EXAMINERS' REPORT

April 2010 examinations

Subject SA4 — Pensions and other Benefits Specialist Applications

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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General comments

The overall standard was lower than expected. In many cases this was because candidates did not seem to be aware of the different roles of the employers and trustees with some worrying comments made about what each party can do.

As usual, the better candidates made their points in a clear and logical sequence, scatter gun approaches are much less successful.

Comments on individual questions

Q1 Solutions were mixed but part (iii) was answered poorly by most candidates. It was not clear that candidates understood what was a principal requirement with many giving too much detail on the calculations, forgetting the bigger picture and higher level principles.

Q2 Part (i) was generally well answered although some candidates over-complicated the calculations and then got an unreasonable answer.

For part (ii) only the better candidates made a link to the apparent discrepancies revealed in part (i).

The examiners were disappointed at the number of candidates who (presumably without any thought) used the same annuity factor at ages 55 and 65 in part (iii). Candidates should realise that in the absence of information in the question, the examiners expect them to use reasonable judgement.

Part (iv) was a straightforward question but some candidates appeared never to have seen an analysis of surplus/deficit. The better candidates showed their calculations, set out all the steps involved and summarised their answers clearly.

In part (v), few candidates realised that some employees could have pension enhancements written into their employment contracts. Most candidates wrote (at length) about early retirement factors. Some invented insurance policies that no sane insurer would ever provide.

Q3 In part (i), it was surprising that many candidates did not consider separately the DB and DC risks. This led to some confusing answers. Demonstrating that they hadn't read the question carefully some candidates also considered member risks in their solutions to part (i) which added to the confusion.

For part (ii) only the better candidates used the logical approach of considering the impact on a member's benefits, contributions, investment decisions and retirement plans.

For part (iii) answers were generally too limited.

Q4 Part (i) was reasonably well answered.

Those who planned their answer to part (ii) by looking separately at the general, employer specific and trustee specific factors scored well.

Others appeared to be thoroughly confused re the roles of the trustee and the employer.

Candidates found part (iii) challenging with many apparently misreading the question as they limited their answers to a long list of data requirements.

Too many candidates demonstrated poor exam technique with their solutions to part (iv). Frequently it wasn't clear whether the points being made were an advantage or disadvantage or which party the option was being considered from. Despite their best intentions, the examiners find it difficult to be sympathetic to candidates who write random statements.

Part (v) was reasonably well answered.

1 (i)

- The principal requirement is to disclose pension liabilities in a company's annual accounts in a consistent and understandable way
- This allows shareholders to make informed decisions about the value of their shares
- The basis of disclosures are prepared by the accountancy profession
- Having regard to fundamental accounting principles eg prudence, going concern, accruals
- With guidance for auditors and actuaries supporting the basis
- The international standards are set in IAS19
- and this is reflected in FRS17 issued by the Accounting Standards Board in the UK
- although the IAS19 requirements over-ride the FRS17 for listed shares
- plus where a US listing exists by FAS87 [amended by FAS158]
- FRS17 and IAS19 aims to value assets and liabilities at fair value
- Using the projected unit method for liabilities
- Liabilities valued at a discount rate based upon high quality corporate bond yields
- All other assumptions are best estimate
- Overall assumptions are the responsibility of the directors
- Subject to sign off by the auditor
- Items to be disclosed
    - Balance sheet – assets and liabilities
    - Reconciliations
    - Service cost
    - Key assumptions used

(ii)

- Companies listed on the UK Stock Exchange must disclose for each director, who is a member of a defined benefit pension scheme:
    - The increase in accrued pension during the year
    - Both gross and net of inflation
    - The increase in the transfer value over the year net of the director's own contribution
    - Usual to show transfer value at start and end of year
    - And for any money purchase top ups, only the contributions from the company need be disclosed

(iii)

- The Directors of the company should obtain a report from an actuary including a discussion of nature and extent of risk
- Which should then be disclosed in the company accounts
- The nature and level of risk of the pension liability should be disclosed by showing various sensitivities
- This is to recognise the uncertainty attaching to any defined benefit liability
- Where changes in assumptions are reasonably possible at the assessment date and these could materially affect the result they should be quantified

- In particular the risks arising from investments held should be disclosed
- By disclosing the percentage of assets held in each major asset category
- Together with the expected return for these categories
- Other risks should be identified, eg key person risks stating
- The exposures to these risks and how they arise
- The methods used to measure and manage risks, and
- Any changes in these risks since the previous disclosures
- Sensitivities to changes in investment returns should be discussed
- Together with potential changes in other key financial assumptions
- Such as inflation or salary increases
- Consider uncertainty re mortality assumption
- Explanation of relationship between trustees and company.

