Subject ST4 — Pensions and other Benefits
Specialist Technical

EXAMINERS' REPORT

September 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.

R D Muckart
Chairman of the Board of Examiners

December 2008

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Comments

Overall the standard was a little below recent sittings with evidence that although candidates could recite lists relating to the bookwork they struggled to apply that knowledge to the question asked.

Yet again too many candidates were not guided by the marks available for a question or part thereof and so either wrote too much or too little. It was disappointing that candidates did not structure their answers in any sensible way and illegible handwriting continues to be an issue.

Comments on the individual questions are given below.

Q1 *Generally well answered with the better candidates providing examples for part (iii).*

Q2 *Those candidates who tackled this question in a systematic way tended to score highly and avoided duplication.*

Q3 *Surprisingly given the wording of the question too few candidates looked at each of the three areas separately. Indeed it wasn't uncommon for solutions to exclude any reference to documented policies. Only the better candidates demonstrated that they understood which features are key and which are more minor.*

Q4 *For part (i) a significant minority of candidates appeared to be answering the question "how can state pension benefits be funded?". Typically too few points were covered in part (ii).*

Q5 *Again there was evidence that candidates did not understand which were the key risks faced by the company. Too many candidates trotted out a standard list of risks without relating these to the specifics of this scheme.*

Q6 *Candidates made a reasonable attempt at part (i) although there was some repetition and insufficient points made given the marks available. For part (ii) it was disappointing that many candidates failed to state the obvious that buy out removes investment and longevity risk.*

Q7 *Most candidates correctly interpreted part (i) as a question on the design of leaving service benefits (given your remit) but candidates could also score reasonably if they discussed wider benefit issues.*

For part (ii), consideration of the "key" features caused some difficulty. It was surprising how few candidates could make any sensible points on the last two type of valuation and very few related their answer to the scheme in the question – despite the clear instruction to do so!

1 (i)

- Set and validate the objective of the valuation process (Specify problem)
    - e.g. ensure reserves held are adequate to meet benefit promises
    - Future contributions are set at appropriate levels
- Planning and execution (Develop Solution)
    - Consider data requirements
    - Consider available actuarial models
    - Set assumptions
    - and consider their sensitivity
- Delivery
    - Consider professional/legislative requirements
    - e.g. Guidance notes, peer review
    - interaction with trustees/sponsor
    - Presentation material, Valuation report
    - Timescales
- Evaluation (Monitor experience)

(ii)

- To check whether the valuation model and assumptions continue to be appropriate
- Consider if any changes should be made
- e.g. to achieve a desired level of prudence
- Consider what other uses the overall results may be used for
- Use monitoring process to refine problem definition
- and development of solution
- Assess reasons for departure from assumptions

(iii)

- Credibility of the data, e.g. errors or sufficiency
- One offs e.g. redundancy exercise, re-alignment of salaries
- Changes to practices e.g. salary increase policy, tightening ill heath criteria
- General trends e.g. mortality improvements
- General economic factors, e.g. recession
- Changes to legislation

2 Effectively two issues:

- choosing between a single cash payment and a regular income for life
- if income, level versus increasing

Cash versus pension:

- can she secure higher pension by taking the cash and reinvesting it?
    - by purchasing a pension elsewhere ("open market option")
    - by reinvesting in some other vehicle
- taxation – are options taxed at same rate?
- does she have any immediate need for the cash – e.g. to pay off a mortgage
- if she takes the cash she is effectively accepting investment and longevity risks
- is she interested in / capable of actively managing investments if she takes cash
- her health – if good, and expects to live for a long time, may prefer pension
- need/desire to provide for dependants (pension is single life – unclear what would happen if she died shortly after the pension started)
- other wealth / sources of income (how important are these savings?)

Level vs increasing pension:

- outlook for future inflation
- if inflation is 3% per annum, it will take 13 years for index-linked pension to exceed the level pension
- and even longer for total pension received to exceed that under the level option
- also need to consider possibility of short-period of high inflation
- index-linked pension can be seen as insurance against erosion of standard of living due to longevity / high inflation
- so the decision depends on her attitude to these risks
- level pension means she is accepting the inflation risk
- again, this attitude may be affected by other wealth / sources of income
- and her health
- any short-term financial commitments – minimum level of income required

3 (i) *Trustee Board*

- Diverse and complementary skills
- Both technical
- And behavioural
- The Chair providing leadership skills
- Committees in place where appropriate e.g. investment committee
- Board sets clear objectives and has a business plan
- Trustee Board meets regularly with minutes taken
- Include some member representation
- Uses a risk based approach to Scheme management, regularly assessing its risks and controls

Documented policies

- Written policies covering
- Funding policy
- Investment strategy
- Risk assessment
- Protocol on conflicts of interest
- Informed decisions are made based on the above documentation
- And are reviewed and updated regularly
- Having taken professional advice

