EXAMINATION

September 2007

Subject SA4 — Pensions and other Benefits 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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Comments

The examiners were encouraged by some scripts but it is still too common to find evidence of questions not being read carefully. In addition, there were too many cases of candidates not being well prepared; in particular lacking knowledge of the core reading. Some candidates appeared to spend too long on the numerical questions, leaving them insufficient time to complete the other questions and their marks suffered as a consequence.

We cannot stress enough the importance of completing past papers under timed exam conditions as part of the preparation/revision process.

Particular comments on the individual questions are set out below:

Q1 *Whilst a reasonable proportion of candidates identified the four main risks, few answered the question in sufficient depth. A surprising number of candidates looked at reducing future accrual of benefits, which was not relevant as the scheme is closed to future accrual.*

Q2*(i)* *Generally a good attempt was made at this part of the question, although some candidates wasted time by rolling forward the assets and liabilities for the DC section, even though only the deficit was required. A number of candidates appeared to get confused between Company Service Cost and actual Company contributions, not realising that they can be different. Some candidates ignored member contributions in their cashflow projections, although the majority added them into the asset side, but fewer added back onto the Company service cost to get the full cost of accrual when projecting liabilities. Worryingly many candidates derived their actual or expected investment returns on assets by projecting the figures correctly but then just subtracting the year start assets, with no recognition of net cashflow.*

Q2*(ii)* *Generally answered well.*

Q2*(iii)* *Too many candidates assumed that the lower 2007 salary increases would become the future salary increase assumption and reworked the DB liability figure accordingly. The timing of salary increases did not appear to register as many reworked the 2006 service cost.*

Q2*(iv)* *Most candidates knew the principal differences between FRS17 and IAS19, but a few concentrated too much on the minor differences.*

Q2*(v)* *Parts (a) and (c) were reasonably well answered, but some candidates struggled with part (b).*

Q3*(i)/(ii)/(iii)*
Well answered by candidates who knew the bookwork.

Q3*(iv)* *Better candidates considered the appropriateness of each of the measures within the context of the question..*

Q3*(v)* *Overall, answers were too brief and did not reflect the number of marks available. It was surprising how many candidates did not appreciate that the covenant of Company A was unlikely to be as good as that of Company B.*

1 (i) **Investment Risk**

- the funding basis will assume that a certain rate of return is achieved on the scheme's assets
- if the assets held do not generate the necessary return, a funding deficit will arise
- the employer should therefore encourage the trustees to develop an investment strategy which maximises the probability that the valuation return will be achieved (i.e. prudent) whilst reducing the volatility of this return
- could consider some sort of matching policy.
- the most effective mitigation would be to remove the risk entirely by settling it
- however the scheme/employer has insufficient money to be able to afford to secure insurance policies
- it may however be possible to persuade the members to voluntarily accept a settlement proposal
- for example, deferred pensioners could be offered enhanced transfer terms
- and if the scheme is fully funded on prudent valuation assumptions, there should be a surplus on best estimate transfer value assumptions
- from which the enhancement could be financed
- ideally the uplift would be sufficient to meet the critical yield analysis applied by financial advisers when considering transfer value recommendations

(ii) **Longevity Risk**

- the funding basis will assume that members live in line with certain assumptions generated from standard tables
- and if members live longer, their pensions will be paid for longer and a financial strain arises
- insurance company annuities effectively remove the mortality risk
- but it is difficult to purchase just the mortality component
- although some investment banks now offer longevity bonds which provide partial protection
- generally this is a very difficult risk to mitigate
- and since there is no future service accrual, it is impossible to pass it onto the members
- since S67 restricts changes to accrued rights

(iii) **Basis Risk**

- the trustees and employer need to agree the funding basis
- and there is therefore the risk that the trustees will suggest that the basis is strengthened
- the employer may want to consider whether such a strengthening would give rise to contributions which would fundamentally impact its ability to compete in its chosen markets
- and therefore create a weakened covenant
- to the detriment of the scheme in the longer term
- the employer may also consider contingent funding
- so that cash would not be tied up in the scheme
- but would be available to the trustees if the company failed
- although there is a limit to its ability to offer such security given the size of the buyout deficit
- Options and guarantees risk
- Do the Trustees have the power to invoke a wind-up?

