EXAMINATIONS

September 2003

Subject 403 — UK Fellowship General Insurance

Paper Two

EXAMINERS' REPORT

Introduction

The attached subject report has been written by the Principal Examiner with the aim of helping candidates. The examiners are mindful that a number of interpretations may be drawn from the syllabus and Core Reading. 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.

The report does not attempt to offer a specimen solution for each question — that is, a solution that a well prepared candidate might have produced in the time allowed. For most questions substantially more detail is given than would normally be necessary to obtain a clear pass. There can also be valid alternatives which would gain equal marks.

J Curtis
Chairman of the Board of Examiners

25 November 2003

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Overall the examiners were pleased with the general level of knowledge, application and higher skills demonstrated by many of the candidates.. There were some cases though were it was evident that candidates knew the bookwork type questions but could not demonstrate to the examiners their understanding of knowledge and application. Candidates are reminded that research and reading more widely than the Core Reading helps considerably in gaining and applying knowledge. In addition candidates are reminded of the need to write clearly so that the examiners do not have to second guess what a candidate has written.

1 *The better candidates focussed on all aspects that impacted profitability whereas a significant number focussed on the claims history and statistics and therefore limited the scope for obtaining sufficient marks on part (I) of this question. The other two parts were answered well*

(i) Financial Information
Statutory Accounts of the Company for last 3 years (including Audit reports , annual reports and statement of accounting principles)

Management Accounts

Monthly accounts by divisions/segments for the last 3 years

- Breakdown by line of business, profit centre, distribution channel

- Historical performance by line of business (loss ratio, acquisition expenses, other expenses, combined ratio)

Latest available unaudited accounts (P&L, Cashflows)
Actual vs. budget last full year and current year (Vid. Monthly subsection above, monthly accounts for last full year and current year)
Reconciliation of management and statutory accounts
Breakdown of expenses
Seasonality of income

Assets

(1) Investment portfolios (3 years) (historic cost, book value, market value, allocation)

(2) Investment policy

Tax information

(1) Tax declarations in last 3 years including:

(a) Corporate Income Tax
(b) Withholdings (Annual Summaries)
(c) Tax on Insurance Premiums (Annual Summaries)

(2) Tax loss carry forward (age, origin, usage)

(3) Specification of deferred taxes

(4) Any special considerations concerning tax position pertaining to particular assets

(5) Latest tax audit

Other Provisions:

Provisions for liabilities and charges
Details of unfunded pension commitments, including details on the bases of providing and of funding

Financial Projections
Forecast current and next year

OPERATIONAL INFORMATION

Business lines, sales and marketing
Description of products and documentation, both current and past where forming a part of the portfolio or for which there are outstanding claims

Details of commissions payable by different distribution, segment, class and product and any exceptional commission agreements.
Copies of Corporate Partnership agreements with full details of commissions payable, unusual administrative or product features

Description of co-insurance relationships

Detailed breakdown of premium income:

(1) new and renewal business activity analysed by:

- origin (commercial channel and intermediary)
- division/ segment
- type of policy and coverage
- line of business
- geographic area

(2) average premium rates by line of business
(3) underwriting performance by underwriter
(4) analysis of lapses / cancellations and return premiums
(5) unusual insurance risks accepted
(6) summary of processing backlogs

In force policy counts and average premium per policy monthly over the last 3 years by:

(1) line of business
(2) type of policy
(3) geographical location of insurance risk
(4) underwriter
(5) new and renewed business
(6) policy limits

Summary of processing backlogs
List of distributors and agents including area covered and turnover.
Description of customers (types, concentration, major customers, target profiles etc.)

Underwriting policy and claims handling
Underwriter's handbook and rules
copies of all quality control reviews undertaken to monitor adherence to underwriting guidelines (last 3 years)
reports on follow up actions / outcomes
Claims department organisational structure (including division of duties, reporting responsibilities)

Claims processing

(1) Technical manuals

(2) Claims processing, Work flow etc for each line of business

(3) Miscellaneous:

- Claims Department. Instructions for experts.
- Rules for ex gratia claim payment.
- Technical Audits of Claims Department.

