

**EXAMINATIONS**

April 2001

**Subject 404 — UK Fellowship Pensions**

*Paper One*

**EXAMINERS' REPORT**

### Question 1

- (i) Generally well done.
- (ii) Better candidates concentrated on the characteristics as an investment. Too many gave a standard answer on the different ways such a policy could be administered.
- (iii) Most people commented on mis-matching. Better candidates were specific on the sources of the mis-matching.

### Question 2

- (i) Generally well done.
- (ii) Few candidates explored the consequences for members of a DB to DC switch.

### Question 3

- (i) Generally well answered.
- (ii) Poor candidates described checks on aggregate data, rather than individual data. Better candidates discussed the contribution rate as well as the funding level.
- (iii) Many gave an explanation of how to perform an AOS. Better candidates considered the contribution rate as well as the funding level.

### Question 4

- (i) Some people didn't note the statement that the decision to wind up had already been made, and so discussed the pros and cons of this course of action. Some candidates discussed operation as a closed scheme even though this was specifically ruled out in the question.

Good candidates made the conclusion that there would be no guarantees on the level of future contributions very clear, rather than burying it away in the detailed arguments. They structured their answer to ensure that the finance director understood the situation without feeling patronised.

- (ii) The lists produced by the better candidates were in a logical order which made it less likely that they would omit an important step.

### Question 5

- (i) Many people confused employer and trustee issues.
- (ii) Good candidates stated assumptions with *reasons*, as requested.

Good answers also identified that it was the cost of the *improvement* that was required and calculated this directly.

- (iii) Most candidates correctly identified that the second director was affected by the earnings cap and identified the benefits to the member of the security of a funded arrangement. However, many people discussed the disadvantages of the tax treatment of a FURB, which was not required.
- (iv) This was generally poorly done. Candidates who identified the need to allow for the taxation of investment return; the fact that contributions were taxed as a benefit in kind; and the fact that the benefits could be paid as a tax-free lump sum received credit.

### **Question 6**

- (i) Generally well done.
- (ii) Nearly all candidates identified the probability of a participation period, but nearly all answers took a standard form.
- (iii) Nearly all candidates identified several reasons for a difference in calculation bases. The better ones described how these differences might affect the basis (or method).
- (iv) Better candidates gave advice that focused on the need of the trustees to take some action as a result. This required wider thinking than just a discussion of the statutory constraints on the amount that the trustees could pay.

- 1**
  - (i) Lump sum death in service benefits  
Death in service pension benefits  
Stop loss or catastrophe insurance  
Deferred annuities  
Immediate annuities  
With profit deposit administration  
Managed Funds  
Trustee liability  
AVC contracts
  - (ii) Usually a combined administration, actuarial and investment package  
  
Guaranteed benefits are provided  
with bonuses on benefits  
  
Surrender value unknown  
  
Charges concealed  
  
Difficult to measure investment return  
  
Provides a smoothed return  
  
Level of guarantee will define underlying asset mix
  - (iii) MFR estimates buyout cost of pensioners

Based on underlying gilt yields in the market

For remaining members individual transfer values calculated

Market Value Adjustment applied to liability (calculated on long term assumptions)

For members more than 10 years from retirement MVA directly linked to equity yields

As approach NRD MVA blend into gilt adjustment

Therefore liabilities will move in line with UK equity yields and gilt yields

Appropriate mix to match liabilities will depend upon maturity of scheme

With profit funds generally hold higher proportion of gilts to cover guarantees

Fund designed to produce good with profit performance

Individual investors can not change asset mix

Therefore potentially volatile funding on MFR basis

**2** (i)

FAS87 requires PUC method SSAP24 requires a method which gives a regular cost which is likely to be a stable percentage of salaries

FAS87 requires best estimate individual assumptions. SSAP24 requires overall best Estimate

Discount rate under FAS87 must be market related

FAS87 may use different rates for discounting liabilities and expected return on assets. SSAP24 usually uses same rate

Assets under FAS87 must be taken at market value. No such requirement under SSAP24

FAS87 allows initial surplus/deficit to be spread over 15 years if longer than average future working lifetime. SSAP24 spreads over average future working lifetime

FAS87 treats different sources of initial surplus in different ways

Amortisation method prescribed for FAS87. SSAP24 allows rational and consistent method

FAS87 has corridor rule under which some surplus/deficit may be ignored

FAS87 requires annual valuations. SSAP24 uses results of triennial valuations.

Responsibility for assumptions under FAS87 rests with Company Directors.  
Under SSAP24 based on actuary's judgement

FAS87 requires allowance for accrued proportion of prospective benefits.

