INSTITUTE AND FACULTY OF ACTUARIES

EXAMINERS' REPORT

September 2013 Examinations

Subject ST4 – Pensions and other Benefits
Specialist Technical

Introduction

The Examiners' Report is written by the Principal 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.

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.

D C Bowie
Chairman of the Board of Examiners

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General comments on Subject ST4

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. Too 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 the planning 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.

Comments on the September 2013 paper

The overall standard of scripts was broadly as expected, and this was reflected in a similar pass rate to the norm. The marks for all questions were broadly similar, with no questions standing out as particularly hard or straightforward compared to expectations. More detailed feedback is provided on each question below.

1 (i) Expertise – Examination, CPD
Good Practice – professional guidance (ethical / technical)
Reliability of advice – compliance checklist, supervision

Aims

Sets a minimum level of competence, interpretation of relevant legislation, adapting to changing circumstances, adherence to integrity, competence and care, impartiality (e.g. Actuaries code), disciplinary process

(ii) (a) Advantages

Focuses on significant pieces of work
Ensures compliance with relevant legal and regulatory requirements
Ensures consistent approach
Identifies any material inaccuracies or inconsistencies
Identifies any suspected non compliance with broad aims of profession
Should provide a minimum level of competence / consistency
Promotes professionalism
Easy to document and monitor

(b) Check on appropriateness and reliability of actuarial methods and assumptions used
Technical skills, ethics and professionalism
Understandable to end user / appropriate communication / users can have confidence in the information's relevance, transparency of assumptions, completeness and comprehensibility
Check any potential conflicts of interest
Consider any limitations / potential danger areas

(c) Report on scheme funding
Report on member options
Accounting for pension benefits
Any other sensible and distinct suggestion

This was a relatively straightforward bookwork question, and was answered as expected. It is important for candidates to ensure in such questions that their answers are wholly relevant to the question, and not to fall into the trap of simply reiterating lists.

2 (i) *General points*

Members and employer contribute into individual investment funds
The member may have the choice of a number of investment funds

DC with investment underpin

If the total return of the funds is below a specified amount then the funds are "topped up" by the employer

This could be done at the member's retirement (or on leaving the scheme, if earlier) or on an annual basis
The specified minimum may be linked to an investment index e.g. yield on government bonds
Or be an absolute amount e.g. 3% p.a.
Different underpins could be used for different investment funds
The member's fund is then used to purchase an annuity at retirement
So the scheme and members share the investment risk pre-retirement….
…the extent of investment risk shouldered by the employer being dependent on the nature of the guarantee
…and the members take on post-retirement risks (e.g. cost of pension annuity or other risks if alternative approaches are taken, e.g. income drawdown)

DC – providing an income at retirement using the scheme's own conversion factors

The actual amount of the member's fund at retirement is determined by the contributions paid;
... and the performance of the investment funds
The member's individual funds at the member's retirement are then converted into a pension determined by the scheme's own conversion factors
rather than buying an annuity from an insurance company
The factors could be fixed or market related
The pensions are then paid from the scheme….
…..So the scheme takes on the investment and longevity risks post retirement
…..but the member will have taken on the investment risks pre retirement
The employer may consider the pace of funding of the actual cost of the underpin

(ii) *DC underpin*

The employer's contributions will be affected by the estimated cost of the investment underpin
This will not be known until the member reaches retirement date/leaves the scheme
And the cost of the guarantee will be variable over time
The employer could use derivatives to mitigate some of the underlying risk
The format of the underpin may result in members choosing more risky funds
…because members know that the employer will make up any shortfall which will increase the amount/value/cost of the guarantee
The employer could restrict the choice of investment funds accordingly, e.g. not allowing investment in very "risky" funds
It may be possible to incorporate the underpin directly into some of the investment funds
If the investment guarantee is set at a low level it will reduce the potential overall cost
But may not be valued or even understood by the members …
…depending on complexity (e.g. fixed 3% p.a. vs index tracking)
guarantee can be applied annually or on an overall basis,

the latter being less costly and easier to value/implement with less risk of selection from members switching funds strategically

DC – conversion factors

General points

Costs / legislative compliance
Administration costs need to be allowed for
Understanding of the risk involved
Funding – a funding / reserving strategy needs to be put in place
Communication / understandable / demonstrating the value
Practicalities

