EXAMINATION

April 2006

Subject ST3 — General Insurance Specialist Technical

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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Comments

Individual comments are shown after each question.

1 (i) **Commercial Property**

More scattered cost distribution than household due to singular nature of properties involved.

Settlement can be delayed by the need to verify the value of stock / need to liaise with other insurers if only cover a part of the damaged property.

Also business interruption cover will be longer tailed as need to see how long the business is out of action before the lost profits can be quantified.

Claim frequency tends to be lower for Commercial Property/higher for Household

Household

Consistent in size and distribution with a small number of larger total losses.

Settlement usually quick.

A subsidence event may cause an uplift in the number of claims and average cost would also increase (more dramatic effect than would be for commercial property).

Possibility of geographic concentration.

(ii) Company is small with low solvency margin so protection of solvency position is a primary concern.

All types of reinsurance will assist with protection of the solvency margin.

Stop loss reinsurance could be purchased to protect solvency margin.

Often it isn't available and certainly not at a reasonable price.

With all types of reinsurance the "value for money" should be considered, i.e. the protection it brings, including security status of reinsurer compared to the cost.

Commercial property is insured so some use of surplus reinsurance to allow to write a variety of risks of a variety of sizes.

Also allows to fine tune exposure by ceding more of the risk in areas where already have some properties on risk.

The small size of the insurer may indicate that quota share needs to be used to allow more risks to be written, giving a more balanced risk profile.

Quota share reduces NWP compared to free reserves, helping the solvency position.

This may also encourage reciprocity, relevant as write Household and this may be regionally based e.g. Building Society.

Only property insurance is written in a small country so cat XL will be required to protect against insolvency in the event of a catastrophe occurring.

Assuming perils exist in this country (like flood and subsidence) that give rise to large claims for individual properties then risk XL will be needed.

Also if there is potential for aggregations (from a defined peril or a geographic concentration) then aggregate XL will be needed to cover the portfolio.

The need for both these types of reinsurance will be exacerbated as the company is small.

Financial reinsurance to protect balance sheet/transfer risk to reinsurer

Any regulatory requirements must be complied with including those that affect the choice of reinsurer / reinsurance programme.

Comments on question 1: *A bookwork question generally reasonably well answered. Only a few identified subsidence/BI settlement delay issues for Household/Commercial Property respectively. The best candidates identified all the reinsurance types and how each type of reinsurance helps protect the solvency position (which is a big issue for a small company).*

2 (i) &(ii)

All relevant standard rating factors for Household Insurance (sum insured, postcode, etc)
Any flood excesses
Height of property above mean sea level.
Number of floors of house.
For a flat which floor it is on.
Distance and height above closest major river/lake.
Height of sea defences/river defences.
Quality of defences (earth/concrete etc.).
Long term weather patterns/climate trends (e.g. predicted rainfall)
Previous experience of flood claims
Reinsurance coverage details
Trends in sea level as a result of global warming.

Total exposure to flood

Note difference between coastal flooding from the sea and river flooding.
Sea flooding due to increased volumes of water and salinity liable to be much more destructive than fresh water.
Sea flooding will only affect properties fairly close to sea level
River flooding affects properties on the flood plain of rivers.

Estimation for flooding

Obtain history of max water levels over say last 50 years
Project maximum likely water levels in future
Identify all properties which lie at or below this level
Obtain history of max sea levels over say last fifty years.
Project maximum likely sea level.

Identify all properties which lie at or below this level.

- Use postcode/full address to determine location.

- By use of ordnance survey maps, or other contour map identify which postcodes are at risk.

- Noting that not all of a postcode may be at risk make qualitative judgement as to proportion of properties at risk within each postcode.

- Noting that even a major flood will generally not result in each affected property being a total loss use either historical data or judgement to estimate average loss as proportions of sum insured.

- Add together the sum insured for all exposed properties adjusted by the two factors calculated above.

Any government directives

For alternative well reasoned approach to estimating flood exposure.

(iii) **From Proposal Form**

Easy to obtain standard rating factors from proposal form

Height and distance are not easily derived from postcode.

Height above sea level — most homeowners probably do not know exactly so difficult.

Number of floors — should be simple.

Floor of flat — no difficulty.

Distance and height above nearest river — again most homeowners probably do not know exactly so difficult.

With all questions on proposal form there may be a moral hazard if proposer aware that flood exposed property may attract higher premium.

