Description: A single payment covers all services for a specific condition or episode of care.
- Use Case: Effective for acute, well-defined care episodes like joint replacement or low risk childbirth events.
- Limitations:
  - Does not work well for chronic or ongoing conditions.
  - Providers bear financial risk if complications increase costs.
  - Requires strong care coordination.

5. **Salary**

- Description: Providers receive a fixed salary for their services, regardless of the number of patients seen or services delivered.
- Use Case: Common in public healthcare systems.
- Limitations:
  - May reduce motivation to deliver high-quality or efficient care.
  - Lacks direct financial incentives to improve performance or patient outcomes.

6. **Pay-for-Performance (P4P)**

- Description: Providers are rewarded based on meeting specific quality or outcome metrics.
- Use Case: Useful for incentivizing high-quality care, such as improving chronic disease management or reducing hospital readmissions.
- Limitations:
  - Relies on accurate measurement of outcomes, which can be resource intensive.
  - Providers may avoid high-risk patients to maintain performance metrics.

7. **Pay-for-Coordination**

- Description: Providers are compensated for coordinating care across multiple providers and settings to improve patient outcomes.
- Use Case: Effective for managing complex cases requiring multidisciplinary teams (e.g., cancer treatment, chronic diseases).
- Limitations:
  - Implementation can be complex and resource heavy.
  - Requires effective communication and data-sharing systems.

8. **Pay-for-Participation**

- Description: Providers are paid for participating in specific healthcare improvement programs or initiatives, regardless of outcomes.
- Use Case: Often used in pilot programs to encourage provider engagement in new care delivery models (e.g., telehealth).
- Limitations:
  - Limited focus on outcomes; rewards participation rather than actual improvements.
  - May not drive meaningful changes in care quality.

Examiner comment: This question was generally well answered. Students who had not fully learned the alternative reimbursement methods struggled, as the question required clear bookwork knowledge. (i) was marked leniently because it was misprinted, making the exact intention unclear. However, many students failed to note that capitation is a fixed amount per life per period, paid in advance—a key distinction that was required for full credit. Several students also included points relevant to part (ii) in part (i), indicating that they did not follow the structure of the question carefully.

For part (ii), many students either repeated themselves or provided too few distinct points. The strongest answers presented arguments both for and against capitation, and clearly articulated when capitation is most appropriate.

For part (iii), a number of students could not name four alternative reimbursement methods, and some contradicted themselves when comparing one method to another. Many did not read the question carefully and therefore did not identify both the most suitable use case and a relevant limitation for each method. Precision of wording was essential here, and vague or incomplete explanations did not receive credit.

A common misunderstanding was the belief that per case payments differ from global fees; these mechanisms operate in the same manner, and treating them as distinct was not credited. A few students included reimbursement methods outside of PMI—such as those used in LTCI or CI. Although this extended beyond the expected scope, credit was awarded if the method was accurately explained, as the question did not explicitly require a PMI-only context.

QUESTION 7

i.

- A risk reserve is held by retirement funds in order to finance risk benefits payable from the fund.
- The reserve is usually funded by regular contributions,
- In a DC context this can be a separate amount paid over and above the contribution rate to retirement funding (exclusive pricing)
- Or can be used to reduce the amount to retirement funding (inclusive pricing)
- The reserve is credited (increased) with investment return
- Benefits are then paid from the risk reserve (in a DC fund, none of the accumulated credit would be used to go towards this benefit but some candidates may refer to benefits in excess of the actuarial reserves)
- Local regulation will determine if this reserve is allowed to go negative (usually not!)
- And may also specify a maximum level as a percentage of member accumulated credit.
- A shortfall on the risk reserve is likely to be made up by fund members e.g. by a once off negative adjustment to fund credit.
- And a surplus will probably be applied to reduce premium rates going forward.
- As pure DC fund, sponsor will not get involved with surplus or deficit.

ii.

- Collect data on the experience of Oak Pension Fund members over a reasonable time period (say 5 years)
- The data period should be long enough to be credible but short enough to be credible
- May need to exclude outlier years (e.g. COVID pandemic if linked to covered conditions)

- This will include information on the number of claims per year for each level of benefit
- And the amount of the benefits paid (i.e. salary levels of claimants)
- Also consider split by type of claim (but unlikely to be sufficient data)
- May also look for additional industry data sources on claim frequency
- Such as industry / regulatory reporting and studies

- Set assumptions for incidence rate by age and gender and type of cover (2x, 4x)
- Determine the cost of managing the benefit (ie expense loading)
- Including claims assessment process
- In addition, there will need to be a margin for risk and uncertainty
- Such as catastrophes, stochastic variation
- As well as to meet any required regulatory capital requirements
- May also consider the effect of holding reinsurance
- Apply the resulting rates to the Oak Pension Fund membership distribution
- And compare to the current reinsured rates (as a sense check and to determine if self insuring is worthwhile)

iii.

