

INSTITUTE AND FACULTY OF ACTUARIES

EXAMINERS' REPORT

September 2021

CP1 – Actuarial Practices Core Practices Paper Two

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.

Sarah Hutchinson
Chair of the Board of Examiners
December 2021

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

The aim of the Actuarial Practice subject is that upon successful completion, the candidate should understand strategic concepts in the management of the business activities of financial institutions and programmes, including the processes for management of the various types of risk faced, and be able to analyse the issues and formulate, justify and present plausible and appropriate solutions to business problems.

This subject examines applications in practical situations of the core actuarial techniques and concepts. To perform well in this subject requires good general business awareness and the ability to use common sense in the situations posed, as much as learning the content of the core reading. The candidates who perform best learn, understand and apply the principles rather than memorising the core reading.

The examiners set questions that look for candidates to apply the principles specific to the situation set out in the questions, having read the question carefully. Many candidates gain few marks by writing around the subject matter of the question in a more general fashion. Detailed specialist knowledge is not required and nor is very detailed development of particular points.

Good candidates demonstrate that they have used the planning time well to understand the breadth of the question and to structure their answer - this is a big advantage in making points clearly and without repetition. This also enables candidates to use the later parts of questions to generate ideas for answers to the earlier parts.

Time management is important so that candidates give answers to all questions that are roughly proportionate to the number of marks available.

The comments that follow the questions concentrate on areas where candidates could have improved their performance. Candidates approaching the subject for the first time are advised to use these points to aid their revision.

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

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

Paper 2 scored lower than Paper 1 with the average scores being circa 5% different between the papers. Paper 2 was generally answered OK although candidates struggled with higher order skills questions with stronger candidates clearly structuring their answers in a coherent way giving evidence that they planned their answers.

C. Pass Mark

The Pass Mark for this exam was 55
708 presented themselves and 254 passed.

Solutions for Subject CP1-2 – September 2021

Q1

(i)

Possible factors:

Consumers are now comfortable using the internet to buy many different types of product, including financial products	[1]
Clients are now able to obtain information about the product including product quotations for themselves from XYZ's website and the price comparison website	[1]
Customers use price comparison websites for other products	[½]
There are potentially reduced costs for XYZ selling via the internet. Particularly as they don't need to pay commission to intermediaries	[1]
However, there may be some additional costs	[½]
It is easier and/or less costly for XYZ to administer sales via the internet than through brokers e.g., able to log a new policy onto the system quickly	[1]
Previous brokers have either been too expensive and/or not successful in attracting new business. Also, the type of business they attracted may not have been profitable for the company in the past	[1]
Reduces exposure to mis-selling and/or reputational risk of using brokers with bad practices	[½]
Its own website may be able to reach a wider group of potential policyholders than before, although company may have to invest in extra marketing to publicise this change	[1]
Enables XYZ to sell more profitable business than before	[½]
Easier to target segments of the population that use the internet more e.g., younger policyholders	[½]
Less costs needed to train staff to "sell" products although might still need expertise on call centres or chat staff	[½]
Competitors may be doing this	[½]
XYZ can use lower costs to reduce its premiums in an attempt to increase market share	[½]
Utilise existing platforms or brand already in place, so may have a competitive advantage	[1]

[Marks available 11, maximum 4]

(ii)

There may be insufficient data to estimate credibly the extent of a risk e.g., amount of damage caused by a traffic accident that is the policyholder's fault	[1]
There may be insufficient data to estimate the likelihood of the occurrence of that risk in future e.g., change of policyholder causing a traffic accident	[1]
This is especially the case when providing estimate of a risk in very adverse circumstances, which may be necessary for some purposes (e.g., estimating the tails of distributions, multiple car pile-up)	[1]
Lack of data means it is difficult to identify rating factors and to split the data into homogenous groups	[1]
It is therefore much harder for XYZ to determine a suitable premium to charge estimate the impact of potential claims or decide on the level of appropriate provisions to hold	[1½]
Important to have an indication of the ways in which the characteristics of the business it is seeking may differ from those of the business it already has e.g., the policy may attract safer drivers who wish to reduce their premiums by having a black box	

