EXAMINATION

April 2006

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.

M Flaherty
Chairman of the Board of Examiners

June 2006

General comments

Many candidates did not give sufficient breadth in their answers, confining themselves to covering a few points in great detail.

There was some evidence that candidates had not read each question fully before beginning their answers and, for example, included the duties of Trustees in their answer to Q1 (i) or (ii) although these should have been covered in Q1 (v)(a).

There was some evidence that candidates hadn't paced themselves well, running out of steam towards the end of the paper.

Particular points on each part of the questions

Question 1

(i) *Reasonably well answered although most candidates ignored the contracting out issue.*

Some candidates distracted themselves by writing about changes to past service benefits.

(ii) *Only a few candidates answered this part well. Many missed the future service aspects or didn't consider the options if the corporation's proposal is rejected.*

(iii) *There was evidence that candidates were not up to speed on the detailed requirements of GN16*

(iv) *Better candidates looked at the annual contributions that would be paid under the two scales and compared these to the benefit accrual.*

Some candidates ignored the instruction in the question to comment on which scale is likely to be most popular.

(v) *Part (a) well answered.*

Most candidates could identify the conflicts for (b) but a surprising number mentioned the (improbable) solution of resigning as CFO.

(vi) *Most candidates wrote a generic solution to investment issues and did not consider the particular scenario outlined in the question.*

Question 2

(i) *Generally well answered although few candidates realised that the budget was 6% of total salary roll.*

(ii) *Generally well answered although most candidates limited their solution to a few points and repeated themselves. As noted previously, additional credit it not given for repetition.*

(iii) *This part was not answered well, with many candidates offering no solution. Those who did offer a solution, related their answers to the principles for defined benefit schemes.*

(iv) *It was disappointing that some candidates couldn't perform straight forward compound interest calculations. Allowing for expenses caused some issues.*

Marks were lost where candidates did not show adequate workings and all the steps in their calculations (but note that full credit was given if the answer was correct).

(v) *Reasonably well answered although some solutions to part (b) were limited.*

(vi) *Only a few candidates made a good attempt at listing the additional assumptions.*

(vii) *Most candidates noted the key points.*

(viii) *Candidates seemed to struggle with this question and went into too much detail on how stochastic modelling would be used. Few mentioned that it would be impossible to calculate the cost exactly.*

Few candidates showed knowledge of the practical issues faced by hybrid schemes.

1 (i) Which scheme is larger
Less disruption if larger scheme not moved, fewer members disgruntled etc.
Which scheme is better funded.
Easier to move members to the better funded scheme, more security for those being transferred etc.
Existing members of better funded scheme may just have to accept slight dilution of security.
So less resistance from both sets of trustees.
Which scheme has better administration.
Consider powers of bulk transfer in both sets of TD&R (payment & receipt).
Consider more general balance of powers, eg contributions.
Liability profile in terms of maturity.
Are members (or certain groups / categories of members) being asked for consents.
Communication aspects.
Regulator approval likely?
In this case cannot transfer Protected Rights without member consent, therefore A must be vehicle, unless consents requested
but messy and unlikely to be successful. [B accepted if candidate noted recent relaxation re protected rights]

(ii) **Future Benefits**

Who has power to change them in TD&R?

- If employer, then trustees can only seek to influence the changes.
- Cannot stop them.
- Should not be seen to endorse changes as members' benefits being worsened unless alternative is not in members' best interest.

What are the alternatives?

- Total closure, with DC only, stakeholder etc.
- Winding-up, do trustees have the power to protect all past benefits by triggering wind-up.
- Would that be in the interests of actives who might lose future benefits or their job (if employer could not afford full wind-up cost).

Past Benefits

Is the security of members' benefits improved by the merger.

A – Definitely, B – Less clear cut.

How has the £5m special contribution been arrived at?

Can trustees demand higher amount?

Can trustees request benefit improvements?

What is the overall funding level of merged arrangement on a realistic basis.

What is the overall funding level of merged arrangement on a wind-up / PPF basis?

What are the company's (sponsoring employer to merged scheme and ultimate parent) plans for future funding. Commitment, strength of covenant etc.

Overall

Take legal advice.

Take actuarial advice

(iii) Consider requirements of the Guidance Note 16, valuation funding level pre and post merger (incl. £5m) on:

- Buy Out
- "Ongoing funding" approaches

Get valuations at consistent dates.

Consider priority coverage of benefits on winding up pre and post merger — ensure coverage not worsened.