Supervision and monitoring

- Relationship with all key stakeholders (e.g. members. sponsor, regulator etc) are developed and managed actively
- Service level agreements in place
- And performance management of advisers and providers

(ii) *Trustee Board*

- Compulsory levels of trustee knowledge and understanding
- Mandatory training courses for trustees
- Power to appoint or remove trustees
- Fines/sanctions for non compliance
- Impose certain make up, eg at least one professional trustee

Documented policies

- Statement of Funding principles
- Statement of Investment principles
- Annual Reports on compliance on the relevant areas
- And production of Statutory Report and Accounts
- Trustee Business Plan

Supervision and monitoring

- Standardised risk analysis / assessment

4 (i) Lower contributions due to:

- Falling birth rates reducing number of younger contributors
- Higher average age at which individuals starts work
- ..e.g. due to greater proportion of population staying in higher education
- Failure to collect contributions from all eligible sections of the population
- ..e.g. self-employed failing to be identified, greater number of illegal workers

Higher payments due to:

- Improved mortality whilst in receipt of benefit
- Changing employment patterns result in greater proportion of the population working at least 10 years
- .. and becoming eligible for full benefits
- Prior baby booms leading to increased retirement population
- Greater proportion of those in receipt of benefits with beneficiaries
- ..e.g. due to changing marriage patterns, greater number of children, greater flexibility of interpreting what constitutes a dependant
- Poor control over when benefit payments should cease
- Inappropriate model, e.g. incorrect assumptions

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(ii) *Reduce benefits*

- General level – possible but transitional issues
- Increase age at which benefits can be drawn

- e.g. to 60 or higher
- ..perhaps in one year steps over a number of years
- Reduces ratio of retired to working population
- Benefits paid for less time overall

- Reduce the level at which benefits increase
- ..e.g. to price inflation rather than wage inflation
- Reduces total payments out over time

- Toughen eligibility requirements for full benefits
- e.g. increase number of years required to qualify for a full pension
- ..perhaps introduced over a period of years
- So fewer people get the full benefit

- Means testing
- Only pay to those who need it / income below a threshold
- Reduces number of people receiving some or all of benefit
- Greater control over definition of dependant
- ..e.g. restrict to spouses and children below a specified age

Increase contributions

- General level / rate
- make % of full salary
- Encourage private sector funding
- ..with contracting out option
- ..possibly with incentives / compulsion
- Carry out audit to identify areas where administration arrangements may be abused
- ..e.g. failure to collect all due contributions, failure to stop payments, workers ceasing payments after 10 years when eligible for full benefits
- Recognise that almost impossible to have benefit outgo exactly matching contribution income
- So build up fund/cushion against adverse experience

5 (i) **Key Risks**

In service only

- If lump sum not prefunded or insured, need to pay out of company resources
- Potential cashflow issues
- ..similarly for death in service dependants' benefits
- ..offsetting any release of reserves for retirement benefits
- risk that employees joining the scheme are in poor health
- ..and may result in a larger claim sooner than expected

In service and after retirement

- In respect of reserves held: Future investment rates may not be in accordance with assumptions, *similarly for*
- ..future bond rates (to match annuitant liabilities)
- ..future mortality rates for active members pre retirement, for annuitants post retirement, for dependants (½ each)
- If dependant very young, could imply a very long payment period

After retirement

- Annuity basis only reviewed every 3 years, so may get out of line with market conditions

Expenses

- Expenses greater than assumed

Other

- Poor scheme design leading to reputational risk
- Poor administration systems
- Fraudulent use of assets
- Potential cashflow issue if lots of employees or very senior employees die

(ii) **Management of key risks**

Calculation of reserves

- Hold reserve in fund based on prudent or best estimate of expected liability
- ..offsetting (in the case of death in service benefits) the release of fund held for retirement benefits
- Subject to regular review in the light of best estimate of future financial conditions
- ..e.g. investment rates and bond rates
- ..and best estimate of future mortality for actives and dependants
- ..allowing for possible future changes in mortality experience

Insurance

- Insure all or part of the risk with an insurance company
- ..e.g. a broad matching of the liability as multiple of salary
- ..taking account of the accumulated fund for retirement benefits
- ..perhaps on a profit sharing basis if the scheme is large enough
- to gain insurance cover for those who might be in poor health

Annuity basis

- Annuity basis to be market related
- ..so that it is sensitive to changes in financial conditions, particularly bond rates
- ..and ask actuary to alert the trustees to any expectation that the mortality rates used may have become inappropriate
- ..so that the annuity rates can be reviewed earlier than end of 3 year period if necessary

Open market option

- Allow employees to take an open market option
- ..so as to remove future uncertainties over longevity, investment etc

