INSTITUTE AND FACULTY OF ACTUARIES

EXAMINER'S REPORT

April 2015 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 at the date the examination was set. Candidates should take into account the possibility that circumstances may have changed if using these reports for revision.

F Layton
Chairman of the Board of Examiners

July 2015

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 April 2015 paper

The overall standard of scripts was broadly as expected, with a pass rate very similar to the previous sitting.

There was a less significant variation in marks than in the previous exam, meaning that there was not that great a distinction in marks between those who were able to demonstrate sufficient depth to their knowledge to be able to secure a pass and those who were not quite there. It is very important that candidates consider all aspects of the question, and read the preamble fully. There is never superfluous information in the question, and by using all of the information available, candidates can ensure they give a full answer. Giving just a little more to clearly show depth can turn a close fail into a pass.

The questions are set so that it should take approximately twice as long to answer a 10 mark question as a 5 mark one. Answers should therefore be similarly proportionate, as mentioned in the general comments above.

In addition, candidates should carefully consider the instruction – for example an instruction to list points should be answered with a list without attaching discussion. Similarly, a question asking for a discussion cannot be answered with a list of undeveloped points.

More detailed feedback is provided on each question below.

1 Advantages of the proposed approach

- Liquidity (with any valid reason why this is important)
- However, company is large so liquidity may not be an issue
- Will give a known cost for the insurance arrangements in any one year
- So that any cost volatility that has been experienced under the existing treatment will be removed
- Noting that this might be quite small since the company is large
- As will the potential for very high claims (e.g. arising from an accident involving many staff)
- There may be favourable tax treatment for the reserve
- Any reserve that remains outstanding at the end of the financial year could be released to fund the insurance premium for the next year
- There is a competitive insurance market for mortality risks (in most countries) so the cost of the insurance should be reasonable
- And it is likely that the long term cost of the scheme will be less than if the benefit were fully insured
- Security – a reserve has been set up

Disadvantages of the proposed approach

- There is a cost to insurance so that in the long term the cost of the arrangements will increase
- Because insurance companies will include a margin to meet capital requirements and want to make a profit
- Any mention of opportunity cost
- It may be difficult to deal with claims that are incurred but not reported at a financial year end depending on how the insurance contract operates
- The insurer may look to have exclusions (e.g. claims caused by Health & Safety breaches) or to seek conditions on the policy which the employer would need to satisfy in order for the insurance to be valid
- It is likely to cost more to administer the arrangements with the insurance company
- Initial start-up costs
- Cost of internal pricing – setting up reserve, advice etc.
- Counterparty risk – default of insurer

Generally well answered – it is important for candidates to clearly set out pros & cons, and to make sure their answer is balanced across the two. Do not repeat points.

2 (i)

- Details of the benefit design
- And who has the power to change the benefit design
- In relation to both future service and past service (if this is possible)
- Membership information
- Valuation of the liabilities
- And how these have impacted the balance sheet and p&l account
- For both past and future service

- On one or more prescribed bases
- Show key assumptions where appropriate and
- Scheme specific assumptions where appropriate
- And method, approach etc.
- Consistent treatment of discretionary benefits
- And sensitivities relating to key assumptions
- Information relating to the insolvency insurance premium
- Expected cashflow
  - current and future

(ii)

- **Details of the benefit design** – will allow investor to assess key risk areas e.g. Inflation
- And information on the extent to which benefits are discretionary
- **Membership data** – if complete, could be used to allow investor to do own calculations
- Or to assess concentration of risk e.g. If only a few members account for significant liabilities
- **Valuation of liabilities** – will allow investor to produce key financial metrics e.g. Value of liabilities as a percentage of market capitalisation
- Which are comparable between companies
- And over time
- **Sensitivity assessment** – will be helpful to understand the extent to which liability values are dependent on key assumptions
- **Insolvency insurance premium** – indication of the insolvency risk

(iii)

- Investors might be concerned with an absolute measure of liability or a measure relative to the size of the company?
- An absolute measure would be based on a valuation of the liabilities
- Is an ongoing measure more appropriate or a measure based on insolvency, such as the insurance premium?
- The key assumptions could be prescribed or scheme-specific
- A relative measure could give this valuation as a percentage of the assets or earnings of the company
- Or by considering the impact of the pension cashflows on profitability
- Variability of ranking could be illustrated using sensitivity analysis or scenario testing
- Rankings will depend on the approach and assumptions used and so a definitive ranking is unlikely to be possible

Book work sections were well answered, with better candidates able to apply their knowledge to make a coherent argument in part (iii). Remember this is an unfunded arrangement!

