Institute and Faculty of Actuaries

EXAMINERS' REPORT

SP4 - Pensions and Other Benefits

Specialist Principles

April 2023

Introduction

The Examiners' Report is written by the Chief Examiner with the aim of helping candidates, both those who are sitting the examination for the first time and using past papers as a revision aid and also those who have previously failed the subject.

The Examiners are charged by Council with examining the published syllabus. The Examiners have access to the Core Reading, which is designed to interpret the syllabus, and will generally base questions around it but are not required to examine the content of Core Reading specifically or exclusively.

For numerical questions the Examiners' preferred approach to the solution is reproduced in this report; other valid approaches are given appropriate credit. For essay-style questions, particularly the open-ended questions in the later subjects, the report may contain more points than the Examiners will expect from a solution that scores full marks.

For some candidates, this may be their first attempt at answering an examination using open books and online. The Examiners expect all candidates to have a good level of knowledge and understanding of the topics and therefore candidates should not be overly dependent on open book materials. In our experience, candidates that spend too long researching answers in their materials will not be successful either because of time management issues or because they do not properly answer the questions.

Many candidates rely on past exam papers and examiner reports. Great caution must be exercised in doing so because each exam question is unique. As with all professional examinations, it is insufficient to repeat points of principle, formula or other text book works. The examinations are designed to test "higher order" thinking including candidates' ability to apply their knowledge to the facts presented in detail, synthesise and analyse their findings, and present conclusions or advice. Successful candidates concentrate on answering the questions asked rather than repeating their knowledge without application.

The report is written based on the legislative and regulatory context pertaining to the date that the examination was set. Candidates should take into account the possibility that circumstances may have changed if using these reports for revision.

Sarah Hutchinson
Chair of the Board of Examiners
July 2023

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A. General comments on the *aims of this subject and how it is marked*

The aim of the Pensions and Other Benefits Specialist Principles subject is to instil in successful candidates the ability to apply, the mathematical and economic techniques and the principles of actuarial planning and control needed for the operation on sound financial lines of providers of pensions or other employee benefits.
This subject examines the ability of candidates to apply core actuarial techniques and concepts, together with specific knowledge of pensions and other benefit arrangements to simple, but practical situations.

The Examiners therefore look for candidates to apply their knowledge of the Core Reading to the specific situation that the Examiners asked, having read the question carefully. Many candidates write around the subject matter of the question in more general fashion or focus on one aspect of the issue at great length, in either case gaining few of the marks available.

Good candidates demonstrate that they have used their time well - an attempt to get a logical flow is a big advantage in making points clearly and without repetition. This also enables candidates to use the latter parts of questions to generate ideas for answers to the early parts (or use their solutions to earlier parts of questions to create a structure for latter parts). Time management is important so that candidates give answers to all questions that are roughly proportionate to the number of marks available. Candidates who give well-reasoned points, not in the marking schedule, are awarded marks for doing so.

B. Comments on *candidate performance in this diet of the examination.*

This was a well-balanced exam paper and well prepared candidates were able to score well and pass. The pass mark of 65, reflects the performance of a minimally competent candidate.

It is very important that candidates consider all aspects of the question, and read the preamble fully. By using all of the information available, candidates can ensure they give a full answer. Giving just a little more detail to clearly show understanding can turn a close fail into a pass.

The questions that were least well answered in this paper were questions Question 2(i) relating to employer covenant, Question 3 relating to a cash lump sum benefit and Question 5(ii) and Question 5(v) relating to transfer values.

Candidates are reminded to study the whole syllabus as all areas may be tested.
Candidates are reminded to pay attention to the command verbs. A list of what is expected for each command verb is available on the IFoA website.

C. Pass Mark

The Pass Mark for this exam was 65
135 presented themselves and 70 passed.

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Solutions for Subject SP4 - April 2023

Q1

Set the objectives	[½]
which should be quantifiable	[½]
and include the relevant time period under consideration	[½]
e.g. meeting a funding target over 5 years with 90% probability of success (or other suitable example)	[½]
and subject to this to achieve the highest possible returns	[½]
Determine liability cashflow data	[½]
including determining how to value options and guarantees	[½]
Determine asset cashflow data	[½]
using expected return, variances, covariances	[½]
Determine contribution cashflow data	[½]
Determine funding method and assumptions relevant in assessing the funding target	[½]
Project assets and liabilities	[½]
Ensure consistency in valuing these	[½]
and correlations between asset and liability cashflows	[½]
A stochastic model is usually used for the economic cashflow elements	[½]
and a deterministic model for demographic elements	[½]
Run an agreed number of simulations	[½]
and results checked and peer reviewed by suitably qualified individuals	[½]
Compare projected assets against liabilities	[½]
Outputs can include a range of investment policies for a particular set of assumptions	[½]
Test robustness of policies	[½]
e.g. sensitivity analysis, scenario testing, stress testing	[½]
Report to client on the investment policies that appear sensible under most reasonable sets of assumptions	[½]
Set the objectives	[½]
which should be quantifiable	[½]

[Marks available 12½, maximum 5]

[Total 5]

This question was generally well answered.

