EXAMINERS’ REPORT

June 2018 examinations

Subject F101 — Health and Care
Fellowship Principles

INTRODUCTION

The attached report has been prepared by the subject’s Principle Examiner. General comments are provided on the performance of candidates on each question. The solutions provided are an indication of the points sought by the examiners, and should not be taken as model solutions.
QUESTION 1

(i) Charges
- Morbidity charge
- Investment charge
- Management charge
- Policy fee

(ii) Investigations
- Morbidity
  - Inception rates per covered condition
  - By rating factor eg age, gender, occupation
  - Likely to vary by sum assured
  - May need to supplement with reinsurance experience
  - Needs to have margin for cost of capital associated with guaranteed sum assured
- Investment charge
  - Experience analysis of direct investment costs
  - Likely to vary per investment portfolio e.g. more for equity and overseas exposure
- Management charge
  - Need to conduct full expense analysis
  - Including direct and indirect costs
  - Including claim settlement costs (allowing for reinstatements)
- Policy fee
  - May be an upfront charge to recover initial sales costs
  - An policy issuing costs
- Charges need to be competitive
- May be a requirement for disclosure

Examiner’s comments:

Candidates where able identify the potential charges on the fund.

Candidates however seemed to struggle with matching charges to particular experience investigations in particular charges in (ii).

QUESTION 2

i)

- Condition or illness considered by public to be serious (life threatening or lifestyle threatening) and occur frequently so as to add value to policyholder
  - Listeriosis can be considered life threatening particularly to the very young and very old and pregnant women, but otherwise healthy individuals can make full recovery within weeks of infection
  - Although not very prevalent the recent outbreak shows it can occur frequently if not contained
  - Cancer is both serious (life threatening and lifestyle threatening) and occurs often / widespread globally
- Each condition or illness can be clearly defined so that any ambiguity is removed at claims stage
  - Listeriosis symptoms well understood and tests for bacteria allow a clear identification. Could however be confused with flu or serious cold so identification of bacteria essential
  - Cancer complex but well defined with medical terminology to remove ambiguity and easily identifiable with tests (blood or biopsy) or scans.
  - Sufficient data are available to price the benefit and predict future trends (Listeriosis may not have enough data to price accurately. Trends would certainly be difficult to predict
  - Cancer has voluminous data and trends tracked globally

- Ability to remove or limit anti-selective behaviour
  - Listeriosis has relatively short incubation period so low anti-selective risk as symptoms present rapidly
  - Cancer can grow very slowly and anti-selective risk is much higher – allowing self-diagnosis (lump or mole) before taking out insurance policy

- Cancer and early cancers are well positioned to be included in CI policies but Listeriosis may not be threatening enough (full recovery likely) to a large enough group of population to be necessary to include (), unless in Female CI product or as additional cover for children

- Consider whether there is a concentration risk given that listeriosis is an infectious disease, and whether it violates the rule of independence of insured events?

ii)

- Screening campaigns will cause an increase in diagnosed cases i.e. increase incidence which may not have been reported before policy lapsed or ended due to death
- Particularly impacting incidences of early cancer where symptoms may be mild/not yet experienced by policyholder
- It will also bring forward claims which would have occurred later i.e. accelerate claims which would usually be claimed at later ages, further increasing claims costs for insurer
- The fact that they are offered for free would mean more people could opt for screening where before the costs involved may deter them
- Anti-selective risk increased if insurer cannot use screening test results or are not aware of test results
- The screening campaign could also increase awareness of risk of Cancer in general leading to increased sales of policies. The above factors could then increase claims incidence for the insurer
- The increase in early cancers and cancers in general could cause a decrease in incidences at later ages in the future
- For tiered policies (if the insurer intends selling them in future), increased earlier incidence may result in reduced incidence at the more serious stages -2,3&4 if treated successfully, which could decrease overall severity of claims
Examiner’s comments:

Part (i) was generally well answered with most students understanding the criteria required to add conditions and applying them correctly to Listeriosis and Early Cancers. There was some confusion around anti-selection and how a shorter incubation period actually reduces this risk rather than increasing it.

Weaker attempts did not come to a conclusion on whether they would include or exclude the two conditions.