installed, which might help improve overall profitability on the whole car insurance book of business	[1½]
Unable to perform accurate underwriting before writing the policy, assuming the black box is the only way that information that will be collected after writing the car insurance policy. Could lead to a greater risk of anti-selection	[1½]
The lack of data will reduce the confidence in an actuary's conclusions. XYZ may add on margins to the premium, which may make the product uncompetitive. Or it may cause greater new business strain and need to hold more capital as a consequence	[1½]
It is likely to take a number of years to collect enough data for analysis purposes	[½]
The data it does have has not been captured at a sufficiently detailed level	[½]
Unlikely to know how drivers' attitudes might change once the black box has been installed – it could change the way they drive and reduce/increase the risk	[½]
Premiums may vary widely from year to year as the company collects data and revises premiums annually. This would be an unsatisfactory experience for customers who look to renew their policies	[1]
[Marks available 12½, maximum 4]	

(iii)

Obtain data from an industry-wide scheme for other insurers that use black boxes	
This will help set a premium or a basis but cannot be used in place of policy data to establish provisions	[1]
Also potential for distortions to arise from heterogeneity as data may not be precisely comparable e.g., lack of female policyholders	[1]
Risk that data from other sources may not be sufficient good proxy for the risk being assessed e.g., different locations within the country	[1]
Can compare expectations against industry as a whole with regards to both the overall level and the pattern of the experience by the categories into which the data are classified	[1]
Obtain data from a reinsurer (ideally one that has worked with insurers who have used black boxes)	[½]
or from national statistics	[½]
or from overseas insurers that use black boxes	[½]
However, if overseas is used then it needs to consider credibility – i.e., does it have similar roads/driving culture	[½]
The manufacturer of the black-box may be able to provide data based on its experience working with other insurers	[½]
Ask policyholder for extra information on the form -	[½]
estimates of potential usage e.g., number of miles driven each day, year etc	[½]
any previous driving penalties e.g., recent speeding tickets may indicate a tendency for fast driving	[½]
Over time, both the quantity and quality of the data will improve	[½]
Offer no-claims bonuses to partly compensate for higher initial premium until the company has sufficient data to price with confidence	[½]
Could do a 'soft launch' to test premiums and experience, to minimise risk	[½]
Offload some risk to a reinsurer or other third party	[½]
Consult with experts to understand how black boxes might affect policies and risks	[½]
[Marks available 10½, maximum 3]	

(iv)

The actual experience of a provider should be monitored to check whether the method and assumptions adopted for financing the benefits continue to be appropriate and, if not, what changes should be made to achieve the desired level of profit	[1½]
XYZ can assess how the actual distance and speed compares to its expectations when it set the premium for the policy. If either or both are higher than expected then it can increase its reserves	[1]
It can also use the information linked to accidents/costs to reflect reserves for other drivers who have similar profile from their black box	[1]
Also consider whether the black box indicates parking/driving in areas where it is prone to accidents OR crime – this could lead to an increase/decrease in reserve compared to expectations	[1]
The black box may give other additional information that could be useful e.g., time of day when car is used most frequently	[1]
The information could also be used to understand whether pre-conceived biases are correct, e.g., are younger male drivers more aggressive in speed – if this is not being seen in the data then reserves could be reduced for these types of driver if sufficient information backs this up	[1½]
The basic requirement is that there is a reasonable volume of stable, consistent data, from which future experience and trends can be deduced	[1]
XYZ will need to be careful not to over-react to one day's unusual activity and instead look at the trend over a period of time	[1]
The data ideally needs to be divided into sufficiently homogenous risk groups, according to the relevant risk factors. However, this must be balanced against the danger of creating data cells that have too little data in them to be credible	[1]
This may result in changes to the assumptions or models used for setting provisions	[½]
XYZ will need to decide how frequent any adjustments should be, in light of any new information. If it is too frequent, there would be significant additional expenses as well as potential volatility in the reserves	[1½]
Use the data to assess likelihood of any trends in claims for the specific group.	[1]
As well as reserves the data could be used to improve pricing in the future	[½]
By having the black box there could be improved reporting of any accidents and therefore reserves could be adjusted quickly, it could also help in prove of fault such that IBNR could be more accurately predicted	[1½]
Able to reduce prudent margins that have been placed on reserves as more data comes in	[1]
	[Marks available 16, maximum 7]