(iv) **Legislative Risk**

- the UK has a history of retrospective legislation escalating the costs of pensions provision
- for example, the costs of participating in the PPF have recently been forced onto trustees
- and there is a possibility of further occurrences
- there is no effective means of mitigating this risk
- short of settling the liabilities and winding up the scheme
- Regulator intervention (if explained)

2 **Project actual DB assets:**

(i) Equities 45.7m × 1.105 = 50.50
Bonds / Gilts 18.1m × 1.045 = 18.91
69.41

Cashflows
+ Contributions £1.7m Company
£0.5m Members
- Benefits (£1.2m)
Total +£1.0m

Assumptions: benefit outgo met from contributions income
Net new money invested in same proportion as existing assets

Cashflows plus average investment return
$= 1.0\text{m} \times ({}^{69.41}/_{63.8})^{1/2} = 1.04$

Therefore total DB section assets
= 69.41 + 1.04 = £70.45m

Project DB Liabilities

Bond yields stable over 2006, so assume no change in the discount rate. Gilt yields stable, implies inflation stable, therefore assuming no change to other assumptions e.g. demographics, the STRGL item for assumptions change will be Nil.

2005 Service Cost = 2.4m
Add back employees contributions to get total cost of accrual.
If employee conts. in 2006 are £0.5m, then in 2005 might be lower due to stripping out a salary increase, but also as a closed scheme may have been more members in 2005. On balance assume employee conts. also £0.5m in 2005. (credit for sensible alternatives)
Therefore total cost in 2005 was 2.4m + 0.5m = 2.9m

Closed scheme so cost in 2006 approx.
2.9 × 1.0475 = 3.04m, less member contributions of £0.5m = £2.54m company Service Cost

Assume the cost of accrual measured at year start

DB Liabilities 31 December 2006

December 2005 PBO plus interest, plus cost of accrual plus interest less benefit outgo plus ½ year's interest

$= [83.5m \times 1.0475] + [3.04 \times 1.0475]$
$\quad - [1.2 \times (1.0475)^{1/2}]$
$= £89.42m$

Deficit on DB section

$= 89.42 - 70.45 = £18.97m$

(a) Assuming no DC Section Surplus (e.g. from non-vested leavers) the overall deficit is £18.97m

(b) Operating charge is the company share of cost of accruing benefits

DB Section = £2.54m (from above)

DC Section = Company contributions at £0.8m

Total operating charge = £3.34m

Assumes no new past service cost

(c) **Other finance income**
Assume NIL on DC section as asset return by definition equals the accrued interest on the liabilities

Expected return on assets

$= 45.7m \times 0.075 + 18.1 \times 0.045$
$\quad + 1.0m \times [(1.0665)^{1/2} - 1]$
$= \underline{\underline{£4.27m}}$

Where 6.65% is the average **expected** return on existing assets, used for net new money (assumes net new money invested in some proportion as existing assets).

Interest on liabilities

$= 89.42m - [83.5 + 3.04 - 1.2]$
$= \underline{£4.08m}$

Other finance income

$4.27 - 4.08 = \underline{£0.19m}$

(d) STRGL items
Assume DC section Nil as before
As noted earlier, no change in assumptions

Asset gain:
Expected assets on DB section
= 63.8 + 4.27 + 1.0 (net new money) = 69.07
Actual assets = 70.45
Asset Gain = £1.38m

Total STRGL items must ensure that deficit from one year to next can be reconciled.