The factors will vary depending on the amount of dependants' pensions
And any pension increases in payment
Need to regularly review conversion factors…
..in particular consider market-related factors
The employer retains the longevity risk in retirement
So not protected against unexpected improvements in life expectancy
But will gain if members die soon after retirement
The employer also retains the post retirement investment risk
But can invest accordingly to minimise this risk i.e. matched to annuity payments

Selection effects e.g. those in ill health may opt to transfer to secure a better annuity rate elsewhere

This question was generally well answered in the first half, with better candidates drawing out more relevant points in the later part. Again it is important to ensure that answers are relevant to the actual question asked. It is also important to consider the split of the questions and to offer proportionate weight to the different parts of the question to maximise opportunities to obtain credit

3 (i) *On-going funding valuation*

Solvency / discontinuance valuation
Best estimate valuation
Accounting or Regulators valuation
Self sufficiency / risk free real returns valuation
Transfer Value basis valuation
A "statutory" valuation basis

(ii) *Funding valuation*

(a) members / trustees / employer / regulator
(b) to determine on going funding level and future contribution requirement

assumes scheme is on-going
and supported by the employer over the long term
uses prudent valuation assumptions
allowing for assessed strength of the employer covenant

Solvency

(a) members / trustees / employer / insurance company/ Regulator
(b) assesses the cost of securing liabilities with an insurance company

valuation assumptions are very prudent
mirroring the terms offered by insurers
assumes the scheme will no longer be supported by the employer

Best estimate

(a) trustees / employer
(b) provides a realistic cost of future benefits

uses the expected outcome for each of the valuation assumptions
i.e. with prudence margin removed

Accounting

(a) employer / shareholders / potential investors
(b) provides a realistic value of liabilities

in accordance with any prescribed accounting regulations
uses best estimate / prescribed assumptions
Subject to short term fluctuations in disclosed results

Self Sufficiency

(a) members / trustees
(b) purpose is similar to buy-out

but assumes scheme is still ongoing though will not be supported by the employer
uses prudent assumptions
but excludes insurance company profit margins etc.
assumes government bonds are held as "safe" investments

(iii) The choice of the discount rate is dependent on the purpose and objective of the valuation
E.g. to provide the cost of a benefit augmentation or to provide a long term estimate of funding (the contribution rate)
The valuation method will also determine the choice of the discount rate
It is important to ensure that the the assets and liabilities are valued in a consistent way
The discount rate may be fixed by the market or regulation or prescribed
The form / structure of the discount rates may differ
For example split discount rates, use of yield curves etc
The consistency of the discount rate over time should also be considered

Those candidates who approached this question in a methodical way scored by far best. Where a question can be broken into easily managed bitesize chinks the ability to meet the requirements of the marking schedule is made much more straightforward. Some candidates clearly understood the different approaches, but by answering without structure failed to obtain the marks available.

4 (i) *General principles*

Consider any requirements in the scheme rules
E.g. who has the power to set the factors
and / or any legislative requirements / practice
Consider if the factors are to be actuarially neutral
and on what valuation basis
If not actuarial profits / losses may result
The significance / materiality of these should be considered
For example early retirement terms may be generous as part of redundancy programmes etc.
Some options may be encouraged / discouraged
Consider the reasons why this may be the case
Need to consider the fairness between those that take the options and those that don't
Could consider adopting the same or different terms for active and deferred members
Investment and longevity risk is impacted by the take up rate of the option
E.g. Cash commutation at retirement removes the longevity and investment risk for this part of the benefit.
Need to consider what allowance if any would be made for discretionary benefits / increases
Consider any potential selection against the scheme
E.g. commutation when the member is in ill health
Communication of factors and any change to members
Consider member expectations
Should the funding position be allowed for e.g. cash commutation reduced if scheme poorly funded
Should sex dependent or unisex factors be used
Theoretically calculated factors may be "smoothed" for practical purposes
Administrative considerations e.g. ease of calculation, cost of calculation

Are factors to be market related or fixed
Market practice – what are other similar schemes doing

Frequency of review

Factors are usually changed infrequently
If they are robust they can be used for a reasonable period of time without change (e.g. a few years)
Depending on whether they are fixed or market related
This allows for member retirement planning
However, the factors need to be reviewed periodically to see if they continue to meet the objectives
For example they do not create a funding strain for the scheme.
Often the review follows an actuarial valuation

