

# **INSTITUTE AND FACULTY OF ACTUARIES**

## **EXAMINERS' REPORT**

September 2020

### **Subject SA3 – Specialist Advanced General Insurance**

#### **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 later 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.

Mike Hammer  
Chair of the Board of Examiners  
December 2020

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

1. The aim of the General Insurance Specialist Applications subject is to instil in successful candidates the ability to apply knowledge of the United Kingdom general insurance environment and the principles of actuarial practice to providers of general insurance in the United Kingdom.
2. Our expectation of a passing candidate at this stage is that, broadly, they should appear capable of stepping up to a head of function (pricing / reserving / capital) role at a small-mid sized organisation or being a senior member of a function team at a larger organisation. They should demonstrate not only a grasp of the technical aspects of general insurance actuarial work, but should also a good sense for products, the competitive marketplace, regulatory environments and the operational aspects of an insurance company. They should be able to pull these areas of understanding together to provide well rounded advice to the users of their services.
3. Consistent with previous examiners’ reports, we would offer candidates two key pieces of advice – (i) read the question properly and (ii) take the time to actually think about what is going on. Further to previous reports, we would stress that candidates do not need to get the majority of the points included in this report in order to pass (there are significantly more than 100 marks available for the points in this report). Time spent making sure that you are answering the question that is asked is therefore more valuable than a panicked rush to put down as many points as possible, regardless of whether they are relevant.
4. On the first issue, candidates should always work on the assumption that the question wording has been carefully chosen. It is therefore essential to read the question properly.
5. If something is not asked for then candidates will waste valuable time writing answers that will gain no marks. These broader answers may be a logical next step to the question and so may be appropriate for candidates to discuss in a professional context. This is an exam however with a finite number of marks available and so the scope must necessarily be limited and specifically defined.
6. If a question does specifically mention something, candidates should also assume that there are definitely marks available for this aspect of the question. During the exam setting process, any content that is superfluous will have been removed. A clear implication of that is that if there are numbers provided in the question paper then there are marks available for comment and consideration of those numbers.
7. Wording of question sections should also be considered in the context of the position within the overall question. Where new question information is provided between sections, candidates should recognise that this information is specifically relevant to the following section or sections. When answering preceding question sections, candidates should not consider any subsequent information in their answers (although it may cover similar ground).
8. Various examples from this paper of recurrent failure to read the question are noted below. On the second issue, candidates should note that SA3 is the key paper at which

we test candidates’ broader thinking. This is generally the final paper before qualifying as a professional, and we consider a capacity for broader thinking to be one of the best indicators of a candidate’s suitability to act in a professional capacity once qualified.

9. As such we aim to design exam papers so that it is difficult to pass without displaying some capacity for independent and broad thinking, as well as to heavily reward instances where these skills are displayed. When reviewing past papers, candidates should assume that the marks available for generic points are substantially less than those awarded for the more challenging points that would be the mark of high quality professional insight in a practising actuary. Marks available for list items from knowledge are lower still.
10. We strongly recommend that candidates step back and take the time to thoroughly think about what is actually going on in question situations proposed rather than simply considering numbers to be analysed with standard techniques. For example, candidates might stop to think about what claims actually are for a particular class of business, considering factors such as what actually causes the claim, who brings the claim, how it is dealt with once brought, what makes one claim small while another is substantial etc.
11. This more grounded, real world perspective will help candidates to consider such things as practical issues, stakeholders involved and their potentially diverging objectives, wider impacts, regulatory or ethical issues, inappropriateness of certain actuarial techniques for the specific situation, current economic or cyclical effects etc. This is likely to lead to significantly broader point generation (and indeed reflects the thought processes of the examiners in drafting the questions and solutions) and a more rounded understanding of the underlying risks and dynamics which should also be of value to candidates when dealing with different stakeholders in their professional life. Again, some examples of this failure to think more widely on the current paper are below.
12. More generally, we would also advise candidates to employ basic exam techniques such as well structured answers and effective time management. The transition to online exams should assist candidates with providing well structured answers. Bullet points within answers can help make answers clearer, and we would advise candidates to ensure that separate points are split into separate bullets and that they do not duplicate the same point across separate bullets.
13. Candidates should also consider the command words used and tailor the depth of their answers accordingly.
14. Candidates who give well-reasoned points relevant to the specific question being asked, which are not in the marking schedule, are awarded marks for doing so.