Risks association with this benefit:

- Anti-selection risk This is not a new risk and would have been reflected in the group cover premiums. However, the trustees now have greater scope to control this which can introduce additional risks
    - the optional nature of the cover in terms of opting in
    - and selecting the level of cover exposes the Fund to the risk that the cost of cover exceeds the premium charged.

- Fluctuation risk
    - incidence rates are relatively low and the employer is only "large"
    - Expect large degrees of claim fluctuations
    - Which can make the risk reserve difficult to manage within regulatory constraints
- Regulatory risk/ there may be changes in the regulations of pension funds affect the cost or viability of offering the cover
- Catastrophe risk – a single event may give rise to a large number of claims
- Administrative risk – there is a risk that the product is not properly administered
    - e.g. claims are not appropriately assessed and ineligible claims are admitted, increasing costs
- Reputational risk
    - Members may not understand that they are effectively taking on the morbidity risk
    - And if they are very risk averse may not tolerate a reduction to their accumulated credit
    - Members may need to be informed about the reduced security of their risk and retirement benefits
    - Which is likely to cause unhappiness even if nothing goes wrong.

(iv) (2 of the following – ensure that they are distinct)

- Reduce anti-selection through reducing the opportunities to opt in to cover (e.g. only at entry or at 5-year intervals rather than annually)
- Make a minimum level of cover compulsory with options to increase it
- Remove the options entirely and make single level of cover compulsory

Examiner comment: This question was reasonably well answered. For part (i) some candidates described an investment smoothing reserve rather than a risk reserve, but most answered this part well. For part (ii) candidates that took a sequential approach to setting out a pricing exercise scored well. A number of candidates got caught up in describing option pricing approaches but simply needed to make the point that take-up levels would affect the expected incidence rate as a result of the potential for anti-selection. Some candidates made reference to profit loadings which would not be relevant here however margins for variation are relevant given the small pool size and only a few candidates noted the need for expense loadings. Part (iii) was well answered and candidates needed to identify a range of risks rather than focusing on specific risks to score well. For part (iv) many candidates included medical underwriting without reference to a free cover limit or the constraints (and costs) of doing this in a group risk environment. Credit was given where the candidate suggested that this would only apply to the higher benefit level or higher salary levels. Credit was also not given for reinsurance which would merely pass this risk on and not manage it.

QUESTION 8

i.

- Pure PAYG
    - State collects taxes or contributions and pays them out again as benefits
    - No assets are set aside
    - Collections and benefits must match
    - So both are usually adjusted annually
    - Because no natural link between income and outgo, vulnerable to changes in dependency ratios
    - Vulnerable to expansion for political reasons
    - As do not have to advance fund for promises
    - For long-term benefits a bit like debt-financing/inter-generational subsidies
    - Very difficult to achieve in practice due to lack of flexibility
- Smoothed PAYG
    - PAYG plus a contingency reserve set up as a working balance/float
    - Reserve not linked to the benefit promise
- Equalised PAYG
    - Instead of an annual revision period, a longer control period is used
    - CR set to be level over the control period
    - Even if income and outgo fluctuate over the short-term
    - Useful in aging populations

ii.

Increased demand

Growth in the population

Growing population will result in greater healthcare demand

This can be from having a high birth rate or a high net in-migration rate.

This could even relate to a highly localised area e.g. movement of people from inland to coastal regions

If supply of healthcare has not kept track with the growing population, pressure would have increased

Ageing population – this could be likely given similar observations in other developed nations across the world

Older people have higher healthcare needs,

E.g. more chronic conditions

More frequent hospitalisations, etc.

Consumer awareness about benefit/care entitlement in a developed nation is likely to be high, resulting in high demand

Recent events (e.g. Covid) and the media coverage thereof could have increased awareness of need for regular check-ups/consults, increasing healthcare demand

Increased physical and temporal access to healthcare and facilities given the increased awareness, good infrastructure and financial sophistication/literacy of the general public.