(v)

Option A

Reputational Risk

Only deal with genuine and reputable price comparison sites [1]

Concentration Risk

Select a range of different price comparison sites, so XYZ is not over-exposed to any one price comparison site [1]

and also improve the chances of maximising business sold [½]

Management Control Risk

Ensure payment of fee is for genuine referrals only and is made to the correct price comparator [1]

It may be difficult to link the policy written together with the original referral	[½]
Mis-selling Risk	
Ensure that any information on each price comparison sites is correct and up to date	[1]
There is a risk that policyholders didn't understand the policy being purchased because no advice being given. So, insurer could: Ensure marketing material is clear, fair and not misleading to avoid claims of mis-selling?	[1]
Consider "online" chats to help or make terms and conditions clear, or indeed simplify the product such that there are no ambiguous claims	[1]
Underwriting Risk	
Ensure that price comparison websites are applying any product limits (e.g., maximum / minimum age, premium size etc) so XYZ only receives valid quotes	[1]
Sales Volume Risk	
Monitor sales to ensure volumes from one provider are not excessive to ensure business strain is not excessive or which could indicate a pricing error	[1]
There is a risk that a particular site could not be very good and mean limited sales	[½]
Business Mix Risk	
There is a risk that by using only one comparison site that the business is restricted or indeed skewed to a type of policyholder. The company could select different price comparison sites, to improve chances of attracting business and ensuring a wider range of potential policyholders	[1½]
Profitability Risk	
The business coming through could be less profitable than expected due to poor underwriting of the potential policyholders – the company could try to influence the questions being asked on the sites to ensure correct pricing can occur to enable the correct price being charged to the policyholder	[1½]
There is a risk that the comparator site has a high lapse rate once the policy has been taken up, the insurer could only pay the relevant fee once a suitable time period has occurred	[1]
Fraud Risk	
Possibly more fraudulent claims if the claims process is automatic as well, this isn't clear from the question but claims management controls would need to be rigorous to ensure this wasn't the case	[1]
Option B	
Underwriting Risk	
Underwrite to ensure premium is in line what is expected – would need to consider the information that would be required to supplement the black box at the outset, that is would still require the usual form to ensure the risks were understood before taking on e.g., age/driving experience/location etc	[1]

Fraud Risk

Supervise installation and ongoing repairs of black box recorder to reduce risk of fraud. [1]
 This is particularly important if the car has co-drivers, could insist on the black box having a driver indicator to ensure the insurer knows who was driving at all times [1]

Business Mix Risk

It may impact on behaviour, reducing any likely claims [½]
 Would need to ensure it wasn't just one type of driver getting it installed, that is would still want the diversification benefits of a number of drivers and types of drivers rather than those just wanting to reduce their premium by having the black box installed [1]

Management Control Risk

Determine procedure if black box recorder is not working e.g., following a car crash [1]
 Investigate unusual data readings to see if they are genuine e.g., no miles recorded over a three-month period [1]

Marketing Risk

Ensure policyholder clearly understands how the insurer could use any data collected to avoid policyholder concerns that the data could be mis-used [1]

Reputational Risk

XYZ should have processes in place to comply with relevant regulation, industry guidance, best practice etc to reduce reputational risk [½]

Claims Control Risk

The black box should be able to help with the claims process, by providing information of any accidents or whether cars were parked in the place that was registered in the forms process [1]

If a reinsurer was willing to follow the approach of the insurer, then this could reduce the risks the insurer was taking on [1]

Option A and B

Ensure that XYZ has management reporting systems in place to monitor risks when either option is implemented and provide information to senior management to make decisions about how to manage risks [1]

Ensure XYZ has a risk identification process in place to identify new risks so that they can be managed [1]

Ensure good quality data [½]

Good accounting and audit process [½]

[Marks available 27½, maximum 9]

(vi)

Investment management expenses [½]

