INSTITUTE AND FACULTY OF ACTUARIES

EXAMINERS' REPORT

September 2020 Examinations

Subject SA1 – Health and Care Specialist Applications

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
September 2020

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

1. The aim of the Health and Care Specialist Applications subject is to instil in the successful candidates the ability to apply knowledge of the health and care environment and the principles of actuarial practice to the provision of health and care.

2. 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.

3. 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.

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

5. Candidates who give well-reasoned points, not in the marking schedule, are awarded marks for doing so.

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

Well-prepared candidates scored well across most of the paper. Questions that required an element of analysis or application of knowledge to a particular situation, such as Q1 (iv), Q1(v), Q1(vi) and Q3(iv) were generally less well answered than those that were mainly knowledge based. For these questions, candidates did not always provide a sufficiently broad range of points to score well or did not make points that related to the specific scenario set out in the question rather than just generic points to demonstrate that they could apply their knowledge.

It is encouraging to see many candidates using headings in their answers to the longer part questions and setting out their answers in a methodical manner which aids marking scripts.

The comments that follow the questions concentrate on areas where the candidates could have improved their performance.

C. Pass Mark

The pass mark for this exam was 60.
54 candidates presented themselves and 20 passed.

Solutions

Q1
(i)

Sales
Technology can help streamline the sales process [½]
It can provide customers with access to basic details about health and care insurers [½]
And information about the products they wish to buy [½]
E.g. on its own website or on online comparison websites [½]
This can allow easier comparison of XYZ's products with those of the competition for the consumer [½]
And the advisor/distributor [½]
Indicative premium quotes can be provided based on the information entered e.g. size of benefit required, term etc [½]

Underwriting
Technology can be used to make the underwriting process less onerous
For example, using data already obtained to prepopulate application forms [½]
Or by allowing purchase online [½]
It may be possible for applicants or distributors to enter information directly and to receive a quick yes/no or need for further information [½]

Technology can help insurer categorise the customers risk more accurately. [½]
E.g. through the provision of an app or wearable technology by the insurer to gather more data on consumer [½]
In return consumer can receive additional benefits such as coffees, film tickets etc [½]
Data may from third party sources to help assess health risks. [½]

Use of technology may be able to identify cases of fraud easily, either at the application stage or the claims stage [½]

Customer service
Policyholders can be provided with interactive tools to access information on their policies [½]

For example:
- Monitoring their health and care insurance products [½]
- Making product amendments [½]
- Obtaining online valuations for unit linked products [½]
- Or allowing switches between funds for unit linked products [½]

[Marks given for other relevant examples, maximum 2 marks]

Channels for doing this include:
- website self-service
- e-mail
- text messaging; and
- social media.

[½ for 2 valid examples, 1 mark for 4 examples]

Technology can be used to speed up the insurer's back office operations [½]
and claims processes. [½]
For example, by the policyholder submitting details of the claim online [½]
And data can be extracted from handwritten and typed forms at high levels of accuracy [½]

Technology can be used to help the insurer in new business acquisition by helping to identify individuals who may wish to buy the insurer's products. [½]
And matching products to individual's needs [½]

XYZ may use data from Country A and other countries to produce new products to meet customers' needs [½]
Better information on providers to reduce costs for PMI [½]
Can track recovery process for IP or suggest treatment/rehabilitation to improve health and speed up return to work based on data on the policyholder [½]

Use of technology could strengthen the relationships between the customer and insurer. [½]

If the customers values XYZ's products more this can improve the retention of the business for the insurer [½]

Technology can be used to differentiate the insurer from other equivalent insurers in the market [½]

[Marks available 17, maximum 5]

(ii)
The collation of personal sensitive data potentially adds complexity and requirements around the data security [½]
And processes that must be followed. [½]
Ongoing risk management requirements increase [½]
Including the training of staff [½]

There is a risk that the insurer is potentially an attractive target for cyber-attack which could result in: [½]

- lost or corrupted data [½]
- potential damage to a firm's reputation [½]
- costs associated with business interruption [½]

The costs for the insurer to adequately protect itself against cyber-security may be very high. [½]
The insurer be held to ransom if a hacker threatened to reveal sensitive information such as the medical history, of policyholders. [½]

There is a risk that the insurer does not comply with relevant data protection regulation in Country A which could result in: [½]

- significant financial penalties [½]
- reputational damage [½]
- regulatory intervention [½]

There is a risk that third parties supplying data may not have got the correct permissions [½]

There may be difficulties in interfacing with third parties supplying data [½]

There is a risk that there are differences in regulation between different jurisdictions making it difficult to comply with the relevant rules across the group. [½]