(ii) Pensions (annuities) may be purchased from an insurance company
However minimum purchase prices may apply
And /or poor terms are quoted for small benefits
The inclusion of a profit margin means the annuities will be more expensive
Purchasing the annuity is transferring the risk from the scheme to the Insurance Company
There will be more flexibility for the member as they can choose the shape of the benefits

Or pensions paid through the scheme
With the scheme setting appropriate terms / assumptions
These may eventually turn out to be too generous or too pessimistic
With a cost / gain to the scheme

Or through an income drawdown facility
With the funds remaining invested and the member withdraws an amount each year
There will be a risk of running out of money
The costs of administering this arrangement may be significant

(iii) The scheme will need to revise its factors as they are currently sex-specific

Could use unisex factors that reflect the scheme's membership profile
If the split is based on the split of liabilities then on average the impact would be broadly neutral on the scheme funding basis
But the actual take up rates of options cannot be predicted accurately
Could use factors which result in the lower/higher of the male or female benefit being provided
This implies adopting male/female life expectancy in setting commutation factors for example

This may increase / decrease take-up rates of the options
Consider possible selection risk
Need to consider the administrative requirements of the change
Communication with members

This question required somewhat more application of the basic points and those candidates who were able to demonstrate a little more depth of thought were able to score better. Candidates should clearly review the instructions in the question (i.e. list, describe, discuss etc.) to help them assess the level of detail and higher skills application required to obtain the marks available.

5 (i) Definition of employer covenant – e.g. the ability of the employer to support the pension scheme

Balance Sheet

From statutory accounts
And management accounts if appropriate
Analysis of current capital structure
Level of liquid assets
Level of tangible assets / value of assets in distress
Level of free reserves
To assess coverage of any pension deficit
And whether the employer could cover the buyouts deficit in the event of wind up
Amount of borrowings
Including secured and unsecured creditors / rating of the debt
Management presentations / views
Trends – how has it changed over time
Publicly available information
Such as broker briefings, press reports etc.
Reports from external credit advisory specialists
Confirmation of compliance with banking and other creditor covenants
Benchmark analysis against other employers/schemes in a similar position

Profitability

Current declared profits
Before and after tax
And projections of future profits
Including future business plans
To determine ability to pay current and future deficit recovery contributions

Cashflow

The amount of cash the business generates (EBITDA)
Projections needed to assess the ability to make future deficit contribution payments
And to determine what contributions the employer's cash flow can support and how this might change in difficult trading conditions
Interest payable as proportion of cash flow (interest cover)

Size and funded status of the scheme

The materiality of the covenant will be influenced by the funding status and size of any deficit relative the Company's free assets
The company is large and the pension scheme is relatively small so there should be sufficient security for any potential buyout deficit
But this will depend on the size of the deficit on different valuation bases
A well funded scheme would require minimum reliance on the sponsor
Only a small proportion of the workforce is in the scheme so its financial importance to a large company should diminish over time
The legal responsibility for the overseas parent to support the pension scheme is an important consideration

(ii) Financial skills of the trustee board
Objectivity of the trustees i.e. not conflicted
Time resource for trustees to make the covenant assessment
Understanding of the key factors that affect the employer's financial position
And understanding of the information that predicts future changes to company performance
Understanding of the group structure of the employer
And the legal obligation of the overseas parent
The materiality of the covenant assessment / degree of importance
For example, how well funded is the scheme?
Cost of using an external covenant adviser
External adviser might help with robust negotiations with the employer
Any legal requirements to have an external adviser
Openness of the employer in sharing their financial position

This is a relatively straightforward question on a regularly examined subject. It is critical, however, that candidates answer the question asked and not a similar one they have encountered before.

6 (i) Specify problem
Develop solution
Monitoring experience
Professionalism
Economic / commercial environment

Set Objective
Identify risks
Assess risks
Produce / implement action plan
Monitor and review
Repeat process

(ii) *Knowledge and understanding*

Do the new Trustees have the required knowledge
E.g. scheme's legal documents, knowledge of funding, investment etc

Trustees should regularly assess skill base
And determine any knowledge gaps
…and undertake regular training
Assess overall effectiveness
Personally and collectively
Take professional advice (e.g. Independent Trustee) / delegate as appropriate

Scheme advisers

Risk of bad advice
Appropriate process for appointment of advisers
And evaluating quality of advice

Conflict of Interest
Are the global advisers working for company & trustees
Potential conflicts involved for the senior manages appointed as trustees
Ensure variety of members on trustee board, e.g. minimum proportion of MNTs
Develop a conflicts policy
Actively manage known conflicts
and potential conflicts
Including those of advisers

Record keeping
Do the In house admin team having sufficient resource / up to date skills & knowledge
Controls in place to ensure member records are present and correct
Checking / auditing
Accurate and securely stored
Controls to ensure prevention of scheme funds being misappropriated

Employer covenant
Ongoing assessment of the strength of the employer's covenant
Consider independent assessment especially if board members are trustees
Have controls to identify events that may impact on it
Measures to reduce risk e.g. Company guarantees etc.