Q2

(i)

The funding position of the scheme should be considered, to determine the importance of the sponsor covenant	[½]
A well-funded scheme with little reliance on the sponsor may take a more pragmatic view on assessing covenant than one dependent on future deficit contributions	[½]
A credit rating can be provided either for whole company or specified issue of debt	[½]
Ratings generally reflected through a letter grade, e.g. AAA	[½]
May need to pay credit agency to obtain a rating	[½]

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The costs of which should be compared against other methods of obtaining a sponsor covenant assessment [½]
A credit rating provides a guide to a company defaulting [½]
But doesn't allow for interdependence of scheme/company [½]
or the circumstances and characteristics of the scheme [½]
A credit rating may be readily available [½]
if the company is large enough to have a rating [½]
A credit rating is based on an analysis of financial circumstances [½]
so not affected by market forces that affect price like implied market default risk method [½]
but misses non-financial impacts, for example the willingness of a company to pay contributions, which may be picked up by an Independent Business Review [½]
The credit agency has access to information not publicly available [½]
unlike just using financial metrics based on the published accounts [½]
Different agencies could give differing ratings [½]

[Marks available 8½, maximum 5]

(ii)
(Take the four best actions provided by the candidate and cap at 1 mark per action. Take care awarding marks when candidates talk about strategies involving contributions. The scheme is in surplus. These points may be credited only if the candidate makes clear they understand this point e.g. the contributions may be required towards a secondary funding target)

Discuss and decide to do nothing [½]
given scheme in surplus, scheme is not so reliant on sponsor covenant [½]
the assessment of 'weak' may be consistent with previous assessments and so managers already have appropriate strategies in place [½]

Discuss with the employer [½]
given assessment based on credit rating doesn't give the full picture [½]

Reduce risk in the investment strategy [½]
e.g. reduce equity investments and increase holdings in bonds [marker note - or another sensible example] [½]
though this will lower the expected return [½]

Review funding strategy [½]
e.g. move to a more prudent approach using a lower discount rate to reflect an increased covenant risk [½]
e.g. set a secondary funding target of self-sufficiency [½]

Invest in assets which pay on sponsor default [½]
e.g. credit default swaps [½]

Cash alternative such as fixed charge on assets or parental guarantee [½]
e.g. charges on property or manufacturing machinery [½]

Buy out or buy in some of the liabilities with an insurance company [½]
such as pensioners which may be more cost effective than non-pensioners [½]

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Include ratchets in contributions paid towards a secondary funding target [½]
so contributions increase if sponsor's financial position improves [½]

Set up contingent contributions paid towards a secondary funding target [½]
so employer needs to make higher/more contributions if the scheme's financial position deteriorates [½]

[Marks available 9 , maximum 4]

[Total 9]

For part i, many candidates did not provide the depth and breadth required to score well. Better scoring candidates were able to fully comment on the proposal by making both general observations and thinking about the pros and cons of the credit rating approach, including some comparisons with other approaches.

Part ii was generally well answered.

Q3

(i)

Number of employees each year [½]
including number of employees joining each year [½]
and number leaving each year [½]
Proportion of employees getting a certain performance rating each year [½]
and how this changes each year [½]
Inflation assumption [½]
Discount rate / investment return assumption (if funded) [½]
expected profits of company each year [½]
expected profit target each year [½]
and how this changes each year [½]

[Marks available 5, maximum 4]

(ii)

General points: *(Cap at 2 marks)*

The financing method will affect the pace of funding not the cost of the bonus [½]
It may be expected that employee performance and company performance are correlated [½]
E.g strong employee performance results in more travel sales and a strong company performance [½]
The largest bonuses are paid when company profits are high, so likely to be able to afford to pay on a PAYG basis [½]
But in years when company profits are below target bonuses are still paid when cash may not be available, so advance funding may be helpful [½]
The legislative environment may dictate the ease with which the employer can access any funds put aside to use in the business (if required) [½]