Deficit 12/05	19.70
+ Operating charge	3.34
- Financial Income	(0.19)
- Company Conts	(2.5)
+ STRGL	?
Deficit 12/06	18.97m

→ STRGL total = + 1.38m

Experience gains / losses must be NIL to balance

Other general assumptions:
Expenses are paid separately by employer outside the scheme.

Demographics, membership movements broadly as expected, so as to have no noticeable effect.

Salary/pension increases as expected.

No major shift in investment strategy throughout the year.

(ii) Marginally improved funding level

Investment returns greater than expected on the equity portfolio

However this only helps the DB section as in DC section = liabilities

DB contributions less than the service cost (due to differing assumptions vs. funding basis presumably), and so this has a detrimental effect

STRGL item low, may be expected to be more volatile in future given investment strategy

(iii) Total liability @ 31/12/2005 = £83.5m + £9.7m = £93.2m

So employed members' liability = 2/3 × £93.2m = £62.1m

Assuming all the DC liability relates to employed members, DB employed members' liability = 62.1 - 9.7 = £52.4m

Revise projected DB liability
= [(83.5 - 52.4) + 52.4 × 1.02/1.04] × 1.0475 + [3.04 × 1.02/1.04 × 1.0475] – [1.2 × $(1.0475)^{1/2}$]
= £88.31m

Benefit outgo during 2006 will be unaffected by the 1 January 2007 salary increase. Also reasonable to assume benefit outgo not affected by salary increase as not from employed/active members e.g. all from pensioners, transfer values (from deferreds) etc.

Still no deficit on DC section, so overall deficit now
= 88.31 – 70.45 = £17.86m
DB accrual cost during 2006 unchanged, as salary increase at 1/1/07, so no change in operating charge.

Interest on liabilities also unaffected as only the year end figures affected by 1/1/07 salary increase.
Therefore "other finance income" is unchanged at £0.19m.

Only STRGL item to change is experience gain on liabilities on DB section, which is original less new liability = 89.42-88.31 = £1.11m gain on PBO.

So total STRGL = asset gain of £1.38m as before + £1.11m = £2.49m.

Check

Deficit 12/05 =	19.7m
Operating charge	3.34
Other finance income	(0.19)
Contributions	(2.50)
STRGL	(2.49)
Deficit 12/06 =	17.86m

Although the FD states that the "average" salary increase has been 2%, unless the average weighted by (DB) past service liability and age (for service cost calculation) is also 2%, some distortion in the revised figures could result.

Credit was given for candidates who assumed $\frac{2}{3}$ rds of both DC and DB liabilities relates to employed members.

(iv) Assets at bid value rather mid-market value.
Disclose expected contributions over the following year.
Disclose any self investment
Explanation of any constructive future obligation such as pension increases.
Treatment of gains/losses can be different as there are two choices:
(a) Full recognition in the Statement of Recognised Income and Expense (akin to STRGL under FRS17), or
(b) Gradual recognition in the pension cost (P&L) of only gains/losses that exceed 10% "corridor", where
Corridor is max(DBO, fair value of assets) and
Spreading is over employee's future working lifetime

(v) **Re (a)**

- Different investment return reflects the different nature of assets backing the different liabilities, principally equities for liabilities up to retirement and then bond/gilt type investments once pensions in payment.
- A direct link between the nature/term of liabilities and the matching asset reduces volatility.

Re (b)

- It is important to be prudent when valuing past service liabilities (Technical provisions), security of accrued rights is of fundamental importance.
- When considering future service benefits such degrees of prudence are not necessarily as relevant.
- Future service benefits can always be cut back or stopped, accrued rights are protected.
- Pensions Regulator does allow a higher investment return for the amortisation of past service deficits over the recovery period
- so this can be seen as a tacit acceptance of such an approach.
- Using a long-term assumption means that the accrual cost will be more stable
- Also don't know what future market conditions will be, any imbalance picked up at next valuation
- Does keep company cash cost/contributions down.