For part (ii) overall surprisingly quite poor results with many students failing to link the free screening to an increase in incidence in short term and reduction in incidence at later ages in longer term. Stronger attempts recognised the increased anti-selective risk as well as acceleration of claims for the insurer leading to increased claims costs overall.

Additional marks were awarded for any remarks made about increased awareness resulting in change in lifestyle to reduce risk of cancer and reduction in incidence in longer term, should the campaigns be a regular offering to the public.

QUESTION 3

i)

<table>
<thead>
<tr>
<th>Operation</th>
<th>Average cost</th>
<th>Cost weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>R10 000</td>
<td>0.1875</td>
</tr>
<tr>
<td>B</td>
<td>R50 000</td>
<td>0.9375</td>
</tr>
<tr>
<td>C</td>
<td>R100 000</td>
<td>1.875</td>
</tr>
<tr>
<td>Avg</td>
<td>R53 333.33</td>
<td>1</td>
</tr>
</tbody>
</table>

\[
CMAF (1) = \frac{0.1875 \times 250 + 0.9375 \times 88 + 1.875 \times 47}{385} = 0.564935064
\]

\[
CMAF (2) = \frac{0.1875 \times 115 + 0.9375 \times 300 + 1.875 \times 206}{621} = 1.109601449
\]

CM adjusted cost (1) = 31 300/0.5649… = R55 404.60

CM adjusted cost (2) = 56 600/1.1096… = R51 009.31

Relative efficiency: Hospital 1 is 55 404.6/51 009.31 – 1 = 8.62% lessefficient than Hospital 2

OR, alternatively: Hospital 2 is 1 – 51 009.31/55 404.6 = 7.93% more efficient than Hospital 1

ii)

- From the data itself it seems like hospital 2 has a much higher average cost per operation performed
- But this is merely because proportionally, more of its cases are for the more expensive operations (B and C)
- It thus has a “worse” case mix than hospital 1, or at least, the more expensive case mix
- Having adjusted for the differences in case mix, hospital 2 seems to be more efficient in performing these more expensive operations.
  - For the cheaper operation (A), hospital 1 is more efficient and has proportionally significantly more of these cases than Hospital 2.
    - Hospital 1 may be a specialist facility for operation A.
    - Hospital 2 may be more specialised towards Operations B + C.
    - Hence the relative difference in efficiencies between these two hospitals for these operations.
- However this is based purely on cost, relative to the average, given the case mix, without any consideration given to the quality of care or patient outcomes.
- Part of the case mix is likely to be driven by the underlying risk profile (demographics) of the hospitals in question.
- Other reasons for these differing case mixes could include:
  - Demand side:
    - Geographic location.
    - Proximity to hazardous industries/emissions.
  - Supply side:
    - Perceived quality of the operations/Reputation of particular hospital.
    - Capacity of hospitals to perform particular operations (as noted above).
    - Max for any 2 valid factors.

- Risk adjustment aims to standardise case mixes/risk profiles to allow for a like-for-like comparison. (Case mix is a reflection of the utilization of healthcare services/goods by the underlying population served.
  - As per the example in this question, one provider exhibited higher costs, but this was because of the mix of treatments it provided (and the underlying lives receiving those treatments).
  - Healthcare outcomes are expected to vary between individuals based on their risk profiles. Factors affecting risk profile include:
    - Demographic characteristics.
    - Clinical factors.
    - Socio-economic factors.
    - Health-related behaviours/activities.
    - Attitudes and perceptions.
    - Max for any 2 of the above.
  - It is important to understand the impact of these factors and to adjust for them for comparative purposes between
    - Regions.
    - Providers.
    - Populations.
    - And to monitor changes/trends over time.
    - Max for any 2 of the above
  - The risk profile will impact the frequency of utilisation as well as the resultant cost (i.e. will impact the case mix).
  - Risk adjustment should only be performed on the underlying demand side characteristics as outlined above.

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- Supply side characteristics can also impact utilisation and cost, but should not be adjusted for, e.g.
  - Availability of treatments, staff, beds, technology, etc.
  - Credit was given for 2 supply side factors
- However, these should be borne in mind when considering patient outcomes, quality, etc.
- As cost and utilisation alone are poor measures of value \( \text{quality + cost = value} \)

**Examiner’s comments:**

**Part (i)** yielded a mixed bag of results. It was a straightforward risk adjustment scenario that was very similar to the example given in the core reading about comparing relative efficiency. It was surprising how few candidates managed to do the calculation. Marks were either very high or very low on this part of the question.