Other sources

Height of sea defences — can easily survey a particular part of the coastal defences.
Quality of defences — the coastline may be long so would be costly.
Global warming — a lot has been written on this.
Global warming/weather patterns, lots of info already available
Previous claims experience, possible industry and own experience
Future sea levels — timing unclear.
Broker or policy holder resistance to changing information required.

Comments on question 2:

For this question in particular points in answer to (i), (ii) and possibly (iii) were given if answered in any section.

Answers to this question were generally poor. Only a few candidates suggested practical and realistic methods of determining total exposure to a major flood loss or considered the different types of major flood risk (sea, river, lake) and the different risk consequences of each. Some candidates discussed burst pipes which isn't a major flood loss. In part (i) better candidates thought through a variety of sources of information, but most just listed the detailed policy and claim information that would be available on a home policy. For part (ii) often candidates just explained how to do a rating exercise with no reference to flood. Some candidates seemed to think one company would have enough historic claims data to rate solely on their past experience hence demonstrating that they didn't understand the peril and frequency with which it occurs. Part (iii) was poorly answered with many candidates not going into sufficient detail about the degree of difficulty in getting each piece of information.

3 Risks relating to level of claims reserves

The company will have a lot of uncertainty about the level of reserves to set aside to pay the claims from the earthquake.

The gross losses that it will have will depend upon:

The amount of damage caused by the earthquake.

The amount of exposure (in terms of insured properties and their sums insured) that the company has in the affected region.

Coverage provided by the insurance policies that the company writes (property damage, business interruption etc.). The company may find itself in dispute with some of its policy holders if the policy wording is ambiguous.

Claims inflation following the earthquake may be higher than the company anticipated when pricing the policies. (due to shortage of building materials and labour).

The company will have to incur increased claims handling costs e.g. loss adjusters fees, etc.

Moral hazard from policyholders inflating claims and unscrupulous builders encouraging this.

Lack of control by authorities: looting/arson; increasing losses.

Timing uncertainty: delays due to scale of event.

Political/altruistic pressure to pay claims up front.

Risks relating to reinsurance

Appropriateness of reinsurance protection e.g. Whether the company has purchased catastrophe reinsurance.
Adequacy of cover. Is there any danger that the reinsurance cover is exhausted?

Possible increased cost of reinsurance in subsequent years.

Need to buy additional reinsurance for the current year (if any is indeed exhausted).

Availability of reinsurance following the earthquake.

Solvency of reinsurers.

Multiple exposures for reinsurer from other insurers.

Need for bad debt provisions on potential reinsurance recoveries.

Possible disputes with reinsurers.

Risks relating to investments

If the company holds bonds as part of its assets, then it will suffer a fall in the market value of its investments.

The company may have to sell those assets at a depressed price to pay its claims from the earthquake.

The company may have to change its investment strategy in line with its lower solvency level.

The company may have to increase contributions into its staff pension scheme if the scheme has suffered losses due to the bond market fall and this fall is not offset by an increase in expected future investment income.

Risks relating to new business

There will be uncertainty about the premium levels that the company will be able to charge after the earthquake.

The company would be expecting premiums to rise but they may not rise as much as expected.

Also the company may not have enough capital to write the level of premium that it wants for future periods.

Business risks

Contributions to pension fund increase/salary rises impacting contributions.

The company may be downgraded by the rating agencies if it suffers a significant loss. This would affect its ability to write business in the future.

Company insolvency

Regulatory intervention

The company may not be able to meet its regulatory solvency requirements and be subjected to regulatory intervention.

The company may have to raise capital at a depressed share price (share issue) or higher interest rates (debt issue).

The company may have to pay into an industry compensation fund if other insurers become insolvent.

The company's own operations may be affected by the earthquake e.g. damage to offices, power outages, disruption to communications etc.

The increased level of claims after the earthquake may lead to increased frequency of operational losses e.g. mistakes in paying claims, fraud, etc.

The company's key business partners (e.g. brokers) may be affected by the earthquake and could lead to loss of business or defaults amongst the company's debtors.

Brokers and policyholders may choose not to renew cover with this insurer due to its weaker financial strength.