**B. Comments on candidates’ performance in this diet of the examination.**

A number of specific comments are provided next to the questions where there were repeated reasons for candidates to score badly. These include recurring issues with failure to read the question properly, lack of consideration of secondary factors to assist with

point generation (e.g. stakeholders, operational issues, market & competition impacts, regulation etc) and time management.

### **C. Pass Mark**

The Pass Mark for this exam was 65  
394 presented themselves and 183 passed.

## Solutions for Subject SA3 September 2020

### Q1

- (i) Consider the likely payout. It depends on how many tickets ABC sells but likely to be zero most of the time, but could be an occasional huge payment. [1]

Therefore it is very likely, but depends on the size of the free assets that ABC has in comparison to the likely jackpot. [½]

. . . particularly as ticket sales are likely to be low initially [½]

ABC may share the risk with other gaming companies, ie effectively a self-insuring group. [½]

ABC may be regulated such that it MUST have sufficient assets [½]

And certainly needs people to believe it has enough assets [½]

Insurance will smooth profits. [1]

Insurance will reduce expected profits. [1]

Once jackpot has rolled over a few times it is likely that ABC will be selling tickets with an expected loss ratio greater than 100% and therefore the cost of insurance may rule it out. [1]

. . . . jackpot only builds up if have made above target profits [½]

ABC could insure a certain proportion of the jackpot. [½]

. . . or other similar profit share [½]

Depends on access to capital & risk appetite – e.g. may be established company able to absorb a jackpot loss [½]

Availability of insurance [½]

Price / quality of insurance [½]

**[Marks available 9½, maximum 4]**

- (ii) *Generic points across both options*

Consider the risk premium = tickets sold x probability of win x jackpot size [1]

So risk premium will increase each time there is a rollover [½]

. . . both from jackpot increases [½]

. . . . and from ticket sales increases [½]

And depending on how much is allocated to the jackpot pool it is feasible that after a few rollovers the risk premium exceeds the ticket price [1]

The likelihood of a rollover depends on the odds of winning the jackpot and the number of tickets sold. [½]

Potential that ABC could be liable to pay full jackpot amount to any tickets sold that match the numbers (i.e. unlike real lottery where prize is shared across winners) [1]

Also need to allow for:

- Commission [½]
- Other expenses [½]
- Profit [½]
- Contingencies [½]
- Tax [½]
- Reinsurance costs [½]
- Capital requirements [½]
- Investment return [½]

*Max of 2 points across generic factors*

Consideration of any contingency / profit / reinsurance loadings will depend on size of limit relative to syndicate which may be affected by coinsurance [1]

Additional credit available for specific comments on how above office premium factors can be affected by specifics of the questions [2]

Note that this risk should have zero correlation with anything else so can provide good diversification benefits. [1]

Also need to bear in mind rates that may be quoted by other potential insurers. [1]

*Weekly renewable vs open-ended*

Risk for managing agency that weekly renewable allows for selection against syndicate if ABC non-renews once the jackpot has accumulated [1]

Weekly renewable may have additional administrative costs [1]

Open-ended syndicate would need to price for the potential for jackpot accumulation [1]

. . . including allowing for higher ticket sales on larger jackpots [1]

**[Marks available 18, maximum 6]**

- (iii) Weekly renewable contract may be cheaper initially but once the jackpot has rolled over a few times it will not viable. [1]
- Need to consider the probability of a rollover. [½]
- There may be slightly higher contingency loadings for the weekly renewable contract as the payout will be more volatile. [1]
- The open ended contract is likely to be more viable as it will involve paying a fixed percentage of revenue each week [1]
- And will also produce smoother profits for ABC [½]
- Credit for appropriately justified recommendation – e.g. weekly renewable has greater flexibility, open-ended is more predictable [1]