**Part (ii)** was quite poorly answered, overall with very few candidates interrogating and trying to explain the difference between the risk adjusted and non-risk adjusted average costs per hospital.

**Part (iii)** was fairly well answered, with most understanding the broad rationale for risk adjustment, however very few explained this in sufficient detail. Some went into details regarding data collection, grouping and subsequently performing the analysis which was not required. Most candidates identified the demand side factors which influence utilisation, but very few noted that the risk adjustment should only be applied to these demand side factors outside the control of the provider. Candidates were then expected to identify the supply side factors (within the providers’ control) that could also affect demand which should be considered when it comes to outcomes/quality of care

**QUESTION 4**

(i) 
- Formula approach involves use of commutation function
- And fixed interest rate over the period
- Does not allow for variations in interest rates
- And relationships between assumptions (e.g. interest rates and inflation)
- Or trends in assumptions
- Such as morbidity improvements or deteriorations
- Also does not give a sense of the timing of cashflows
- To facilitate reserve management
- Less conducive to sensitivity testing
- And stochastic approach

(ii) 
Advantages and disadvantages of NCDs

Advantages:
- It discourages small claims which the insured will pay for themselves – reducing claims levels, and anti-selective behaviour
- Decreases claims administration costs by discouraging unnecessary claims
- It may increase persistency/ decrease lapse rates if the NCD is not transferable to other insurers.
- If not offered by other insurers (or differentiated from others’ offerings), can be an innovative feature, attracting more new business
- May result in positive selection – younger and healthier lives joining wanting the discounts; older/sicker lives leaving to competitors as non-discounted premiums may be higher than elsewhere

Disadvantages:
- It may discourage policyholders from seeking care, leading to health complications and higher claims costs down the line which could have been prevented
- It increases administrative complexity as the insurer would need to track NCD levels, leading to higher administration expenses.
- Cost of systems development, staff and broker training
- To fund the cost of the NCD, higher premiums may be required initially, potentially discouraging new applicants who value lower premiums over eventual NCD’s

(iii)
Collect the data for appropriate period
- The company should have sufficient internal data regarding claims experience
- The company will require additional data to estimate the level of physical activity of its members and link it to claims experience.
  - Data can be sourced from external sources such as journals or reinsurers to develop the link between exercise and health status
- The company can survey its beneficiaries to determine who is physically active and how much physical activity they take part in over a given month – to help price the NCDs.
  - May be tricky to get accurate information this way – given that past data on exercise levels wasn’t collected (make allowance for this uncertainty/risk)

(iv)
Pricing process:
Choose base period for the pricing exercise, such that data is:
- Of sufficient volume (both claims and exposure data)
- Carries sufficient detail with relevant rating factors
- Over a long enough period to indicate trends
- Relevant given changes in cover and claims recording systems
Split data into homogenous groups
- Ensuring that cells contain enough data and are credible
- Combine smaller risk cells to ensure credibility
Adjust the base values/ data, allowing for:
- Unusually heavy or light experience
- Large or Exceptional claims
- Trends in claims experience
- Changes in risk profile over the data period
- Changes in cover
- Changes in the cost of reinsurance
- Incomplete claims (IBNR)
- Seasonal variation in claims
- Changes in agreements with suppliers
- Calculate the Burning Cost Premium
- Half Mark for formula as example

Analyse the data and adjust the sub-divided BCPs for any changes in the insurer’s practice or relevance of the past data.
Project the adjusted base values forward allowing for:
- Changes in policyholder profile by benefit option, allowing for possible option movements the following year
- Changes in policyholder behaviour given the existence of the NCD’s
- Claims inflation, allowing for increases in professional fees, hospital tariffs and medicine prices next year.
- Changes in cover – for example, benefit enhancements or reductions for the following year.
- Trends – specifically allowing for changes in the frequency of accessing health services or changes in treatment methods between years. (one example is enough)