Opportunity cost:

If a funded financing method is used the company should consider the investment return which can be achieved on the assets compared to the opportunity cost to the business [½]

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Security:
From a Company's viewpoint security is unlikely to be a key factor unless they are very paternalistic. [½]
The most secure financing method is keeping the expected level of cost for whole 10 years aside [½]
PAYG method is the least secure [½]

Stability *(Cap at 2 marks):*
Regularly contributing into a pot to be used to pay out the lump sum is the most stable [½]
which could be topped up to ensure the correct amount paid each year based on actual employee/company performance [½]
Stability of contributions may be attractive if business activity is stable over the year [½]
but for a travel agency business activity may be higher in peak holiday periods, so stability may be less attractive [½]
PAYG may also provide stability as a lump sum payment each year [½]
especially if number of employees and performance levels each year are stable [½]

Liquidity:
Advance regular funding helps with the Company's liquidity planning [½]
Financing approaches such as PAYG and lump sum in advance, which require lump sums to be set aside, may cause liquidity problems for the Company [½]

Flexibility:
Financing approaches which are funded provide more flexibility for adjusting contributions to meet the benefit [½]
especially if contributions are prudently calculated [½]

Realism:
Funded approaches may give a more realistic cost [½]
if appropriate funding method and assumptions are chosen [½]

[Marks available 9, maximum 6]
[Total 10]

Generally those candidates who were able to apply their knowledge to a cash lump sum arrangement scored well.

For part i, some candidates provided a long list of assumptions more appropriate to valuing pensions, many of which were irrelevant to valuing a cash sum.

For part ii, those candidates who demonstrated their understanding of the relevant issues for funding a cash arrangement generally scored well. Some candidates failed to note that the question asked for key factors ***for the company*** *and wasted time talking at length about issues more critical for other stakeholders. Better scoring candidates were able to present specific points regarding how the various factors were relevant in the context of funding a cash lump sum.*

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Q4

(i)

Type of scheme - schemes may be DB, DC or hybrid in nature	[½]
Governance of the scheme - whether it will be trust based or contract based	[½]
Schemes will have different eligibility restrictions	[½]
e.g. a minimum age to join scheme or a waiting period	[½]
How the contributions are set	[½]
Will members make contributions?	[½]
How will contributions be structured (age related, matching etc)?	[½]
The age at which retirement benefits may be taken	[½]
which may be consistent with State Pension Age or set at a different age	[½]
and taking into account manpower planning and the occupation of the workforce	[½]
Retirement benefits	[½]
The targeted amount of pension, lump sum or DC fund	[½]
The definition of pensionable pay	[½]
and benefits to dependants	[½]
Death benefits	[½]
In active service, deferment and in payment	[½]
e.g. what will be paid as a lump sum or pension on death, including whether there will be a refund of contributions	[½]
Ill health benefits	[½]
e.g. any reduction on early retirement	[½]
or enhanced benefits on terminal illness	[½]
Benefits available on leaving employment	[½]
e.g. how and if benefits will be preserved, or whether a refund of contributions will be paid	[½]
Benefit increases	[½]
In payment or deferment	[½]
Fixed or linked to inflation	[½]
Capped or uncapped	[½]
Which options will be available to members?	[½]
Under DC, what retirement options will be available?	[½]
e.g. annuity purchase terms to include dependents or the types of increases to be secured	[½]
Whether drawdown will be available	[½]
The available investment options	[½]
Under DB, options such as late and early retirement	[½]
Integration with state benefits	[½]
e.g. adjustment to accrual rate, pensionable salaries or pensionable service or explicit deduction	[½]
Consistency with other employer benefits	[½]
e.g. same definition of pay used in all benefits offered by the employer	[½]

[Marks available 18, maximum 10]

(ii)

Scheme design depends primarily on the sponsor's objectives	[½]
e.g. the government of a state scheme will have a different view of the target level of benefits compared to an employer of an occupational scheme and this will be	

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reflected in the design of the scheme [½]
Restrictions in legislation must also be considered [½]
The taxation environment will also affect scheme design [½]
Benefit options carry a cost and each company may have different budgets [½]
analysis of cost should include the cost of administering the benefits [½]
Different pension sponsors have different risk tolerances [½]
which are likely to impact the type of scheme they sponsor [½]
Scheme members may have different needs [½]
for example retirement age may be lower for fire fighters than office workers [½]
Schemes may have a different member profile [½]
for example different proportions of manual or office workers [½]
with differing benefits between worker types [½]
The sponsor's manpower planning needs may differ [½]
and they may use the pension scheme to attract and retain staff by reference to competitors' schemes [½]

