

# INSTITUTE AND FACULTY OF ACTUARIES

## EXAMINERS' REPORT

April 2022

### Subject SP1 - Health and Care Specialist Principles

#### Introduction

The Examiners' Report is written by the Chief Examiner with the aim of helping candidates, both those who are sitting the examination for the first time and using past papers as a revision aid and also those who have previously failed the subject.

The Examiners are charged by Council with examining the published syllabus. The Examiners have access to the Core Reading, which is designed to interpret the syllabus, and will generally base questions around it but are not required to examine the content of Core Reading specifically or exclusively.

For numerical questions the Examiners' preferred approach to the solution is reproduced in this report; other valid approaches are given appropriate credit. For essay-style questions, particularly the open-ended questions in the Specialist Advanced (SA) and Specialist Principles (SP) subjects, the report may contain more points than the Examiners will expect from a solution that scores full marks.

The report is written based on the legislative and regulatory context pertaining to the date that the examination was set. Candidates should take into account the possibility that circumstances may have changed if using these reports for revision.

Sarah Hutchinson  
Chair of the Board of Examiners  
July 2022

**A. General comments on the *aims of this subject and how it is marked***

The aim of the Health and Care Specialist Principles subject is to instil in successful candidates the ability to apply, in simple situations, the principles of actuarial planning and control needed in health and care matters on sound financial lines.

Candidates who approach the questions, especially the more substantial elements of each question, in a methodical and detailed manner are far more likely to satisfy the examiners and receive a pass in the subject. Candidates will gain few marks if they do not address the question asked but merely write around the topic of the question.

The mark allocation for each question part gives an indication of the relative length of answer or number of points to be made to gain full marks. The Examiners' Report covers more points than would be expected to get full marks. This is so that alternative approaches to questions by different candidates can be accommodated.

It is often helpful to structure and use subheadings when answering long part questions.

**B. Comments on *candidate performance in this examination.***

The paper was a relatively straightforward one and well-prepared candidates scored well across most of the questions.

Questions that focussed on knowledge of the Core Reading were well answered by those who had prepared thoroughly. However, the paper included several part questions requiring wider thinking or application of core reading to specific circumstances, such as questions 1(iii), 2(iv), 3(ii), 4(ii), 4(iii), 5(ii) and 5(iii). Candidates should recognise that these are generally the questions which differentiate those candidates with a good grasp and understanding of the subject.

It is pleasing to see many candidates providing their answers under subheadings, ensuring clarity and ease of understanding. This also helps show that they have applied their knowledge to the specific scenarios described, and that they have structured their answers.

**C. Pass Mark**

The Pass Mark for this exam was 63.  
258 presented themselves and 127 passed.

## Solutions for Subject SP1 - April 2022

### Q1

(i)

The regulator may want to support economic growth of the local reinsurance industry by retaining business locally. [1/2]

The local government may be pursuing a protectionist policy to support growth of local industries. [1/2]

Reduce foreign currency commitments that would increase if reinsurance premiums are being made to foreign reinsurers. [1/2]

As a small developing country, foreign exchange reserves may be limited and vulnerable to commodity prices given reliance on agriculture and mining. [1/2]

Profits made by reinsurers can be retained locally, [1/2]

And increase reinvestment into the country. [1/2]

There could be political pressures from the local market to always support local business. [1/2]

There could be environmental, social, and governance (ESG) pressures to ensure the reinsurers have: [1/2]

A commitment to a low-carbon economy, [1/2]

Consideration for climate risks. [1/2]

More skills transfer may be achieved if reinsurers are local and have more and closer interactions with local insurers. [1/2]

The regulator will have direct control over the regulations of locally based reinsurers. [1/2]

For example:

To ensure the reinsurer is suitably capitalised. [1/2]

To ensure the reinsurer is suitably managed. [1/2]

The direct controls exercised by the regulator may include:

monitoring of solvency, [1/2]

Submission of adequate and accurate reports, [1/2]

The charging of appropriate reinsurance prices and the use of rating within the reinsurance, [1/2]

The reinsurance sales process, leading to greater protection for insurers, [1/2]

The types of reinsurance contract used, [1/2]

and the amount of business that can be taken on by reinsurers. [1/2]

Reduces possibility for regulatory arbitrage by reinsurer being based in a territory with weak regulatory requirements. [1/2]

Onsite inspections and audits would also be easier to conduct. [1/2]

The regulator would have direct control over the solvency regulations applying to domestic reinsurers and so could ensure that reserving requirements are sufficiently prudent. [1/2]

There will be no need to test the equivalency of other regulatory frameworks to the local framework. [1/2]

Local reinsurers will create job opportunities locally, [1/2]

Which should help reduce unemployment rates, [1/2]

And increase government revenue through income tax. [1/2]

There is a reduced risk of foreign reinsurers exiting the market and leaving insurers exposed. [1/2]

Setting up offices locally would also be beneficial to the commercial property sector. [1/2]

The reinsurers may also attract foreign investors to invest locally, which would help support further economic growth. [½]

Locally based reinsurers are likely to match its liability with local assets/investments, thus boosting savings and investments in the local economy, [½]

For example, local reinsurers can boost demand for securities issued by government to fund strategic national projects. [½]

Or they can buy corporate bonds issued by local miners and agriculture companies. [½]

Or they can buy shares of miners and agriculture companies on the local stock exchange. [½]

Local reinsurers may be more familiar with the intricacies of insurance products offered within the territory. [½]

For example:

With respect to the fact that it is a small, developing country, with an economy dependent on mining and agriculture, [½]

There might be product features particularly appropriate to miners / farmers, such as zero deferred periods and own occupation claims criteria for IP. [½]

[Marks available 18½, maximum 4]

(ii)

#### Market Size

Reinsurance premiums achieved by Company B have been consistently low and below desired levels due to a number of possible reasons as follows. [½]

The reinsurance market as a whole is small and already saturated. [½]

The market could possibly be dominated by other larger reinsurers, [½]

Or reinsurers who have a legal cession giving them first priority on all the reinsured business. [½]

Direct insurers could have high retention levels due to their high and sound capital positions. [½]

The overall insurance market could be small and not growing in the country hence still low business filters to reinsurers. [½]

#### Regulations

Country X's regulatory framework may not be equivalent to that of country Y, [½]

Which could lead to Company B incurring significant additional costs to meet both regulatory requirements. [½]

Country X's regulation framework may impose high capital requirements such that return on capital has consistently failed to meet Company B thresholds. [½]

Country X's regulatory requirements may just be overly onerous from Company B's perspective. [½]

This could lead to high ongoing costs to Company B to ensure its ongoing compliance with regulations in Country X. [½]

#### Profitability

Low or no profits are being made in Country X. [½]

Company B is not achieving an acceptable return on its capital. [½]

Company B can achieve a better return on capital possible in other markets. [½]

This could possibly be due to high expenses / rents of maintaining an office in the country despite low business in the country. [½]