Consider position on PPF basis.

Any discretionary practices to be maintained?

Actuarial factors — compare / contrast and ensure members' options not worsened.

Apply guarantees to maintain better factors for a certain period perhaps.

Transfer credits in receiving scheme are broadly no less favourable than the rights to be transferred.

Future funding commitment from sponsor to merged plan.

Consider balance of powers — legal advice needed.

(iv) Changes:

Past service: accrued leaving service benefits unaffected.
Assume death benefits unchanged.
NRA: only A affected for future service, worsened but probably not unrealistic given general demographics market norm etc.

Pensionable Salary offset: A worsening of benefits going forward.
Scheme B members, lose the bonus element, but for an engineering company how significant would that have been in any case.

Contributions: But as lower Pensionable Salary also used for contributions, then mitigates above effect.

A: 4% to 5% increase is marginal in £ terms given BSP offset and average salary level.

B: 3% to 5% larger increase, but
some saving from lower NI.

Options

Given above comments most A members would probably stay on $^1/_{60}$ths for a similar contribution amount.

For B members, more might opt for 4% rate that keeps contribution amount similar.

However if members "value" defined benefit most might opt to stay on $^1/_{60}$ths.

Depends on how well the change is communicated and members' priorities.

Revalued Career Average

If members perceive that their earnings only increase close to RPI in any case, they may feel little downside.

Loss of salary link might aggrieve some.

High fliers most affected.

In engineering sector perhaps majority of salaries only broadly inflation linked in any case.
Overtime, shift allowances etc. have never been "pensionable".

General

If well communicated, members may realise overall the "deal" is not too bad.

(v) (a)

- Administer scheme within TD&R.
- Operate within Trust Law.
- Operate within UK / EU Legislation.
- Act in the interests of the beneficiaries.
- Act prudently / honestly / not for profit.
- Seek specialist advice where appropriate.
- Strike a fair balance between the interests of different classes of beneficiary.
- Invest the scheme assets, safe custody.
- Maintain confidentiality.
- Exercise discretionary powers.
- Meet regularly and maintain proper minutes.

(b)
- Conflict between the 2 sets of trustees.
- The merger likely to be more advantageous for B then A.
- Difficult to act for both sets of members impartially.
- Conflict with CFO role.
- In CFO role may be looking to control costs.
- So reduction of benefits is good in this respect.
- May wish to reduce the amount of the special contribution (incentive for the trustees to agree to merger).
- Set special contributions and future funding on a weaker basis, leading to less member security.

(c)
- Resign as a trustee to one scheme or another, or both.
- Do not participate at one or another (or both) trustee meetings for project duration.
- Attend trustee meetings but do not vote on the merger proposals.
- Appoint an independent trustee as a temporary replacement.

(vi) Both current strategies appear overweight in equities given the liability profile.

B more so than A.
Why does B have such high cash holding?

Has there been regular re-balancing, or could market movements since the last valuation have moved the split even more towards equities?
In considering strategy going forward, need to look at:

- combined liability profile/funding position
- statement of investment principles
- cashflow requirements
- high pensioner liability and low actives so may be net –ve cashflow
- trustees attitude to risk
- use £5m contributions to rebalance asset allocation
- costs of further rebalancing
- strength of covenant of sponsor,
- backing of a large multinational corporation, for whom these schemes may seem very small
- more index-linked benefits going forward with revalued career average
- duty to consult with sponsor on investment strategy

2 (i) Improving recruitment and retention

- Assuming no other cuts in benefit package, should make overall package more attractive.
- Depends whether workforce will appreciate the value of a pension scheme.
- Communication will be important to emphasise the value of the scheme.
- There is some flexibility in design of pension to be taken.
- But it is simple to understand.

- Age related contribution scale may be regarded as unfair.
- Scheme may or may not be competitive for this sector.
- Compulsory member contributions might be too expensive for workforce.
- Good if want to attract older workforce.

Meeting the budget set by the FD

- Overall cost depends on take up.
- Compulsory member contribution likely to mean take up is less than 100%.
- Depends on take up of over 45s compared to under 45s.
- If age profile is evenly spread then likely to be within budget.
- Have initial and ongoing expenses been allowed for.
- Cost of internal conversions might need to be allowed for unless terms not guaranteed.
- Can budget be afforded in future years? Would not be easy to reduce contribution scales in future.