(4) Copies of quality control reviews prepared for management to monitor effectiveness of claims handling functions including:

- claims estimate crosschecks post settlement analysis reviews
- large estimate movements reviews

Management reports (for past 3 years) detailing:

- claims volumes
- trends in claims volume
- claims in dispute (e.g. regulatory complaints)

Claim file ageing report and number of claims open

Details, and any supporting management reports (past 5 years) prepared for review, of:

- loss trends

- change in loss trends between periods

- changes in company compared with industry for ratios
  - by line of business
  - by accident year
  - by geographic location

for ratios including the following:

- losses incurred to Earned Premium (i.e. loss ratio)
- number of claims reported to number of exposure units
- average earned and written premium (by exposure unit)
- average losses incurred and paid
- losses incurred to loss reserve
- IBNR reserves to measure of exposure to losses (e.g. to earned premium &/or exposure units)
- claims handling expenses to losses incurred
- claims handling expenses paid to claims paid
- claims handling expenses reserve to loss reserves
- loss recoveries to losses paid

Technical provisions

Claims Reserves

- Reserving methodologies and procedures applied for internal / external reporting
- Any changes made to methodology over last 3 years
- Correspondence from lawyers, accountants and other outside professionals on the accuracy & appropriateness of reserves, methodologies and procedures during past 3 years
- Separately identify any reserves which are established on the basis of judgement or which are adjusted on the basis of judgement rather than supported by detailed actuarial studies or historical loss experience.

Chain ladder triangles

Copies of recent reports on technical reserves, external or internal in past 3 years

List of large claim files

Method of calculation of technical provisions, reserving methodology relating to unexpired premium, risk, outstanding claims, IBNR and equalisation reserves

Unexpired Premium and Unexpired Risk Reserves (UPR and URR)
Methodology utilised to calculate UPR and URR (including any changes made to methodology over last 3 years)

Management reports prepared (over last 3 years) to monitor and review:

- Ratio of unearned premium reserve to premium earned
- Written premium by line of business
- Ratio of URR to UPR by class of business (including commentary on reasonableness of URR calculation)

All information to be supplied by Line of Business and Accident Year

(ii) Access to different levels of data

Company B does not have direct access to the claims staff or an indepth knowledge of the business
One may have made a mistake

Different interpretation of large losses, view on their future development
Different view on latent claims

Different views on past and future claims trends

Different views on past and future inflation

Different views on potential claims handling changes which could affect costs

They could have treated claims handling expenses in a different way.

May have taken different views on investment return,
or one may be discounted and the other not.

Company A will want the estimate to be as low as is reasonably possible. If there are any areas of major uncertainty then A will take a more optimistic view on the possible outcomes.

Company B does not want to see run-off losses from the business written by Sub 1 prior to the purchase, so for the liability classes where there is uncertainty they take a more pessimistic view.

(iii) (1) Halfway between X & Y

May be acceptable to both parties, dependent on the size of the difference and whether or not the half way option is within each range of acceptable values.

A has a clean cut — not providing any guarantees.
The value of the sale is effectively reduced for them as they will have to increase the reserves by $(Y - X)/2$
B does not have the reserves they required as part of the purchase.
B may want to increase the reserves transferred over by $(Y - X)/2$.
B may decide to do this immediately following the sale.
B is exposed to the risk of the reserve run off

(2) Independent assessment of the reserves on a best estimate basis — agreed by both companies that this would provide the value for the reserves as part of the sale.
Not likely to happen if X & Y quite close. Cost of the review, plus the time delay
Clean cut for A, B take the run-off

Value could be greater than Y, A would be worse off
Value could be less than X; A could be better off

(3) Reinsurance Deal — External

Clean break for both sides
Could be costly, depending on the uncertainty in the reserves.
Particularly if B don't want to take on the reserves at the amount being offered by A

Various types — could just reinsure risk of run off loss or have a whole portfolio transfer.
Could be with or without claims handling

The external reinsurance deal could release reserves if business went to competitive tender and a reinsurer was willing to take it for less than X.