Dependant issues

- Tighten definition of dependant

- ..e.g. perhaps restrict to spouse, common law spouse, children to specified maximum age (perhaps different if in full time education), same sex partner, any other dependant with financial dependency, (½ each max 2)
- ..with specified dates for changing nominations
- .. to ensure that reserve / insurance held for all potential beneficiaries
- cease benefit on remarriage, or if reach working age
- reduce benefit if age difference very large

Expenses

- Review allowance made for expenses

Other

- Regular review of scheme benefits to ensure in line with competitors / the market
- Service agreements with administrators
- Use of custodian for assets
- Offer cash option at retirement to reduce amount used to secure annuity

6 (i) ***Factors***

- Decision may be constrained by requirements of legislation
- ..or the Scheme rules
- ..or expectations from the past (eg previous benefit improvements such as increases for pensioners)
- The need to be fair between the different parties
- ..to include an appropriate allocation of surplus to the different classes of beneficiary
- ..which may take account of how the surplus has arisen
- ..and likelihood of it recurring in future
- ..particularly if improvements are being granted that affect future accrual of benefits or future member contributions

Examples

- Benefit increases / improvements
- ..to be prioritised by category
- ..or age, length of service

- ..*for active members*: enhance accrual for past service, for future service, give credit for any non-pensionable past service such as waiting periods, or periods before the scheme began, or service prior to a take over (½ each max 2)
- ..*for pensions in course of payment*: review benefits to take account of inflation
- ..*for left service members*: review benefits to take account of inflation
- Secure assets by switching into bonds
- Consider impact of buying out/securing some liabilities

- Introduction of new benefits / options
- ..extension of dependant benefits
- ..new options which have a financial value
- ..such as retirement at an earlier age with a lower (or no) reduction for early payment

- Reduction in member contributions over a period
- ..but bear in mind that if this is only for a 3 year period, this needs to be communicated clearly
- ..so as to avoid creating expectations for the future

- Reduction in employer contributions over a period
- Or return of surplus to sponsoring employer
- ..perhaps subject to tax
- Each subject to an appropriate communication to members to justify surplus going to the company
- ..e.g. to explain that the employer bears risks in sponsoring the scheme and meeting benefit promises

(ii)

- Consider any regulations/restrictions in their Trust Deed and Rules
- Consider attitude of Company
- A comparison of the cost of insuring current liabilities, with the best estimate of retaining liability under the scheme
- ..allowing for market testing
- Would be reinsuring future mortality risks
- particularly those associated with future improvements in mortality

- Would effectively be reinsuring future investment strategy for pensioner liability
- ..likely to be bonds with liability matched as far as possible
- Insurance would lose the opportunity to gain from future surpluses that might arise e.g. from
- ..mortality experience more favourable than expected
- ..investment terms more favourable than expected
- ..opportunity to invest in more risky (less matched) investments such as equities
- But insurance company bears risk that experience worse than expected
- A decision would be required on the division of record keeping between the trustees and the insurance company
- ..and the corresponding responsibility for communicating with pensioners
- The cost of making pension payments could be transferred to the insurance company
- ..together with associated admin functions such as tax deductions, passing tax to the central authorities, answering pensioner queries (½ each, max 1)
- although some of these functions could be retained by the scheme's administrators
- Decision required on any elements of scheme basis that are uninsurable
- ..e.g. benefits payable to non standard beneficiaries, options, steps in benefits (up or down) at particular ages, or on particular events
- Need to consider likelihood of insurance company being unable at some future point to meet its liabilities in full
- Payments to insurance company include loading for insurance company profits and expenses
- Would need to fund the cost of future increases by means of a lump sum payment in full and in advance to the insurance company
- ..so possible cash flow implications
- Cost of future increases depend on insurance company terms at the time
- ..which may not be economic if increases are small
- ..and would not wish to shop around if intention is, for admin convenience, to retain all payments with one company
- ..and insurance company may not be able to cope with any unusual features of scheme design

- Initial transfer of liabilities would require lump sum payment to insurance company

- ..so need to arrange disinvestment of current assets
- ..or alternative arrangements, such as stock transfer
- Consider whether security for remaining members is acceptable

7 (i) ***Factors***

- Company needs to set a basis that is fair and seen to be fair
- ..particularly if joining the scheme is a condition of employment
- ..and particularly for older or long service members who have accumulated a significant fund from both member and company
- ..need to consider implications if members wish to retire early
- ..e.g. as part of a redundancy exercise
- ..or on ill-health
- ..so need to consider a basis that blends at older ages to the full retirement benefit, without any significant discontinuities
- Possibly subject to a minimum age, a minimum service period, a minimum accumulated fund, or other factors, (½ each max 1)
- Benefits need to satisfy any legislative or regulatory requirements
- ..which could be maximum benefits or minimum benefits
- ..lump sum payments to member may be subject to tax
- Would want a simple design to ease administration
- Alternative costs would be considered
- If known, practice of competitors might be reflected