Fund based management charge, dealing costs [½]

Administration costs [½]

Pension Payroll, transfer value calculations, member queries, administration staff, overheads, rent etc [½]

Advisory fees [½]

Actuarial, consultancy, secretarial	[½]
Communication	[½]
Printing, postage, drafting, web domains	[½]
Regulation / governance	[½]
Levies, Cost of producing annual accounts/ regulator returns/ Tax returns	[½]
	[Marks available 5, maximum 3]

(vii)

Consider any relevant legislation/regulation in the country for setting transfer value factors	[1]
Consider what market practice is in the country for other similar schemes.	[1]
Scheme may decide to calculate the transfer value on a 'best-estimate' basis, with no margins for prudence	[1]
This could be for each individual assumption or the basis as a whole	[½]
This would ensure that members that transfer out get fair value and don't benefit for any prudence that might be held for reserves	[½]
it will also potentially be fair to those remaining in the scheme	[½]
Instead, may decide to give some or all of prudence to member e.g., well-funded, profit-share	[½]
If the scheme is underfunded, may decide to give less than 100% of best-estimate value to protect non-transferring members	[½]
For discount rate, the yield on corporate bonds would be a good starting point, less a margin for possible default risk	[1]
For mortality/longevity, consider studies into the scheme's own experience. If the scheme is too small for this to be credible, use standard tables adjusted for the scheme's demographic profile	[1]
Will factor be set at an average age or at a different age e.g., the age that gives the highest value to avoid any complaints?	[1]
How to set unisex factors, e.g., would the assumption be in line with the scheme membership or skewed in one direction and could this be based on experience of transfers so far	[1]
Whether factors should vary in line with market conditions	[½]
Expected take-up from members, with possible anti-selection against the scheme	[1]
Frequency of the calculation of the factor e.g., monthly to reflect changes in market conditions	[½]
Frequency to review the underlying basis, which are likely to be less frequent e.g. annual change in longevity assumptions	[½]
Allow for expenses of calculating the transfer value	[½]

[Marks available 12½, maximum 6]

(viii)

One factor will not give fair actuarial value to transferring members	[1]
Not suitable for all members	[½]
Doesn't reflect assumptions made for different time periods e.g., amount of expected investment return, inflation, life expectancy etc	[1]
Doesn't reflect different profiles of membership e.g., age, gender, length of time to retirement etc	[1]
Difficult to communicate value to members e.g. How can they compare against an equivalent fund value?	[1]

May not comply with local legislation/regulation,	[½]
which could leave some members feeling dissatisfied	[½]
could be legally challenged by members	[½]
particularly if particular sub-groups of members were being disadvantaged	[½]
May not be in line with approach taken by other similar schemes	[½]
Work will still need to be done to update the computer system and ensure the transaction can be done immediately over the internet	[1]
The receiving arrangement may require additional paperwork or evidence before being in a position to be able to receive the transfer value, which can take time	[1]
This approach may cause security of benefit issues for remaining members if it is too generous to leavers	[1]
This approach may not give equity between transferring and remaining members	[½]
If factor is deemed to be too generous, may result in many members submitting requests for transfers, leading to a significant disinvestment in assets that could lead to problems, especially if they are not easily realisable	[1]
Could be questions from members on how/why the TV was different to previous calculations	[½]
Reputational risk with members taking transfer values at sub-optimal rates	[½]
Having a single factor does make it simpler to calculate	[½]
	[Marks available 13, maximum 5]

(ix)

Lack of diversification, in assets (corporate bonds), sub-assets classes (investment grade) and investment fund, that will impact volatility and future returns	[1½]
Keyman risk – relying on a single manager to make investment decisions that could be sub-optimal. Also, key individual(s) may leave without suitable replacements being found	[1½]
Potential mismatch of assets vs liabilities, especially if the discount rate is set in relation to another asset type e.g., gilts. Also, harder to address other types of risks in a single fund e.g., inflation	[1½]
Under-performance of investment manager against the market	[½]
Impact of any defaults/change in grading could potentially be higher (compared to government bonds)	[½]
Especially in an extreme scenario e.g., credit crunch	[½]
Expenses for active management are typically higher than on a passive basis	[½]
Investment manager's expenses may be higher than the average market rate	[½]
Typically, expenses for asset valuation are much lower than for liabilities so might not make a significant saving	[½]
The scheme may still need to rely on independently audited asset values for its statutory reporting, which would take a lot longer than the daily updates from the internet	[½]
There is potential liquidity/disinvestment risk as the scheme holds no cash to pay benefits	[½]
Impact of any fraud will be greater from having a single fund	[½]
May need regulatory approval for the switch	[1½]
	[Marks available 10½, maximum 5]