Managing risk for the Company

- Less risk than a DB scheme.
- Depends on age profile of employees.
- Now and in the future.
- Risk of selection — if over 45s only join then cost will be closer to 7% if over 45 salary roll a high proportion of total salary roll.
- No mortality risk pre-retirement.
- No investment risk pre-retirement.
- Risk that internal conversions will not be cost-neutral.
- Risk that scheme will need to fund pensions in payment at a higher level in future than when conversion rates were calculated.
- Risk of fraud (increasing cost).
- Risk of administrative errors (increasing cost).
- Risk that members (or their dependants) are disappointed with ultimate benefits achieved.

(ii)

- Have company set conversion rates at retirement.
- Ensure that scheme is well-communicated.
- Allow flexible retirement ages.
- Introduce cash commutation open to reduce pension in payment.
- Improve death-in-service benefits — cheap but appreciated.
- Avoid having compulsory member contributions.
- Have a level company contribution rate for all members.
- But allow members to pay AVCs
- Deduct cost of ongoing expenses from members' funds.
- Buy-out annuities at retirement in members' names.
- Lower rates to give "cushion".

(iii) **Effective decision making**

- Trustees should have necessary skills individually and collectively.
- Decisions should only be taken by people with necessary skills.
- Trustees must have sufficient skills/training to evaluate any advice given.
- Trustees need sufficient in-house support on investment matters.
- Trustees should be paid.
- An Investment sub-committee should be set up to provide focus.
- Trustees should have a forward looking business plan.
- Give enough information to members.

Clear objectives

- Trustees should publish characteristics of each DC fund on offer.
- Trustees should take members' circumstances into account when choosing range of funds to offer.
- Trustees should offer a sufficiently wide range of DC funds for members to invest in.

Performance measurement

- Trustees should measure the funds' performance.
- Trustees should measure their own performance.
- Trustees should measure their advisers' performance.

(iv) **Member A**

Joint contributions in years 1 to 10 inclusive = 10% × basic salary

Joint contributions in years 11 to 30 inclusive = 12% × basic salary

Accumulate at (7% pa less 1% for expenses) 6% p.a. to age 65

$\bar{a}_{10}$ @ 6.0 / 2.5 = net 3.41% discount rate = 8.496

$\bar{a}_{20}$ @ 6.0 / 2.5 = net 3.41% discount rate = 14.572

$10\% \times £15{,}000 \times 8.496 \times 1.06^{30}$
$\quad + 12\% \times £15{,}000 \times 1.025^{10} \times 14.572 \times 1.06^{20}$

= 73,195 + 107,683
= 180,878

Convert to pension (i.e. ÷ 20)

= £9,044 p.a.

Salary at 65 = 15,000 × 1.025^{30} = £31,464 p.a.

Replacement ratio = $\dfrac{9,044}{31,464}$ = 28.7%

Member B

Joint contributions in years 1 to 15 inclusive = 12% × basic salary

Accumulate at (4% pa less 1% for expenses) 3% p.a. to age 65

$\bar{a}_{15}$ @ 3.0 / 2.5 = net 0.49% discount rate = 14.466

12% × £25,000 × 14.466 × 1.03^{15} = 67,613

Convert to pension (i.e. ÷ 20)

= £3,381 p.a.

Salary at 65 = 25,000 × 1.025^{15} = £36,207 p.a.

Replacement ratio = $\dfrac{3,381}{36,207}$ = 9.3%

(v) ***Limitations***

- Provides an illustration to assist members with financial planning for retirement.
- Members may choose an annuity that is not in the prescribed form (e.g. pension increases, spouse's benefits).
- Cost of annuities is likely to be different in practice to those in projection.
- Does not give members any idea of the sensitivity of the answer to the assumptions.
- Investments may not perform as expected.
- Asset allocation may change.
- Salary may not increase as assumed.
- Contributions may not be paid as expected.
- Differential assumptions for performance of different asset classes may influence members' investment choices.
- Will be out of date by the time members receive them.

Caveats

- Valid only at effective date.
- Provides a guide to benefits, not a quote/guarantee.
- Investments will not necessarily perform in line with assumptions.
- Salary growth will not necessarily be in line with assumptions.
- Small changes in the assumptions adopted can lead to large variation in the results.

- Expense allowance may need to change in the future.
- Cost of annuities will depend on level of increases, spouse's benefits chosen and market rates.
- Further advice should be sought from an IFA.
- State benefits will be payable in addition to scheme benefits.
- Assumes nil AVCs.