Re (c)

- For FRS17 the assumptions used are generally "best estimate"
- For funding purposes it is important that assumptions are more prudent, to help safeguard the security of members benefits.
- Therefore additional margins are kept in the assumptions for funding purposes.
- If such performance does materialise it can be reflected in the experience at the next valuation.
- Not all assets are invested in equities

General

- Assumptions are the responsibility of the trustees, although they should seek actuarial advice
- The trustees may have a different attitude to risk than the sponsor who is responsible for setting the FRS17 assumptions.
- Under funding regulations, the trustees must take into account the strength of covenant of the employer in setting their funding principles and the assumptions, and this may lead them to seeking more contributions now via a stronger past service assumption set.

3 (i) The various parties and their interests are as follows:

- The Seller and their shareholders
  - Seeking a satisfactory overall deal in which pensions is only a part
  - Does not want to pay over more than is necessary to the new scheme
  - Does not want residual arrangement to be any worse off
  - Ideally want employees to be treated fairly
- The Buyer and their shareholders
  - Seeking a satisfactory overall deal in which pensions is only a part
  - Wants as high a transfer paid over to fund benefits as possible
  - Wants a satisfied workforce
  - Wants as simple an administrative arrangement post sale as possible
  - Wants as low a funding cost post sale as possible

- Trustees of Seller's Scheme
  - Must comply with trust deed & rules
  - Must treat all members fairly, including those transferring out
  - Must ensure funding of residual scheme no worse off
  - Will want to ensure covenant of sponsor not diluted by sale
  - Need to ensure funding plan remains relevant
  - Ensure that any shortfall in agreed transfer is met by seller, not scheme
  - Should seek input from regulator if not satisfied with proposals
- Trustees of buyer's scheme
  - Must comply with trust deed & rules
  - Must ensure that the transfer in to the scheme is sufficient to meet liabilities on a reasonable basis
  - And/or ensure funding plan is sufficiently robust
  - Should seek input from regulator if not satisfied with proposals

Other parties are:

- Regulator – may impose conditions
- Transferring members
- Remaining members
- Unions may act for members
- Actuaries to both sets of trustees — must give relevant advice to clients
- Solicitors — need to support consideration of relevant trust deeds and rules

(ii)

- Trustees in the UK are required to have sufficient knowledge & understanding of trust law, and the issues relating to funding and investment as set out under the 2004 Pension Act
- They also have certain duties to report on late or non payment of contributions under the Act
- They must understand their duties; in particular
  - always operate in line with trust law, the scheme's trust deed and rules and all relevant legislation
  - be aware of their duties to act prudently and conscientiously
  - Seek advice from, and delegate appropriate responsibilities to, specialists
  - Act fairly across all categories of beneficiary
  - And in their beneficiaries' best interests
  - Manage and invest the scheme assets and maintain a SIP

(iii) Key objectives for trustees are:

- Control of the Scheme Assets
    - They must ensure the safe custody of those assets
    - And invest them prudently in line with a formal Statement of Investment Principles
    - Reflecting the incidence of liabilities
    - They may delegate managers and custodians
    - Have regard to Myners' principles.
- The financing of benefits
    - By agreeing a statement of funding principles with the sponsor
    - Taking account of the sponsor covenant
    - Setting out funding objectives
    - And arrangements to fund any deficits arising
    - And seeking help from the Pensions Regulator where agreement is not reached
- To administer and pay benefits
    - Maintaining member records and accounts
    - And meeting all disclosure requirements
    - Delegating this responsibility to specialists where relevant
- Appropriate exercise of discretionary powers
    - Taking appropriate funding advice where relevant
    - And other specialist advice – eg medical advice for incapacity benefits
    - And managing "expression of wish" for death benefits
- To meet regularly and maintain a record of these meetings
- Conflicts of interest will have to be managed
- Monitor performance of advisers
- Seek out relevant training as necessary

(iv) The trustees will have to carefully consider:

- The sponsor covenant of Company A
    - taking account of the ability
    - and willingness of the sponsor to fund the new scheme appropriately.