2 (i) **Changes in liabilities**

(a) Actives

Accrued liabilities increase at pre-retirement discount rate
i.e. 30m × 1.06 = 31.8
Salary roll over year in 10m (member contributions ÷ 5%)
plus additional year's accrual i.e. 25% × 10m × $1.06^{½}$ = 2.6
Total expected liability at year-end is £34.4m, less actual liability at year-end £20m
Some £14m reduction due to leavers and retirements.

(b) Deferreds

Accrued liabilities at beginning of year increase at 6% (pre-retirement) discount rate,
i.e. 50 × 1.06 = 53m
Expected liability at end of year is 53m
No deaths and revaluation in line with assumptions
and assuming no retirements in year
Actual end of year liability is 55m, so increase due to active leavers is £2m

(c) Pensioners

Accrued liabilities at beginning of year increase at 4% (post-retirement) discount rate, i.e. 80 x 1.04 = 83.2m
Less pensions paid with half-year discount i.e. 4 × $1.04^{½}$ = 4.1m
Expected pensioner liability is £79.1m
Therefore, increase due to retirements is some £21m

(ii) **Likely reason for results in (i)**

- £14m reduction in active liability but deferreds and pensioners increased by £23m.

- Some relates to early leavers taking deferred pensions (i.e. the £2m increase from (i)(b)).

- No allowance for withdrawals in assumptions so some withdrawal profits, but not significant.

- £2m of deferred liability maybe equivalent to £2.5m of active liability $[2.0 \times (1 + (.045 - .030))^{15})]$
  Some £11.5m of reduction in activity liability relates to retirements.

- But pensioners have increased by £21m.

- Suggests either significant augmentations to the benefits anticipated for members retiring

- … or early-retirement on terms that are more generous than actuarially "cost-neutral" (possibly due to redundancy exercise if terms generous).

- Or significant data problems

(iii) **Impact of senior executive retirement**

Expected liability at year end (as an active member)

- $15/25 \times 2/3 \times 1.0\text{m} \times 1.045 \times 1.015^{-10} \times$ annuity@65, say 20 = 7.2m

- (Uniform accrual of 2/3 promise under projected unit method)

- Reserve at year-end allows for one salary increase

Actual liability at year end as a pensioner

- $2/3 \times 1.0\text{m} \times$ annuity at age 55, (say 26) = 17.3m

- Annuity factor at age 55 assumes approx 3% increase in value of joint life + reversionary annuity for each year early (ie $26 = 20 \times 1.03^{10}$)

- Strain on early-retirement approx £10m (17.3 – 7.2 = 10.1)

Note that this is broadly consistent with the £9.5m (21.0 – 11.5) identified in part (ii) as being the apparent unexplained increase in the pensioner liability

(iv) **Analysis of change in deficit**

- Deficit at last valuation was 140 – (80 + 50 + 30) = (20m)

- Deficit at this valuation = 150 – (100 + 55 + 20) = (25m)

- Interest on deficit is ~ 5% (rough weighted average of pre/post retirement discount rates)

- i.e. 5% × 20m = (1.0m)
- Actual contributions paid were 4.5 + 0.5 = 5.0 m
- Accrual cost 25% × 10.0m = 2.5m
- Allowing for half-year's interest, extra contributions paid would reduce deficit by (5 – 2.5)* $1.05^{½}$ = 2.6m
- So, expected deficit at this valuation was (20) + (1.0) + 2.6 = (18.4m)
- Expected assets at year end = 140 × 1.05 + (5.0 – 4.0) × $1.05^{½}$ = 148.0m
- Actual assets = 150m, so investment gain of 2.0m
- Withdrawal profits estimated in (ii) at 0.5m
- Executive early retirement strain (10.1m) from part (iii)

In summary

Deficit at previous valuation	(£20.0m)
Interest on deficit	(£1.0m)
Deficit funding	£2.6m
Anticipated deficit now	(£18.4m)
Investment gain	£2.0m
Executive retirement	(£10.1m)
Early leavers	£0.5m
Balancing item/misc.	£1.0m
Actual deficit at this val'n	(£25.0m)

(v) **Trustee actions**

- Trustees have a responsibility to ensure the security of all members' benefits.
- This retirement has significantly increased the deficit ...
- ... and the potential advance in priority may reduce security for actives and deferreds further
- If this is a long-standing promise in employment contracts for senior executives (or others) Trustees should know about them:
    - require the employer to notify trustees of pension promises made to current senior employees
    - and proposed arrangements for future promotions
    - pre-fund the promises made in some way
    - e.g. making separate and prudent assumptions about early retirement
    - when (assumed age) and on what terms (reductions)
    - considering impact on ongoing funding ....
    - ... and discontinuance measures (buy-out and S179)