Statutory prescriptions on minimum wages and wage structures result in sub-optimal remuneration expenses / costs.	[1/2]
The local market could be dominated by reinsurance brokers with high commission rates / acquisition costs.	[1/2]
Low business volumes could mean that ongoing overhead expenses may not be adequately covered.	[1/2]
Business written on original terms has very low profit margins due to competition amongst direct insurers.	[1/2]
Low profits could also be due to poor claims experience, e.g. high claims from individuals in manual jobs.	[1/2]
Small policies (microinsurance) from low-earning occupations in a developing country could also lead to low profit contribution.	[1/2]

#### Economic and Political Issues

Economic recession may have significantly reduced demand and profitability of insurance products.	[1/2]
This could possibly be due to a significant reduction in commodity prices (country is dependent on mining and agriculture).	[1/2]
The current political situation could be volatile.	[1/2]
The current government in Country X may have a hostile attitude towards to foreign companies with headquarters in other countries.	[1/2]
There could be political conflicts between Country X and Country Y, which made it necessary for Company B to exit country X.	[1/2]
Company B may be under pressure (at home) to reduce its underwriting of ecologically harmful businesses (e.g. coal mining)	[1/2]
There may be political / industrial unrest, leading to staff issues.	[1/2]

#### Other

This could be a consolidating and streamlining exercise for Company B, So that it can divert resources to concentrate on / target certain markets.	[1/2]
There could have been changes in owners / management within Reinsurer which led to a change in strategy and exiting certain markets.	[1/2]
Company B may be unable to find a buyer for the subsidiary, and hence recapturing the business (rather than transferring it) is the only option available.	[1/2]
There may be exchange rate risks to Company B due to a volatile exchange rate in Country X.	[1/2]
Company B might be over-exposed to small, developing nations.	[1/2]

[Mark available 17, maximum 6]

#### (iii)

Put in place a clear withdrawal plan to guide management in having a smooth withdrawal.	[1/2]
The withdrawal plan needs to have clear timelines and milestones, And trackers to measure if the reinsurer is on track to deliver within the expected timelines.	[1/2]
The reinsurer may need clients and other stakeholders' input to agree realistic timelines, Which should provide cedants sufficient time to seek alternatives,	[1/2]
And cover all the key tasks and agreements that all parties involved will need to complete.	[1/2]

The withdrawal plan must be approved by the management of Company B.	[½]
Consultation should also be made with Country X's regulator.	[½]
Communicate the key aspects of the withdrawal plan to cedants in order for the cedants to take appropriate actions.	[½]
For example, a six months' notice period for termination of treaties may be served to Company A and other cedants.	[½]
The reinsurer may also seek consultation with its own regulator in Country Y.	[½]
It may be necessary to hire external specialists / consultants to help design and implement the withdrawal plan effectively.	[½]
Notifications of termination should be guided by the terms and conditions of the treaties and facultative arrangements.	[½]
Company B may need to decide on whether it is able to keep some of the existing treaties on its book,	[½]
Or offer recapture options to the cedants.	[½]
If it is the former, it will depend on whether the regulator in Country X will allow the insurers in that country to continue their reinsurance arrangements with a reinsurer that no longer operates in Country X.	[½]
If it is the latter, the recapture terms will need to be agreed.	[½]
As the termination is initiated by the reinsurer, it would be unreasonable for Company B to expect its cedants to compensate it for the loss of any future profits.	[½]
It is therefore reasonable to expect that the exit terms do not involve requests for further payments from the cedants.	[½]
Some cedants may even request compensations from Company B for the additional costs incurred in relation to seeking a new reinsurer.	[½]
There should be agreements in place for settling outstanding claims,	[½]
And resolve any claims that are under investigation before exit.	[½]
Company B should prepare redundancy packages for employees affected by the exit,	[½]
And redundancies should be timed to ensure that there are still sufficient staff to run the business.	[½]
Company B may offer its employees the opportunity to be moved to other countries in which it has operation.	[½]
Assets held by Company B may need to be disinvested and proceeds to be transferred back to its parent company.	[½]
Any existing third party services arrangement contracts will need to be negotiated and terminated in due course.	[½]
Company B will need to arrange the sale of any properties it occupies and/or termination of any lease agreements of the properties it rents.	[½]
Company B may decide to retain a small presence in Country X for a period to deal with ongoing transition issues.	[½]
The PMI reinsurance is likely to be on an annually renewable basis,	[½]
As such, the reinsurer could simply decide not to renew the reinsurance and the business would then be naturally run off at the end of the year.	[½]
Company B should ensure that any commission already paid to brokers can be clawed back on terminating reinsurance covers.	[½]

[Mark available 16, maximum 6]

(iv)	
Consider the financial position of the potential reinsurers.	[½]
This should include:	

Solvency levels of the reinsurer in terms of capital and free assets available.	[½]
Profitability of the reinsurer over the past recent years.	[½]
Credit ratings of the reinsurer to ascertain the probability of default.	[½]
Market share of the reinsurer, which other insurers have been reinsuring with the same reinsurer.	[½]
Consider the products that the reinsurer specialises in (ideally the reinsurer should be a specialist in the same product that the insurer sells).	[½]
Consider the track record and brand image of the reinsurer,	[½]
Where good track record and brand image can also enhance the brand of the insurer by virtue of being associated with a reputable reinsurer.	[½]
Consider the risk appetite of the reinsurer,	[½]
Whether they are willing to reinsure risky business,	[½]
And how they price such risky products.	[½]
Availability of expertise of the reinsurer in various aspects including:	[½]
Underwriting	[½]
Claims management	[½]
Experience data (morbidity, mortality etc)	[½]
Pricing	[½]
Product design (terms and conditions)	[½]
Expertise may be particularly important given the small size of Company A.	[½]
Referrals from peer groups who have been dealing with the particular reinsurer to determine various aspects.	[½]
Operational efficiency of the reinsurer such as turnaround times on:	[½]
Underwriting.	[½]
Claims management.	[½]
Claims settlement.	[½]
Reinsurance accounts reconciliations	[½]
The reinsurer's overall customer service and working relationship.	[½]
Consider general operational ease of reinsurer to deal with in areas such as speed of paying claims, likelihood of the rejecting claim payments etc.	[½]
The general working culture of the reinsurer will need to be considered,	[½]
And whether it is compatible with that of Company A.	[½]
The insurer may also consider using reinsurance brokers to carry out independent assessment of various reinsurers and make recommendations.	[½]
Consider the underwriting / claims systems used by the reinsurer use,	[½]
And whether the insurer can leverage on the functionalities of these systems for its own use.	[½]
Consider whether there are any regulatory requirements in terms of appointment of reinsurers.	[½]
Consider who are the retrocession parties to the reinsurer,	[½]
And to which the reinsurer's business are retroceded.	[½]
Comparison of new reinsurance treaty with the existing terms and conditions.	[½]
Existing treaty limits, such as underwriting limits, claims approval limits and overall reinsurance cover capacity.	[½]
New reinsurance premium rates with existing rates to assess the implication on the profitability of the insurer.	[½]
Premium guarantees, if any, under existing policies.	[½]
Any changes in managing the exposure to counterparty default risk of the new reinsurer, e.g. deposit back arrangement, custodian arrangement etc.	[½]