There is a risk that the insurer could be perceived by policyholders as being overly intrusive [½]
This could make it more difficult for the insurer to sell new business [½]
Particularly if the competitors don't require so much data. [½]

The insurer could incur significant additional costs to accumulate and maintain large amounts of data. [½]
There is a risk that the insurer can't adequately store and analyse the large amounts of data… [½]
…which may make it difficult for the insurer to process and draw useful conclusions from the data [½]
If the data are poor quality there is a risk of drawing incorrect conclusions [½]

Potential increased risk of fraud from insurer's own staff [½]

Allows the insurer to more precisely price and capture the market [½]
May lead to a demand from customers/distributors for a change in product [½]

[Marks available 13½, maximum 5]

(iii)
Market Share
It is unclear how easy it will be to attract new business away from the existing dominant players in the market. [½]
It is unclear even if it is possible to attract sufficient new business to meet the market share target whether this is achievable within the desired timescale. [½]
May be at wrong stage of underwriting cycle in Country A [½]
The insurer will have a narrower range of products than the existing dominant players in the market…. [½]
…. possibly making the insurer less attractive to advisors and potential policyholders making it difficult to achieve the required market share targets. [½]
It is possible company's product offering may not be attractive to the local population due to local culture, religion and custom. [½]
The products offered by the group may exclude a large market in Country A, for example it could be that PMI is compulsory for employers to offer and therefore there is a large group PMI market rather than individual market. [½]
The State benefits offered in Country A may affect the product required and demand too, for example a comprehensive State healthcare system may mean there is no need for PMI in this country. [½]

The economic environment in Country A will affect the new business volumes, [½]
For example, if the country is entering a recession it may experience low new business volumes across the health and care insurance market. [½]

The existing insurers are large and well established and so will be well placed to fight back to eliminate a new competitor [½]
e.g. brand awareness, large advertising spend *[or other suitable example]* [½]
Competitors could cut premiums to keep the new company out. [½]

It is possible that a new innovative insurer could increase the total size of the market by selling to customers that would not have bought products from the current dominant insurers in the market [½]
It is not clear how possible this will be. These new customers may not exist in suitable volumes. [½]

The existing dominant players are likely to have strong distribution of their products…. [½]
…..it may be difficult for a new insurer to sell sufficient volumes [½]
From outset a new company will have very little market awareness with customers, distributors etc….. [½]
….. which may make it difficult to attract sufficient customers away from the dominant insurers in the market [½]
The insurer may have to invest significantly on marketing, advertising etc to increase market awareness…… [½]
…… which could be costly. [½]

Relationship between the insurer and third parties such as hospitals unlikely to be as strong as the main local competitions which could adversely impact costs and service standards. [½]
There may be language issues e.g. translation of materials [½]

Profitability
It is unclear at this stage whether the required return on capital is reasonable in this market. [½]
The dominant insurers in the market may be willing to accept a lower return on capital. [½]
If the insurer's required return on capital / profitability targets are too high relative to the competition, then the insurer's premiums are likely to be high relative to the competition. [1]
Which is likely to make significantly increasing market share difficult. [½]
Particularly if the market is very price sensitive. [½]
Insurer will not have credible local data making accurate assessment of risks and pricing more difficult. [½]

The experience of Company XYZ could have a significant impact on the potential profitability, for example: [½]

- claims experience may be worse than other countries, perhaps due to attitudes to claiming [½]
- if inflation is much higher than expected it could lead to much higher benefit payouts than expected. [½]
- low investment returns [½]
- high expenses, perhaps due to high salaries that are required in Country A [½]
- low renewals or retention of business e.g. due to attitudes of policyholders to move providers frequently. [½]

Company will have limited expertise initially in the new market so will need to spend a lot on training. [½]
There may also be a lack of staff in Country A with the required experience for the products being offered. To get the necessary staff may lead to higher salaries being paid, or more external assistance, and lower profits. [½]
The high level of regulations in Country A may lead to higher costs of complying with regulations, reducing profitability. [½]
It may take time understanding what the regulator in Country A wants. [½]
The political / regulatory / tax situation in the country may be volatile. [½]
There may be restrictions on foreign ownership/profit movement [½]
There may be a currency risk e.g. on relocation of returns in investments [½]

Reinsurance may be difficult to obtain [½]

The insurer could decide to accept a lower level of profitability in the short term to enable it to build up its market share. [½]
It may be difficult to get the required return on capital until the insurer is selling sufficient volume of business to spread its fixed costs sufficiently across a large number of policies [1]