    - ... particularly the issue of advances in priority

- If not-contractual, but part of a recent settlement between the employer and the individual
    - review trustee powers in rules regarding early retirement/augmentation
    - require the employer to notify trustees of proposed augmentations
    - or at least to fund them at the time they are granted ...
    - on terms acceptable to the trustees
    - i.e. again considering all liability measures and issues of changes in priority
    - probably means using buy-out terms?
    - including this issue in the Statement of Funding Principles and Recovery Plan agreements

3 (i) **Risks for employer DB**

- Reduction in flexibility of the employer's long term funding strategy

- Scheme may become less affordable or unaffordable

- The cost of providing DB benefits for the executives will be higher than if they were included in the DC scheme

- Ability of the sponsor to fund the scheme may be undermined

- Resulting impact on the trustees behaviour

- If the sponsor covenant is weakened, trustees would reflect this in the assumptions used to determine the technical provisions

- Trustees may also require a change in investment strategy to bonds

- Both of the above would require an increase in contributions

- Need to consider impact on liabilities and assets

- If deficit increases, contributions will need to increase

- The risk based PPF levy will increase if the sponsor covenant deteriorates and/or if the long term funding level deteriorates as a result of the poor equity performance

- Mature scheme – large cashflow requirements – assets realised at low values?

- Scheme benefits may have to be altered going forward if rising costs are unaffordable

- Can executives be switched to DC

- Or employee contributions may need to increase

- Any of the above may cause HR issues
- Employer may have to increase contributions at inopportune times from a business perspective

- Increasing contributions may force a wind up with resulting buy out cost implications for the company

- Possible deterioration in the FRS17 position – Undermining shareholder confidence or ability to do deals

- Risk to the overall solvency of the employer if the scheme is large relative to employer

Risks for employer DC

- Less risk for the employer than under the defined benefit pension scheme

- Even if the scheme is not targeting benefit then there may be pressure for the employer to increase contributions (similar issue if any guarantees or underpins)

- Otherwise members will need to increase contributions to get the same expected pension as originally planned, may lead to damaged reputation

- May lead to employee discontent with employer potentially exposed depending on how the scheme was set up and communicated

- The fact that the DB scheme is still open to executives may cause further discontent

- If the employer is removing defined benefit deficit then the employer contributions on the defined benefit and defined contribution pension schemes may be very different to target the same benefit

- In the longer term if employee/employer contributions to the DC scheme do not increase then the employer may find that members with similar service and salary levels are having very different retirement outcomes depending on whether they are in the defined benefit or defined contribution pension schemes.

- The above two outcomes may lead to discontent among members of the DC scheme and subsequent HR issues for the employer

- In the longer term HR policies such as encouragement of early retirement may no longer be practical or new policy needed to cover older employees who cannot afford to retire

(ii) **Risks for member DB**

- May not receive full scheme benefits if scheme becomes unaffordable to the sponsor
- Benefit structure may be significantly changed including possible increases in member contributions
- Scheme may have to be wound up or closed to future accrual
- If the scheme has to enter the PPF then the PPF may not cover their scheme benefits
- More important for executives as PPF limits more likely to bite for them
- Plans for retirement/early-retirement may have to be changed
- Options terms may be reduced or removed
- Any significant changes to the scheme will be potentially more serious for the older members who have less time to put in place alternative arrangements
- If the difficulties in the scheme are affecting the finances of the employer, members may find their jobs or terms and conditions of their jobs under threat

Risks for member DC

- More risk for the member than under the defined benefit pension scheme
- Unless member opted to switch out of equities before fall in equity values retirement benefits will less than expected if contribution levels aren't adjusted
- Alternatively higher member contributions than anticipated will be required to target the original level of benefits expected
- Timing – Members having to encash their funds when asset values are depressed
- Poor equity performance may be accompanied by strong performance in bond markets thus exacerbating the difficulties for members who have to secure an annuity on retirement

- Uncertainty over equity performance will make member investment decisions more difficult

- Members may have to alter their retirement plans or expected lifestyle in retirement. e.g. working past normal retirement age, working part-time in retirement

- If death in service benefits are a function of the value of the fund then they will now be less valuable

- Unlikely to lose any value in current fund if scheme wound up

(iii) **Defined Benefit**

General measures

- Investigated the employer's ongoing commitment to defined benefit provision given decision to close

- This may have prompted a change in investment strategy towards less risky assets