Consistency of new reinsurance terms and conditions with the benefits and exclusions under existing policies.	[½]
Consider the existing policyholders' interests/ benefits under new reinsurance treaty.	[½]
Consider the terms offered / quoted by various reinsurers, including:	[½]
Original terms vs risk premium.	[½]
Facultative vs treaty.	[½]
Relative level of reinsurance premiums rates.	[½]
Level of assistance to be provided.	[½]
Level of reinsurance commissions.	[½]
Any profit commission arrangements.	[½]
Proportional vs non proportional reinsurance.	[½]
Excess points for excess of loss cover.	[½]
Any other special terms e.g. recapture clause, portfolio transfer.	[½]
Consider other alternative risk transfer mechanisms instead of reinsurance.	[½]
Ensure that the reinsurance will cover certain product features:	[½]
IP - claim criteria, deferred / linked claim periods, benefit amounts (relating to maximum benefit formulae / maximum replacement ratios).	[½]
CI - CIs covered, specific claim definitions, FCLs for group business.	[½]
PMI - treatments covered / exclusions to cover, pre-authorisation requirements.	[½]
<b>Other considerations</b>	
Geographic location of the reinsurer (i.e. Country X or in a country that is approved by Company X's regulator),	[½]
And whether it is a subsidiary of another reinsurer / company.	[½]
How established the reinsurers are in Country X (and so how likely they are not to move out / stop trading in Country X).	[½]
The degree of financial assistance that might be offered, e.g. financial reinsurance arrangements.	[½]
The availability of reciprocal business.	[½]
The environmental, social and governance (ESG) stance of the reinsurer.	[½]
	[Mark available 31, maximum 8]
	<b>[Total 24]</b>

*Part (i) This question should be familiar to those who have prepared well, with the focus being on expanding the knowledge around the role of the regulator to apply this to the specifics in the question. Some candidates found challenging to cover enough points to score highly through considering wider implications such as tax, employment, investments etc.*

*Part (ii) This question was generally answered well, with many candidates able to suggest potential reasons why a reinsurer may wish to exit a market.*

*Part (iii) Many candidates were unable to articulate a good response to this question. As an example, if a reinsurer does exit a market, it is very unlikely that they will share commercially sensitive information such as data and models with other reinsurers. However, many candidates suggested this. A number of candidates interpreted that Company C can sell its business to a local reinsurer and based all their points on that*

*basis. However, the question stated clearly about an operationally smooth and financially fair exit strategy. Those who managed to score highly were able to suggest in detail for the reinsurer to have a plan in place and keep good communication, and cover wider topics such as treatment of employees, assets, offering compensation etc.*

*Part (iv) Most candidates scored well on this question. For those less prepared, there was often not sufficient breath of solutions.*

*Part (iii) of this question differentiated the stronger candidates from those not well prepared.*

## Q2

(i)

Key exclusions for PMI product:

Pre-existing conditions for a specified period.	[½]
Currently ongoing treatments in any hospitals.	[½]
Future treatments in any overseas hospitals.	[½]
War, terrorism, acts of violence, civil unrest.	[½]
Self-inflicted injury or attempted suicide.	[½]
Hazardous pastimes or sports.	[½]
Aerial activity other than as a fare-paying passenger.	[½]
Drugs.	[½]
Alcohol.	[½]
Criminal acts.	[½]
Failure to seek or follow medical advice.	[½]
Treatment relating to standard pregnancy, and potentially also complications of pregnancy and childbirth.	[½]
Out-patient drugs and dressings.	[½]
Cosmetic surgery.	[½]
Gender reassignment.	[½]
Preventative treatment.	[½]
Kidney dialysis.	[½]
Mobility aids.	[½]
Experimental treatment.	[½]
Experimental drugs.	[½]
Organ treatment.	[½]
Dental procedures,	[½]
HIV/AIDS (subject to local discrimination legislation)	[½]

[Marks available 11½, maximum 3]

(ii)(a)

Policyholders:

X% discount in premium rates.	[½]
Better clarity of coverage as medical & personal history is fully disclosed.	[½]
Ease of completion of PMI policy as all the details is already available with hospitals.	[½]

Full coverage of cost of medical treatments may not be matched by other hospital groups.	[1/2]
If increased volumes of business lead to economies of scale (for either Company B or Hospital Network A), this might be passed on to policyholders in the future in lower premiums.	[1/2]
“Full cost of medical treatments” implies no excess, which will be good for policyholders.	[1/2]
If the policyholders need treatments, they will be returning to hospitals that they are probably familiar with.	[1/2]
Less choice of hospitals as limited to network hospitals only,	[1/2]
Which may also mean more restricted in terms of the quality of the facilities the policyholders can use and the consultants.	[1/2]
Accessibility and reach of Group A's network hospitals may be poor.	[1/2]
Less choice of treatments e.g. specific treatment may not be available in network hospitals.	[1/2]
If the premium rates are reviewable (not guaranteed) each year, these could go up as well as come down.	[1/2]
There could still be a waiting list for hospital beds if they are not available in the nearby network hospitals.	[1/2]
Even X% of discount may not be attractive enough in comparison to the premium rates offered by the competitors.	[1/2]
If the discount is removed at some future point in time (e.g. when the deal between Hospital Group A and Company B ends), then there is a risk that premiums increase.	[1/2]
(b)	
Company B:	
Increase new business sales,	[1/2]
Which might lead to economies of scale and further increase profits (or could be used to reduce premiums).	[1/2]
No commission to sales force.	[1/2]
Extra savings on marketing cost depend on the level of commission payable on sales through intermediaries / agents.	[1/2]
Administration cost savings as the claims process will be more straightforward due to the direct link between the insurer and the care provider.	[1/2]
Increase profits due to lower per policy expenses.	[1/2]
High level of individual disclosures of health conditions.	[1/2]
Better medical underwriting at no extra cost.	[1/2]
Easy to price the known risks e.g. due to better disclosure.	[1/2]
If premium rates are reviewable (not guaranteed), there is the flexibility to correct any mismatch between actual experience and pricing assumptions at yearly review of premium rates.	[1/2]
Less control over the cost of treatment / claims costs in the network hospitals.	[1/2]
Depending on the level of discount the business may not be profitable.	[1/2]
If ‘meeting full cost of medical treatments’ means excesses no longer apply, this could also impact profitability of the business.	[1/2]
There is a potential risk of over concentration of business if the deal is very successful.	[1/2]
The quality of treatment may be deteriorated in the network hospitals due to increase sales,	[1/2]
Which could lead to reputational risk.	[1/2]