The opportunity cost to enter market may be too high. Capital could be used better elsewhere. [½]

[Marks available 23½, maximum 10]

(iv)
Company XYZ
Advantages
The group should be experienced in rolling out its business model in different countries….. [½]
….which should make the roll out straightforward and cost effective [½]
Relevant products that meet customer need will lead to high volumes of new business, good customer retention and reputation. [½]
The company's use of technology may give it a competitive edge [½]
Improved pricing terms should reduce anti-selection risk [½]

Disadvantages
The one size fits all strategy may not work well in every country. [½]
For example the product lines may not be the products customers want to buy in this country [½]
The low capital model may not be popular with the local regulator….. [½]
….. which may make it difficult for company XYZ to get approval [½]
The group's strategy does not give company XYZ much flexibility to amend its strategy to allow for conditions in a particular country. [½]
It may be too difficult to maximise market share and profitability [½]

The company will not benefit directly from any excess profits as the surplus is retained at the group level. [½]
There are risks associated with holding large amounts of personal data, such as fines for lost data (outlined in solution (ii) earlier). [½]

The technology will need to be maintained leading to costs for the insurer. [½]
They may not be able to access a significant part of the market in Country A via the products offered (e.g. LTCI). [½]
Or XYZ may not be price competitive if model leads to high premiums [½]

[Maximum 3 marks for this section]

Group XYZ

Advantages

Simpler operationally for the group to roll out the same approach in each market it operates within. [½]
Capital can be moved within the group as required. [½]
The ability to move capital around could help with expanding parts of the business and allow it to generate a return rather than having capital sitting idle. [½]
Additionally, the capital can be moved to bolster a particular subsidiary's solvency after an adverse event. [½]

Same target level of profitability for all insurers within the group, so the group is potentially ambivalent which country business is written in. [½]
Increased diversification for the group with business in different countries [½]
Profits should be higher if the technology and data analysis allow the companies to write high volumes of good quality business. [½]
There is a clear listed aim for shareholders which may be appealing and lead to a higher share price in anticipation of the higher returns. [½]

Development costs reduced as IT systems etc for subsidiaries developed centrally [½]
And provides economies of scale [½]

Disadvantages

Exactly the same model may not be appropriate for all markets. E.g. certain markets may require a different approach. [½]
It may not be straightforward and easy to move capital within the group [½]
E.g. due to regulatory restrictions [½]

There is a risk if they don't achieve the required return on capital aim, potentially reducing the share price and affecting the credit rating. [½]
Contagion of risk if same product design in all places [½]
If they mis price they may be subject to anti-selection risk in some of the countries [½]

[Maximum 3 marks for this section]

Policyholders

Advantages

Operational model could mean better service standards for policyholders than existing insurers in the market [½]
Policyholders may be happy providing large amounts of personal data in return for a better customer experience. [½]
The model should mean that the products better meet the needs of customers. [½]
More players in market should mean better policy terms/premiums [½]
A company adhering to globally accepted standards may be attractive for policyholders [½]

Disadvantages
Low capital model for the insurer may give poor protection for policyholders [½]
e.g. if the insurer competes aggressively for market share [½]
Policyholders may want different products than those the insurer sells [½]
Policyholders in the countries the group operates in may not be happy sharing large amounts of personal data [½]
Rigid model could mean policyholders in some countries could be paying too much for cover….. [½]
…. which could mean that policyholders in those countries could end up subsidising policyholders in other countries. [½]
Companies such as XYZ may cease to operate in a country or be sold if there is no success under the business model within the 3 to 5 year timeframe. [½]

[Maximum 3 marks for this section]
[Marks available 22, maximum 9]

(v)
Ultimately the regulator will be concerned that the policyholders of XYZ may not receive their promised benefits. [1]
The Regulator's biggest concern is likely to be about protecting policyholders [½]

Minimum Solvency Model
The level of capital that is the 'minimum' would affect the potential concerns. [½]
For example, if it was held at the SCR level, a breach is only likely once in every 200 years, but at the MCR level it is likely every 6-7 years. [½]

Holding the minimum solvency amount may not give the insurer a sufficient buffer against adverse experience…… [½]
……which means policyholders may not have sufficient protection against adverse experience. [½]

The minimum level of capital may not provide any protection against even relatively small changes in experience….. [½]
…… which may reflect poorly on the reputation of the regulator if XYZ were to get into trouble. [½]

The Regulator will normally want an insurer to hold considerably more than the minimum. [½]
e.g. it may require a significant buffer above minimum to allow company to operate. [½]