- There are many ways of measuring the ability to pay. These include various credit assessment techniques, such as:

    - **General assessment of the business outlook**
        - This might derive from the sale & purchase business plan
        - Or input from the prospective trustees who are well placed to have good knowledge of the business
        - Although there may be issues arising for them from conflicts of interest

    - **Financial metrics for Company A**
        - Which depends upon published accounting data
        - Although this may well be out of date by the time it is published
        - And will make no allowance for the implications of the purchase of XYZ Limited
        - Although there may be good access to management accounts via the trustees

    - **Implied market default risk**
        - Which is derived from the pricing of equities or bonds issued by Company A
        - Although for a smaller company this data may not be available
        - Especially where it is privately owned

    - **Credit ratings for Company A**
        - Which uses specialist agencies to assess published data
        - Although again this is limited for smaller companies such as Company A
        - And will not reflect the implications of the purchase
        - as a proxy could use the assessment used by the PPF board (if it exists)
        - Although this would also depend to a high degree on out of date information

    - **Other credit risk models**
        - Such as Merton type models or quantitatively derived models
        - But has similar problems in out of date data and responsiveness to changes such as the purchase

- **Independent business review**
  - Taken from an external credit advisory specialist – accountant or insolvency practitioner for example
  - Which requires sponsor cooperation
  - And is typically more expensive to obtain
  - But will be much more responsive to the changing circumstances of the company
  - And can explicitly tell the trustees what the sponsor can afford

- In terms of 'willingness' to pay the Trustees will need to listen to the ideas of the management team but be aware that this may change with personnel changes

In light of these comments, the most appropriate measures for the trustees might be:

- Own measure of sponsor covenant
  - Depending upon knowledge of key individuals in company
  - Although the issues of conflicts of interest may cause problems

- Independent business review
  - Leaning heavily on business plan likely to have been produced for banks to support the purchase
  - Because it accurately reflects effect of the purchase

- Or any other well argued reasoning for another method

(v) These assessments will assist the trustees in considering how they should approach a funding plan for the new scheme. There may be some key differences from the Company B Plan:

- The market capitalisation of Company A will be significantly less than that of Company B

- The credit rating of company A will likely be lower than company B
  - Company B is known to be well capitalised.
  - Company A as purchaser may have spent reserves and borrowed to make the purchase.

- The pension scheme will therefore be likely to rank lower as a creditor relative to the bank lending compared to Company B

- The overall effect is that the covenant of Company A is likely to be significantly lower than that for Company B

- On the other hand, if the deal has allowed for the full past reserve to be paid across to the new scheme,
  - as a combination of a proportionate reserve from the Company B Plan
  - that is currently only 84% funded
  - then the covenant of the sponsor is less of a concern
- Assuming company a is regarded as a viable ongoing enterprise
  - Which is likely given the willingness of the bank to advance funds
- Then it can be expected that the employer should be able to agree a reasonable funding plan going forward to prevent a deficit arising
- Although there may be consideration given to amending the investment strategy
  - To one that is more bonds based
  - To protect the funding position of the accrued liabilities
  - Indeed it may be part of the initial negotiations to transfer a higher amount on completion of the purchase
  - To meet a past service reserve on a bonds basis
  - But this may not be appropriate as the balance of membership and liabilities is very significantly more weighted towards active members in the new scheme
- Or the trustees may wish to seek a charge on the sponsors assets as additional protection
  - Or indeed have a time bound charge on the seller’s assets should funding fall below a certain level
- Company A trustees likely to want a shorter recovery period
- Size of 'A' scheme likely to be bigger relative to company A → reduced ability to make good significant shortfalls
- An over-riding requirement however is to balance security through greater short term contributions with affordability for the sponsor
- It may be appropriate to discuss the purchase arrangements with the Pensions Regulator
  - As they may be able to apply various powers to improve the funding of the scheme following the sale

END OF EXAMINERS' REPORT