Possible leaving service benefits

- No benefit in any circumstances
    - Seems harsh and very unfair
    - e.g. if a significant fund has accumulated / has long service
    - Doesn't blend in to retirement benefit

- A benefit based on the members' contributions only
    - ..e.g. a repayment to the member of contributions with or without interest or investment return
    - ..or a deferred benefit payable at retirement based on the member's accumulated fund, plus future investment return

- Harsh to give repayments without interest, except possibly for very short service members
- Retaining the value of the employer's contributions seems harsh for longer service members, e.g. more than 5 years, who even though leaving service, are likely to have made a real contribution to the company
- Harsh to give no benefit for the defined benefit (DB) element, especially for older members /those close to retirement

- A benefit based on the members' and company's DC only
  - ..e.g. a repayment to the member of all member and company DC contributions with or without interest or investment return
  - ..or a deferred benefit payable at retirement
  - Much fairer for the longer serving members who get the full value of the DC account
  - ..but still no benefits from the DB element
  - Could encourage older members to remain in service, as they potentially lose a valuable benefit (even when in employment terms it might be better from both sides for member to move on)

- A benefit based on the scheme design, ie based on salary at the date of leaving, and service and contributions to the date of leaving.
  - Seems fairest approach
  - Need to consider how benefit is reviewed in period of deferment
  - ..e.g. what index is used, e.g. wage inflation, price inflation

(ii) ***Minimum Pension (Underpin)***

Even if the underpin does not appear to bite and have value at the valuation date further investigation using a stochastic model may be needed to determine if it may have some value at a point in the future.

Underpin needs to be considered on an individual basis.

Funding

- Legislative requirement
- Assumes the Scheme will be on-going
- Main purpose is to make an assessment of the future level of contributions needed
- and to compare assets & liabilities to assess the degree of security for the benefits
- Assumptions set by either trustees, sponsor or together
- Assets and liabilities will be valued on consistent bases
- The "under pin" of providing the minimum pension will be valued separately
- and any extra liabilities over and above the basic benefits will be added to the liability total
- It is likely prudent valuation assumptions will be used
- and in particular to value the "underpin"

- The valuation may also be used to develop an appropriate investment policy
- The employer may use the valuation to assess their ability to continue to provide the current benefit basis and hence review future pension provision

- The valuation will review the financial progress since the previous valuation

Accounting

- The valuation is used for the Company's financial reporting requirements
- Allows the owners of the capital of the company to make an assessment of the financial significance of the benefit obligation that exists
- and also the future financial position
- Usually completed on an annual basis
- Certain disclosures e.g. basis used, surplus deficit at year end, pension cost over the year etc are often mandatory
- Attempts to recognise the realistic cost of accruing benefits
- Best estimate valuation assumptions are used
- Assets at market value

- The valuation assumptions are usually determined by the directors of the company after taking actuarial advice
- The pension underpin is valued separately also using best estimate assumptions
- There is a more consistent approach across Companies than for funding valuations
- And consistency in the accounting treatment from year to year

Cost of providing guaranteed benefits from an Insurance Company

- Main purpose is to assess the security of members accrued benefits if the scheme had terminated / wound up at the calculation date

- All active members will be treated as early leavers
- With benefits calculated with reference to salary at the calculation date

- Benefits would be secured by purchase of immediate and deferred annuities from the Insurance Company
- The valuation assumptions are determined by the Insurance Company and are likely to be very prudent often allowing for significant margins
- especially estimates of life expectancy
- The cost will also allow for Insurance Company profit, set up and ongoing administration etc.

- The actual cost will be determined by the Insurance Company i.e. the market price at the time of purchase
- This will vary over time depending on financial conditions and competition in the market place
- The "underpin" will depend on the Insurance Companies assessment
- and may be on different financial terms to the basic benefit

- An estimate of the Insurance Company cost may be made by Scheme's actuarial advisors
- to avoid the time / effort / cost of obtaining actual quotations

Bulk transfer value

- Main purpose is when it becomes necessary to transfer liabilities and assets from one scheme to another

- It is likely that the actuarial advisors to each scheme will be asked to agree the method and assumptions to be used including allowance for the DC underpin
- It is important that the transferring and receiving parties view the terms as being fair
- There is no definitive basis
- but the purchaser will aim to maximise the bulk transfer value and the seller to minimise it with the final valuation basis usually determined following negotiation
- The "transfer values" may be calculated with reference to a number of different methodologies
- e.g. cash equivalent transfer values
- past service reserve
- accounting liabilities
- or a "share of fund" basis reflecting any surplus / deficit
- Always calculated using full data (not roll-forward as for other methods)

END OF EXAMINERS' REPORT