Incidence of disease/illness increasing,

E.g. lifestyle conditions (heart disease, cholesterol, diabetes)

Other societal trends, e.g. vaccine hesitancy, resulting in prevalence of certain diseases increasing and resulting in greater demand for treatment.

Constrained budget/reduced supply

The increased demand problem is exacerbated if birth rates are low/net migration low/negative

Means a smaller workforce, and thus reduced payroll taxes

Which could result in lower human resources allocated and hence increased pressure/demand

Similar issue if recession or unemployment

Also fewer people of working age to provide healthcare services driving up waiting times.

Similarly, facilities/equipment in disrepair and delays in upgrading/fixing it, could lead to lower supply relative to demand

New/costly technology could further limit funds available to ensure supply meets the level of demand and increases pressure on the system.

Any weakening of the currency would have increased the costs of imported medicine and equipment, putting more pressure on the system to expand offering to meet demand

Uptake of private medical insurance may have reduced over recent years,

Especially among older, sicker individuals given that they are risk-rated/exclusions likely to apply

The cost to them may be excessive relative to government offering

And similarly for younger individuals who don't see the value of purchasing insurance

Operational issues

Fraud, wastage and abuse within the system by either patients and/or providers

E.g. people not arriving to booked appointments because there is no penalty for doing so

Healthcare is free at the point of service, which means providers may be over-servicing patients/patients demanding overservicing – 3rd party payer problem

There may not be appropriate incentives for providers to limit the cost and/or amount of care provided

Or the government may not have appropriate monitoring and evaluation practices in place.

iii.

Longer waiting times means delays in treatment

This could result in people not seeking medical advice/treatment early on given the wait/inconvenience

Until such time that the condition has sufficiently deteriorated to warrant the inconvenience of seeking treatment

At this point, the cost of treatment may be significantly higher than it would have been if treated early on

i.e. now requiring hospitalisation/chronic care

And the health outcome for the patients significantly worse

Potentially resulting in earlier death and healthy life years lost

Meaning less contribution to the system in terms of earmarked payroll taxes.

Placing further pressure on the system in terms of healthcare demand and funding for the system

If this is happening to many patients, the country as a whole may be disadvantaged by poorer healthcare outcomes, less economic activity, less contributions to healthcare, resulting in a downward spiral

iv.

Amend regulations around medical underwriting/exclusions

To cap premiums, prevent excluding older individuals, e.g. open enrolment or community rating

Tax incentives to individuals taking up private cover or employers providing private cover for employees
E.g. a reduction in earmarked payroll taxes for those belonging to private health insurance risk pools
Can result in significant employer groups not being reliant on state-funded care anymore
Education
Education/information provided to the general public on private healthcare benefits, incentives available, etc. could encourage uptake
Changing the eligibility for the state cover, e.g. means-testing
Would mean fewer people qualify for the free public cover and would thus increase demand for the private cover options
Or introduce an additional charge for those earning above a certain level utilising public healthcare services
Reduce level of coverage, limits, formularies, protocols, etc.
Will reduce what is available under the public sector and may increase uptake of private cover for those wishing to have richer benefits/more expensive treatments/medicines

iv. Problems with suggestions

Regulations
Costly to develop and to ensure compliance
May be a disincentive for insurers to innovate or to participate in the market if they cannot price individual risks appropriately
May not achieve desired aim of increased uptake
Tax incentives
Costly, i.e. taxes diverted away from provision of healthcare
Likely to mainly be utilised by those employed and thus healthier in general and currently subsiding the sick
Meaning a sicker public risk pool with less cross-subsidies and less financial resources with which to provide care for them
Education
Costly to initiate campaigns
May not have the desired impact if not coupled with attractive incentives to take up private cover
My be distrust of the government and their campaigns, hence no increase in uptake
Changing benefit eligibility
Unpopular
Especially if those still paying earmarked taxes are not eligible for benefit and effectively have to pay for both public and private cover
Worst case, may result in emigration of taxpayers
Changing benefits
May also be unpopular, but less so than the means-testing access
However, likely to affect poorest/sickest most as they can't access top-up or more comprehensive cover through private provision

Examiner comment: Overall, this question was answered well. Part i – bookwork – was well-answered by those who knew their bookwork. Part ii was answered well for the most part – many candidates lost marks for not making a sufficient number of distinct points. Part iii was generally well-answered. Parts iv and v often saw candidates going beyond the 3 ways as asked – only the first 3 were considered, and only problems with those 3 considered in part v. Not sufficiently elaborating cost candidates marks.