Potential for high lapses at review, if revised premium rates are not competitive.	[½]
This could introduce risk of selective withdrawals.	[½]
It may also lead to higher risk of fraudulent claims.	[½]
There could be a moral hazard risk by network hospitals, such as:	[½]
Inflated claims costs.	[½]
Default risk of network hospital due to failure recovering X/2% discount.	[½]
Conflict of interests with intermediaries / sales force.	[½]
Morbidity risks if experience turns out to be worse than expected.	[½]
Increased regulatory risks of compliance because of the two companies are regulated by different regulators.	[½]
Hospital Group A may not have an incentive to provide top quality services in order to keep costs down.	[½]
In order to maintain its revenue, Hospital Group A may apply pressures on Company B to sell higher volumes of business,	[½]
Which could lead to risk of selling products that may not meet the exact needs of the customers.	[½]
Risk of non-recoveries of X/2% discount cost if it exceeds the sales cost as compared to the existing sales channel.	[½]
“Full cost of medical treatments” implies no excess, which would increase claim frequency (higher propensity to claim and more claims falling below the threshold) and claim amounts.	[½]
There is the key risk that the insurer attracts a lot of high-risk lives as the target market are all past patients,	[½]
So there will be considerable anti-selection as people who expect to need further treatment are more likely to take out a policy.	[½]
Mis-pricing risk - there is the risk that the actual policyholder/business profile turns out to be different from that assumed in pricing.	[½]
If policyholders are offered a discount compared to standard rates, then the business would likely be loss making,	[½]
Or if these policyholders are rated up (given their past claims experience) before they receive a discount, then this might be hard for Company B to explain which could lead to reputational issues.	[½]
Policyholders may seek to cover their current treatment(s)/pre-existing condition(s), so there is potential for mis-selling and reputational damage if these are excluded.	[½]

(c)

Hospital Group A:	
Increased number of patients i.e. insured members,	[½]
And hence profits.	[½]
Hospital may be able to utilise its full capacity,	[½]
And further increased profits through to economies of scale.	[½]
More “guaranteed” patients means that there is less need for Hospital Group A to be competitive, meaning it could increase its prices (and hence its profits).	[½]
Tying itself to Company B might improve its brand image.	[½]
Increase pressure on infrastructure due to increased patients.	[½]
Increased demand for medical staff,	[½]
Which could drive up staff costs.	[½]

Increase pressure on infrastructure and staff could have adverse effects on:

The quality of services / facilities provided,	[½]
Waiting times for treatments.	[½]
Risk of non-recoveries of X/2% discount cost if utilisation rate is lower than expected.	[½]
Extra administration cost to complete insurance policies.	[½]
Immediate capital requirement for X/2% contributions in premium rates.	[½]
The arrangement may lead to dual regulatory compliance requirements.	[½]
There is the potential of conflict of interests if policyholders are being treated differently from other regular patients.	[½]
This may lead to complaints from policyholders or regular patient, which could lead to reputational damage.	[½]
Reputational damage if Company B becomes insolvent because Hospital Group A may come under pressure to provide free care (as they did sell the policy).	[½]
Reputational damage, and potentially fines, if Hospital Group A is accused of mis-selling, particularly if PECs not covered.	[½]
Such an arrangement might set a precedent for other insurers to team up with other hospital groups, with implications for non-PMI treatments / patients not related to Company A (so patient numbers, reputation, etc).	[½]

[Marks available 35½, maximum 9]

(iii)

Monitor profitability of the deal to ensure that it is financially beneficial to continue with the deal.	[½]
Consider maximum volume limits on deal.	[½]
To manage the risk of pressure on Company B to sell higher volumes, could manage their expectations by providing projections at the outset.	[½]
Monitor lapse rates.	[½]
Standardisation of medical treatments/surgeries/procedures to control claims costs.	
For example:	[½]
Limits on cost of certain surgeries,	[½]
Medical procedures,	[½]
In-patient accommodation facilities.	[½]
Frequent inspections of network hospitals to maintain quality treatment.	[½]
Regular review / audit of network hospital's claims records to check for fraudulent claims.	[½]
Introduce pre-authorisation of claims.	[½]
Regular survey from policyholders on quality of services provided by hospitals.	[½]
Specify and agree minimum quality standards on medical treatments in network hospitals.	[½]
This can be achieved through a service agreement between the insurer and the group of hospitals.	[½]
Ensure the ease of access and availability of network hospitals in nearby locations.	[½]
Consider being able to use other hospitals if there is a lack of coverage in certain locations.	[½]
Ensure competitiveness of premium rates to increase sale.	[½]
Regular monitoring of claims experience across the network hospitals / doctors to control the claims costs.	[½]
Ensure that the distribution of geographical locations of network hospitals are consistent with the distribution of policyholders to avoid imbalance between supply and demand between geographical locations.	[½]

Purchase insurance cover to mitigate third party default risk by Hospital Group A.	[½]
Obtain parental guarantees from Hospital Group A to avoid losses due to default risk by one of its hospitals.	[½]
Provide policyholders with incentives to use the network hospitals.	[½]
Consider being able to use other hospitals if waiting lists become too long.	[½]
Provide good customer service to keep the customer relationship healthy.	[½]
To reduce selective lapses, consider introducing no-claims discounts.	[½]
To manage reputational risks, could carry out ongoing (positive) marketing activities.	[½]
To manage regulatory risks, consider researching regulatory requirements upfront and monitoring possible changes.	[½]
To manage mis-selling risks, implement process controls on distribution, e.g. invest in sales training.	[½]
To manage the risk that Hospital Group A may apply pressures on Company B to sell higher volumes of business, Company B could manage Hospital Group A's expectations by providing and agreeing realistic business projections at the outset.	[½]
Manage anti-selection risks through:	
Underwriting applicants carefully (making use of information held by Hospital Group A).	[½]
Charging premiums that reflect the risk.	[½]
Including an exclusion of pre-existing conditions.	[½]

[Marks available 16, maximum 5]

(iv)(a)

Additional risks to Company B:

This may cause friction with existing sales / distribution channels,	[½]
As Hospital Group A may take business away from existing sales / distribution channels.	[½]
This could lead to the risk of losing existing sales / distribution channels.	[½]
This could increase the dependency on single sales channel. i.e. network hospitals,	[½]
And introduce business model risk if network hospitals discontinue discounts in future.	[½]
Increased default risk of hospital funding the discount for entire sales.	[½]
Anti-selection risk increased as more risks of non-disclosure.	[½]
Pricing risks as actual experience may not match with pricing assumptions,	[½]
If the underwriting process is left at the hands of the network hospitals.	[½]
Hospitals may not have the same incentives to sell this product to the healthier lives.	[½]
There is a risk that the network hospitals may target the less healthy lives.	[½]
Sales staff in network hospitals may not have the same product knowledge as Company B's existing sales / distribution channels,	[½]
Which could increase the risk of mis-selling.	[½]
With potentially more business, this could have significant strain on Company B's resources - both administrative and capital.	[½]
Sales resulting from this proposal might be very low because healthy people are unlikely to associate hospitals with insurance sales,	[½]
Which may mean a lot of resources (for both Company B and Hospital Group A) being wasted on a project that does not deliver.	[½]

(b)

Additional Risks to Hospital Group A:

Hospital may not be able to recover the cost of discount provided to retail customers, if this is offered to attract customers and increase sales. [½]

This could lead to reduced profit to the extent of discount in premiums. [½]

There could be significant capital strain due to the support required to develop the sales facilities. [½]

Hospital Group A may not have the surplus capital to fund the initiatives. [½]

If discount is also offered on business renewal, this will put further strain on available capital. [½]

Increased administrative cost for hospitals to carry out underwriting / medical examination on potential policyholders. [½]

With potentially more business, this could have significant strain on Hospital Group A's resources (beds, facilities, staff). [½]

[Marks available 11½, maximum 4]

**[Total 21]**

*Part (i) This is a knowledge based style question and was generally well answered by most candidates.*

*Part (ii) This is generally well answered by most candidates, with the structure to breakdown given by the question.*

