

Subject SA1 — Health and Care Specialist Applications

EXAMINERS' REPORT

April 2008

Introduction

The attached subject report has been written by the Principal Examiner with the aim of helping candidates. The questions and comments are based around Core Reading as the interpretation of the syllabus to which the examiners are working. They have however given credit for any alternative approach or interpretation which they consider to be reasonable.

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Chairman of the Board of Examiners

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General comments

Candidates who approached the problems, especially the more substantial elements of each question, in a methodical and detailed manner were far more likely to satisfy the examiners and receive a pass in the subject. Generally, candidates lost marks by giving insufficient detail in the answers. 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. Usually each valid point in the answer would normally attract 0.5 marks whilst the more basic elements e.g. details in a pricing basis such as age and sex, would attract 0.25 marks.

Some papers were not clearly marked as to which part of the question was being answered.

Marks may be lost where answers are difficult to read.

Comments on individual questions

Question 1

In general this was reasonably answered, although in part (i) several candidates failed to suggest alternative benefit covers so losing the opportunity to gain marks. In part (v) candidates often did not comment on whether gym membership might merit a discount or not for each of the health contracts suggested in (i) or failed to discuss the advantages and disadvantages of the suggestion.

Question 2

In general candidates did reasonably well on this question. No credit was given in part (ii) to comments on differences due to whether a buyer or seller as this is not relevant to published embedded values or the use of best estimate assumptions. Similarly no credit was given for detailed experience investigations in part (iii) as this is not appropriate for the scenario in the question.

Question 3

This question was generally not as well answered as questions 1 and 2. The best approach to answering the question was to consider what aspects of reserving practices can be researched. In part (i) no credit was given for comments on items such as geographical location, product details, questions on regulatory guidance/audit of results, reinsurance or underwriting arrangements, assets.

- 1** (i) Suitable health insurance benefits include:
CI or Serious illness,
PMI
Dental Cover
Optician cover
Personal Accident
Hospital Cash
Major medical expenses
Non-indemnity Long Term Care
Indemnity Long Term Care would not be included since this is likely to be very expensive

Credit was given for suitable descriptions of each of the above covers.

The covers need to be easy to understand and simple as there is unlikely to be face to face selling.

Possible options for alternative benefit cover include:

Levels of benefit
Employee only or wider family cover
Scope of family needs to be carefully defined, especially for Non-indemnity Long Term Care
Continuation Options
CI – policy term, stand alone or accelerated or TPD
NHS coverage or full private for PMI

- (ii) Poor lives maximise health cover.
Poor lives may also maximise life assurance cover
Good lives maximise holidays.
So poor lives will anti-select
And so will good lives with a poor family health status

Tools to manage the risk of anti-selection include:

Actively at work criteria
Health Declaration at outset
Restriction on benefit eg term or amount
Pre-existing medical condition exclusion
May use moratorium on PMI
Limited application to tempt good lives
Price (better rates than individual cover)
Limit dates at which package may be changed e.g. once a year on scheme anniversary
Have waiting periods
Require a health check for high sum assureds

- (iii) Group IP is typically provided as part of the overall pension package.
It may therefore be difficult to give individuals free choice.
especially if there is a range of occupational classes within the company.
Difficulty in pricing individual IP with a range of occupational classes.
Perceived high cost of Individual IP

Group IP may have significant benefits to employer

e.g. business expense relief on premiums

external claims admission and control

benefits can be tailored to employee status

and earnings

May also reflect paternalism of employer

May help with recruitment of key staff

Can be used with rehabilitation clauses to help encourage return to work

(iv) IP benefit design options and features include

Benefit level

Period of payment

Probably would want an own occupation definition.

Increase benefit if serious disability (e.g. failure of ADLs)

IP benefit formula related to pre disability earnings

Expiry Age to coincide with Normal Retirement Date in the Company

Some increase in benefit during claim payment

Could insure pension fund contributions

Varying by fund if directors etc. separate

Different benefit structure if specialist occupations

Deferred period

Proportionate benefits/rehabilitation clauses

Linked claims conditions

Counselling

Continuation options

(v) Suitable covers suggested under (i) are CI or Serious illness, PMI, Dental Cover, Optician, PA, Hospital Cash and Non-indemnity LTC cover.

Dental cover – generally no impact but if strenuous exercise, could increase dental injuries so no reduction in premium

Similarly for Optician cover, generally no impact but possible increase in eye injuries

For Personal Accident, possible increase in injuries

CI or serious illness – suitable contract to add a modest discount

PMI would merit a larger discount but not that substantial (for example, may have increased sports injuries which would increase PMI claims thus offsetting to some extent the benefits from improved fitness)

Hospital Cash would merit some discount

Non-indemnity LTC cover – no discount

Someone who uses the gym may be regarded as a better risk than someone who doesn't.

It might be argued that if a discount is offered to gym attendees, a loading should be added to non-gym members.