The disclosures under FAS87 and SSAP24 are different

(ii)

The main changes from SSAP24 proposed for FRED20 are:

- Scheme assets will be measured at market value
- Liabilities will be valued using AA corporate bond discount rate
- Immediate recognition of actuarial gains and losses
- Disclosed in Statement of Recognised Gains and losses (STRGL)
- Greater disclosure information
- Annual detailed calculations needed

Pension costs in company accounts are likely to be more volatile

Easier for investors to compare results with those disclosed under IAS19 and FAS87

More professional fees for more frequent calculations

There is unlikely to be any impact on members unless

Volatility may encourage finance directors to switch from DB to DC arrangements

Transferring risk to the members

May include a reduction in overall company contributions to pension benefits

- 3**
- (i) Trust deed and Rules  
Scheme booklet  
Any announcement letters  
Breakdown of Scheme assets at valuation date  
Copy of last valuation report  
Scheme accounts for the intervaluation period  
Member data for actives, deferred and pensioners at the valuation date  
And member data for those who have been scheme members at some time since the last valuation including reason for leaving

- (ii) Check current non pensioner ages are less than NRD
  - Age at date of joining is greater than minimum entry age
  - Contributions are consistent with salary and service
  - Look at maximum and minimum salaries
  - GMPs and NI details are reasonable
  - Date commenced Pensionable Service consistent with service date
  - Date commenced pensionable service before valuation date
  - If provided accrued pension consistent with data
  - Check transfers in ties up with a benefit
  
- (iii) Carry out valuation using same basis as was used for previous valuation
  - Calculate average pensionable salary at this valuation and last valuation
  - Calculate average past service at this valuation
  - Estimate average past service at last valuation taking account of membership changes disclosed in company accounts
  - Estimate expected active liability by multiplying last times liability by average service and average pensionable salary at this valuation divided by estimated average service and average pensionable salary at last valuation
  - Adjust for the implications of any changes in average age (if disclosed)
  - Estimate expected deferred pension liability by multiplying last times liability by total deferred pensions at this valuation divided by total deferred pensions at the last valuation
  - Estimate expected pensioner liability by multiplying last times liability by total pensions in payment at this valuation divided by total pensions in payment at the last valuation
  - Compare future service contribution rate with that calculated at the previous valuation
  - adjusting for implications of any changes in average age (where disclosed)

Compare any loadings for insurance costs and/or expenses with those disclosed in the previous valuation report.

Take account of any benefit changes.

Take account of any changes in method.

4 (i)

Check trust deed and rules does not require any top up

Scheme will be subject to debt regulations

You will be required to certify at a date between wind up commencing and assets being distributed whether there is a debt

Date is determined by trustees

Potential debt is calculated using MFR basis not funding/expressing basis

Basically the buy out cost of pensioners

Plus transfer values for actives and deferreds

And prescribed expense loading

Professional guidance on how this is carried out

Which actuary must comply with

Whether there is any further payments from employer will depend upon:

Current MFR position

Investment strategy adopted by trustees

Time taken to finally wind up scheme

You cannot guarantee that there will be no further contributions.

(ii)

Check what trigger is needed under rules to action wind up

Check trust deed and rules on any actions required

Notify all members within one month of wind up date

Provide members with an update on the position at least annually

Confirm membership of the scheme at the wind up date

Confirm accrued benefits for members at wind up

Review investment strategy. For example consider adopting gilt matching policy

Where necessary obtain legal advice on issues such as equalisation, distribution of surplus

Agree contracting out liabilities with the DSS

Get actuary to calculate whether there is a debt on the employer and action debt if required

Obtain buy out quotations for purchasing immediate and deferred annuities

Provide members with individual option forms

Distribute assets through transfer values and buy out policies

Consider trustee indemnity insurance

Prepare final accounts/wind up trust

Inform Registrar

Order of securing liabilities

Inform PSO scheme is wound up

**5** (i) Trustees primary concern is the security of members benefits.

Will need to consider trust deed and rules to see who has power to grant improvement

and who determines how it is funded.

In the majority of cases consent from trustees would be needed subject to company meeting any additional contributions required.

There is an immediate past service cost as accrued benefits have been improved.

Would need to consider current funding position of the scheme.

Can this past service cost be met from existing surplus.

If scheme is in deficit likely to want an immediate cash injection.

Trustees need to consider whether the use of surplus in this way (i.e. for one individual) is appropriate.

If company requests spreading of past service cost the trustees will need to consider the financial strength of the company and its ability to meet the cost over the requested period

and the likelihood of the scheme continuing.

In respect of future service cost this should be met as director accrues additional benefits.

Should this be met by separate identifiable contribution for him or by an increase in overall funding rate.

Are there to be unreduced early retirement benefits

should these be funded in advance or by an additional cash injection at retirement.

How volatile are bonuses likely to be?

Will Director contribute to this extra benefit?

Trustees would wish to consider whether this sets a precedent.

Trustees will need to check that IR limits not breached

- (ii) Assume no other retirement benefits.  
Member retires at age 60.  
No allowance for death before retirement.  
Assume 20% early retirement reduction in scheme at age 60.  
Assume 7% interest pre 60, 5% interest post 60, 5% salary, 3% price inflation (with reasons).  
Assume bonuses remain fixed percentage of basic salary.  
Assume director is married.  
Assume 10 salary increases before retirement.  
Assume member continues to pay same rate.