If solvency falls below minimum levels the regulator may look to protect existing policyholders. [1]
For example by forcing the insurer to stop selling new business….. [½]
….. or it could require the insurer to merge within another insurer. [½]

As the risks being taken by XYZ increase (with new business volumes), the regulatory capital may not increase in the same way (depending how it is calculated) leading to insufficient capital at the company level. [½]

There may be insufficient capital to cover new business strain if volumes were high [½]
There may be insufficient capital to help fund the growth of XYZ in terms of technology costs, product development, purchasing office space etc [½]
If investment returns were low, given the lack of surplus at the company level, it may lead to issues with capital requirements being breached [½]

Excess capital held at Group level
Regulator is unlikely to be happy for all excess capital to be held at group level…. [½]
…. particularly as XYZ will only have the minimum level of capital [½]

The regulator may be concerned that the Group may be unwilling or unable to provide additional capital to XYZ in the event that XYZ actually needs the additional capital [1]
Possibly because other insurers in the group may also need capital in the same circumstances. [½]
Or possibly the Group could be willing to accept XYZ going bust and any adverse publicity for the Group that this may bring, rather than give XYZ capital in the event that XYZ needs capital support. [1]

There may be a lack of capital to cope with unexpected events, such as a global pandemic [½]

Company could need additional capital for specific risks in Country A [½]
…..for example if individuals in country A are potentially at a higher risk of certain types of cancer this could impact CI and Income protection capital requirements. [½]

[Marks available 14½, maximum 10]

(vi)
Data
The company should invest sufficiently in technology to ensure it can securely store [½]
and analyse the potentially significant amounts of data it will collect. [½]
Introduce data quality checks [½]

The company should put in place robust strategies to deal with cyber risks…. [½]
……including processes for detecting, reporting and responding to fraud, cyber risks etc [½]

The company should have clear governance in respect of data held. [½]

Sales
Company should ensure it has robust processes in place to ensure it can take on expected levels of new business. [½]
Processes should also be able to cope if new business is much higher than expected [½]
Recruit appropriately trained staff in adequate numbers to meet the demands of writing new business. [½]
Distributors should be adequately trained on communication with potential customers about the use of their data [½]

Ensure good customer service to retain business and ensure initial expenses are covered. [½]

Carry out customer satisfaction surveys to identify any issues [½]

Pricing
Appropriate margins in premium rates for new business to allow for more adverse experience than expected. [½]
Ensure processes in place to review pricing if required. [½]

Claims
Ensuring that good claims management processes are in place to prevent excessive or fraudulent claims. [½]
Ensure that policy wording is clear to reduce the risks associated with disputed claims. [½]

Ensure policy wording sufficiently tight to reduce possibility of unexpected claims… [½]
….and anti-selection [½]

Providers
Review any commission structure [½]
Review contract terms with providers [½]

Solvency
The company should ensure it has sufficient free capital in respect of the business it expects to take on [½]
The company should also hold a capital buffer in case new business is higher than expected. [½]

Company should ensure it can obtain additional capital if required…. [½]
….possibly from an external party [½]
Or from Group if required. [½]
In particular it could ensure there is a legal agreement in place that would require Group to pass the company sufficient capital in the event that the company required additional capital. [½]

The company may not offer any guarantees or options on products, to reduce the capital requirements. [½]

Reinsurance
Given the company is new to this market the company could put in place an appropriate reinsurance program with a high quality reinsurer [1]

Monitoring
The company should regularly monitor experience to ensure adverse experience is identified early….. [½]
….. which will allow management to take action to address the issue(s) [½]

Training
Company should ensure staff are appropriately trained. [½]

Underwriting
Ensure underwriting standards are sufficiently robust to assess the risks being taken on accurately. [½]
Consider the use of exclusions [½]

Expenses
Consider whether it would be appropriate to outsource any functions, such as admin roles, to save costs. [½]
These might be outsourced to other insurers within the group who may have more expertise [½]

[Marks available 18, maximum 10]

[Total 49]

Most candidates scored well on questions Q1(i), Q1(ii) and Q1(ii) giving a wide range of relevant points.

Q1(iv) was reasonably answered. However, some candidates gave points relating to the group, rather than specifically the company in answering part (a) or points relating to the company, rather than the group when answering part (b). Under (b) few candidates discussed diversification, shareholders or the share price. Under (c) few candidates mentioned that XYZ may cease to operate in the country or be sold if there was no success under the business model within the 3- to 5-year timeframe

Q1(v) was less well answered with few candidates providing a wide enough range of points to score well.