[Total 46]

Part (i) was answered fairly well with most candidates picking up the marks for commission, wider sales reach and the other obvious marks available

Part (ii) was answered less well with few candidates coming up with sufficient ideas and tended to focus on 3rd party data and adjusting that.

Part (iii) was generally well answered with a reasonable range of answers but examples relating to the answer were only covered by the stronger candidates.

Part (iv) was answered poorly with candidates not coming up with wide enough range of points to hit the marking schedule.

Part (v) was also answered poorly due to a lack of wide enough range of points and the main ideas provided were generic rather than covering the points on the black box (i.e. focused on car insurance more generally).

Part (vi) was answered well, but the stronger candidates focused on answering the question being asked rather than overwriting – i.e. some candidates wrote far too much for the marks on offer, wasting valuable time.

Part (vii) was answered reasonably, but the stronger candidates structured the answers better enabling them to pick up more points and making it easier to mark. Only the stronger candidates were able to go into sufficient depth on specific details.

Part (viii) Candidates generally scored well on this part

Part (ix) was answered well

Q2

(i)

probability of sickness inception	[1]
probability of recovery from sickness	[1]
probability of death	[1]
probability of leaving employment	[1]

The cost of the sickness scheme will also depend on the following things:

rate of increase in numbers employed	[½]
rate of increase in average salary	[½]
average age	[½]
Types of employees e.g., part-timers, contractors	[½]

And if Option A was implemented then the following things would need to be considered when looking at the cost of the sickness scheme:

Length of time/waiting period in the sick period	[½]
Length of time/waiting period required before entering the scheme again with the same sickness	[½]
Length of time/waiting period required before entering the scheme again with a different sickness	[½]

[Marks available 7½, maximum 4]

(ii)	
numbers/lives at start of year	[½]
+ new joiners	[½]
+ return to work	[½]
- deaths	[½]
- retirements	[½]
- left employment	[½]
- off sick	[½]
= numbers/lives at end of year	[½]
Items could be split by employee status e.g., full-time, part-time	[1]
Items could be split by type of employee, e.g., doctors/nurses/cleaning staff	[1]
Could also have split by length of time employed – short/medium/long term	[1]
Could also be split by region/hospital	[½]

[Marks available 7½, maximum 4]

(iii)	
In isolation, it will be effective in reducing the direct costs of the sickness scheme	[1]
There will be fewer payments made than present system	[½]
A cap has the advantage of being simple to administer	[1]
which could reduce operational costs	[1]
It is an objective approach	[1]
All stakeholders can easily understand how the cap will work.	[1]
It is easy to discuss between managers and staff	[1]
For staff who do not have long periods of sickness it may appear fair	[1]
A cap would make the scheme's costs more predictable	[½]
However, it may have negative impacts on HS as a whole, which could outweigh the savings in direct costs of the sickness scheme	[1]
For individuals who have long periods of sickness the system is unlikely to appear fair	[1]
Would be fairer if it varied according to type of sickness e.g., more lenient if an operation was involved, as opposed to a standard cold	[1]
Employees would normally expect to be supported by their employer	[½]
particularly during periods of long-term illness	[½]
A cap would imply a lack of support from the employer when the individual needs help most	[1]
A cap has a number of other disadvantages:	
If most of the sickness periods are relatively short, then having a cap for the number of days will have little effect	[½]
Similarly, if the cap is set at a relatively high number of days, then it will have little effect	[½]
Unclear whether the cap applies in aggregate for all periods of sickness during a year, or whether it applies (or could apply) per period of sickness	[1]
A cap is a poor way of encouraging recruitment and retention of staff	[1]
HS already in under-supply	[1]
sickness will last as long as it lasts, a blunt cap is inappropriate;	[1]
A cap could lead to staff being ill for longer, e.g., due to extra stress	[1]