**[Marks available 5, maximum 2]**

- (iv) ABC’s management could intentionally fraudulently claim for a jackpot winner [1]  
. . . . mitigation e.g. fit & proper checks / external audit [1]
- A rogue employee at ABC may be able to forge a jackpot win [1]  
Mitigation e.g. – internal controls around employees [1]
- External cyber attacks may lead to a fraudulent claim against ABC which is then passed on the insurer [1]  
. . . mitigation e.g. – adequate cyber security controls [1]

**[Marks available 6, maximum 4]**

**[Total 16]**

A number of candidates missed marks available for stating more obvious elements, e.g. the pricing should reflect size of jackpot x likelihood of a jackpot win. Some candidates also didn’t read the question specification fully and produced answers that were not relevant for the scheme specification (and may have missed other points available as a result).

## Q2

- (i) An insurer operating in one country only is likely to be smaller than Worldwide so aggregate exposure to latent claims almost certainly higher for Worldwide. [1]
- Single country insurers may be more likely to specialise so, depending on what lines of business they sell, may be more or less exposed than Worldwide on a per policy basis. [1]

Latent claims may vary by country therefore relativity depends on the characteristics of the single country being compared against [1]

. . . relative to e.g US or UK single domicile insurer a global insurer may have a lower average exposure per unit of premium [1]

Can vary by country due to e.g. propensity to claim, legal system, maturity of insurance market, health & safety, environmental factors (half per point max 2) [2]

Worldwide has expanded rapidly, has it done its due diligence thoroughly? Risk if expanding through acquisitions into a country they are not familiar with that they may pick up additional latent claim exposures not correctly identified at time of acquisition [1]

**[Marks available 7, maximum 4]**

(ii) Different points in time, ie emergence of latent claims over the last twelve months [1.5]

What instructions were given to consultancy, ie best estimate, 99% adequacy etc, and how does that compare with the internal approach? [1.5]

Different actuarial methodology or judgements [1.5]

Different regulatory or other basis [1.5]

Changes to the external environment e.g. regulatory change or inflationary environment [1.5]

Acquisitions made over the last twelve months may have added to latent claims [1.5]

Large claims skewing data [1.5]

Reinsurer failure [1.5]

Data or modelling errors in one or both estimates [1.5]

Better access to data or other benchmarks [1.5]

**[Marks available 14, maximum 6]**

(iii) *Guidance for markers – 1 points for option & up to 6 half marks for advantages & disadvantages, take two best options*

Claims cleansing initiatives, eg close claims more quickly and aggressively [1]

- Can be carried out alongside other methods [½]

- Can be implemented immediately [½]

- Latency may be a challenge as reserves may be weighted towards losses yet to be reported [½]

- Even where losses are reported may take time to establish extent of illness [½]
- . . . or to determine which exposure period(s) led to the claim & whether the company was on risk at that point [½]
- But could lead to more re-opened claims [½]
- And reputational damage [½]
- May be quite labour intensive to close [½]
- May pay higher amounts to achieve quicker settlement [½]
- Conversely may make savings by allowing funds to be accessible sooner [½]
- *Credit for other valid advantages / disadvantages*

Take out adverse deviation cover (credit for other well argued reinsurance options e.g. run-off quota share) [1]

- Could quickly remove the downside potential of losses [½]
- May not actually materially impact net reserves (depending on structure) [½]
- Would still have gross reserves and reporting responsibilities [½]
- Reinsurer may take over administration & settlement of claims, reserving & other functions [½]
- Potential for reputational damage depending on reinsurers claims handling practices [½]
- May be some caps / participation etc [½]
- WW remains ultimately liable in the event of default [½]
- Default risk non trivial for very long tailed liabilities [½]
- Costs may be prohibitive [½]
- Depending on structure may retain access to investment income [½]
- And exposure to investment risk [½]
- May not be availability [½]
- May take some time to negotiate [½]
- Does not need regulatory approval [½]
- Does not need policyholder approval [½]

