EXAMINATION

April 2005

Subject SA1 — Health and Care Specialist Applications

EXAMINERS' REPORT

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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1 (i) The following areas would be amongst those considered in assessing the market for the launch of a health and care company in another country:

Does critical illness and income protection insurance already exist in the country?

Consumer demand

- will customers buy in sufficient quantity to make viable?
- will products fit a need?
- are customers aware of this need?
- are products affordable?
- could carry out a survey of consumers
- impact of personal taxation

Consumer confidence

- in the company/brand
- in the product

Level of competition

- fit with existing products
- will the products be revolutionary or similar to any already existing?
- is there a gap in the market for this product?
- have there been any previous 'invaders' from outside and, if so, have they been successful?

Profitability of players

- if they're not making money, why should you?

Availability of data

- are suitable data to price the contract available?
- are data relevant to product and target market?

Availability of capital for a new product

- expense overruns
- new business strains
- solvency requirements

Availability of capital for a new company

- contingency plans

Potential distribution channels

- will you be able to sell the product?
- how easy is the product to sell?
- what research needed
- substitution of existing products

- different potential channels — sales force employed by insurer, employed by 3rd party, independent advice, direct

Regulatory issues

- can business be authorised/written in country?
- solvency margin requirements
- reserving requirements
- financial reporting
- EU v Non-EU
- any restrictions on product design or investments?
- any regulation of distributors/sales processes?

General legal issues

- contract law, employment law
- ability to repatriate profits

Availability of key staff and systems

- administrative and claims systems
- key staff
- availability of service partners (eg disability counsellors)
- possibilities for outsourcing

Reinsurance

- willingness of reinsurers to support business; availability and cost

State provision

- what employee benefits are available?
- what is currently provided by the State?
- medical provision – system of hospitals and doctors (referrals, reports)
- how does this product fit with this?

Demographics and earnings levels

- demographic projections
- earnings levels and projected growth
- influence on choice of products and distribution methods

Culture

- impact on the product — claims experience

Others

- approach, modelling and profit testing
- levels of corporate taxation
- currency considerations/volatility
- comparability with alternatives of company purchase, badging

(ii) **Morbidity**

Perform an analysis of own company experience over a suitable recent period 3-5 years may be suitable depending on volume of data – credible but homogeneous

Split analysis into major different risk groups e.g. male/female, smoker/non-smoker

Adjust data for other possible influences which will affect its immediate usage e.g. past changes in underwriting standards or claims management.

Compare own data with that from other sources over the same time period, in both the home market and in the overseas territory:
Industry data e.g. from insurers' associations
Data from reinsurers
Published tables based on insurance experience
Population figures and government health statistics

Assess the level of adjustment needed to the local data (which may be more plentiful) to make it relevant to the prospective overseas market. Ratios may be appropriate initially but margins will be needed.

Assess the adjustment needed to relate any published data, which may not be underwritten, to the particular circumstances of the company, its products and target market.

Analyse trends in experience by age, sex,` by smoker status.

For CI, if data permits, analyse risk premiums and trends by specific diseases.

For IP, analyse claim inception and claim termination rates. If data permits, investigate by occupational classes and deferred period.

Investigate the availability and cost of reinsurance arrangements of various sorts e.g. risk premium, original terms. In a new territory, company may wish to reinsure a significant proportion.

May base premium terms on reinsurance rates, subject to the above analyses.

Need to investigate potential impact of AIDS/HIV

Further adjustment needed to align different target market in the overseas territory with that underpinning the base data.

Adjustment may also be needed for differences in potential size of policy.

Need to include reserving basis among pricing assumptions, affecting cash flows. Will probably use adjustments to a standard table, with the adjustments derived from the above analysis. Need to allow for deterioration also.

Mortality

Carry out similar analysis to the above. Data needs to be interpreted with care

For IP, need to split pre-claim and in-claim mortality

For CI, need to split pre-claim and post-claim (survival period) mortality. Other deaths from critical illnesses covered will be irrelevant, because a claim has already been paid. Need to avoid double counting in cases of accelerated CI.

Investment

Assess the level of potential investment return on the assets backing this portfolio, dependent on where the assets are held. Allow for currency differences. Include net of direct investment expenses.

Expenses

Start with company's most recent in-house expense analysis. Allow for trends if this is an annual exercise

Allow separately for acquisition (sales, marketing and underwriting), servicing and claims costs

Allow separately for IP and CI

Include both head office and overseas territory costs

Claims costs will be split between initial claim validation (CI and IP) and ongoing claim maintenance (IP).

Split policy costs into those that are premium related and those that are per policy.

Need to understand the extent to which specific one-off costs (e.g. establishment overheads) and expected additional costs (e.g. regulation) are to be costed against individual policies.

Degree of detail will depend on size of company and volume of expense information

Reinsurers will be able help with certain expense information e.g. cost of obtaining medical evidence and its likely impact on premium rating.