Scheme would provide (at 60) £62,053 p.a.

$$\frac{25}{60} \times 120,000 \times 1.05^{10-1} \times 0.8$$

Required benefit is £161,338 p.a.

$$\frac{2}{3} \times (120,000 \times 1.05^{10} + 30,000 \times 1.05^{10-1})$$

Annuity at age 60 is approx 17.5

Capital cost is  $(161,338 - 62,053) \times 17.5 = 1,737,000$

As a percentage of basic salary for 10 years net 2% = 82%

$$\frac{1,737,000}{(120,000 \times a_{\overline{10}|} \times 1.07^{10})}$$

- (iii) Earnings used in the calculation of Revenue limits for members joining after June 1989 are capped.

Would need to provide benefits in excess of 15/30ths of the Cap Subject to maximum of 2/3rds cap less retained benefits through non approved arrangement.

A FURB is set up under trust therefore there is security for the Director.

It is exempt from some pension legislation.

There are no limits on benefit levels at retirement age.

Benefits may be entirely commuted for a tax free (currently) lump sum at retirement.

Death benefits under the FURB are currently not subject to Inheritance Tax (if paid at trustee discretion).

- (iv) Employees are taxed on employers contributions as a benefit in kind. Investment income and gains are subject to income tax and CGT. Assume say 5% return in FURB (composite tax rate on 7%). Any additional salary paid to the director will be subject to National Insurance. Initially would normally maximise pension from approved scheme as most tax efficient.

Basic scheme entitlement at 60

$$\frac{15}{60} \times 120,000 \times 1.05^{15-1} \times 0.8 = 47,518$$

Assumes pensionable salary not limited to CAP (assume £91,800).

Maximum pension from scheme

$$\frac{15}{30} \times 91,800 \times 1.03^{15} = 71,511$$

Extra liability =  $71,511 - 47,518 = 23,993$

As a percentage of basic salary =  $(23,993 \times 17.5) / (120,000 \times a \frac{2\%}{15} \times 1.07^{10})$   
 $= 10\%$

Total target benefit is

$$\frac{2}{3} \times (120,000 \times 1.05^{15} + 30,000 \times 1.05^{15-1}) = 205,913$$

Capital cost outside scheme  $(205,913 - 71,511) \times 17.5 = 2,352,035$ .

But paid as tax free lump sum therefore fund for  
 $0.6 \times 2,352,035 = 1,411,221$

As a percentage of basic salary =  $1,411,221 / (120,000 \times 15 \times 1.05^{15}) = 37.7\%$  to FURB.

Need to compensate Director by  $(0.4/0.6) \times 37.7\% = 25\%$  of basic salary.

Note: National Insurance would be payable on the compensation to the Director.

**6** (i) Definition of terms

Obligations of seller

- e.g. any example) to supply all relevant information

Other obligations of buyer

- e.g. (any example) make necessary applications to supervisory authorities (no marks for definition of benefits)

Calculation and timing of transfer amount

Who does calculations

“Actuary’s letter” setting out assumptions for transfer

Warranties regarding accuracy of information, etc

Shortfall/excess clause

Dispute procedure if actuaries fail to agree

Transfer participation period

(ii) This is usually allowed for by a “Participation Period” (PP)

- buyer participates in sellers scheme for a period to allow formalities to be completed

The terms will be set out in Sale & Purchase Agreement

- contribution rate during PP
- contribution for protection benefits
- contributions for scheme expenses
- whether new employees may be admitted
- timing of calculation of bulk TV
- obligations of buyer/seller during PP
- participation period may be set to allow for ease of any staff restructuring to take place after sale
- actuary should be made aware of any plans in setting basis

(iii) The mix of staff will be different in old and new schemes

Old scheme - manufacturing and technical

New scheme - greater proportion manufacturing

As a result, some assumptions may be different e.g.

- average age (higher in new scheme as new technology development usually has younger staff)
  - this may affect basis (e.g. investment assumptions)
  - or method
- turnover (often higher in technology development than manufacturing)
- salary — average higher and growth (faster in development)
- any other example

As a result, the basis used may not be the same as would be appropriate in valuing the scheme as a whole.

The new scheme will also be of a smaller size. If the size is substantially different, this may affect the expense allowances.

Basis agreed may be different to allow for agreed costs from commercial viewpoint on both sides

(iv) Points to cover:

- Trustees are not bound by the Sale & Purchase Agreement
- The seller must make good any deficit produced
- They must, however, ensure the transfer offered is fair to the transferring members.
- Trustees should seek advice of scheme actuary
  - who may have been part of the Sale & Purchase negotiations
  - and on whom the Trustees may reasonably rely for advice
- Trustees may, however, seek independent legal advice
- What have the Trustees done in the past?
- They may also rely on the Trust Deed & Rules to support them, as any deal must be in accordance with these
- Any transfer will require actuarial certification or member consent. They may wish to discuss the issue with the Scheme Actuary or members as appropriate
- Ultimately they may wish to enter negotiations with all other parties to ensure all terms are fair
- Trustees may seek assurances from the employer on agreements to resolve any shortfalls perhaps from sale value