This could lead to staff returning to work too early, because they cannot cope with lack of income	[1]
This is likely to be the case for all staff, except a small minority who have sufficient wealth to support themselves	[1]
HS staff will be exposed to already sick/vulnerable patients being treated	[1]
exposing patients to sick staff will lead to greater costs on HS i.e., false economy	[1]
sick staff could pass the illness to health staff members	[1]
one such cost will be increased chance of being sued for negligent treatment	[1]
bad PR will result e.g., HS doesn't care for its staff, so what chance for patients?	[1]
change to current rules will face resistance e.g., reducing staff morale, productivity and may lead to strike action. Or may simply be against their employment contract for existing staff	[2]
For fraudulent cases of sickness, the cost could be better contained by a cap. However, there are still disadvantages:	[1]
cap may be used as a "green light" for staff to take that number of days sickness each year, actually increasing sickness costs	[1]
fraudulent cases need to be dealt with as fraud, not rewarded with allowing periods of sickness	[1]

[Marks available 31, maximum 10]

(iv)

HS could take out a sickness policy with an insurer, to provide more certainty of costs	[1]
Depending on the level of competition in the market between insurers it may be possible to insurer sickness benefits for a competitive price	[1]
However, the premium paid to insure benefits is likely to exceed the expected future cost of sickness benefits	[½]
In particular premium will include allowance for the insurers profit margin	[½]
expenses	[½]
Cost of capital	[½]
The premium may only be guaranteed for a limited period	[½]
Some employees may need to undergo some form of underwriting by the insurer – free cover limits will not extend to the most senior/expensive employees e.g., surgeons	[1]
Likely insurance is available only for the healthy population, not the already sick	[½]
Also, normally will include a deferred period i.e., won't cover short periods of sickness	[½]
Introduces risk of default with the chosen insurer, and also concentration risk if only a single insurer is chosen	[1]
Need to ensure the insurer's Terms & Conditions are consistent with what HS is offering e.g., definition of 'sickness'	[1]
HS may not be able to obtain complete cover, leading to a mismatch. Even possible that no such product exists	[1]
Potential for the insurer to take over the administration of the scheme, which could raise a number of issues e.g., should employees interact with HS or the insurer if a claim arises?	[1]

[Marks available 10½, maximum 4]

(v)

may be easier to change approach to managing sickness for new cases of sickness, rather than existing sickness	[½]
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may be easier to change approach to new employees, rather than existing ones	[½]
increased costs must be outweighed by increased benefits	[½]
the most effective approach will be the one that affects the greatest causes of sickness	
the reconciliations in 1., weighted by benefit per annum, should be used to indicate the greatest causes of sickness. Separate attention to new sickness versus continuing sickness, and short-term vs long term sickness, one-off vs recurring	[1]
Need to ensure sickness is genuine, at start of claim and regularly thereafter	[1]
This reduces the chance of fraudulent or excessive claims	[½]
Need to balance costs of claims underwriting process with potential benefits	[½]
HS can use this process to provide support to sick employees, with a view to shortening the total period of absence	[½]
To keep costs down requirements for employees likely to depend on level of sickness	[½]
Short term claims will probably be managed just with medical notes from employee's doctor	[½]
Long term claims could also require doctors note but supplemented with formal interviews between HS and employee	[½]
Enable return to work (full or partial)	
Provide adapted workplaces/support to enable full or partial return to work	[½]
Which can reduce sickness costs	[½]
also, there is evidence that simply being part of workforce again can improve chances of recovery	[½]
Offer commutation	
For longer term/persistent sickness, it may be useful to offer lump sum commutation of future sickness benefits	[½]
The idea is to pay a lump sum less than the future expected value of sickness benefits and remove uncertainty	[½]
The difficulty is this approach is paying a large lump sum could cause a significant financial outlay	[½]
Regulations may not allow payment of the benefits via a lump sum	[½]
Potential for lump sums to be squandered	[½]
Reconfigure the Terms and Conditions of the sickness scheme	
80% looks generous, and there may be an incentive for sick employees to not return to work	[½]
Could consider reducing the percentage e.g., 70% to be supportive enough but not over-generous	[1]
The definition of sickness could be changed	[½]
“usual job” is the costliest definition of sickness. Consider a move towards “any job” but there will be limits in practise	[½]
Review the eligibility conditions for the scheme	[½]
like minimum number of years	[½]
or minimum grade of employees	[½]
Find other ways of limiting the benefits paid e.g.	[½]
Limit the number of periods of sickness per year for which sick pay would be paid	[½]
Only pay sickness benefits after the person has been sick for a specified number of days	[½]