Specifically relating to the new pricing structure, the pricing actuary will have to consider how policyholders will react to the new developments. Taking into account the risk profile of policyholders the following year:
- The insurer is likely to attract a higher mix of physically active members after launching the product. This will result in a decrease in claims experience if the research is true.
- However, these individuals may be more prone to other claims such as joint replacements. So the claims reduction factor can be reduced to introduce a margin for unforeseen claims experience
- Or an explicit margin can be allowed for in the pricing process.
- The insurer may also experience lapses of its physically inactive members who view the new pricing structure as unfair.
- At the same time, a proportion of these existing members may also change their lifestyle (rather than lapsing) and become more physically active
- This could lead to an improvement in its overall claims experience
  - However, this is not likely to be an immediate impact – downstream improvement in risk profile and claims experience

The insurer will also have to allow for a reduction in premiums received from existing business:
- The insurer will have existing policyholders who are physically active, and will be able to access the activity discounts.
- These policyholders are unlikely to lapse, but will already experience lower claims levels relative to the inactive members.
- Thus the insurer will not experience any claims savings on these members
- If the insurer used a survey to determine how many beneficiaries are physically active, it could possibly estimate the proportion of active beneficiaries in each option and calculate a more accurate margin for these lost premiums

The insurer will have to allow for other loadings:
- Expenses associated with the product,
- Recognising that the discount structure will likely lead to increased administration costs
- Commission levels
- Solvency margins required by the regulator
- Any contingency margins for unexpected claims experience, if not allowed for earlier.
- Investment income (less investment expenses) earned on the assets underlying the insurance products
- Profit margins taking into account the shareholders required return on capital

Other considerations
- The insurer will have to check the competitiveness of the product against competitors within the market.
- Given that it has lost market share recently, the insurer may have to reduce the profit requirement or accept lower contingency loadings in order to recapture lost market share.
- Premium rates overall, should be broadly consistent with those of previous years – radical changes may result in reputational damage and/or a loss of business.
  o Especially for those who are not active and who will not be receiving the discounts.

Examiner’s comments:

Overall, it was clear that students had gaps in their knowledge of the bookwork although these gaps varied significantly. No student scored above 70% in this question, as students did well in either the shorter sub-questions, or in the longer question. No student did well in both.

Part (i) was clear book work. Students either managed to recite the bookwork and score points or they performed poorly.

For part (ii) students concentrated on the selection effect, and few mentioned the reduction in small claims. In other words, students often thought almost single-mindedly about anti-selection but few thought about the mechanics behind NCDs and what would happen to claims experience. A fair number of students identified the fact that policyholders will avoid smaller, earlier claims and run the risk of significantly more expensive treatment down the line due to missed diagnoses.

Part (iii) was relatively well answered where students applied their minds to the problem. It is clear that the students knew the bookwork but many failed to think about the specifics behind the questions - regarding fitness and activity data.

Part (iv) was poorly answered overall. It seems that students get lost in the detail and forget their bookwork. Students failed to give the long list of adjustments to the data (which results in easy marks for those who do put down these items in their solution) and thus most scored poorly. Stronger candidates identified that there would be little or no change in claims experience from the existing policyholder base, while premiums are likely to reduce.

**QUESTION 5**

i) Assumptions
   - Model Points that are representative of portfolio being transferred would be needed
   - Lapse rates
- Investment returns
- Renewal rates
- Risk discount rate allowing for:
  - the return required by the company,
  - and the level of statistical risk attaching to the cash flows under the contracts.
- If the products provide “funding for care”, then appropriate adjustments should be made for claims inflation as this will impact the claims amount to be paid out in future and hence, the profitability.
- Incidence rates of critical illnesses covered allowing for:
  - Medical advances and projected changes in disease burden
- Assumptions surrounding duration of care would need to be taken into account for LTC business
- Need to consider assumptions possible changes in provision of state benefits
- Changes is persistency post acquisition e.g. large lapses
- Rates of exercising product options