Similarly, in Q1(vi) candidates did not generate sufficient points to score highly. The better candidates approached Q1(vi) by considering the various aspects of the business, such as data, sales, underwriting, pricing, solvency etc and considering the risks under each of these and the possible ways of controlling these risks. Few candidates discussed expenses, providers, solvency or monitoring experience.

Q2

(i)
Improve staff retention as not leaving for better remuneration elsewhere [½]
Able to attract good quality staff as remuneration package is competitive [½]
Viewed as paternal/caring company by consumers [½]
Retention of staff leads to efficiencies in working [½]
Long term cost for employer could be reduced if recruitment fees were high [½]
Employees who do fall sick are more able to return to work as living standards maintained [½]
Employees who do fall sick return to work sooner with rehabilitation benefits [½]
There may be a legislative requirement to offer benefit [½]
There may be tax benefits from offering a scheme [½]

As the company is large it may consider that this approach may be cheaper than purchasing income protection insurance for the employees [½]

[Marks available 5, maximum 3]

(ii)
The replacement income benefit payable should be related to the employee's income, [½]
For example, 90% of average income over the previous 3 months before sickness [½]
With the aim of ensuring that the net after tax income was not higher than the net after tax income when the employee was working [½]
Otherwise there is no incentive to return to work [½]
Would need to specify what income was included in the replacement benefit calculation e.g. basic salary, bonuses, overtime [½]

Ensure that the scheme is consistent with any sick pay that is required to be paid by either the employer or by the State [½]
To reduce 'over financial insurance' by the employer which might reduce the incentive to return to work [½]

The benefit provided may vary by type of employee [½]
To help retain key groups of employees [½]

For longer periods of sickness, e.g. over 2 years, reduce proportion of benefit to 50% of income [½]
To reduce costs to the employer for those with long-term sickness [½]

Benefits in payment are likely to be increased, for example by RPI, NAE or the max of (RPI, NAE) annually when in payment [½]
Or the salary increases awarded by the employer [½]
To maintain employees' living standards over time and the ability to meet their outgoings [½]

There may be a short deferred period e.g. of 7 days [½]
To reduce short term absenteeism [½]
And avoid the administration costs for paying for very short periods of illness [½]

The situation or circumstances that need to exist in order for payments to be paid needs to be set out [½]
For example, would payment be made for absences due to injuries arising from activities outside work (e.g. hazardous pursuits, drug abuse) [½]
To reduce the employer's exposure to moral hazard [½]

The benefits are likely to cease at the earlier of recovery or retirement age [½]
To encourage return to work if sickness ceases before retirement [½]
After retirement age the employee is likely to be in receipt of state and/or private pensions [½]
Rehabilitation services may be provided [½]
Or proportional benefit to those who return to work on a part-time basis [½]
or in a less strenuous (and lower paid) role. [½]
To encourage full recovery and return to work [½]

Payments may also be re-started if the employee returns to work but is then off work again for the same reason within a certain period of returning to work. [½]
Payments may be stopped whilst the employee is resident outside an agreed geographical location. [½]
The payments might cover any pension or social security contributions that would be made by the employee [½]
Give a contribution holiday whilst off sick if the employee is paying contributions to the scheme [½]
May be a statutory requirement or the company taking a paternal approach [½]

The employer will need to put in place a procedure for monitoring the ongoing sickness [½]
For example, continuing medical certification. [½]
The employer may arrange for health care advice to be provided by a specified group of providers [½]

May pay higher benefits if the sickness or disability was incurred through work. [½]

Only employees that meet eligibility requirements could be allowed into the scheme to reduce the overall costs of the scheme. [½]
Or there may be a waiting period e.g. of 3 months, or in line with any employee probation period. [½]

Provide rider benefit like PMI to reduce illness impact on leave [½]
And encourage full recovery and return to work [½]

Structure the scheme in a tax efficient way to reduce costs [½]

[Marks available 20½, maximum 10]

(iii)
- Expense efficiencies [½]
- e.g. part of payroll systems [½]
- … simplify benefit structure [½]
- … claims administration costs in proportion to benefit claim [½]
- Keep the design of the scheme simple to reduce the complexity of the administration [½]
- Auto-enroll all employees, or offer to all employees as standard, to ensure there are sufficient economies of scale [½]
- Require employee to have been in employment for a minimum period before they can get access to the scheme – to avoid admin costs of dealing with people who do not stay with the company for long. [½]

- Analyse expenses over time to manage expense inflation risk [½]
- Outsource the running of the scheme for efficiencies in running costs [½]
- Outsource administration for a fixed cost to control expense inflation [½]
- Outsource claims administration/management [½]
- Ensure all scheme literature is available online and not in paper form [½]
- Seek advice from the consultants [½]
- Have fixed cost arrangement with providers [½]
- Seek employee contributions [½]

[Marks available 7½, maximum 3]

[Total 16]

Note that it was intended that this question related to a self-funded scheme but this was omitted from the question. Marks were given in parts (ii) and (iii) for relevant points made that related to an insured group IP scheme.