Part VII / insurance business transfer, ie transfer of a ring-fenced section of the business [1]

- Can achieve full finality with this method [½]
- No credit risk [½]
- . . . potentially important for long tailed latent exposures [½]
- No ongoing reporting requirements [½]
- Can close down any entities which no longer have exposures post transfer [½]
- Lengthy process [½]
- And costly [½]
- Requires an independent expert [½]
- And court approval [½]
- Does not require approval of individual policyholders [½]
- . . . although they can raise objections to the process that the independent expert & courts would consider [½]
- Requires communication with policyholders to allow them to raise objections if any [½]
- . . . may be challenging for latent claims business depending on quality of record keeping [½]

Commutations [1]

- Can be carried out alongside other closure methods [½]
- Does not need any regulator or court approval [½]
- Can be carried out for individual policyholders [½]
- Unlikely to get all policyholders to agree [½]
- Commutation may be challenging on regulated business [½]
- And scheme of arrangement for mass commutation unlikely to be allowable for regulated business, particularly where the company is not insolvent [½]
- May be challenging to get policyholder agreement [½]
- . . . as this is likely to be non-core to a company’s business with high uncertainty [½]
- . . . and a lack of any internal skillset to manage claims [½]
- May also need to commute reinsurance contracts in parallel to avoid losing value [½]

Sell impacted business [1]

- May be badly received by market (especially if recently purchased) [½]
- Price achieved may be unattractive [½]
- Particularly if there is some uncertainty around loss valuation as indicated by the change in reserves [½]
- Probably a lengthy process [½]
- Incur significant legal & other costs [½]
- But achieves finality [½]
- Will involve some regulatory oversight and approval [½]
- May be IT issues separating systems & transferring data [½]
- May be TUPE or other employment issues transferring staff [½]
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- 

*Other potential exit methods (credit for valid answers):*

Novation / LPT

Run off to exhaustion and / or hybrid

**[Marks available 16, maximum 8]**

**[Total 18]**

Some candidates struggled to articulate themselves clearly with part (i) and give a clear comparison of global vs local portfolios. Some candidates took a more prospective view looking at reducing exposures going forward for which some credit was allowed as part of a run-off solution, although significantly more methods were available for reducing existing latent claim exposure.

Otherwise candidates generally scored well on this question

- 3 (i) Competitive pressures may mean that insurers need to underprice new business in order to win it [1]  
... particularly where they are selling through aggregator sites [1]
- Renewing policyholders may be unaware that they could achieve better prices by moving to a different insurer [1]  
... potentially because the insurer has not provided sufficiently clear communication for the policyholder to realise the price difference [1]  
... for example not showing the price of the previous policy for comparison or providing clarity on the drivers of movement [1]  
... or because the policyholder has not read the communication provided [1]  
... particularly if it is provided electronically rather than physically [1]  
... or there are generally low levels of financial awareness in the country [1]
- Policyholders may be aware that they could make savings but are not choosing to do so [1]  
... perhaps because the process of changing is unnecessarily onerous [1]  
... or because the insurance overall is cheaper so the incentives are limited [1]  
... or from simple inertia / laziness / lack of materiality to the customer [1]  
... they may have some degree of brand loyalty [1]  
... or a perception that the quality of cover or service is superior with their existing insurer [1]  
... other discounts at renewal may discourage switching even if they do not actually translate to lower pricing for renewal customers [1]
- Even within the portfolio of renewing customers, there may be some customers who have challenged and renegotiated their premium while remaining with the insurer [1]
- The country may currently be in a soft part of the rating cycle, with renewing policyholders having started their policy in a hard market – i.e. potentially they have simply not seen price decreases rather than seeing additional price increases [1]
- There may be genuine reasons why the renewing portfolio is on average higher risk than the new portfolio [1]
- In some classes of business there may be policyholders who are no longer able to easily switch policies as changes in their risk profile since taking out their policy make them difficult to insure [1]  
... e.g. a major loss, emerging health issue, series of claims, caught out in fraudulent activity, reduction to flood defences in an area etc [1]  
... particularly if there are regulatory restrictions around non-renewal of cover or excessive price increases at renewal [1]
- Other classes of business may naturally have higher risk over time [1]  
... e.g. rolling annual warranty policies for a car, where new policies would on average be newer vehicles more recently serviced [1]