- The employer may have been seeking to reduce the volatility of the costs of the scheme and may have supported such a move to help achieve this objective

- Could have switched assets to match liability structure

- Redirected future contributions to less volatile assets

- Could have asked the employer for additional security in return for remaining invested in equities

- Could have required contingent contributions from the employer if the scheme's solvency position deteriorated as a result of poor equity performance

- Or ratchet in recovery plan if equities fall

- Could have requested extension of closure to executives

- Wind up the defined benefit pension scheme

Governance issues focused on investment

- At the point of closure they should have ensured they had sufficient expertise to make appropriate investment decisions for the closed scheme

- Set up an investment subcommittee within the trustee board if it did not already exist

- Review Statement of Investment Principles at point of closure and on a more regular basis

- Undertake an exercise to investigate matching the assets to the nature, duration and currency of the liabilities with the closed scheme in mind

- Increased use of cashflow models and ALM

- Investigate whether to insure any liabilities e.g. using annuities

- Affordability discussions with the employer regarding a matched investment strategy

- Put in place a rigorous selection process for investment managers

- Ensure their equity portfolio was sufficiently diversified or use derivatives

- Awareness of the relative levels of risk carried by different stocks in their equity portfolio

- Increase monitoring of investment strategy through regular investment reviews

Having tolerance levels/trigger points related to equity underperformance whereby the trustees are notified by the investment manager of falls in the value of equities e.g. the trustees are notified if the equities they are holding fall by more than 5%.

4 (i)

- Work with trustees to review / change investment strategy so that assets and liabilities are closely aligned:
    - FRS liabilities assessed relative to corporate bonds
    - so reduce equities, increase proportion of bonds of appropriate fixed/real nature
    - if required, change duration of bonds held to match duration of FRS17 liabilities
    - use derivatives where appropriate – e.g. interest rate or longevity swaps
- Review / amend benefits, e.g:
    - stop future accrual for active members, offer DC or CARE scheme for future benefits
    - cap (or change definition of) pensionable salaries, e.g. only basic salary would be pensionable - to ensure sponsoring employer has control of actives liabilities, or limit future increases but care re Section 67 issues.

- Manage liabilities, e.g:
    - Insure all past service benefits
    - Insure benefits for one category of membership – e.g. pensioner buy-in
    - Offer transfer value incentives to (hopefully) remove significant portion of deferreds
    - Carry out early retirement exercise
    - Conduct bulk trivial commutation exercise to remove the risks associated with paying small pensions
    - Stop any discretionary benefit improvements (e.g. pension increases or early retirement on generous terms)

(ii) **General**

- Is a market available to insure this size of liabilities?
- How competitive is the insurance market? Are good terms available?
- How do terms/prices now compare to previous or possible future dates? E.g. is there an opportunity now to take advantage of very cheap prices?
- What options are being offered by insurers and other bulk annuity providers?
- Are there any innovative products available
- Is it feasible to do a buyout or buy-in of pensioners only?
- Who will pay adviser fees?
- Have all parties explored other options to remove liabilities?
- Some of which have the potential to reduce potential cost to insure benefits
- – e.g. enhanced transfer values

Sponsoring employer's considerations

- What is the estimated cost to secure benefits under buyout or buy-in policies?
- If estimate seems attractive, then could approach the insurance market for quotations
- There may be a deficit relative to the cost to secure benefits; can sponsoring employer afford it?
- If employer cannot afford to meet deficit now, should they (with agreement of trustees) have a short term buyout funding target?
- With plan to do full buyout in, say, five years' time
- Could do partial buyout or buy-in for pensioners first
- As they are usually the easiest and cheapest category to be secured by annuities
- What impact will partial buyout or buy-in have on the funding basis or FRS17 basis?
- E.g. if pensioner buyout cost is lower than FRS17 liabilities, then could release a surplus – potentially providing extra security for non-pensioner members' benefits
- Decision needed on active members
- Loss of future accrual unlikely to be popular

Trustees' considerations

- Is the suggestion in the best interest of members?
- If partial buy out, consider security of remaining members
- How does the security of bulk annuity providers compare to that of the employer?
- What is the strength of the employer's covenant?
- If weak, then trustees may opt to secure benefits, but sponsoring employer would be likely to be less able to meet any deficit
- If strong, trustees may be more relaxed – or ask for significant extra funding
- Buy-in may be more attractive as it does not treat pensioners more favourably by full discharge of liability to member.
- Who has power to windup the scheme?
- Check Trust Deed and Rules
- What benefits are being secured by annuities? Usual to exclude discretionary benefits
- Can annuity providers cover all benefits, e.g. some benefits may be too complex in which case some providers may not offer quote
- Loss of connection with members
- What effect will this have on investment strategy
- Consider communications with members

(iii)

- Insurers base their premium calculations on the member data provided for the Scheme.