A discount may help encourage gym membership which might lead to healthier lifestyles.

The problem is that in each case the insurer would need to monitor each year that the insured is still a gym member and is an active user. This requires the insured to complete an annual declaration. So the administrative problem may outweigh the likely reduction in claims experience.

As an option, the employer might use a local gym and seek a report from the gym about attendance rather than asking individuals for records of attendance. Administration would be easier if a gym were offered in the building.

2

(i) Group Structure

- Company Information (active and dormant companies)
- Group Structure
- Outline of Insurance Business Transfers
- Information on any previous mergers/acquisitions
- Report of the Appointed Actuary on the proposed merger
- Report of the Independent Actuary on the Scheme for any previous transfer
- Memorandum and Articles of Association

Financial statements

- Annual Returns & Accounts
- ICA Reports (ICG)
- Published EV calculations
- Internal Management accounts/information pack
- Minutes of board meetings
- Board paper
- Terms of reference of any internal management/risk committee
- Minutes of committee meetings
- Risk management reports
- Investment strategy
- Investment reports
- External/internal audit reports

Actuarial information

- External actuarial reports
- Financial condition reports
- Valuation reports
- Surplus analysis
- Appointed Actuary/Actuarial Function Holder's reports
- Statutory reserving methodology and assumptions
- EV methodology and assumptions
- Analysis of movement in EV
- Options/guarantees

Correspondence with regulators

- Correspondence with FSA
- Correspondence with ABI

- Correspondence with FOS

Policy details

- Policy documents
- Distribution channels
- Underwriting standards
- Claims process
- Commission structure
- Sales literature
- Illustration system
- Samples of quotes/communications to policyholders
- Business profile

Third party arrangements

- Reinsurance arrangements
- Third party administration
- Medical providers. E.g. Hospitals

Experience analysis

- Mortality/morbidity
- Expenses
- Persistency

Operational

- IT system/system development
- Administration system
- Pension scheme
- Fraud control
- Data integrity
- Tax returns
- Employee details
- Insurance arrangements
- Risk management
- Corporate governance
- Underwriting
- Percentage of lives declined
- Percentage of lives rated
- Claims management
- Complaint process
- Past customer complaints
- Past legal actions
- Outstanding litigation
- Goodwill
- Historic and planned future new business volumes
- Market share
- Market capacity
- Details of owner occupied properties/geographical location
- Profiles of key management

(ii)

- Margins in EV assumptions
- Different mix of socio economic groups
- Different distribution channels
- Different sales methods
- Tied agents for bancassurer
- Large office may have IFA, DSF and direct marketing
- Different geographical distribution
- Period of investigations/averaging of experience
- Volume of data
- Quality of data
- Underwriting standards
- Claims underwriting
- Reinsurance rates
- Different weightings given to past experience and industry experience
- Differences in product design or cover
- Different view of future trends
- Different levels of selective withdrawal

(iii)

- Starting point is to calculate EV
- $EV = \text{shareholders' net assets} + \text{Value of In Force (VIF)}$
- Net assets at market
- Need to set appropriate model points base don available information
- Project forward future cashflows and discount back

Assumptions

- Assumptions should be best estimate, possibly with some prudence since a purchaser
- Assumptions should allow for your expectations of future trends
- Risk Discount Rate
- Possibly allowing for the inherent risks and uncertainty within the cashflows
- Determined by board of purchasing company
- Mortality/morbidity assumptions
- Take into account factors in part (ii)
- Allow for reinsurance arrangements
- Expense assumptions
- Allow for own expense taking into account of potential synergy
- Expense inflation
- Persistency
- Take into account profile of business
- Consider possible on persistency experience following the takeover
- Statutory reserving
- Use own methodology and assumptions
- Investment return
- Consistent with RDR and expense inflation taking into account own investment strategy

- Tax
- Consider effects on pro-forma tax computations and allowed for appropriately
- Commission
- Renewal commission
- Initial commission if on non-indemnity basis
- If on indemnity basis, may want to allow for clawbacks

(iv)

- Reason for sale
- Cultural fit with company
- Compatibility of policy profile
- How competitive is the bid?
- Sole bidder or competing with other companies
- Structure of the bidding process e.g. opportunities to revise bid
- Own reason for takeover e.g. cross-selling
- Solely for the in-force or possible distribution arrangement with the bank
- Market reaction if purchase goes ahead
- Shareholder reaction if purchase goes ahead
- Quality of data
- Quality of experience investigations
- How desperate is the target company?
- Any possible legacy issues?
- Location of the target company
- Quality of the target company's workforce
- Plans for the workforce, offices
- Integration/migration plan
- Costs of the takeover (e.g. advisors, legal, stamp duty etc.) and whether or not factored into the offer price
- Payment method e.g. cash only
- Ease to raise capital
- Credit rating
- Capital structure
- Quality of asset profile
- Existence of high risk investment e.g. derivatives
- Quality of distribution channel
- Quality of systems
- ICA and ICG
- Possible synergies e.g. expenses, reserving capital, tax
- Pension scheme
- Commission arrangement
- General economic outlook
- Need to get warranties in place if any outstanding litigation
- Determination of goodwill/value of new business amount
- Regulatory constraints (e.g. Monopolies Commission)
- Time taken to complete purchase/management distraction
- Sensitivity testing