Need to analyse and project the impact of inflation in the two countries. Inflation may need to be split between manpower costs, future equipment costs and others.

Projected inflation may possibly be measured as difference between government fixed-interest and index-linked securities.

Adopt consistency of assumptions between investment returns and expense inflation

Commission

Investigate levels of sales reward to be paid to the distributors in the new territory. Load directly into premium basis. May need some adjustment if there are volume-related overrides – thus dependent on new business forecasts

Lapses

Analyse home experience for CI and IP products

Limit scope of analysis to experience produced by the distribution channel which will sell the healthcare products abroad. Else (or as well as) obtain industry data if available for these healthcare products and this form of distribution

Adjust data if target market is different from those underlying the above researches

Further adjustment may be needed if past period of data collection was influenced by unusual economic circumstances, or any other abnormal historical situation

Tax

Make suitable assumptions as to the insurer's current and future tax position

Make allowance for any tax liability in overseas territory, including premium/sales tax

Profit

Include company profit criteria, commensurate with underlying risk of venture – risk discount rate, PVFP, pay back period

Sensitivity analysis

Test the sensitivity of the final premiums to adjustments in the individual assumptions and refine inputs accordingly

Competitors' rates

Research competitors' office premium rates to assess levels of new products – then adjust assumptions if deemed appropriate.

Assumptions and strategy

The values of the assumptions and the premiums that they produce will reflect the company's strategy in launching into the new market: An aggressive growth strategy may require assumptions stripped of margins. A slow portfolio build strategy may permit more caution in the assumptions

(iii) **Assumptions** — these may depend on mix of business and product size

Mortality/Morbidity — reinsurers rate with a loading of 0 to 10%
Morbidity deterioration
Investment returns — 5%
Expenses:
- Initial £125
- Renewal £20
- Critical illness claims £250
- Income Protection claims £1,500

Commission — 150% Lautro
Expense inflation — 3% say
Withdrawals — Year 1 15%, 2 10%, year 3 on 5% — but very dependant on distribution channel
Tax — dependant on office's tax position
Profit — 10% return on capital

HIV/AIDS test

(iv) In assessing the company for takeover, the following are amongst the areas which should be considered:

Seller

- why is the seller selling the business?
- are the other companies interested in acquiring the company?

Data available and quality

- need more data for a health product
- level of detail available
- quality of staff

Models, discounted cashflows

- use embedded value calculations to assess the value
- concerns that considerable sensitivity in results
- timing will be an issue

Market precedents

- to understand the dynamics of the market

Regulatory issues

- check with regulators what information and procedures they might require

Adequacy of reserves

- if not adequate, what is required?
- certain liabilities may need to be ring-fenced.
- check existence of any options and guarantees

Demutualisation may be an issue, which will take time

Are there any synergies available?

- caution is required in assessing these

If either company is quoted

- market timing is an issue
- shareholder approval may also be required

Other

Ability to service claims and administer the business
Non-insurance liabilities (eg pension benefits)
Monopoly considerations
Tax implications of takeover

Price sought
Brand name
Competitive position of your company and takeover company

(v) **Private medical insurer**

- May not have expertise in this business
- Absolute and relative size of PMI book
- Any synergies with UK business on PMI will be limited
- PMI is shorter term business
- Need to look into data and models for this
- Will probably need to get external help
- Potentially could sell off this element separately

2 (i) Areas that may be covered in the report include:

Recap of history of long term care involvement. What was the rationale for entering the LTC market?

Current and future State provision/incentives/means-testing

Demographic trends

Does current product design fit market needs?

Projected volumes of business.

Expected level of profitability

Full description of the products

History of product changes

Current and future reinsurance availability

What were the original pricing assumptions?

Expected claim basis — split by both inception and claim termination (recovery, death and policy expiry (if appropriate))

Lapses

Expenses split by acquisition (distribution and underwriting), maintenance and cost of managing claims

Expected investment return and tax assumption

Assumed business mix (age, sex, size of policy, premium, any optional benefits)

Basis for setting reserves and solvency capital

Need to look at the actual experience since launch

Compare actual experience against the assumptions used in pricing

Look at reported profits and the current embedded value of the business

How sensitive are the projected profits to various future scenarios?

What is the current supervisory valuation basis of the company and how does this compare with realistic reserves?

What are the current expectations for market growth or changes in experience — are there any social, medical or regulatory changes which are expected to impact on the market?
What is the current competitive position and how are other players acting within the market?

What options are available given the current product range to make changes to improve profitability?

- revision of premium rates
- changes in product design for new business
- changes in underwriting for new business
- changes in claims admittance process

Other options:

- Abandon business and sell off
- Abandon business and manage run-off
- Purchase better positioned insurer
- Focus on niche

(ii) The basic requirement is that there is a reasonable volume of stable, consistent data from which future experience and trends can be deduced.