- Once an insurer has accepted scheme liabilities it must be able to guarantee that the benefits can be paid.

- The insurer takes on the risk of any errors in the data coming to light in future.

- Insurers will seek to reduce risk and protect their profit margins.

- They will therefore price cautiously where there is uncertainty.

- Insurers may include a risk premium in their quote where scheme data is incomplete or poor.

- If data is of low quality they may refuse to quote.

- Where data is incomplete, insurers will make assumptions.

- … which will be conservative.

- … and different insurers may make different assumptions.

- … making it difficult to compare quotes from different insurers.

- Pension schemes may not hold the full list of data items that insurers use to calculate premiums.

- … e.g. postcode data, spouse's DOB.

- Collating this information can give a cheaper price if the actual data shows a better picture than the insurer's assumptions.

- Likewise, scheme experience data (e.g. actual proportion married at death, mortality) can be used to show more favourable experience than the insurer would otherwise assume, leading to cheaper premiums.

- To protect itself, an insurer is likely to carry out due diligence on the data.
- If problems are found this is likely to extend the time taken for the process.

- At this point it may be discovered that the scheme's liabilities are higher than previously thought.

- … so the company finds itself short of the funds required to buy-out.

- Insurers may insist on indemnities allowing them to increase the premium after the deal is agreed.

- … which would leave the company open to risk.

- Reinsurer may have stipulations on quality of data.

(iv) **Advantages of (a)**

Company

- No up-front cost to company
- So cheaper than other options
- Savings on FRS17 basis, so possible £10m surplus (using 1 Jan 2009 basis as rough guide)
- Possible savings on funding (if funding basis stronger than accounting basis)
- Option to buyout non-pensioners at a later date – maybe at competitive prices

Trustees

- Convenient way of eliminating risks for largest portion of liabilities
- Reduced volatility of funding level as significant matching asset
- Scheme benefits from protection in the insurance market (FSA regime), but retains protection from the PPF
- Added security possible if a pool of assets of insurer ring-fenced to be available for the scheme if insurer runs into financial difficulties

- Tends to be larger market for immediate annuities, so more competitive, could negotiate price
- Essentially a trustee investment, so members notice no change
- Opportunity to spread risks to two or more insurers if buyout non-pensioners at a later date
- Easier to provide future discretionary increases

Disadvantages of (a)

Company

- Only removes part of the risks
- Additional cost if insurer defaults

Trustees

- Susceptible to strength of covenant of insurer A
- Still exposed to covenant of Sponsoring employer
- Trustee investment so scheme is not wound-up
- and trustees still responsible for managing the risks for the non-pensioners
- and responsible for managing the scheme as a whole
- Future valuations of the scheme – value of insurance contract may be difficult to obtain

Advantages of (b)

Company

- discharges all the liabilities
- no further PPF levies

Trustees

- assets and liabilities transferred to insurer, so added security to members' benefits
- Full FSA backing
- Clean break of scheme from sponsor once buyout completed

Disadvantages of (b)

Company

- No immediate clean break from scheme
- Shareholders still exposed to pension risk until scheme is wound up
- Upfront cost of £40m
- Decision needed on future service
- If closed to future accrual could have HR implications

Trustees

- Windup may take longer than other options to complete
- Scheme retains exposure to risk before windup is completed
- Ongoing management by trustees still required until windup completed
- Exposed to covenant of insurance company
- Benefits provided in the event of insolvency of insurer may not be better than PPF

(v) Possible reasons for weaker pricing basis vs funding (same as accounting) basis:

- Very competitive market, so insurer willing to adjust profit margins/price accordingly
- Insurers may not have the full pensioner data
- Or could have full data and allowed for post code mortality effects
- Insurer's price (or pensioner valuation) could be wrong
- Insurer's price could be based on a different date – so different market conditions compared to 1 Jan 2009, or significant experience
- Insurer may be using weaker mortality assumptions – trustees may have chosen a prudent mortality basis for funding
- Insurer may also be using yields on lower quality corporate bonds for pricing,
- but trustees may be using the corporate bond yield at an average term vs the insurer using different terms (or the full yield curve)
- insurer could use a lower inflation assumption (if relevant)
- trustees may have made a provision for expenses at a higher level than the insurer's allowance
- FRS17 basis may allow for future discretionary pension increases – these are unlikely to be secured in the annuity market

END OF EXAMINERS' REPORT