Portfolio Transfer

If the reserves are undiscounted and investment income is being taken account for elsewhere in the sale agreement then the loss of the loss of this Investment income needs to be reflected
Claims handling is taken outside
Clean break for both sides
Can often be costly. Who meets the costs? Will these all be borne by A?

(4) Reinsurance Deal — Internal provided by Co A

minimal risk of run-off loss for Co B
Dependent on where the limits are set, if experience is as expected by Co A, the reinsurance won't have cost them anything.
However A are exposed to the potential run off losses

covering all o/s claims reserves, plus IBNR claims
still need to set limits.
could just be IBNR claims
will there be a limit of cover provided by Co A
consider who is handling the claims. Will this be Co A (unlikely), Co B or an external party
How will Co A audit the claims handling
Will Co B have a participation in the claims — as an incentive to keep the costs down.
Will there be any return of premium if there are no payments to the treaty?

There may be the need to obtain regulatory approval for such a sale.

2 *The examiners were looking for candidates to apply their knowledge to a practical problem which has been covered in some detail recently in certain publications. The solution below gives an indication of the areas which the examiners were looking for to be considered. In part (I) most candidates answered the factual part well, however some failed to set out the rationale and effectiveness. In part (ii) the key risks were generally well covered, but few candidates made any comments on the importance of each risk to the different types of company. Part (iii) was answered quite well. Whilst most candidates could describe the DFA models and how they may be constructed, many did not go onto discuss the practical use of such models by regulators. In part (iv) most candidates were unable to demonstrate that they were familiar with the risk measures as they relate to output from a DFA model. In part (vi) the examiners were looking for a reasoned recommendation but several candidates failed to make one.*

(i)

- Currently a formula based approach that take gross written premium
- and gross incurred claims
- as proxies for risk.
- Reinsurance allowed for fully to 50%.
- Assumes that *r*/*I* up to 50% is risk free.
- Slightly higher factors for the first tranche of premium / claims
- rough allowance for size of account.
- Reduced factors for *A*/*H*
- as very short tail specialist business.
- All subject to a monetary minimum.
- Easy to apply
- Does not take into account reinsurer's rating
- Companies that reserve strongly suffer by having higher requirement
- Reinsurers have same requirement as direct where arguably they have more volatile book

(ii)

- Underwriting
  - Market
  - Premium
  - Claims
    - Cat
    - Frequency
    - Size
    - Latents
    - Mass tort
  - Expenses
  - Social
  - Reinsurance
  - Legal/Legislation
  - Economic
  - Currency
  - political

Assets
  - Market falls
  - Yield rises
  - Default risk
  - Liquidity
  - concentration

- Other
  - Operational
  - Dependency
    - Binders/MGAs
    - Concentration of distribution
    - Outsourcing
  - Group Structure

Expect a brief description of risk and also a cross reference to direct writer / reinsurer other possible types of companies — London Market / Lloyds vs direct witers

(iii) A structure that allows for factors by class of business
Charge for more volatile classes of assets
Factor to take into account reinsurer security
Exposure to catastrophe — EML measure
If have factors by class then allow for diversification credit

(iv) Description of DFA model
Each model will potentially be different
How do you test parameters / validity of models?
Consistency between companies

Expertise in companies — small to large?
Standardisation of reporting
Manpower of regulators
Reporting to public / analysts
Is the regulatory authority abdicating responsibility?

(v) Risk measures

- Multiple of standard deviation (does not reflect skewness of outcomes)
- Var (probability of ruin) Does not reflect the size of loss if ruin happens
- Expected p/h deficit
- Tail Value at risk function of Var and EPD

(vi) Any sensible conclusion
E.g. more refined formula plus reduction if justified by internal model