Management controls/admin/technology

- Having an integrated, efficient IT system will help to reduce the admin costs of the scheme [1]
 It will also enable reporting, in real time, to help control costs [½]
 Ensure sufficient monitoring captures the costliest causes of sickness, and then roll out tailored support to employees [1]
 e.g., a busy HS may well suffer from stress-related (or muscular-skeletal) illness, which would benefit from mental health support/counselling (or physiotherapy). HS expertise should be available! [1]

Other

- Important for HS to be proactive, rather than reactive, regarding health of employees e.g., regular check-ups [½]
 Develop a healthy culture, provide health-related initiatives e.g., healthy free meals, gym memberships [½]
 Share examples of local best practise across the whole HS [½]
 Providing an employee assistance programme [½]
 Ensure the interaction with patients is itself as safe as possible, e.g., hygiene/cleanliness initiatives, adequate protective equipment provided [1]
 Review staffing of the sickness scheme's admin/management department. It needs special skills, but need to ensure it is operating as efficiently as possible. Consider outsourcing as an option to improve efficiency [1]
 Have well trained staff to keep up regular contact with sick employees. Be ready to dismiss in appropriate circumstances [1]
 Make the scheme contributory for employees [½]
 Asking for doctor's reports [½]
 Providing vaccinations to protect employees from falling ill due to infections [½]

[Marks available 23½, maximum 10]

(vi)

- Ideally a large hospital that regularly treats a large number of patients should be chosen, [1]
 This will enable sufficient patients in a control group to be assessed during the trial [½]
 A large control group will allow:
 credible/statistically significant benefits to be measured [½]
 a wide cross section of patients/illnesses/operation types to be studied [1]
 The hospital should be located with a catchment area with a mix of city/rural homes, as this is likely to be a driver of health [1]
 The chosen hospital should be able to cope with the trial being implemented without any undue disruption to the hospital's normal day-to-day services e.g., have catering facilities on-site [1½]

Possible considerations could be:

- The hospital itself should not be suffering from excessive demand – for example due to a pandemic [½]
 The hospital should not be under any special scrutiny from HS [½]
 The hospital itself should be not subject to any staff strikes [½]

[Marks available 7, maximum 5]

(vii)

The trial should have measurable outcomes as soon as the project ends to enable a decision to be made and the roll out can begin [1]

This means that various theoretically possible measures that could be considered, e.g., long term increase to life expectancy, are not likely to be appropriate as the results will not be available until well after the trial is finished. Important to measure something that is observable and will change in the short-term [2]

Any measure also needs to be simple/tangible enough to engage the interest of a range of senior decision makers that will be involved [1]

A possible measure could be improvement to mortality rate of patients during stay [1]

another measure might be reduction to number of nights of stay in hospital [1]

Perform hypothesis testing to validate the success of the trial [½]

It is likely that nutritional benefits will be significant for certain subsections, e.g. elderly patients, or others who may struggle to feed themselves, so split results by different groups as outcomes will be variable [1½]

For maximum impact, the measure could be presented as a percentage improvement for just the most at-benefit subsections [1]

Consider qualitative measures of success as well e.g., survey patients at end of trial for impact on physical and mental wellbeing [1]