. . . or pet insurance typically bought for new pets, PPI / creditor etc where new policies are likely to be for younger / lower risks [1]

Some insurers may be actively managing their portfolios to maximise their overall margins based on analysis of policyholder behaviours [1]

. . . for example identifying the sensitivity of groups of policyholders to price changes and charging more to those least likely to move [1]

. . . or managing communication through the renewal process to minimise lapses [1]

. . . or making the cancellation process overly difficult [1]

**[Total marks available 28, maximum 8]**

(ii) Average premiums for a class of business [1]

. . . likely to be more material for classes with low average premiums as there is a lower financial incentive to shop around [1]

Variability in policy terms and conditions [1]

. . . policyholders may be less inclined to shop around if they are uncertain whether alternative insurers offer the same breadth of cover [1]

Extent of competition for a class [1]

. . . more competitive classes will be more likely to show material first year price reductions [1]

. . . and provide more options for a policyholder looking to move their policy [1]

Availability of information on alternative insurers [1]

. . . higher profile classes may be more likely to have independent assessment of insurer reliability, giving policyholder more comfort on switching [1]

Ease of switching policies [1]

. . . classes that can be changed via an aggregator site are more likely to have policyholders moving regularly [1]

. . . particularly where they have simpler proposal forms [1]

. . . some classes may have additional barriers to moving such as warranty, healthcare or income protection where insurers may need to impose waiting periods or restrictions on pre-existing conditions to manage anti-selection risks [2]

Varying costs of acquiring new business [1]

. . . this may impact the extent of the first year discounts that can be offered and / or the need to retain a policy for several years to make profits [1]

Mix by age (or other policyholder profile) [1]

e.g. Younger people more likely to shop around [1]

Duration of policy [1]

. . . shorter policies allow for more switching [1]

*Credit for other sensible suggestions*

Up to 2 half marks for giving examples of classes relevant to points above [1]

Up to 2 half marks for comments on distribution channels / compulsory class points relevant to points above [1]

**[Marks available 22, maximum 5]**

(iii)

As ever, “fairness” is a somewhat subjective term heavily overused by politicians [1]

The review does likely suggest that higher margins are being made on renewing policyholders which could be said to be unfair [1]

. . . particularly as acquisition costs should be lower on these policyholders which would if anything support lower pricing [1]

. . . although as per points in (i) there may be some instances where renewal risks are on average higher risk [½]

. . . conversely in some industries such as motor, new policyholders may be higher risk as e.g. newer drivers [1]

. . . the politician has also only read a newspaper article which may well not have accurately communicated any underlying justifications for price variance found in the review or any limitations noted in the review [1]

However if policyholders could reasonably be expected to shop around and are choosing not to do so, it could be perceived as “fair” to charge higher margins [1]

. . . particularly if overall industry margins are not excessive so there is a cross subsidy to those policyholders who do care enough to switch regularly [1]

. . . insurance premiums may be a lower materiality expense for renewing policyholders contributing to their inertia [1]

However this is only a reasonable counterargument if there are not unreasonable barriers for policyholders to rotate their policies [1]

. . . as noted in (i) there may be unfair communication practices designed to keep policyholders unaware of the benefit of switching [½]

. . . or unfair operational practices that make switching onerous enough to discourage policyholders from changing [½]

Renewing policyholders may be closer to a “fair” price for their risk if new business is regularly sold as a loss leader [1]

May not apply to all insurers, e.g. could be limited subset driving majority of difference at market level [1]