*In Part (iii) well prepared candidates scored well on the question.*

*In Part (iv) most candidates found challenging to answer this question directly and found it difficult to articulate solutions available on the marking schedule. Many repeated their answers in part (ii) without touching on more specific points such as sales channel conflict and distribution strategy.*

*Part (iv) of this question differentiated the stronger candidates.*

**Q3**

(i)

New business volume

The company may have written a significant amount of new business over the year. [½]

This could be the result of a new product launch, [½]

Or success of a marketing campaign, [½]

Or establishment of a new distribution channel, e.g. online sales, mobile apps etc. [½]

There could have been major change in the target market, [½]

Or mix of business. For example, a trend towards: [½]

Bigger benefit amounts, [½]

Higher risk lives (e.g. riskier socio, economic or occupation classes) [½]

Data

There could have been errors in the data. For example: [½]

A large proportion of policyholder data were missing from previous year's valuation. [½]

Incorrect policyholders' information, such as: [½]

Age, premium frequency, premium amounts, guarantee / reviewable, deferred period, benefit amounts, own occupation / any occupation etc. [1]  
*[½ mark for at least two examples, 1 mark for at least four examples]*

The problems could have been identified through a data cleansing exercise carried out in the year. [½]

#### (Base) Assumptions

The company could have revised its valuation assumptions. [½]

This could be caused by deteriorating morbidity trends, [½]

Relating to inception rates, [½]

Or termination / recovery rates. [½]

There could have been significant expense overruns over the year. [½]

Lapse / persistence trends could also be deteriorating, [½]

Which could be caused by an exceptional event in the year, e.g. pandemic. [½]

The increase in reserve could be caused by the increase in credit default allowance in the discount rate, [½]

i.e. a much lower discount rate is being used this year due to the increased uncertainty over asset default or downgrade. [½]

The increase in credit default allowance could be caused by recent higher default / downgrade experience in the investment market, [½]

Or general downturn in the economy. [½]

The insurer could have changed its investment strategy over the year, [½]

Switching from high yielding assets to lower yielding ones. [½]

The prudence margins could have been increased significantly, [½]

To make allowance for increasing uncertainties over some of the assumptions mentioned above, [½]

Or the Board decide to take a more prudent view of its reserves. [½]

There could have been adverse experience in other assumptions, such as:

Benefit/Expense inflation (higher than expected) [½]

Mortality pre-claim (higher than expected) [½]

Mortality in-claim (lower than expected) [½]

#### Models

There could have been errors in the models that are used for the reserve calculations. [½]

This could be caused by model upgrade without being properly tested. [½]

This could be caused by correcting existing errors in the old model, [½]

Or improvement made to the model to carry out more accurate calculations [½]

#### Regulations on reserving

The regulator may have imposed more stringent reserving requirements in the year, for example: [½]

Setting a minimum level of prudence margins. [½]

Minimum level of reserve requirements. [½]

Prescription of assumptions for the company to use. [½]

Removal of the allowance to set up negative reserve on profit making policies. [½]

#### Reinsurance

There could have been changes in the reinsurance arrangements over the year. [½]

Major reinsurance treaties could have been terminated in the year.	[½]
The reinsurance premium rate on reviewable terms could have been increased significantly by the reinsurers.	[½]
The downgrade of some reinsurers in the year caused the significant increase in reinsurance default reserve.	[½]
[Marks available 22½, maximum 9]	

(ii)

As the solvency capital requirements are calculated as the change in the value of liabilities / assets under stresses, all the reasons mentioned in part (i) above would be relevant in this part. [½]

Increased solvency capital requirement may be triggered by changes in the solvency capital requirements methodology, e.g. from factor based to risk based [½]

The key additional reasons are the factors that could affect the stress factors / scenarios to be applied for each of the risk module. [½]

Insurance risk

Morbidity risk - the stress factor could have been increased due to increasing uncertainties over future trends. [½]

This could be a more severe stress scenarios on inception rates, [½]

Or on termination/recovery rates. [½]

Mortality risk - this is unlikely to be a significant factor for IP solvency capital requirement. [½]

Increased longevity risk for in-claim lives due medical advancements. [½]

Catastrophe risk - the stress factor could have been increased due to the occurrence of an exceptional event. E.g. Pandemic, war, recession, stock market crash. [½]

Lapse risk - the Mass Lapse scenario could have been increased due to the occurrence of an exceptional event. E.g. Pandemic, war, recession, stock market crash. [½]

Expense risk - the increase in expense stresses could be caused by the persistency of expense overruns observed over recent years, [½]

Or it could be caused by the increasing uncertainties over future expense inflation. [½]

Company A may have better (in terms of quality and appropriateness) reinsurance arrangements in place, so a greater risk mitigation effect / reduction in the solvency capital requirement calculation. [½]

Market risk

Equity risk - the increase in equity stresses could be caused by the increasing uncertainties over the global economy, [½]

Which could be caused by the occurrence of an exceptional event e.g. pandemic, war, recession, stock market crash, [½]

Or a general downturn in the equity market. [½]

Interest risk - the change in interest stresses could be caused by the increasing uncertainties over the global economy, [½]

Which could affect the level of the interest rates curve, [½]

Or the overall shape of the interest rates curve. i.e. shift of the shape of the curve. [½]

Spread risk - the change in stresses would mainly be due to higher uncertainties over the yields on corporate bonds over the risk-free rates. [½]

Property risk - the change in property stresses could be caused by the increasing uncertainties over the property market and the global economy.	[½]
Currency risk - the change in currency stresses could be caused by the increasing uncertainties over the strength of the local currency and the currency in which assets and liabilities are denominated.	[½]
This is unlikely to be a significant factor if assets and liabilities are well matched in terms of currency,	[½]
Or Company A is not exposed to material currency risk as most of its assets and liabilities are denominated in local currency.	[½]
Counterparty default risk - the change in currency stresses could be caused by the increasing uncertainties over the future default or downgrade of investments.	[½]
It could also relate to the increasing risk of default by service providers with whom Company A has in place Third Party Agreements (TPAs).	[½]
It could also relate to the increasing risk of default by Company A's reinsurers.	[½]
Liquidity risk - this could be caused by a change in Company A's liquidity policy.	[½]
For example, Company A may have used a significant portion of its cash / short-term deposits for the purchase of illiquid assets such as properties.	[½]
Operational risk - this could be caused by the increasing uncertainties over Company A's operations.	[½]
For example:	
Mis-selling risk	[½]
Fraud risk (both internal and external).	[½]
Staff risk	[½]
Other	
Company A may have more appropriate (alternative) risk management / governance in place, so a greater reduction in the solvency capital requirement.	[½]
The way the individual stresses are aggregated / correlated (to give the total capital requirement) could have changed, by assuming reduced benefits of diversification, e.g. following a pandemic, it might now be felt that morbidity, lapses, and investment stresses are more heavily correlated than previously thought.	[½]
The tax relief under the stress scenarios could have changed to reflect the changes in Company A's tax position.	[½]
	[Marks available 18½, maximum 7]
	<b>[Total 16]</b>

*Part (i) This question was generally well answered by most candidates. The stronger candidates were able to structure their answers well and gained high marks relatively easily.*