Outside influences:
Trade union involvement of the membership [½]
which have differing expectations /demands [½]
Market practices [½]
such as whether defined benefit or defined contribution schemes are most prevalent [½]
[Marks available 9½, maximum 5]

(iii)
The accounting standard used [½]
which will dictate how items are determined and disclosed [½]
Any may prescribe the funding method or assumptions used [½]
Director pension costs [½]
e.g. accrued pension, contributions paid [½]
Current investment strategy [½]
and performance figures over 1, 3, 5 years [½]
including notes on ESG [½]
Funding method adopted [½]
Key assumptions used [½]
e.g. discount rate, inflation and mortality [½]
Liabilities at previous year end [½]
Split between actives, deferred pensioners and pensioner members [½]
Duration of the liabilities [½]
and sensitivity of the liabilities to the assumptions used [½]
Assets at previous year end [½]
Including any annuity policies held [½]
Surplus/deficit at previous year end and movement to date [½]
The change in the surplus / deficit over the year including reasons for movement [½]
The value of liabilities accruing over the year (pensions cost) [½]
The increase in the past service liabilities over the year (interest cost) [½]
The investment return achieved on assets over the year [½]
Contributions made into the scheme by Bullet Cars [½]
Split by accrual, deficit contributions, augmentations and expenses [½]
Benefit outgo from the scheme [½]
Split into different benefit type and expense payments [½]

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Details of any special events such as scheme closure or bulk transfer [½]

[Marks available 13½, maximum 8]

[Total 23]

This question was generally well answered.

Q5

(i)

Provisions in the scheme's documentation or legislation [½]
may specify the assumptions for transfer values [½]
The basis to be used and the level of prudence in the assumptions [½]
e.g. will the option be funding neutral (best estimate)? [½]
Will the terms be market value or fixed? [½]
Consider the impact of selection e.g. by single members when setting the proportion married assumption [½]
Consider the potential take up rates of transfer values [½]
to assess materiality of any potential funding strains, e.g. through having a fixed basis rather than market related [½]
Consider the transfer value terms offered by an insurer [½]
especially if scheme looking to buy out [½]
Consistency with other options/factors in the scheme [½]
including potential consistency with derivation of the commutation factors [½]
Consider the treatment of discretionary benefits [½]
Consider the managers' objectives, such as [½]
Need for encouraging/discouraging take up [½]
Transfer value may be enhanced [½]
or reduced if the scheme is underfunded and the covenant is weak [½]
Impact on security of remaining members' benefits [½]
Consider fairness to members [½]
to those taking the transfer value and those not [½]
Consider the simplicity of administration and communication [½]
Consider whether the transfer value basis will be used for a bulk exercise to be carried out in the near future [½]

[Marks available 11, maximum 6]

(ii)

The funding basis uses a prudent basis [½]
which could allow for a secondary funding objective such as self-sufficiency or buy out [½]
Whereas taking a transfer value is a settlement of benefits so the member should be provided with fair value [½]
and a best estimate basis may be used [½]
An explicit level of prudence may be applied in the funding basis through individual assumptions [½]
or as a separate prudence reserve [½]
The transfer value discount rate may be based on expected return on assets [½]
Whereas the funding discount rate may be based on a different approach [½]

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Both bases may have restrictions on the assumptions from legislation [½]
e.g. not being able to allow for commutation in the transfer value basis [½]
An allowance for discretionary pension increases may have been included in the funding basis for prudence [½]
but may be excluded from the transfer value calculations [½]
[Marks available 6, maximum 3]

(iii)
Gender [½]
Date of birth [½]
Date of leaving scheme [½]
Pension at date of leaving [½]
split by different pension tranches [½]
Category of membership [½]
if there are different sections with different benefits such as pension increases [½]
Normal retirement date/age [½]
Details of any underpin e.g. contributions paid into the scheme [½]
Details of any additional benefits such as transferred in benefits or AVCs [½]
[Marks available 5, maximum 3]

(iv)
The member wishes to look at their options [½]
as they approach retirement or for general financial planning [½]
including consideration of consolidating with other benefits from previous employments [½]