**[Marks available 12½, maximum 5]**

(iv) Encourage the industry to sign up to a voluntary code of conduct [1]

Publicise the issue to encourage policyholders to be aware of the benefits of switching [1]

- Publish statistics (or require insurers to publish statistics) which clearly highlight the insurers with the largest differences [1]
- Take actions to make switching policies quicker and simpler [1]  
... e.g. set up government sponsored services, impose requirements on insurers to make switching easier etc [1]
- Require insurers to clearly show pricing from the previous year(s) on renewal statements so that policyholders are well informed [1]
- Require insurers to justify price changes between renewals [1]
- Require insurers to show the prices they would be charging a new policyholder with the same rating factors [1]
- Reduce or remove barriers to policyholders moving, e.g. improve portability of pre-existing conditions or ban waiting periods where policyholders are moving from another insurer [1]
- Set limits on differences in average premiums between new and renewing parts of an insurer’s portfolio [1]
- Set limits on / ban differences in charging for policyholders with the same rating factors / risk characteristics [1]
- Impose fines, sanctions, capital loads, business plan restrictions or other regulatory pressures on insurers who do not reduce their price differentials [1]  
... or benefits e.g. capital reductions etc for those that do [1]

**[Marks available 13, maximum 5]**

- (v) All impacts will depend on the level of competition in the market currently [1]  
... which is likely to be reflected in the current levels of margin in the industry [1]

*General impacts*

- The proposal is likely to reduce the extent of any discount achievable for changing insurer [1]  
... which may represent either the removal of a subsidy for new policyholders paid for by policyholders who have shown more inertia [1]  
... or may represent the removal of excess profits on policyholders showing inertia [1]  
... either way should result in more consistency of margin / profitability [1]
- The majority of new policyholders are not entirely new to the market, but have simply changed insurer [1]  
... as such numbers of new policyholders may decrease if more policyholders stay with their current insurers [1]

. . . . this may introduce additional challenges for insurers trying to stay within the limits while the market stabilises [1]

If there is less of a churn in policyholders, there may be lower operating expenses incurred across the market as a whole which might translate to lower prices [1]

. . . and also lower acquisition costs paid which may impact business models for aggregators or brokers [1]

#### *Design flaws*

The process looks at average premiums only [1]

. . . may create additional competition for higher risk policyholders to inflate average premiums for new policyholders [1]

. . . even if they are still written at a discount to a fair risk cost these could be above overall average premiums [1]

. . . companies would then be incentivised to persuade these higher risk policyholders to non-renew some time in the first five years [1]

. . . potentially by applying excessive rate increases as the fifth renewal approaches [1]

Conversely it may make it difficult for low risk policyholders to transfer for a discount [1]

. . . or even for a fair price [1]

. . . pricing in line with their risk cost would lower average new business premiums creating a potential constraint on pricing for their renewal portfolio [1]

. . . which is likely to be a lot larger than the new business portfolio [1]

. . . particularly if the proposal reduces the amount of switching [1]

. . . making some sacrifice of new business volumes to protect margins on the renewal portfolio more attractive [1]

. . . although over time this would be a self defeating strategy as volumes would gradually decline [1]

Overall may end up with a situation where low risk policyholders are overcharged and have fewer options for switching [1]

. . . . while higher risk policyholders are undercharged provided they switch relatively regularly [1]

. . . effectively rewarding riskier behaviours (in so far as the risk is within the control of the policyholder) [1]

Taking only the fifth year of renewal may distort outcomes across different years [1]

. . . as there would be no restrictions on onerous pricing for people with fewer than or more than five continuous years [1]

. . . insurers may offer targeted discounts to this particular cohort that are then reversed over the following years [1]

. . . although the legislation may have some controls to prevent this [1]

. . . or this may result in additional regulatory challenge even if the legislation is not specifically designed to exclude it [1]

There may not be any firm definition of what counts as a “new” policy [1]

. . . potentially giving insurers the option to e.g. offer to move people in their fifth year to a “premium” policy for loyal customers and count that as re-setting to a new policy [1]