The data ideally needs to be divided into sufficiently homogeneous risk groups according to the relevant risk factors. However this ideal has to be balanced against the danger of creating data cells that have too little data in them to be credible.

Sales expenses

Note that the question only asks about sales expenses

For expenses ideally want to split costs between direct expenses and overheads. In practice there is not a clear dividing line between these two categories

Information may be obtained form timesheet/functional analysis, activity based costing

Need to know the level of commission

Non-commission expenses need to be split between

- initial expenses which arise at the start of the policy
- renewal expenses

Expenses should be split according to whether the expense is proportional to:

- the number of contracts written
- the benefit written
- the premium written

Persistency, claims inceptions and claim terminations

Lapses may be understated because of any non forfeiture provisions

Lapses on single premium business unlikely if no surrender value

To analyse inception, termination and lapse experience will require sufficient exposure data to enable expected decrements to be calculated. Similar information will be required for actual claims and lapses

- Type of contract including benefit conditions
- Date of birth (age)
- Sex
- Smoker status
- Policy commencement date (or duration from entry)
- Policy status — inforce, lapse, claim, recovery, death
- Date of status change
- Rated information (at least sufficient to split policies in to standard and sub standard risks)
- Source of business/sales method
- Definition of disability satisfied
- Level of original benefit
- Level of current benefit
- Basis used to calculate current benefit
- Marital status at policy issue

Possible difficulties in extracting data or interpreting results of analysis

It is assumed that data from the period being examined is sufficiently homogenous as to enable the results to be considered as a whole

Any errors in the recording of data are not so great as to invalidate any analysis

It is possible that for the group contract pricing may have been based on a unit rate and individual exposure details may not be available

Claim information may be incomplete because of delays in claim reporting and delays in claims acceptance and settlement

There may be delays in the reporting of claim terminations

On the single premium policies deaths occurring prior to any claim may not be reported and so this could lead to an overestimate of the exposed to risk

The number of claims and lapses may be insufficient to give credible results particularly if the analysis considers a large number of rating factors.

For claims in payment there is likely to be considerable uncertainty about the expected future duration of the claim.

It may be necessary to consider future improvements in mortality or trends in morbidity assumptions.

(iii) An analysis of experience is a key part of the control cycle of the company. The analysis would enable:

- Refinement of assumptions used in the product pricing bases
- Profit testing of existing premium rates against revised assumptions to determine current profitability
- Analysis of any surplus/loss arising between valuations in order to identify areas of experience with poor trends
- Projection of profits arising in the future under different scenarios
- Review of the assumptions used in the supervisory valuation basis
- Setting of the assumptions for and calculation of the embedded value of the business
- Review of sales processes and commission levels
- Review of underwriting process
- Identification of target markets for concentrated efforts
- Assessment of capital requirements

(iv) Possible implications of withdrawing from the market include:

Effect on market perception.

- May create considerable negative customer sentiment
- Brand damage, particularly if viewed very negatively by media
- Can lead to increased lapses (which may be antiselective) from disgruntled customers

Cannot cancel cover for existing contracts

Can close product to new business but must consider existing business already in the pipeline

May cause concern with distributors who have been trained to sell contract or who have clients to whom contract is targeted

Group contract is yearly renewable and so this may cause greater distress

Product is being dropped because of profitability so any replacement contract is likely to offer poorer value for money

Could lose key staff

Considerable expense saving and possibly insurance loss/saving also

Frees up capital to be used elsewhere

Impact on share price (up or down)

(v) The recommended action will depend on the reason for the lack of profitability

If future business volumes are expected to be insufficient a decision to withdraw from the market may be the most appropriate action

Assuming this is not the case alternative approaches include:

Closure to new business of one or more of the existing product lines and relaunching revised contracts

Change the policy wording/conditions for new business cases or introduce brand new contract. For the group contract this approach could be applied to existing business as terms are reviewable

Increase premium rates for the regular premium and group contract and reduce the benefit level for the single premium contract

Change the remuneration structure as a means of cutting costs or more directly to increase business

Pay increased commission for business which adds most to profitability

If persistency is an issue, enhancing benefits or reducing premiums may be appropriate

Change mix of business between O/R, rated and declined

Improve the questions asked at underwriting or reduce medical limits

Introduce a computerised process for acceptance for all but the most complex applications. This may improve consistency in underwriting decisions and may reduce costs

Change claims information and procedures eg increase training, more accurate and appropriate information obtained at time of claim, involve all parties (underwriters and policy developers) in claims process, check quality of information obtained

Change investment policy and/or managers

Change IT structure

Change office personnel and competence balance

Consider whether a change to the reinsurance structure can improve profitability by either risk sharing or improved capital management

Reduce periods of guarantee on non-group products

Concentrate on products over which the company has most control (eg yearly renewable products)