To provide flexibility: [½]
(Award a maximum of 1 mark from the options below)
Access different options in a DC scheme, such as income drawdown [½]
To purchase an impaired health annuity [½]
To purchase benefits of a different form such as different increases or dependant's benefits [½]
To invest in different funds [½]
Ability to take a larger cash lump sum [½]
To pay off their mortgage or other large debts [½]
To obtain better tax efficiency [½]

They may not understand their DB benefits [½]
and benefits under a DC arrangement through the transfer value may be easier to understand [½]
The potential to pass the remaining transfer value to dependants [½]
The transfer value may be enhanced [½]
so better value for member than under the scheme [½]
They may think benefits under scheme are not secure [½]
and benefits under discontinuance would be reduced [½]
May have been encouraged to take a transfer value by a change in legislative environment, press reports or a suggestion from a friend or IFA or as a result of a pension scam [½]
They may be required to request a transfer value as part of divorce proceedings [½]

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May believe they can invest the transfer value to achieve a higher return than that assumed in the transfer value basis [½]
May believe that the current terms offer good value for money and it is an opportune time to invest a transfer value elsewhere to achieve larger benefits than those available in the scheme [½]

To select against the scheme [½]
(Only 1 example to be credited)
e.g. a single member can use the entire transfer value to provide benefits for themselves [½]
e.g. a member in ill health, with a short expectation of life, may receive better benefits elsewhere [½]
[Marks available 9½, maximum 6]

(v)
Financial advisers would be able to help an individual set financial goals for their savings including collating all the benefits someone will receive and their adequacy [½]

This will include consideration of:
The needs and goals of the member [½]
including what they plan to do with the transfer value [½]
Their understanding of financial matters [½]

The member's personal circumstances including:
The member's income and outgo [½]
Their other benefits and wealth [½]
The extent to which their portfolio manages retirement risks [½]
such as their level of inflation or longevity protection [½]

And the member's characteristics, including:
Details of their dependants [½]
Their tax position [½]
Their health status [½]
Their attitude to risk [½]
The size of the transfer value [½]
and whether it represents good value for money [½]
The security of the pension scheme and the likelihood of their benefits being reduced [½]
The adviser should be transparent about the service provided and their remuneration [½]
The cost of providing the advice [½]
either via commission for fixed fee [½]
The level of advice needed by the member [½]
i.e. just for the transfer value [½]
or to be provided on an ongoing basis [½]
The adviser should consider any regulatory or professional requirements, which may include: [½]
Providing advice that is clear and understandable [½]
Ensuring the member doesn't feel pressured [½]
Ensuring the member doesn't make a poor decision which leads them to complain [½]
[Marks available 12½, maximum 8]
[Total 26]

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Generally, parts ii and v were less well answered than the other parts of this question. For part ii, better scoring candidates were able to provide broader points, covering points beyond the level of prudence allowed for in the discount rate.

For part v, many candidates recognised that the member circumstances and characteristics were important. Better scoring candidates also considered the professional requirements and service provided by the financial advisor to generate more points.

Q6

(i)

(No credit given for just stating the any of the headings)

Objectives *(Cap at 1 mark):*

Set the objectives of the funding valuation	[½]
with input from the key stakeholders	[½]
taking into account legislation	[½]
and the desire for consistency with the previous valuation	[½]
Assess sponsor covenant	[½]

Data:

Request membership data	[½]
Check membership data	[½]
including reconciling with other data sources (last time's data / accounts)	[½]
Confirm the benefit specification with reference to scheme documentation	[½]
Request asset information	[½]

Method and Assumptions: *(Cap at 2 marks)*

Advise Trustees/ managers on method	[½]
Advise Trustees/ managers on assumptions	[½]
which may include an analysis of experience of member movements and deaths	[½]
and taking account of the membership characteristics to focus on those assumptions which have most significance	[½]
for a mining company, mortality and ill health experience may be particularly important	[½]
include advice on the level of prudence to be taken reflecting the covenant, investment strategy and funding position	[½]
proposing these for the Trustees/ managers to agree with the company	[½]
seeking input from the company on the salary growth assumption	[½]

Calculations:

Run the valuation	[½]
Check and peer review the results	[½]

Results: *(Cap at 2 marks)*

Provide Trustees / managers with an initial set of results on proposed assumptions	[½]
Reconcile valuation results against previous valuation	[½]

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Provide sensitivity analysis on the figures [½]
Provide indicative plans to recover the deficit (e.g. recovery plan), if necessary [½]
using the current plan or other agreements in place as a guide [½]
Provide future service contribution rates [½]
Assist the Trustees/ managers with the negotiation of the valuation results with the company [½]
preparing advice for the Trustees/ managers on this [½]