This may create additional opportunities for start-ups who don’t have renewal portfolios of that maturity to compare against [1]

*Operational issues*

It is not clear exactly how the mandate is going to work in practice or what the sanctions are if the mandate is breached [1]

. . . if sanctions are limited barring any material breaches then there may be less impact from the requirement [1]

. . . or if it is onerously enforced it may result in insurers needing to operate within the threshold to avoid the risk of breaches [1]

. . . as a precise percentage may be difficult to target given uncertainty over renewals and new business [1]

Conduct / reputational / brand risks should be considered by companies when responding to the new initiatives [1]

Lead-in time to implement change may affect the smoothness of transition [1]

**[Marks available 20, maximum 9]**

**[Total 32]**

There was greater variety in candidate performance on this question, even with whole marks available for each point.

In (i) candidates sometimes failed to generate a range of points or consider issues such as communication to policyholders or to consider behavioural factors on the policyholders’ side even where the question steered candidates to consider these issues. Similar challenges impacted those candidates on part (ii).

A number of candidates also didn’t understand the fundamental concept, i.e. in the same underwriting year at market level renewing policyholders are charged more than new policyholders. This led to a number of non-scoring answers where candidates e.g. considered why premiums now may differ from premiums several years ago, or why individual insurers may have differences through changing their target market etc.

In part (iii), candidates should expect that questions revolving around subjective terms such as “unfair” have marks available for considering what those subjective terms really mean from multiple perspectives.

(iv) was generally higher scoring

In (v) many candidates missed marks available for considering the flaws in the scheme. The exam team commonly produce specific question setups that are designed to have some flaws or unintended consequences as we would want actuaries to be able to anticipate potential issues in real life situations.

- 4 (i) A captive is an insurer wholly owned by a commercial enterprise with the primary purpose of insuring the parent or associated group companies. [1]
- Premiums and risks are retained within the group, ie self-insurance. [½]
- Some captives will also sell insurance to customers of the parent company. [½]
- Captives may insure external companies if they have the relevant expertise and risk appetite. [½]

**[Marks available 2½, maximum 2]**

(ii) *Advantages of setting up a captive*

- Retains insurance profit within the group thereby potentially increasing overall profits. [½]
- Could also sell to customers boosting profits further. [½]
- Could increase awareness of risks leading them to be managed more effectively. [½]
- Reserves come from pre-tax profits [½]
- Direct access to reinsurance market (and its expertise). [½]
- Can select against the insurance market during harder markets [½]
- If domicile is flexible there may be further tax benefits, eg Bermuda [½]
- Cover may not be available in the open market [½]
- Helps to manage insurance spend [½]
- May be legislative advantages [½]
- Not exposed to UW cycle so more stable premiums [½]

*Disadvantages of setting up a captive*

- May increase volatility of results [½]
- Although this could be mitigated through reinsurance [½]
- Possible accumulation of risks [½]
- Complex and costly to set up and run [½]
- Lack of internal expertise for pricing / reserving etc [½]

Lack of policy & claims admin experience	[½]
Onerous governance requirements	[½]
Ties up capital that may be better employed elsewhere	[½]
May take up valuable management time	[½]
Reinsurance may not be available at suitable price / design	[½]
May not have authorisation for all classes	[½]

**[Marks available 10, maximum 6]**

(iii) (a) *Policy Coverage*

PL insurance indemnifies the insured against legal liability to a third party for losses arising from a product issue resulting in	[½]
... death	[½]
... bodily injury	[½]
... property injury	[½]

The benefit may be restricted by:

- A maximum claim amount per event	[½]
- A maximum aggregate over one year	[½]
- An excess or deductible	[½]
- Insured retaining a proportion of any claim	[½]
- A maximum amount per claim.	[½]

The perils covered will depend on the nature of the products being manufactured, but may include:

- Faulty design	[½]
- Faulty manufacture	[½]
- Faulty packaging	[½]
- Incorrect or misleading instructions	[½]

The policy will also normally cover legal costs. [½]