Most candidates scored well on Q2(i), giving a range of reasons as to why the company is introducing the scheme.

Part 2(ii) was reasonably answered. However, some candidates only provided a description of potential benefit structure that might be implemented but failed to provide reasons how these would meet the requirements of the company, in particular, the need to incentivise return to work and keep the costs of the scheme affordable to the company. For example, whilst many candidates mentioned having a short deferred period, few commented that this would help reduce short term absenteeism and avoid the administration costs for paying for very short periods of illness.

Only the better candidates mentioned payments being re-started if the employee returns to work but is then off work again for the same reason within a certain period of returning to work, payments being stopped whilst the employee is resident outside an agreed geographical location or that the payments might cover any pension or social security contributions that would be made by the employee.

Q2(iii) was less well answered. The question asked for possible actions the employer could take to reduce the operational costs of running the scheme, several candidates discussed issues relating to the cost of claims. Few candidates mentioned keeping the design of the scheme simple to reduce the complexity of the administration, auto-enrolling all employees, or offer to all employees as standard, to ensure there are sufficient economies of scale or requiring employees to have been in employment for a minimum period before they can get access to the scheme to avoid admin costs of dealing with people who do not stay with the company for long.

Q3

(i)

Advantages

Marketing – may increase sales as more options for potential policyholders. [½]

This is particularly the case if most of the other competitors in the same market offer reviewable business. [½]

Risk management – provides product diversification on pricing terms. [½]

Profitability – may increase profitability as the company has the option to change premiums if the actual experience turns out to be worse than the original pricing assumptions. [½]

Reinsurance – it may be easier to obtain reinsurance as some reinsurers in the market may not offer critical illness reinsurance on guaranteed terms. [½]

Reserving – reserving requirements for reviewable business are likely to be lower than those

for guaranteed business as the option to change premium rates is at the discretion of the insurer. [½]
Capital requirements – for the same reason as above, capital requirements for reviewable business are likely to be lower than those for guaranteed business. [½]
More product options should also be welcome by brokers/intermediates. [½]
There will be less reliance on sufficiency of pricing data and credibility of experience at outset as the insurer has the opportunity to fine tune the premium rates on written business in the future. [½]
Any reduction in premium rates as a result of favourable experience will be welcome by existing policyholders. [½]

Disadvantages
Data – it may take a long time to accumulate sufficient data for pricing/policy review depending on how popular the reviewable business. [½]
System – have to run two systems, one for guaranteed business and one for reviewable business. [½]
Review process - can be onerous and time consuming. [½]
Any increase in premium rates may not be well received by policyholders. [½]
This may lead to bad publicity and hence reputational risks. [½]
The premium increase may lead to selective lapses, which could worsen experience further. [½]
Reinsurance - premium rates may become out of sync, in particular that the reinsurer may decide to increase the reinsurance premium rates and the insurer chooses not to because of strategic reasons. [½]
Market practice – offering reviewable business may not be in line with market practice. [½]
Reviewable business could attract higher level of regulatory scrutiny. [½]
The maintenance costs could be high because of the regular policy reviews and policyholder communication. [½]
There could be issues relating to reserving (e.g. contract boundaries) [½]
Policyholders reasonable expectations may be hard to manage over time [½]
The regulator's views on the permissible triggers for a review may vary over time [½]
Burden of proof for Treating Customers Fairly [½]
May lead to churning by distributors [½]
There is a lapse and re-entry risk if premiums decrease for a newer tranche of business [½]

[Marks available 13, maximum 5]

(ii)
Review process
The insurer may be required to demonstrate that reviews are calculated fairly [½]
The insurer might be required to review the assumptions on a regular basis [½]
And in line with any frequency set out in any marketing literature, policy terms etc [½]
The insurer may be required to disclose the basis on which the review is carried out [½]
The review process should meet any relevant regulations in the country [½]
e.g. Treating customers fairly [½]
Insurers should keep records of the assumptions used to calculate premiums and analyses undertaken to support reviews. [½]

Change in assumptions
The statement may specify the reasons for which the assumptions used might be changed [½]