One difficult aspect of measuring the benefit arises if any significant expenditure is involved (e.g., employing people to help elderly feed themselves). Then net benefits are a mixture of non-financial and financial parts. It may be possible to convert the non-financial parts to a financial measure. E.g., HS may have experience of what value to place on a life (e.g., for drug trials) or on the costs of having less beds available due to longer stays in hospital [2]

[Marks available 12 maximum 5]

(viii)

Government - affects level of spending on HS, or how to target spending, levels of tax to be raised, increase in popularity [1]

Regulator of HS - affects how they will assess performance of different hospitals/targets they set [1]

Employees of HS - may be asked to do more, or chance of new staff being employed e.g., to feed elderly patients [1]

Patients or their relatives - interested in better outcomes from operations/hospital stays [1]

Patient interest groups - as for patients/adjust lobbying [1]

Doctors - can inform patients better before they consent to an operation [1]

Health food/drink suppliers - will need to adjust the mix/quality of items they provide, may be able to adjust prices, may be more or less exposed to outsourcing [1]

Private Hospitals in the country - will want to mirror the benefits found in HS, whilst gaining a competitive advantage [1]

Health providers in other countries - will want to mirror the benefits found in HS [1]

Insurance companies – impact demand on their health insurance products [1]

Political parties – assess whether it's a popular policy with voters [1]

Pharmaceutical companies – could lose business [1]

[Marks available 12, maximum 5]

(ix)

The insurance company product could potentially reduce overall demand for HS's

services, e.g., those who can afford it are likely to use it for quick treatment, rather than wait for HS	[1½]
This could create extra time and resources for HS to treat more serious conditions or be used to reduce costs	[1½]
This may lead to better retainment of key staff, although private hospitals may try to poach staff	[1]
The level of impact will depend on the scale of the number of individuals covered by the insurer's product relative to the number of individuals covered by HS	[1]
Treating of minor ailments quickly would reduce the chance of it becoming a major ailment, and so needing to be treated by HS	[1]
The insurer's new product could lead to an:	
An increased awareness of private sector and of possible insurance provision	[1]
increased scope for more private procedures, and even less demand on HS.	[1]
It is likely that it will take some time for increased private provision to be developed so the impact may be longer term	[1]
There could be confusion if the policyholder believes he/she is covered for the minor ailment but is not and will therefore need to go back to HS	[1]
this could result in a delay in treatment, which could make the ailment worse, which falls back on the HS	[1]
Also creates extra administration costs	[½]
Similarly, if the treatment by the private hospital is of a poor standard, likely patient would need to be referred back to HS as they might not be able to afford full private medical care	[1]
Could lead to spare capacity for HS or underused resources, resulting in inefficiencies	[½]
If the care product becomes popular, then political pressure from policyholders to reduce their taxes as they are paying premium but not using HS's services	[1]
Impact on HS may be minimal if the insurance product is expensive or poorly designed	[1]
HS may no longer have complete health records for those patients who are treated under the insurance policy. Will need to put in place processes to keep HS records complete	[1]
	[Marks available 15½, maximum 6]
	[Total 54]

Part (i) This was not answered as well as expected with some candidates not understanding what contingencies are. This led to not being able to answer the question and therefore answering in a different way which scored no marks.

Part (ii) This was answered well by the most prepared candidates but many candidates didn't understand the question asked.

Part (iii) Most candidates did well on this part with the stronger candidates structuring their answers appropriately for the marks on offer.

Part (iv) This was reasonably well answered but many candidates limited the number of marks they could score by just focusing on premiums being higher than cost rather than considering a wider range of ideas.

Part (v) This was reasonably well answered with candidates producing a reasonable range of ideas with the stronger candidates then developing these ideas.

Part (vi) Most candidates did quite well on this part

Part (vii) Candidates did reasonably well with this part but there wasn't much discussion around measurable outcomes, measures that wouldn't be suitable or would be difficult to use.

Part (viii) This was answered very well but a list of stakeholder didn't go into enough detail. Given the command verb for the question, marks were generally NOT given for just stating the stakeholder without some reasoning on why the stakeholder could be affected.

Part (ix) This was answered reasonably well

[Paper Total 100]

END OF EXAMINERS' REPORT