Valuation finalisation: *(Cap at 1 mark)*
Provide the Trustees/ managers with a final report on the valuation [½]
setting out all key agreements made in the valuation [½]
prepare any submission documents as required to finalise the valuation [½]
advise Trustees / managers on any next steps, e.g. updating option terms [½]
[Marks available 9½, maximum 6]

(ii)
General points: *(Cap at 3 marks)*
Overall assumptions should be set prudently [½]
or set each assumption at best estimate and include an explicit reserve in the liabilities for prudence [½]
to reflect the security of the scheme [½]
The interaction between the funding method and assumptions should be considered in setting the overall level of prudence [½]
The gaps between financial assumptions are often more important than their absolute values [½]
Some of the assumptions or principles may be prescribed under legislation or regulatory guidance [½]
Different assumptions may be made for different types of employee e.g. managers and miners [½]
The key assumptions are typically discount rate, mortality and mortality [½]
Although other assumptions may also be key depending on the membership profile or circumstances of the scheme [½]

Discount rate:
Discount rate is the rate at which liabilities are discounted to the valuation date [½]
it is often set prudently [½]
It may be set as a single rate or different rates for pre and post-retirement [½]
It may be set as a single rate for all terms or by use of a full yield curve [½]

Inflation:
Price inflation assumptions [½]
for pension benefits which increase in deferment or payment in line with price inflation [½]
Allowing for any caps or collars which apply [½]
Consider the market inflation rate based on the difference between the yields on index linked and conventional bonds [½]
Consider any central bank of government targets [½]

Mortality:
Mortality base tables [½]

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which could be based on actual scheme data given size [½]
or based on industry standard tables [½]
and adjusted to reflect scheme experience [½]
e.g. heavier expected mortality of the mining population [½]
Mortality improvements [½]
To update base tables to current date [½]
and allow for future improvements in mortality after the valuation date [½]

Ill health:
For a mining company, the proportion of members qualifying for ill health retirement may also be important. [½]
This should be set by looking at recent scheme or industry experience [½]

Salary growth:
Salary growth assumption [½]
May require company input on this assumption [½]
May be influenced by trade unions [½]
Typically linked to inflation [½]

Other assumptions: *(Cap at 2 marks)*
Proportion of members with eligible dependant [½]
Could use actual data if available [½]
Proportion of members retiring at each age [½]
Differing for in service and deferred members [½]
Leaving service assumptions at each age for in service members [½]
Option take up assumptions [½]
e.g. commuting pension for a lump sum [½]
or transfer assumptions [½]
[Marks available 16½, maximum 12]

(iii)
The funding position would have been expected to improve as a result of the recovery plan [½]
Investment returns may have been higher than expected over the period [½]
e.g. from risk seeking assets [½]

Or other areas where actual experience has been better than that assumed (*Credit any two valid examples)* [½]
e.g. actual pension increases lower vs that expected [½]
or more deaths than expected over the period [½]
There may have been a change in assumptions between valuations [½]
such as financial or demographic assumptions [½]
from changes in market conditions [½]
e.g. increase in gilt yields / fall in inflation expectations [½]
or from taking a less prudent approach [½]
There may have been a change in funding method to one with a lower actuarial liability [½]
such as a move from Projected Unit Method to Current Unit Method [½]
A reduction in benefits [½]
Change in legislation [½]

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leading to a lower value placed on benefits	[½]
e.g. removal of a requirement to fund discretionary increases	[½]
More options taken by members compared to that expected on less generous than funding terms	[½]
e.g. more cash commuted for a lump sum	[½]
or transfer values paid out to members	[½]
perhaps through a bulk liability management exercise	[½]
Higher contributions paid by the employer over the period	[½]
by employer for deficit repair and for future service	[½]
or by members due to an increase in member contribution rate	[½]
Error in the previous or current valuation calculations	[½]
or in previous or current valuation data	[½]

[Marks available13, maximum 9]

[Total 27]

Parts i and ii were generally well answered with many candidates demonstrating a good understanding of the valuation process and the assumptions used.

For part ii, better scoring candidates generated a larger number of points on the more important assumptions of discount rate, inflation and mortality.

Part iii was less well answered with many candidates focussing on experience items only. Better scoring candidates provided a breath of reasons in their response.

[Paper Total 100]

END OF EXAMINERS' REPORT

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