*Part (ii) Most candidates did not perform well in this question. For those candidates with lower scores in part (i), this question proved even more challenging. Many candidates found difficult to see the differences between reserves and solvency capital requirements, which are explained in the core reading and this question. The strongest candidates were able to structure their answers by considering each relevant risk individually and explained why each risk might have increased solvency capital requirement, rather than just stating the risk (e.g. morbidity risk increasing because of uncertainties, as opposed to just listing morbidity stress). When marks were awarded in relation to Data, Base*

*Assumptions, Models, Regulations on reserving and Reinsurance if this has already been covered by candidates in part (i) marks were not given in part (ii). However, marks were awarded in part (ii) if they had not been covered in part (i).*

*Part (ii) of this question differentiated the stronger candidates.*

#### Q4

(i)

Advantages:

The proposed scheme will help protect the nation's health.	[½]
Subsidising the poor.	[½]
Balancing the budget.	[½]
Improved health should increase the nation's productivity, which should help the Government budget overall.	[½]
By paying for healthcare, the government might avoid other social security payments, Such as unemployment benefits for individuals not able to continue working due to injury.	[½]
Following social culture and or political promises.	[½]
It is more affordable for the government as it is partially funded through individual contributions,	[½]
e.g. fixed annual fee and risk-sharing.	[½]
Burden on general taxation is limited due to yearly review of risk-sharing proportion.	[½]
It is likely to increase awareness of the people towards health insurance.	[½]
Risk-sharing may motivate individuals to be more responsible for their health,	[½]
And keep the claim costs down.	[½]
It supports segments of the society which may be associated with health inequalities. e.g. with net worth below threshold level.	[½]
The use of hospitals in approved networks should ensure a degree of quality.	[½]
The use of a state-approved insurance company means that the administration and certain costs are not borne by the government.	[½]

Disadvantages:

It does not provide cover for some of those individuals that are funding the subsidy i.e. the higher rate taxpayers.	[½]
The yearly contributions may not be affordable to the very poorest as they may not be able to afford the annual membership fee required.	[½]
In which case the proposed scheme may not meet its aims of covering all citizens, And the yearly reviewable feature is likely to add further uncertainties.	[½]
There is the risk of losing the cover by those whose net worth moves above the threshold level.	[½]
This may discourage individuals to increase net worth above threshold,	[½]
Or seek alternatives to keep net worth down.	[½]
If a significant proportion of those who are eligible cannot afford the scheme at inception due to risk-sharing and fixed subscription fee,	[½]
This could lead to the need to increase the contributions,	[½]
And makes it even more unaffordable for the poor.	[½]

There is the risk that disputes may arise at claims stage if the members are unable to pay the risk-sharing share.	[½]
The burden may then fall back on the government,	[½]
And the taxpayers.	[½]
There is the risk of lapsing the membership if there is a significant increase in contributions at renewal.	[½]
If this scheme proves to be unpopular, it may damage the political favour/reputation of the government.	[½]
Medical treatment is restricted to an authorised network hence some hospitals accessible to citizens may be excluded.	[½]
The use of hospitals in approved networks should lead to a dependence on those hospitals, so if costs increase and/or standards worsen, then the government is fully exposed to this risk.	[½]
The use of a state-approved insurance company could lead to a dependence on a specific insurer, so third-party default is a greater risk.	[½]
The government will need to research and set an appropriate threshold (and might set it at a sub-optimal level).	[½]
Not all eligible individuals might join the scheme, e.g. those who cannot afford / do not want to pay the membership fee, meaning that their health is not protected.	[½]
The government might make itself unpopular with ineligible voters,	[½]
Particularly those with wealth just above the threshold.	[½]

[Mark available 19½, maximum 6]

(ii)

Implications on the health and care insurers

The overall impact will depend on the level of cover provided under social scheme,	[½]
And where the threshold is set.	[½]

Advantages:

The scheme could help increase the general awareness toward private medical health insurance cover.	[½]
This could lead to increase in demand,	[½]
Particularly the segments of the population that are not covered by the proposed scheme. i.e. the people with higher net worth.	[½]
Potential increase in demand may lead to increased sales and profits.	[½]
Any exits from the social scheme at yearly review due to breach of threshold limit may go for private PMI products.	[½]
Increased persistency as covering only high net worth individuals and higher awareness level.	[½]
The high net worth individuals may also be in better health,	[½]
And hence better claims experience.	[½]
This may also help increase sales of other health and care insurance products such as critical illness and income protection, due to the increase in awareness towards insurance cover.	[½]
Changes in mix of business may lead to reduced level of cross subsidy especially to policies of smaller size.	[½]
There might be an opportunity to design new products that provide eligible members with complementary cover (including treatments not covered by the social healthcare scheme),	[½]

Cover the annual membership fee for a number of years. [½]  
 If the state-approved insurance company is an existing PMI provider, there would be increased business volumes, leading to economies of scale and higher profits, [½]  
 As well as improved reputation / standing in the market. [½]

Disadvantages:

There could be limited impact if many of those in the new scheme were not able to afford insurance previously. [½]  
 There could be significantly higher lapses of PMI policies at the implementation of the proposed social scheme. [½]  
 This would include most of those whose net worth is below the threshold, [½]  
 Although this might not be significant as these are likely to be the people who cannot afford PMI. [½]  
 Future lapse experience could also be affected when net worth of some of the policyholders reducing to below the threshold. [½]  
 It could be a challenge to compete with the government, [½]  
 In order to attract new business, [½]  
 And retain existing business. [½]  
 Increased volumes going through hospitals in the network might put a strain on facilities and resources, [½]  
 And ultimately drive prices up, which would affect the cost of PMI treatments. [½]  
 Reduced diversification of business may lead to concentration risk. [½]  
 Government may impose additional tax on insurance companies to recover the losses under social healthcare scheme. [½]  
 If the state-approved insurance company is an existing PMI provider, this could result in increased strain both on resources and capital. [½]

[Marks available 15, maximum 5]

(iii)

Information needed for the review of the scheme

Methodology / Calculations

The expected total claims costs for next year, [½]  
 Including expenses, [½]  
 Less government contribution, [½]  
 Less subscription fee, [½]  
 Gives the share of total deficit / surplus. [½]  
 The government can then assess how to allocate the deficit / surplus between next year's government subsidy and membership fee. [½]

Members' information

Enrolled members' details. [½]  
 Date of enrolment. [½]  
 Date of birth / Age. [½]  
 Gender. [½]  
 Exit members' details to derive lapse rates. [½]  
 New entry members' data. [½]  
 Previous years' claims records, including: [½]  
 Date of claims [½]  
 Amount of claims [½]