Investment
Ensure security and safe custody of assets
Moving to a better match of assets and liabilities
i.e. size of equity holding compared to pensioner liability
and impact of market volatility on funding & security
Regularly review investment performance
And review long term asset allocation
Review liquidity issues

(iii) Risk register
Including assessment of risks on impact and likelihood
Conflicts policy
Training logs of knowledge and understanding

Planned strategy / Action plan to have responsibilities and timescales
Regular monitoring and review process in place covering
Investment issues (safe custody and security)
Record keeping,

Regular dialogue with employer
Agree joint objectives with employer
Disclosure to members
Seeking advice as appropriate
Regular review of covenant

This was a straightforward question and well prepared candidates scored well.

7 (i) *Fairness & value for money*

Costs & charges are transparent
And communicated at point of selection to the employee
To allow value for money comparisons to be made
Expenses minimised
Age related benefits offered
Impact on members of sponsor's business / commercial risks are minimised
Flexible contribution and benefit structures are offered
...which are expected to provide an adequate level of benefit at retirement
A process is provided to maximise members income at retirement (e.g. finding suitable annuity providers)
Comparison with the former DB Scheme

Governance

Trust v Contract considerations
Sufficient time and resources are available for maintaining the on-going governance of the scheme
The importance of providing accurate information on a timely basis to advisers and service providers is understood and carried out
Accountability of all the elements of running the scheme are identified, documented and understood
Procedures & controls are in place to ensure the effectiveness and performance of services offered by scheme advisers & service providers
Internal controls are in place to mitigate operational, financial, regulatory and compliance risks
Regular review of investment options
Availability of investment funds
Ensuring assets are invested in appropriate vehicles e.g. with regulated investment managers

People

The people running the scheme understand their duties
The duties include governance, Investment, communication etc.

And are fit and proper persons
And act in the best interests of all beneficiaries
Any potential conflicts of interests and recorded and managed

Administration

All member data is complete and accurate
An audit process is in place
All transactions are processed promptly and accurately
A complaints procedure is in place
Disaster recovery systems are in place

Communication to members

Members are educated on how DC pension schemes operate
Including an understanding of the relevant DC risks
And the requirement to purchase an annuity at retirement
All costs and charges to members are disclosed at least annually
Members' levels of contributions are regularly communicated
Regular benefit projections provided to members
Scheme communication is accurate, clear, timely and understandable
There is regular communication from date of joining to retirement
The risk profile of Investment options must be communicated
Members are encouraged to regularly review investment choices

(ii) Comparison with any existing company's global pension provision
Any potential economies of scale savings using existing global pensions provision
E.g. existing fund managers
Comparison of DC offered by competitors

Analysis of reasons for switch from DB to DC influencing future design
E.g. cost savings, risk mitigation
Consistency with overall benefits package offered
And possible HR / employment issues with the change / member appreciation
Any legal / regulatory restrictions / considerations

Eligibility

E.g. all members to be offered access to scheme, a waiting period etc.
Payment of initial and ongoing running costs
Including governance costs, professional adviser fees etc.
Contract based or occupational schemes
Existing and future employee profiles
E.g. existing employees, new hires, seniority etc.

Investment options

Range of investment options to be offered
And frequency of review of the options

Default investment options
Lifestyling options towards retirement

Contribution Rates / benefits to be provided

Level of member contributions / employer contributions
With different scales for executives for example
Flat contribution rates or company "matching"
Contributions to be based on basic salary or total remuneration

Benefit Options

Annuity purchase at retirement or pension purchased through the scheme
Member communication interface e.g. web based
Income drawdown
Cash v pension
Integration with State benefits

Risk benefits e.g. death in service cover
Use of insurance to cover the risk benefits

Well prepared candidates who broke the question down well, heeding the instruction of each question, could score well here. Again, a structured relevant answer is very important to be able to score against the schedule.

END OF EXAMINERS' REPORT