And that the reasons under which assumptions might be changed should be set out in the policy terms [½]
The statement may specify how any new assumptions should be derived [½]
And for how long the assumptions are assumed to be valid [½]
There may be restrictions regarding the use of different assumptions for in force policies and for new business [½]
May require that if critical illness list coverage changes customers will be on 'no worse' terms going forward [½]

There may be restrictions on the reasons under which premiums can be increased [½]

For example, insurers may not be allowed to increase premiums purely to recoup earlier losses [½]

Confirmation of possible circumstances where the insurer could increase the CI premium more than outlined in statement – e.g. after a period of hyper-inflation [½]

Communication with policyholders
The results of a review should be communicated to policyholders [½]
And the reasons for any increase in premium should be explained to policyholders [½]
And in clear language [½]
If premium rates increase as a result of a review, individual customers may be given the option to amend the policy [½]
e.g. continue paying the same premium but reduce the sum insured instead [½]
And given sufficient time to make any decisions about whether to continue cover [½]

Regulation and complaints
Any review resulting in large increases in premium may need to be discussed with the regulator [½]
There may be a requirement for a complaints process to be available for policyholders [½]

[Marks available 12, maximum 5]

(iii)
Homogeneous groups and model points
Split existing policies into homogeneous groups. [½]
This should be by product types such as standalone and accelerated business. [½]
And then further sub-divided based on pricing series and premium rates. [½]
Within each homogeneous group, a number of model points could be chosen to represent the existing policy profile of that group. [½]
Alternatively, the assessment could be based on all the policies within each group. [½]

Experience investigations
Experience investigation should be carried out for each homogeneous group. [½]
Morbidity experience data should be collected since the last pricing or premium review date, whichever is the latest. [½]
Incidence rates will be examined at the homogeneous group level and subdivided into the following areas for analyses: [1]

- age;
- gender;

- occupation (if known);
- region/area of residence;
- duration from entry;
- underwriting method. ***[½ mark for two examples, 1 mark for four examples]***

Further analysis, if data permits, may be done on the validity of the factors underlying any survival period for claim on a stand-alone CI policy. [½]
It may be appropriate to analyse incidence rates by severity, if reduced benefits are payable on lower severity cases. For example, in some countries CI contracts pay a partial lump sum on treatable early stage cancer claims. [½]
Mortality experience is also an important component of the investigation. [½]
Under accelerated critical illness cover, death is a trigger for payment of the full sum insured. [½]
Under standalone critical illness cover, death signals a release of reserve in favour of the insurer. [½]
Exposed to risk - particular care will need to be exercised to ensure that only lives insured in the investigation period under consideration are included in the figures. [1]
It is equally important to ensure that claims are correctly included. [½]
Adjustments to "exposed to risk" will need to be made where the life exposure only contributes to part of the period under investigation. [½]
As data is largely computerised, adjustments can be made on a life-by-life basis using the date of entry and/or exit from the investigation. [½]
Actual versus expected - the insurer needs to monitor the actual claims experience against the expected level. [½]
Expense investigation - the insurer needs to monitor the actual expenses incurred against the expected level. [1]
Broken down by initial, renewal and claims expenses [½]
Allowing for inflation since the last analysis [½]
Excluding any one-off expenses [½]
And commission [½]
Lapse investigation - the numbers of policies lapsing in any period will be compared to the relevant portfolio exposed to risk to produce lapse rates. [1]
A key area for lapse analysis for a long-term insurer will be the duration from entry. [½]
This will enable the insurer to ascertain its susceptibility to loss, as measured by the degree to which the capital outlay in writing a policy has not been repaid by the premiums received prior to lapse. [½]
Investment income investigation - the insurer needs to monitor the actual investment income received (after allowing for capital movements) against the expected level. [1]
The significance of investment income will vary by contract, significance for critical illness business is likely to be low. [½]
The analysis would be split by investment class and, where appropriate, would include dividends, interest and capital gains (realised and unrealised). [½]

Assumption setting
The best estimate assumptions will need to be revised based on the results of the experience investigations mentioned above, [½]
Taking appropriate considerations regarding the sufficiency and credibility of the insurer's own data. [½]
Make appropriate allowance for expectations of future trends in incidence e.g. through diagnostic trends [½]

And whether the illness should continue to be included [½]

The risk discount rate will be based on the insurer's required profit margin at the original pricing date, [½]
but the risk-free rate should be consistent with current economic conditions and other financial assumptions. [½]
As reinsurance is not part of the contractual agreement between the insurer and its policyholders, any profit or loss relating to the costs and recoveries of any reinsurance arrangements will not be considered as part of the premium review exercise. [1]
Investment return will need be consistent with risk discount rate and expense inflation. [½]