Data Sources
- Seller of the portfolio could provide model points
- Maybe provided from previous valuation
- Industry tables could be used for incidence rates
- If industry tables are unavailable population tables could be sourced
- With necessary adjustments for insurer population
- Reinsurer may also assist with data or
- Provide guidance in making adjustments
- Previous published accounts could be used to derive estimates of lapse and renewal rates

ii) The level of statistical risk could be assessed:
- in some situations analytically, by considering the variances of the individual parameter values used
- by using sensitivity analysis with deterministically assessed variations in the parameter values
- by using stochastic models for some, or all, of the parameter values
- Attention must be given to assumptions which the profitability valuation displays most sensitivity

iii)
- The future renewals from the existing portfolio as well as the new business that the Company will be able to get from selling this product.
- The overall current market and outlook for LTC and CI products
- The goodwill value that the selling company carries with its LTC policyholders. This will enhance the brand name of the new Company and all others things remaining same; it should help the new company in establishing itself quickly.
- The transaction value of the other similar portfolio transfers that have happened in the market in the recent past
- Reputation/brand of the Established Company in the market
- Other Products that the new company is looking to sell
- To what extent the LTC product matches with their product philosophy and whether it complements the other products to be sold by the new company.
- Risks with the existing product – guarantees, options
  Systems and processes – What are the system requirements for this product? Is a new/separate set up required for this product?
- Whether the start-up company has adequate infrastructure to service the portfolio
- Any claims that are outstanding or incurred but not reported as at the transfer date.
- Cross-sale opportunities – Opportunity for the new company to be able to sell other products to the existing LTC and CI customers of the established company post transfer of portfolio.
- Are there any other buying opportunities available or likely to come up?
- Why is the established company selling the portfolio?
- Cost/benefits of purchasing an existing portfolio compared to coming up with its own product
- How to fund the purchase? Availability of capital/strain on capital
- Payback period/shareholder returns required, etc. on this purchase
- Bargaining power of the company.
- Other competitors present in the market willing to purchase the portfolio.
- Shareholder/market reaction

Examiner’s comments:

Candidates struggled to apply bookwork to the given scenario. Many candidates failed to realise that most of the data would be sitting with the company being acquired. Candidates also lost marks for failure to give direct bookwork on statistical risk evaluation.

Part (iii) required candidates to add business considerations that are over and above the pricing considerations in (i) such as relative negotiation strengths, goodwill etc

QUESTION 6

(i)
- The neigbouring country is developing and is likely to have affordability constraints in terms of state provided care.
- Private health insurance can operate as an alternative source of health financing.
- Depending on what proportion of population can afford the cover.
- This will increase as the economy develops.
- Private health insurance can increase the capacity of the health system.
- And can be used to promote health policy goals, such as enhanced individual responsibility.
- And can cover eligibility gaps based on categories of individuals, health services or providers not covered by public health systems.
- And can potentially provide healthcare quicker than state system, reducing waiting times for individuals.
- And may be able to provide care or services not readily available under the state system.
- (Quite likely given the low quality experienced and the limited resources the state has for health care financing)

(ii)

Risks entering the market
**Exchange rate risk**
- Premiums may be received in the neighbouring country currency or the current country currency, and if the product provides indemnity, claims will be paid in the neighbouring country currency.
- The expenses of the subsidiary will mainly be in the neighbouring country currency.
- Exchange rate fluctuations risk reducing the profits or increasing the solvency capital requirements when exchanged to the currency of the key performance indicators.

**Investment risk**
- The company will either have to invest in a market with which it is less familiar to match the liabilities or accept a mismatching risk.
- Therefore the liquidity risk and currency mismatching risk may be higher.
- The investments may not perform as expected

**Data risk**
- As there is no own specific experience data available, the insurer will have had to use its Current country experience and adapt that when pricing the products
- or use external data, which may or may not be relevant.
- Also the risk of poor quality, incompleteness, erroneous, etc.

**Assumption risk**
- The product will have been priced on a set of assumptions but there will be extra uncertainty about these as the company is not familiar with the neighbouring country experience.

**Expenses risk**
- It may be difficult to correctly predict the additional costs involved in operating in a foreign country, such as the neighbouring country.

**Claims incidence risk**
- This could be different in the neighbouring country than the current country due to:
  - different prevalence of infectious diseases.
  - the introduction of screening programs
  - lifestyles (e.g. smoking and alcohol consumption patterns).
  - accidents (e.g. due to motoring behaviour, crime rates).
  - illnesses or conditions specific to each countries’ climate (e.g. skin cancer in hot sunny countries, depression in cold countries with little daylight during winter).
  - different government policies relating to sanitation, health education, childhood vaccinations.
  - Changes in government policy leading to changes in claims incidence.
- **Claims cost risk**
  - Claims inflation risks may be materially different from that expected (e.g. more volatile).
  - Claims cost risk may be greater due to potentially having less close ties and relationships with providers in the neighbouring country.
  - Anti-selection – those buying may know that what they need can’t be delivered by state; likely wealthier and better educated segments making selection easier
  - The claims management system may not work
  - e.g. in relation to pre-authorisation.
  - Different legal processes may give rise to higher numbers of disputed claims
  - Impact of new technology on cost/claims