3 (i) The introduction of the following options could be considered:

- Any changes should be cost neutral
- To exchange part or all of the pension for a cash sum
- To take a lower initial pension which increases during the course of payment
- To take a higher initial pension which reduces during the course of payment
- To take an alternative shape of payments – e.g. U-shaped
- To take a different level of initial pension with a higher or lower percentage of spouses pension
- To take part (or none) of the pension and to defer the remainder (or the whole) of the pension
- To transfer the pension to a third party pension arrangement
- To capitalise the pension and permit the balance to be invested and
- Allow the member to draw down an income from the balance every year
- To take a lower initial pension with a higher bridging pension payable until any state pension commences
- To extend the range of beneficiaries entitled to a contingent pension payable on the death of the member
- Purchase extra benefit
- Continue to accrue benefit

(ii) The member should consider the following initial points:

- The member will want to choose the option which provides the largest/most suitable benefits. This will depend on…..
- The amount of the pension payable under the scheme
- And the lifetime annuity available in relation to the transfer value
- On a basis with the same contingent benefits as payable by the scheme
- On the best terms that are available in the market
- Assuming that the trustees will offer the transfer value with an open market option

The member should then consider any points that are specific to the member's situation such as:

- Marital status and existence of any financial dependants (including children)
- Noting that the transfer payment will include an allowance for a spouses/dependants pension based on proportions married/financially dependent which are relevant to the population generally
- And will probably not make any specific additional allowance for children's pensions
- Their own life expectancy (particularly if they know this is impaired as a result of ill-health)
- Noting that the transfer payment will probably be based on average life expectancy
- Both the above considerations will serve to increase the amount of the annuity paid by the insurer in comparison to the current pension

- How the benefits will be taxed

The member should then consider any preferences that might be available under the insured arrangement but are not available under the current scheme such as

- Changing the shape of the pension (in the same ways as covered by part (i) of the question)
- Changing the amount and recipient of any contingent benefits payable on death

Other miscellaneous points that the member should consider are:

- The likelihood that the insurer will default, the protection available in such circumstances and how this compares to the security offered by the current scheme
- Any restrictions that will arise by accepting the transfer compared to other options that the trustees will also make available e.g. No cash sum if member accepts the transfer

It is important to answer the question in full. For example, candidates often missed obvious points about comparison of the actual benefits themselves – not just the level of transfer value etc.

4 (i)

- Mandatory training sessions
- To help educate the respondents on the issue
- Fine the trustees
- To remove them as trustees from this scheme
- To prevent them from acting for any other scheme
- And potentially to imprison them (although this would generally be considered an extreme penalty for this type of breach taken in isolation)
- To act as a punishment for the breach of legislation

(ii)

- The regulator is likely to consider the purpose of the requirement to disclose this information
- When the disclosure requirement was introduced and how long non-compliance has been going on
- And the reasons that the legislation was first introduced
- Such as any situations where members have had their benefits reduced unexpectedly
- Leading to pressure from trade unions and lobby groups for more information to be provided about funding and security of benefits
- The regulator is also likely to have regard to the extent that a compliance culture exists in the country
- And whether other schemes have also failed to comply
- In which case, he would have regard to any penalties issued in these cases