The company may have to post collateral to back its obligations to policyholders (e.g. Letters of credit or other security arrangements)

Comments on question 3: *Candidates who scored well tended to focus on different types of risk, not just claims, reserving, reinsurance and investment issues, but also considering operational and other third party risks. Many candidates tended to focus on one aspect such as claims or solvency and overdevelop this at the expense of other aspects.*

4 (i)

Underwriting Year	*Inflation index*		*premium index*		*Inflated losses*	*on level premium*	*loss ratio*
2005	1.04	=1.04	0.95	=(1 - 0.05)	131.0	133.0	98.5%
2004	1.08	=1.04^2	0.95	=0.95*(1+0)	129.8	142.5	91.1%
2003	1.12	=1.04^3	1.00	=0.95*(1+0.05)	135.0	149.6	90.2%
2002	1.17	=1.04^4	1.10	=1.00*(1+0.10)	167.3	142.6	117.3%
2001	1.22	=1.04^5	1.65	=1.10*1.5	175.2	197.5	88.7%
					738.3	765.3	96.5%

Weighted average loss ratio: 97.2%
Simple average loss ratio: 96.5%
Assuming 4% future inflation
Assuming similar policy conditions/coverages
Assuming incurred losses include IBNR/IBNER
Assuming no change in business mix

(ii) More information about rate changes for 2006
Projected volumes of business in 2006 (Written Premium)
Information on large or unusual exposures
Information of large loss experience.

Any IBNR, particularly for 2005.

Commissions including profit commissions, brokerage, overrider etc.

Loads for internal expenses both fixed and variable.

Taxes and any other levies.

Any costs of retrocession.

Investment income.

For this we need to know payout pattern and premium receipt pattern as well as investment yields on suitable assets.

Relevant comments on changes in any of above.

(iii) The past 5 years may be too short a time frame to capture the extremes of the loss experience.

For example, if this portfolio of business has had unusually heavy claims experience in the last 5 years, then the average loss ratio over a longer time period may be lower.

There will be differences of opinion from the buyer's and seller's perspectives.

Errors in data supplied or errors in calculation

Oversimplification or differences in calculation/method used

Claims expenses/reinsurance coverage changes of direct insurer.

Difference in definition of premiums and claims (i.e. gross/net of commission)

There may be difference in opinion of:

Coverage provided in 2006 vs historic years.
Type of claims incurred.
Claim inflation.
Legislation or regulation that affects claims.
Propensity to claim.

This means that the future experience may be very different from the past.

The company may be planning to target a particular segment of the portfolio and hence increase its exposure to that part.

There may be changes in underlying economic conditions / crime rates that affect the claims experience.

Comments on question 4: *Candidates responses were mixed. Some candidates did not produce a loss ratio as asked in the question. A number of candidates did not read the question that the data was by underwriting year and decided to convert premiums to accident year using certain assumptions. Some candidates did not use all the information given (e.g. only using 2005 data to estimate 2006). Several candidates inflated premiums in the same way as claims rather than the correct method of adjusting for rate changes. Very few candidates actually provided any appropriate assumptions thereby losing out on marks. Parts (ii) and (iii) were reasonably well answered, with the best candidates giving a range of possible different reasons why the figures differed in part (iii).*

5 (i) Compare results against competitors writing similar business

Examine individual accounting items gross and net of reinsurance.

Examine ratios, within and across years.

Less information will be available as only looking at published information.

Credit rating.
Prior year reserve adjustments
Level of discounting if disclosed or used
Evidence of additional contingency reserves

Ratios to be considered are:

Notified claims reserves to premium income
IBNR claims reserves to premium income
Claims expenses reserves to outstanding claims reserves
outstanding claims reserve to claims paid

(ii) Accounts

	2002	*2003*	*2004*
GWP	2500	3000	3250
UPR b/f	200	250	300
UPR c/f	250	300	325
Earned Premium	2450	2950	3225
Claims paid	1500	1800	1950
Claims reserve c/f	465	927	1447
Claims reserve b/f	100	465	927
Claims incurred	1865	2262	2470
Commission	200	240	260
Expenses $5 per policy	150	160	175
Expenses 2% claims pd	30	36	39
Expenses total	180	196	214
Reinsurance	125	150	162.5
Investment return	25.4	48.6	75
Insurance return	105.4	150.6	193.5

Assumptions

No AURR is required.

Assume no DAC allowed for or alternatively used correctly in calculation

No reinsurance recoveries are made or they are included in the figures given.

Using the number of policies at 30/6 is a fair approximation to number on risk over the year.

Investment return 5% of average of total reserves for each year.

(iii) Claims ratio is stable at 76/77%.

Average written premium per policy increased from 2002 to 2003 and then stayed the same 2003 to 2004.