- Alternative uses of capital

3 (i)

- What best describes your type of Office? Give examples
- What is the size and relative importance of your CI/IP business?
- How do you value IP claims in payment?
- What valuation methodology do you adopt for your statutory valuation?
- Gross Premium/Net Premium?
- If you use a net premium valuation, do you make a zilverised adjustment for initial expenses?
- Are negative reserves allowed?
- Are any approximations used e.g. grouped data?
- Frequency of reserving calculations

Mortality/Morbidity

- How often are investigations performed?
- In determining best estimate assumptions, over how many years do you average your experience?
- What base table do you use?
 - Death
 - Critical Illness
 - Incidence rates
 - Recovery rates
- Own table/Reinsurer's rates/Standard tables
- Do you use a select table in your assumptions for statutory reporting?
- What margin (%) between your best estimate assumptions above and your valuation assumption do you use in your statutory valuation?
- Which differentiating features of your experience are used to apply adjustments to factors in the standard tables you use to reflect your own experience?
 - Age
 - Gender
 - Smoker status
 - Duration in force
 - Location
 - Sales channel
 - Product
- Do you make any allowance for future mortality improvements in your statutory reserving for ACI products?
- What allowance for future morbidity deterioration do you use in your statutory valuation calculations?
- Do you use stochastic models? If not, do you intend to develop them?

Additional Reserves

- Do you set up additional reserves for:
 - IBNR
 - UPR
 - Notified claims awaiting authorisation

- Disputed claims (declined or terminated)
- Data quality
- TCF considerations
- Reinsurance/Third Party Default
- Contingencies

Lapses

- Do you allow for lapses in your statutory valuation?
- How frequently do you carry out experience investigations into lapse experience?
- How do you derive your best estimate lapse assumptions?
- Own table/Reinsurer's advice/Industry data/Other
- If you allowed for lapses what margin (%) between your best estimate lapse assumptions above and your valuation assumption for business written on both reviewable and guaranteed rates do you use in your statutory valuation?
- Which differentiating features are used to apply adjustments to reflect your own experience?
 - Age
 - Gender
 - Smoker status
 - Duration in force
 - Location
 - Sales channel
 - Product
- How did you determine whether the margin used in your statutory valuation should be an addition or a reduction in your best estimate assumption?

Expenses

- What expense assumptions did you make?
 - Per policy
 - % of premium
 - One-off claims related
 - Ongoing claims expenses
 - Investment related
 - Margin over best estimate
- Frequency of analysis
How are fixed and /or overheads allowed for?
Any allowance for expenses on closure to new business?

Financial assumptions

- Does the critical illness business have a hypothecated set of assets? If so, what does it comprise?
 - Gilts/Corporate bonds/cash/other
- What valuation interest rates did you assume?
- What expense inflation rates did you assume?
- Claims inflation
- Margin v actual yields

Guarantees/Options

- Types of options?
 - Buyback/continuation/conversion/indexation/renewability/waiver of premium
- What approach do you use to calculate reserves for options?
- Guaranteed/reviewable benefits?
- Guaranteed/reviewable Premiums?
- If reviewable, options/constraints to review
- Assumptions on option take-up rates

(ii)

- Profit criteria/margin
- Shareholders' expected return on capital/risk discount rate
- Volume of new business
- Sample premium rates
- Margins between best estimate and pricing assumptions
- Cost of capital
- Distribution channels
- Whether different assumptions have been adopted for different distribution channels
- Initial commission/clawback structure
- Acquisition expenses
- Underwriting standards
- Persistency assumption
- Tax assumption on initial acquisition expenses
- Rating factors (or number of "model points" used)
- Level of cross-subsidy or profit variation accepted between policies
- Relationship between pricing model and competition

(iii)

- Main problem is that companies will not want to share commercially sensitive information with competitors
- Companies not likely to tell the truth
- In particular, the mortality/morbidity assumptions
- If these are based on the reinsurer's tables, the reinsurer will not want the cedant to disclose these
- Would not want to disclose profit margin/criteria
- Difficult to benchmark underwriting standards
- Should the professional body interfere with the pricing practices in the market?
- How will this affect free competition?
- Standardising pricing practices could drive some companies out of the market
- Unlike reserving practices, this is unlikely to add significant value in terms of policyholders protection and could reduce value to policyholders
- Difficult to define good practice in terms of product pricing
- Much more diversity between the underlying influences (e.g. strategies, capital structure, risk appetite) so hard to compare

- Pricing practices change more rapidly than reserving practices

END OF EXAMINERS' REPORT