Additional disclosures

- Basic member/fund details.
- Have to provide statutory figures in addition to anything more tailored.
- Ideal would be to make an on-line benefit statement/interactive modeller accessible to members.
- Provide figures on a range of investment assumptions (e.g. to show the impact of +/– 1% change in these).
- Provide figures on a range of salary growth assumptions.
- Provide figures using a range of annuity options.
- Show State benefits.
- Show total reward on statements.
- Provide figures at an early retirement date.
- Provide stochastic illustration of results (funnel of doubt).
- Must comply with GN34.

(vi) ***Additional assumptions needed***

- Ignore dividend income on equities.
- Investment managers (and therefore DC funds) have performed in line with market.
- Salary increases midway through year in line with assumptions.
- Market value falls in equities occurred evenly through year.
- Expense deduction was actually 1% of fund value per annum.
- No change in investment strategy during the year.

Member A

Fund value at end of year 1

$= 10\% \times 15{,}000 \times 1.025^{½} \times 0.75^{½} \times 0.99 = 1{,}302$

Accumulate at (6% p.a. less 1% for expenses) 5% p.a. to age 65

$\bar{a}_{9}$ @ 5.0 / 2.5 = net 2.44% discount rate = 8.091

$\bar{a}_{20}$ @ 5.0 / 2.5 = net 2.44% discount rate = 15.870

$1{,}302 \times 1.05^{29} + 10\% \times 15{,}000 \times 1.025 \times 8.091 \times 1.05^{29}$
$+ 12\% \times 15{,}000 \times 1.025^{10} \times 15.870 \times 1.05^{20}$

$= 5{,}359 + 51{,}204 + 97{,}023$
$= 153{,}586$

Convert to pension (i.e. ÷ 22)

= £6,981 p.a.

Replacement ratio = $\frac{6,981}{31,464}$ = 22.2%

(vii)

- Essential to include some explanatory literature with this year's statements.
- Projected pensions at NRA are lower than shown last year.
- Despite contributions that have been paid during the year.
- Impact is worst for those members furthest from NRA.
- Impact is worst for those members invested in equities.
- Investments have not performed in line with assumptions.
- Cost of annuities has gone up since last year.
- because of increasing longevity/lower interest rates.
- Outlook for future returns has fallen.
- Might want to offer face to face communication/helpline for members who are concerned.
- Explanation about long term nature of pension saving.
- Is investment performance down to market performance or poor manager performance?

(viii) ***Whether the introduction of these underpins is likely to improve or worsen the chance of the scheme meeting the design objectives set out in (i) above***

- Option of underpins likely to make scheme more attractive.
- But more complex to communicate and administer.
- Other employers unlikely to be offering anything similar — these type of underpins are relatively unusual.
- Care needed on pricing of options to avoid Company incurring any extra cost.
- Costs will need to be reviewed on a regular basis.
- Protects Company from risk of members becoming disgruntled about the level of risk in DC schemes.
- Care needed re selection against scheme — need to think carefully about whether members should only have a one-off choice to select an underpin.
- Costs of running scheme likely to increase with increased complexity.
- Risk that members will invest their funds more aggressively once they have paid for the underpin.
- Effect of underpins will need to be included on annual benefit statement.

How you would estimate the cost of each underpin

- Express as % of eligible funds.

Investment return min 0%

- Stochastic modelling of assets to understand probability of negative returns occurring in any particular year.
- Impossible to calculate cost exactly.
- Separate modelling needed for each asset class.
- Consider cost of any derivative (or option) that would provide this downside protection.
- DB underpin
- Stochastic modelling needed to assess how likely underpin is to bite.
- Deterministic modelling indicates that underpin is likely to bite for members above age …
- Cost will vary by age (and possibly sex) of member.
- Impossible to calculate cost exactly.

How you would structure the underpin charge to members

Investment return min 0%

- Charges need to reflect investment choices made.
- Charges need to err on cautious side to reduce Company exposure to risk.
- Pass on additional running costs.

DB underpin

- Charges should be age-related (at least banded by age).
- Charges need to err on cautious side to reduce Company exposure to risk.
- Pass on additional running costs.

How the funding and investment strategy of the scheme might need to change as a result of introducing these underpins

- Actuary will need to advise about reserves required to fund underpin.
- Or Company could meet costs of underpin on a "pay as you go" basis.
- Company will want some say in investment strategy relating to additional reserves.
- Might wish to restrict range of fund choices offered to members (e.g. remove very volatile asset classes).
- Might purchase appropriate derivatives.

END OF EXAMINERS' REPORT