Average claims per policy are increasing at similar rate as loss ratio is stable
Expenses as % of premium decreasing slightly over time.

Will always be fairly constant per policy as most of expense is per policy

Insurance return (i.e. profit) is increasing in absolute terms also as % GEP and GWP.

Average premium has increased but investment return increased more than proportionately due to increasing reserves.

Relevant comment about strengthening of reserves

Relevant calculations to support strengthing of reserves comment.

Comments on question 5: *Part (i) was generally not well answered. A number of candidates thought that it was important to have strong free reserves or free assets when the question clearly stated "claims reserves". Only a few candidates suggested comparing different ratios between companies. Part (ii) was generally reasonably well answered except for investment income where, in a large number of cases investment return was calculated on outstanding claims only (technical reserves do include UPR, many candidates did not seem to know this!) and for a good number of candidates on Profit which is just wrong! Again, very few candidates stated any assumptions they were making. Part (iii) was poorly answered with very few candidates scoring well: many candidates did not comment on the level of reserve strengthening taking place nor any trends in the data year on year.*

6 (i) Public liability
for claims made by members of the public for
damage, claimants' costs and expenses
in respect of accidental bodily injury
or property damage.

Employers liability
for claims made by temporary staff, helpers and volunteers.

Negligence on the part of company (comment made under either EL or PL cover)

Property damage — all risks, covering
loss or damage to insured property at the event, including transit to and from the event.

Cost of hiring replacement items for the event.

Accidental loss or destruction to money whilst in transit or in storage at any authorised residence.

Cancellation insurance

Covering cancellation, abandonment or postponement of the event due to reasons beyond the control of the organiser.

Non-appearance cover

Covering the cancellation, abandonment or postponement of the event due to the non-appearance of specified persons due to reasons beyond their control or the organisers.

Theft by employees/Fidelity guarantee

Terrorism cover

Covering the cancellation, abandonment or postponement of the event due to, or damage / injury caused by, terrorist activities

(ii) Sum Insured/ limits of indemnity for each aspect of cover.

Date of proposed event.

Duration of proposed event.

Length/Terrain of course

Location of proposed event.

Estimated number of participants.

Estimated number of onlookers.

Has the event been held before.

If so, what differences are there this year.

Past claims (or incidence) experience
… as this may affect the likelihood of accidents.

Will there be trained marshals / police providing road supervision
… as this will affect the exposure to risk of accidents for participants.

Numbers of helpers and volunteers
… as this will affect the exposure to potential injury of employee
… and also affects the exposure to risk of accidents for participants.

Details of any equipment that will be required
… in order to determine the potential costs involved in the event of damage and additional hire costs.

Expected costs, budget, expenses and net profit from the event
… in order to estimate the potential impact of cancellation
… and the potential impact in respect of loss / destruction of cash.

Details of celebrities/officials due to attend the event (for non-appearance cover).

Levels of excess per cover
Dangerous peripheral activities on day of event (e.g. firework display/fun fair).

(iii) Any excess applicable under each element of cover.

Deliberate/criminal acts of negligence.

Public and Employers liability:

Participant liability as participants will be responsible for their own conduct (and related insurance).

Road Traffic Act motor liability

Damage to property in the custody or control of the insured.

Property damage — all risks, covering:

Theft / losses from unattended vehicles
Exclusion of losses not reported to police authorities
Loss / damage due to Terrorism
Theft where there is no sign of forcible or violent entry.
Damage due to nuclear, biological or chemical risks.

Cancellation insurance

Anything within the control of the organiser.

Anything arising from breach of contract.

Due to lack of or inadequate attendance.

Non-appearance cover

Any loss within the control of the organiser or participant.

Any pre-existing medical conditions.

Terrorism cover may be excluded.

Comments on question 6: *Many candidates adopted a scattergun approach listing all the types of insurance they could think of. Better answers showed more discrimination and showed they had thought about the question. Also poorer answers seemed to think that insurers would collect individual information on all participants, which may be nice but not practical nor economic. The best candidates were those that identified most of the relevant covers that needed to be considered. A number of candidates mistakenly decided that PL would cover fun run participants as well when, in reality, this would be an exclusion. A few candidates also commented on insurance coverage of the charity's own premises when the question was about event insurance. Part (ii) was answered reasonably well by most candidates. Part (iii) was not answered well with only a few candidates having a grasp of what exclusions would be made on any of the covers taken out.*

END OF EXAMINERS' REPORT