Policies are normally written on a losses occurring basis (credit given for claims-made basis as SP7 / SP8 core reading says claims made) [½]

Some policies may also include product recall for products which have not actually caused any damage. [½]

(b) *Claims Profile*

Can be long notification delays [½]

Can be long settlement delays	[½]
Variety of different claims can be made with different profile	[½]
e.g. property or product recall may be quicker to notify or settle	[½]
. . . injury or illness from pharmaceutical issues may be significantly longer tailed	[½]
Costs to the insured may be significantly higher than recoverable amounts with reputational & other damages	[½]
Exposed to changes in regulatory environment / consumer protection rules	[½]
Potential for latent claims	[½]
Volatility	[½]
Exposed to inflation	[½]
Some PPO potential	[½]
Reinsurance often used	[½]
Aggregation of claims is common	[½]
When claims are made they tend to be for large amounts	[½]
Legal costs, particularly re litigating claims, can be significant	[½]
Low frequency	[½]
<i>(c) Rating Factors</i>	
Nature of product	[½]
Distribution channels used	[½]
Whether there is US exposure	[½]
Use of product	[½]
Materials used within the product	[½]
Testing completed on the product	[½]
Risk of failures	[½]
Trade of policyholder	[½]
Size discounts e.g. by turnover banding	[½]
Turnover as exposure measure	[½]
Underwriter risk assessment	[½]
Historical claims experience	[½]
Cover level	[½]
Discount for retained interest	[½]
Other sensible suggestions max 2 x	[½]

**[Marks available 23, maximum 12]**

(iv) Examples of reasons that would be considered in a determination:

Availability of insurance  
Price of insurance  
Position in market cycle  
Licensing available  
Historical performance  
Expectations of any changes to risk assessment that might not get credit  
Capital requirements  
Availability of reinsurance  
. . . and ability to retain part of an exposure and reinsure the remainder  
Uncertainty in loss outcome  
Length of tail of line of business  
Exposure to systemic issues  
. . . catastrophes  
. . . legal issues  
Scope to deliver improved risk management on retained products  
Risk appetite  
Extent of experience  
Volume of exposure / premium

Possible retentions:

- Motor fleet
- Lower layer property
- A&H
- Travel
- Lower layer EL
- Cargo

More likely to transfer:

- D&O
- Products liability
- Public liability
- Business interruption
- Cyber
- Higher layer EL / Motor / Property

Up to 2 marks per product (best 4) where adequate reasons given, plus 2 marks for noting various unknowable factors that could affect all products (e.g. pricing & availability). Max 4 marks for the question if only listing factors to consider

**[Marks available 11, maximum 6]**

(v) What locations does XYZ operate in? [½]  
Captive domicile [½]  
  
Type of insurances placed in the captive, [½]

Pure captive or writing external business too? [½]

Pure captive means lower requirements depending on where domiciled [½]

Appearance of strength, greater capital backing will make it easier to attract business from outside (if that is the intention) [½]

*Need to consider:*

- Premium volumes [½]
- Expected growth in premium volume [½]
- Profit margins within premiums [½]
- Tax on profits [½]
- Potential volatility of results [½]
- Reinsurance programme [½]
- Credit risk of reinsurers [½]
- Reserving methodology [½]
- Likely investments & investment strategy [½]
- Potential for liquidity risk [½]
- Operational risks & how they may be mitigated [½]

Solvency II or other legislation requirements, if applicable, for captives [½]

What provision is made for latent claims? [½]

Competitors capital [½]

Diversification [½]

Data available [½]

Costs of capital [½]

Alternative uses for capital [½]

Exposure to accumulations [½]

. . . or catastrophes [½]

Limits & retention of the captive [½]

**[Marks available 13½, maximum 8]**

**[Total 34]**

(i)-(iii) were knowledge based questions that were high scoring

In (iv) some candidates did not talk specifically about classes of business which might sit better in or out (or partially in) a captive missing some available marks.

**END OF EXAMINERS' REPORT**