Cause of claims (treatment types)	[½]
Risk sharing share.	[½]
Date of renewal.	[½]
And date of first inception of scheme.	[½]
Level of cover for each member.	[½]
Eligibility threshold for current year.	[½]
Estimate of member's personal wealth.	[½]
Information from the government	
Government's share of contributions in previous year.	[½]
Government's proposed budget for next year.	[½]
Information about the social healthcare scheme:	
Maximum cover ceasing age for the member.	[½]
Minimum entry age for the member.	[½]
Annual subscription fee.	[½]
Administration expenses for the scheme in previous year.	[½]
Existing Threshold limit.	[½]
Demographic profile of the country to estimate the expected new entrants to be covered in the scheme next year.	[½]
Proposed premium rates for next year's health insurance cover.	[½]
Information from the hospitals	
Claim amounts by hospital.	[½]
Information on any new treatments that have come into use (what they are, where they are available, how much they cost, what treatments they might replace, etc).	[½]
Assumptions for the calculations	
Medical inflation.	[½]
Expense inflation.	[½]
Total exposure data derived using the information listed above.	[½]
Incidence rates derived using the information listed above.	[½]
Expected claims costs derived using the information listed above.	[½]
Other assumptions include:	
Mortality,	[½]
Investment returns / interest that might be earned on fees / the subsidy.	[½]
Any margins to be included in any assumptions to allow for uncertainty.	[½]
	[Marks available 20½, maximum 8]
	<b>[Total 19]</b>

*Part (i) This was generally well answered by most candidates, noting that the question asked for the advantages and disadvantages specifically to the government.*

*In Part (ii) many candidates misinterpreted the question as the insurer taking on the government's work (i.e. state approved), which resulted in limited marks being scored using this assumption.*

*Part (iii) This was generally well answered by the well prepared candidates. Those who scored highly had a well-structured response with subheadings, that was well thought through to aid with idea generation. Candidates not so well prepared focused on specific aspects, such as listing policyholder information such as age, date of birth, gender etc, and restricted themselves from gaining more than a few marks. With a question like this one, it is important to consider the bigger picture.*

*Parts (ii) and (iii) of this question differentiated the stronger candidates.*

## Q5

(i)

The product pays a fixed lump sum amount in the case of: [½]  
 Upon the diagnosis of a critical illness specified in the policy terms, [½]  
 e.g. heart attack, stroke, cancer, kidney failure, multiple sclerosis, terminal illness,  
 total and permanent disability (TPD). [1]  
*[½ mark for at least two examples, 1 mark for at least four examples]*

Other incidents that could trigger a claim may include: [½]  
 On reaching a defined degree of impairment e.g. losing the ability to walk unaided or  
 losing ability to speak. [½]  
 On undergoing a surgical procedure e.g. having a major organ transplant or having  
 a heart bypass surgery. [½]  
 For accelerated CI product, there will also be a death benefit. [½]  
 The benefit / sum assured is not designed to indemnify the policyholder. [½]  
 Benefits may be fixed throughout the policy term or be indexed / increased in line  
 with inflation. [½]  
 Benefits can also be tiered, where the payment of the sum insured is linked to the  
 severity of the medical conditions, [½]  
 Where a proportion of the full benefit is paid out each time the severity of the medical  
 condition reaches certain pre-defined levels. [½]  
 The product may offer the opportunity for the lump sum to be paid in instalments,  
 with any outstanding amount payable on death (if applicable). [½]  
 It may also include children's benefits. [½]

[Marks available 7, maximum 2]

(ii)

Fixed lump sum benefits will be affected / eroded by high inflation rates as the real  
 purchasing power of the benefit will reduce. [½]  
 During the duration of the policy, the real value of the sum insured will reduce such  
 that when the customer has a claim, the claim amount may not be sufficient to support  
 what the policyholder originally intended to achieve. For example: [½]  
 Sum insured cannot afford significant re-designing for the home and other changes  
 of lifestyles. [½]  
 Sum insured cannot afford costs of treatment or major surgeries such as chemotherapy,  
 coronary bypass surgery. [½]  
 Fixed lump sum benefits will be eroded over the duration of the policy by high  
 inflation rates as the real purchasing power of the benefit will reduce, [½]

And consequently, on making a claim, the claim amount may not be sufficient to meet the policyholder's specific needs.	[½]
Health care / Medical inflation tends to trend higher than general / consumer price inflation, which may exacerbate the problem.	[½]
This will affect both domestic liabilities,	[½]
And overseas liabilities due to the depreciating exchange rate.	[½]
This problem relating to erosion of benefits might be significant as the high inflation rates are expected to continue for the foreseeable future.	[½]
Individual critical illness that was bought to pay off a mortgage where the loan amount is fixed would still meet the intended needs.	[1]
Customers on group critical illness schemes may have benefits as a multiple of salary, And if employers are keeping employee salaries / remunerations in line with inflation, there is scope that the real value of benefits is maintained.	[½]
On the other hand, if employee salaries / remunerations are lagging behind inflation, the real value of benefits will be eroded.	[½]
As the pay-outs will still be made in cash, the policyholders still have a degree of freedom on how to utilise the funds to meet their needs,	[½]
Albeit the adverse effect of high inflation on the real value of benefit.	[½]
Sum insured may not be able to buy a sufficiently large (and increasing) annuity when the individual cannot work due to their critical illness.	[½]
Sum insured may not be sufficient to buy other lifestyle one-offs, such as home improvements, children's school fee funds.	[½]
Transparency and clarity may not be met if benefits are fixed and the policyholders have not been advised / informed about the adverse effect of high inflation on the real value of benefit.	[½]
Customers may find the need to revise the sum insured on a regular basis a tedious exercise,	[½]
Especially if such increase is subject to further medical underwriting	[½]
	[Marks available 11, maximum 4]

(iii)

It should allow customers to review and adjust their levels of cover in line with inflation trends,	[½]
This could be done using guaranteed insurability options that allow policyholder the option to increase the insured benefit at various points without further underwriting.	[½]
Premium will be reviewed in line with sum insured increase.	[½]
Sum insured can be linked to inflation so that the level of cover increases automatically in line with inflation trends.	[½]
Alternatively, offer fixed increases which may not be as good as inflation linked but easier to administer.	[½]
Sum insured can be denominated in a stronger and more stable currency so that level of cover could be protected to a certain extent,	[½]
But this would also require premiums to be denominated in the same currency.	[½]
Otherwise, the insurer will be exposed to the currency mismatch risk.	[½]
If the policy was taken out to pay for a loan that is denominated in the local currency, this would create mismatch for the policyholder.	[½]
Sum insured could be linked to the policyholders' salaries,	[½]
So that if salaries move in line with inflation, the levels of cover also increase accordingly	[½]

A unit-linked product may be better suited to maintain value.	[½]
Assets within the unit-linked funds could be equities or properties which should provide a reasonable hedge against inflation trends.	[½]
The company may offer the facility to increase monthly premiums in line with what the customer is able to afford in a particular month.	[½]
Avoid selling long term products which are susceptible to economic changes.	[½]
It may be better to sell annually renewable policies which can be consistently reviewed in line with market trends.	[½]
Remove any guarantees that do not provide value for money to customers under the extreme economic conditions.	[½]
The benefit could be changed to be an income that increases with inflation.	[½]
	[Marks available 9, maximum 4]

(iv)

#### Meeting Specific Needs

Assess whether the existing product design and features are attractive to the target market.	[½]
The benefits should clearly meet customer needs and failure of which necessitates a review of the design and features.	[½]
Customers should get clarity on the purpose of the product.	[½]
Complex products may be difficult for the customer to understand and hence will lack meaning and purpose in the eyes of the customer.	[½]
The charging structure should be appropriate to customers and generally affordable to the customers.	[½]
Consideration should be made as to whether the product still meets the specific needs that it was originally designed to meet.	[½]