Profit testing
For each policy/model point, cashflows will be projected forward from the premium review date to the end of the policy term. [½]

Typical elements of cashflow will include:
Premiums [½]
Expenses (renewal, claim) [½]
Commission (renewal) [½]
Morbidity claims [½]
Mortality claims – this is only needed for the accelerated critical illness business [½]
Contribution to reserves [½]
Contribution to capital requirements [½]
Interest on cashflows and reserves [½]
Tax [½]

[Maximum 2 marks, for 4 examples]

Allowance should be made for decrements through:
Lapses [½]
Deaths [½]
Critical illness [½]
The net projected cashflows will then be discounted at a rate of interest, the risk discount rate. [½]
The profit criteria, based on the latest assumptions should be compared with the profit criteria based on the original pricing assumptions. [1]
This will enable the insurer to assess whether the existing premium rates should be adjusted to maintain the original level of profitability when the policies concerned when they were priced. [1]
Consider the potential to reduce premiums depending on the outcome of the analysis, if excess profits are expected [½]

Consider how the results of any review are communicated to policyholders [½]
And that policyholders are given sufficient time to make any decisions about whether to continue with cover. [½]

[Marks available 32, maximum 15]

(iv)
Sufficiency of historical data for setting the latest best estimate assumptions. [½]
And hence the reliability of the results of the experience investigations. [½]

This is particularly the case if historical data for certain homogeneous product groups or risk groups within homogeneous product groups are sparse. [1]

The insurer should also take into consideration the robustness of the policy review exercise. [½]

Which will affect the accuracy and reliability of the overall results. [½]

The insurer should consider whether there are any existing guidance or tolerance levels that would trigger an adjustment to the premium rates. [½]

As such, if the extent of deviation from original level of profitability is not material, it may not be worthwhile to make any changes to the premium rates. [½]

Similarly, the insurer should consider the extent of products affected. [½]

The insurer should consider the expected level of premium changes, in particular if the increase in premium rates is expected to be significant. [½]

Consider any precedent of premium changes, [½]

and the reactions of policyholders. [½]

Consider the expected impact on persistency. [½]

In particular, the possibility of selective lapsing. [½]

Consider any historical press coverage, in particular bad publicity as a result of premium increases. [½]

Consider the practice adopted by other competitors. [½]

Consider whether there are any regulatory guidance or rules relating to changing premium rates. [½]

Consider any potential issues relating to Treating Customers Fairly. [½]

Consider any statements of best practice [½]

and demonstration that these have been adhered to. [½]

The insurer may consider commissioning an external party to carry out an independent review to demonstrate accuracy and transparency of its decisions. [½]

The insurer may want to seek independent advice from reinsurers, in particular whether reinsurers are also considering making changes to the reinsurance premiums rates. [½]

Consider potential reactions of distribution channels. [½]

The insurer must ensure that any potential actions are in line with the corresponding product literature and sales documents. [½]

Consider any other alternatives such as adjusting sum assured instead. [½]

Materiality of products in question relative to the company's overall product portfolio. [½]

Consider the costs relating to customer communication. [½]

The insurer should consider the cause of the deficit – is it just one item of experience that could be controlled by the insurer or is it trends in several items of experience [½]

Is there any explanation for the deficit [½]

For example, was the mix of business different to what was expected, did the underwriting processes changes or claims management differ [½]

[one half mark for any valid example]

Consider how many policies have been written on the current premium rates [½]

[Marks available 15½, maximum 10]

[Total 35]

Most candidates scored very well in Q3(i) generating a wide range of both advantages and disadvantages.

In part 3(ii) most candidates provided several examples that might be included in a statement of good practice. Few candidates mentioned points relating to regulation or complaints.

Part 3(iii) was not well answered. Relatively few candidates mentioned points relating specifically to Critical Illness business such as analysing incidence rates by severity, if reduced benefits are payable on lower severity cases or that mortality experience is also an important component of the investigation. Similarly few candidates discussed the discount rate or the investment return assumptions or that as reinsurance is not part of the contractual agreement between the insurer and its policyholders, any profit or loss relating to the costs and recoveries of any reinsurance arrangements will not be considered as part of the premium review exercise.

Many candidates did not generate sufficient points to score highly on part 3(iv). For example, few candidates mentioned that the insurer should consider whether there are any existing guidance or tolerance levels that would trigger an adjustment to the premium rates and if the extent of deviation from original level of profitability is not material, it may not be worthwhile to make any changes to the premium rates or that the insurer should consider the extent of products affected and the materiality to the insurers overall product portfolio

END OF EXAMINERS’ REPORT