**New business risk**
- It may be difficult to predict the likely level of take up for the products offered by the company in the neighbouring country.
- There is a risk that volumes will be insufficient to recoup the development costs.
- or too high, leading to new business strain
- or higher capital requirements than expected
- or lead to a different mix from that expected
- There may be moral hazard
**Competition**
- As the neighbouring country is only now establishing a private healthcare industry, there are no existing competitors.
- However, it should be expected that other health insurance companies will be set up, e.g. other insurers in the current country may also be considering setting up a new subsidiary in the neighbouring country.
- This would impact the sales volumes.
- and lead to selective lapses.
- There may be high non-renewal rates if products don't offering what customers want or not seen to be offering value for money.

**Operational risk**
- There is a risk that pricing may be incorrect if data used is wrong.
- There may be issues arising from language differences.
- There may be the risk that IT systems don't work or can't cope with the new products.
- If a local claims management team in the neighbouring country is developed there may be issues of fraud.
- Fraudulent claims may be higher as it may be more difficult for the company to monitor what happens in an unfamiliar country.
- There is a risk of fraud from counterparties
- or churning by distributors
- Reinsurance cover may become unavailable

**Political risk**
- Future governments of neighbouring country could reverse the changes that opened up the country to private healthcare.
- or change the benefits provided by the state
- making private insurance less attractive
- or make it harder for foreign-owned companies to operate there
- or repatriate profits.

**Legislation and changes to legislation**

(iii) **Capital requirements**
- The insurer needs to identify the extent to which reserves and additional regulatory capital requirements will be necessary when designing the products that it intends to launch in the neighbouring country.
- Capital will be required to fund the market launch, both to support such reserves and to pay for product development and marketing costs.
- There are also likely to be expense allowance overruns generated in the early years of the new neighbouring country product.
- The availability and cost of such capital, either from within the company or raised externally, are important considerations in deciding whether to enter the new market and, if so, in its pricing of the new products for the neighbouring country.
- Unless the company has substantial capital resources, the products for the neighbouring country should have benefits and charges which minimise its financing requirement.
- It may be possible to reduce capital requirements through the use of suitable reinsurance arrangements.
- The initial capital required in respect of the new products for the neighbouring country will be determined by means of an appropriate model.
- This should incorporate the forecast level of new business together with the other business and experience parameters
- e.g. model points, lapses, morbidity, development cost etc.
- A range of scenarios should be run to assess the likely level of capital required.
- In the long term, writing profitable business should improve the solvency position.
- Higher reserving margins would be needed due to the additional uncertainty of operating in an unfamiliar territory. – i.e increases capital requirements
- The effect on solvency will also depend on the means of writing business in the neighbouring country – if high levels of initial commission are paid, the impact on solvency will be more onerous. – i.e. higher capital requirements
- Need to consider the return on capital required by the various sources of capital to determine the optimal method.

Return on capital
- The insurer should incorporate its required return on capital into its business and pricing models for entering the neighbouring country.
- This assessment should take account of other competing uses for capital as well as shareholders’ demands.
- Shareholders’ demands may include specific targets on the return of capital and/or a strategic fit or support to other company products and ventures.
- The insurer should consider if entering the neighbouring country fits in with its strategic objectives.
- In proposing an absolute level, the actuary will start at the risk-free rate of return e.g. the average yield on suitably dated government bonds.
- To this would traditionally be added a margin to reflect the riskiness of the insurance ventures undertaken

Examiner’s comments:

For part (i) only a few candidates considered the role health insurance can play in encouraging the development of a private sector for delivery of care and relieving the burden on the state.

Part (ii) was reasonably well answered although quite a few candidates missed the risks relating to operational risks and marketing. Since the proposed product is a regular premium medical expense product, reference to new business strain needed to be properly explained to get credit – such a product is unlikely to have large initial commission payments.

Candidates tended to provide only superficial points for part (iii) with only a few properly addressing the points on the required return on capital (other than a generic reference to “risk”).