#### Providing Financial Support

A reasonable balance needs to be made so that the choice doesn't result in increased levels of moral hazard or anti-selection.	[½]
e.g. guaranteed insurability options can only be exercised at predetermined times to reduce the risk of anti-selection.	[½]

#### Providing Peace of Mind

A product is supposed to provide peace of mind to a customer.	[½]
A customer should have confidence that their level of cover is adequate to meet their intended needs.	[½]
If the product design or features can no longer provide that peace of mind, the product may need to be reviewed.	[½]

#### Transparency, Simplicity and Clarity

Complex products will be difficult to understand and will require review of the product to ensure that customers understand the product.	[½]
If a product's terms become too complex or ambiguous, it could result in a significant number of disputed claims,	[½]
Which could result in litigation and reputational damage.	[½]

#### Regulatory and Statutory Requirements

All product features have to comply with existing regulatory and statutory requirements.	[½]
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Changes in regulation might mean that certain product features are made redundant hence have to be revised. [1/2]

Any regulatory requirements of changing the design itself, e.g. in providing policy literature. [1/2]

Any regulation on distribution of different (more complex) products. [1/2]

Treating Customers Fairly (TCF) requirements (of both existing and new customers). [1/2]

#### Distribution Channels

Product features should be easy for the distribution channels to be able to explain and sell to customers. [1/2]

Consider how the CI business is sold, [1/2]

Whether a more complex design would be appropriate to these channels, [1/2]

Or whether different channels would be needed, [1/2]

e.g. a more complex product would be more suitable for insurance intermediaries given that they provide more advice and have more financially sophisticated clients [1/2]

Consider whether there would be a change in remuneration to sellers, [1/2]

And whether further training / marketing would be needed [1/2]

#### Profitability / Return on Capital

Profitability will be a function of sales volumes and the profit margin per policy. [1/2]

Low profitability may be a sign of inappropriate product design or features [1/2]

Consider the impact on profits of changing the design, which could include: [1/2]

The appropriate level of profit margins per policy, [1/2]

Impact on volumes, [1/2]

And contributions to overheads and overall profits. [1/2]

This may necessitate revisions around claims assessment, underwriting, benefit limits etc. [1/2]

#### Systems and other constraints

Admin systems need to be compatible with the product design and features. [1/2]

Lack of compatibility may necessitate: [1/2]

Upgrade of the current system at a cost. [1/2]

Procurement of a new systems which can be expensive for the company. [1/2]

Consider the potential costs associated with a system upgrade. [1/2]

#### Reinsurance

Change of product design and features will affect the reinsurance agreements that are in place for the products. [1/2]

Reinsurer(s) should be consulted on the proposed changes so that they are able to review reinsurance premiums, underwriting and claims assessment grids. [1/2]

Reinsurer(s) may withdraw cover for the product if they view changes to be adverse. [1/2]

This may increase capital requirements or decrease capacity to write business. [1/2]

Without the appropriate level of reinsurance support, the insurer may therefore not proceed with the review process or incorporate recommendations from the reinsurers. [1/2]

#### Pricing Considerations

Need to consider if the insurer will have data to price for the revised product. [1/2]

Own data is unlikely to be available if new features are added, [1/2]

Hence there may be needs to use reinsurer data, industry data or other alternatives. [1/2]

Without the right quality of data, there may be need to incorporate margins into assumptions Which might make the product unaffordable again. [1/2]

#### Competition

Actions of competitors are a key determinant of the decision to review or not. [1/2]

If competitors already offer the proposed product variants, the insurer will need to match competition and remain competitive. [1/2]

If competitors do not currently offer the proposed product variants, the insurer may benefit from taking the lead to introduce an innovative new product. [1/2]

Distribution channels can also provide feedback on the competitiveness of the product. [1/2]

Analysis of business volumes and consultation with distribution channels can help to decide whether it is necessary to review the product design and features. [1/2]

#### Underwriting and Claims Management

It would be necessary to consider whether the current underwriting / claims management would be appropriate for a new more risky/complex product, [1/2]

Or whether it would need to be made more stringent to allow for greater risk (e.g. the increased risk of anti-selection). [1/2]

#### Risk Management

Consider the risks associated with the new design: [1/2]

The product changes suggested in the previous parts might introduce new risks such as benefit inflation and currency risks, [1/2]

Particularly if matching assets are not available. [1/2]

The lack of past experience with the new product may lead to mispricing. [1/2]

Sales may not be sufficient to recoup the development costs. [1/2]

#### Financing requirements

Consider the financial implications of making the changes, and whether Company A has the financial resources, including: [1/2]

One-off costs of changing systems, policy literature, marketing, etc [1/2]

Extra capital requirements (reserves and SCRs), [1/2]

e.g. the need to reserve for inflation risk. [1/2]

Consider the financial impact of any guarantees provided by a revised design, e.g. guaranteed insurability options. [1/2]

#### Other

Design reviewability - consider the practicality of reviewing the design now and of offering reviewable premiums and benefits, [1/2]

And whether it would be necessary / preferable to revert to a more basic design (i.e. the current design) should inflation levels fall back to more reasonable rates at some point in the future. [1/2]

State benefits - consider whether any State benefits are provided that reduce the needs met by a CI product, e.g. if the State provides medical treatments for CIs, in which case there would be less importance given to this customer need. [1/2]

Sustainability of design - any implications of ensuring that changing the design, and the new design itself, is sustainable, [1/2]

e.g. lots of extra policy literature being sent out being non-environmental. [1/2]

Sustainability of investment options - investment strategy will need to change if Company A wants to match assets and liabilities, so it will need to consider if there are socially responsible investment options that provide sufficient matching.	[½]
Consistency with other products - consider whether the design of other insurance products (e.g. term assurance products) are also being reviewed in the market.	[½]
Culture of the company - consider whether changing the product would fit with Company A's culture, brand and strategy	[½]
	[Mark available 36, maximum 10]
	<b>[Total 20]</b>

*Part (i) This is a knowledge based style question and was generally well answered by most candidates. Candidates should however be aware of the maximum marks available and avoid spending too much time going to great lengths with explanations which would not gain them any further marks than the maximum marks available.*

*In Part (ii) the stronger candidates were able to focus on the needs of the customer, and ways in which these needs were not met under the current product design. Those that were not well prepared tended to focus on the generic shortcomings of a typical CI product and gained few marks as a result.*

*In Part (iii) the strongest candidates were able to consider and come up with a wide number of responses with ways in which CI products could be adapted. Those that were not prepared did not take note of the question being asked (i.e. to address the current economic environment in Country X) and instead generated points that were irrelevant to the current economic environment such as including more benefits, reducing underwriting, different distribution channels etc.*

*Part (iv) This was generally well answered by most candidates, and with a large number of marks awarded. Those who structured their solutions well with subheadings and follow a well thought through process tended to score particularly well on this question.*

*Parts (ii) and (iii) of this question differentiated the stronger candidates from the weaker candidates.*

**[Paper Total 100]**

## **END OF EXAMINERS' REPORT**