- Noting that if this is the first such breach, the penalty issued will be a precedent for future cases
- The regulator is likely to check how well scheme is run and whether there have been previous breaches of law by the same trustee board
- And will probably impose a harsher penalty if the trustees have been non-compliant in the past
- Or if he discovers related breaches e.g. That the trustees have not finalised the calculations required to determine the year end funding position
- The regulator may take in to account whether benefits are at risk
- Because the funding position is low
- Or the employer covenant is weak
- Or the investment strategy is risky
- Or member misled over decisions
- Materiality of non-disclosure
- The regulator may consider the extent to which the trustees have made any information about the funding position of the scheme available to members
- The regulator may ask why it was not consulted in advance of the decision not to disclose
- Or take in to account whether the trustees are prepared to correct the breach and issue the statement now
- The regulator may take in to account the composition of the trustee board
- Noting that higher standards might be expected if any of the trustees are paid, particularly if they are acting in a professional trustee capacity
- The regulator may take account of any planned changes to the law in this area
- Particularly if any plans to repeal the legislation are in the public domain
- Or in contrast if there are plans to further develop the legislation so that additional financial information is to be made available to members
- The regulator is likely to require further information from the trustee board
- To check factual points such as whether the entire membership does in fact consist of manual workers
- And the extent of the consultation with employee representative groups
- And will also want to form a judgement on whether the employee representative groups represent the whole workforce
- And whether they may have any political motivation for taking a particular position on this issue
- If trustees took legal advice prior to non-disclosure

Relatively well answered – best candidates simply showed a greater depth and breadth to their answers with no repetition of similar points.

5 (a) Potential short term financial impacts on employees

- The short term financial impacts will mainly relate to changes to the amount of pension contributions that workers are now required to pay
- Compared to the pension contributions currently payable to State Scheme and any scheme currently offered by the employer
- And how this will impact take home pay
- It is possible that contributions to the State scheme will be required at a reduced level
- Or that employers would change the terms of their current more generous pension to the minimum level
- Which would offset the introduction of mandatory minimum contributions of 5% of basic pay for those with lower contribution rates currently
- The impact on take home pay will also depend on the tax treatment of the contributions
- And whether employers decide to reduce basic salary to claw back the cost of higher employer pension contributions
- If take home pay reduces, then this will have a disproportionate impact on very low paid workers
- Unless other State benefits are available to support workers with income levels below a minimum threshold
- Although the member does have the opportunity to opt out of the scheme entirely
- By offering a matched contribution structure, the government is trying to encourage workers to make do with less in the short term, in return for more at retirement
- In practice, this structure favours better paid workers who are able to afford to pay higher levels of contribution
- Cost of financial advice
- Members close to or past retirement age will not have time to make up difference due to reduction in state pension

(b) Potential short term financial impacts on employers

- This will depend on the extent to which the employer currently pays contributions to an occupational pension scheme and
- The ability of the employer to pay a different (probably reduced amount) to the current pension arrangement and
- Any changes to the contribution rate that the employer is required to pay to the State Scheme
- It will also depend on the extent to which employees take advantage of the matching facility
- Noting that employers with well paid white collar workers will probably pay more (as a percentage of basic salary) on average compared to those with lower paid blue collar workers
- In considering the overall impact, it is also necessary to understand the tax treatment of any pension contribution payments
- Depending on the date that the new scheme is to be introduced, it is possible that any increase in cost will be unbudgeted causing cash flow difficulties.

- No contributions will need to be paid in respect of those members opting out
- Transitional expenses between old and new schemes

(c) Potential longer term financial impacts on employees

- These will relate both to the affordability of the rate of minimum mandatory contributions throughout the workers career and
- Any decisions that the worker makes in terms of paying higher voluntary contributions or opting out of the scheme entirely
- To the extent that the overall pension contributions are higher under the revised arrangements, it is likely that retirement income will also increase
- Assuming that the investments in the defined contribution scheme perform satisfactorily
- If the worker opts out of the new arrangements, they will lose the right to a State Pension
- Which is unlikely to have a positive financial impact on the worker's overall retirement pension
- And could cause extreme poverty if the worker has no income at all in retirement
- For workers who take advantage of the matching facility, the maximum rate of total contribution is 25% of basic salary
- Which is likely to be sufficient to produce relatively high replacement ratios at retirement (depending on the period to retirement)
- Or to encourage early retirement assuming the benefits can be taken at different ages
- Ongoing expenses

(d) Potential longer term financial impacts on employers

- This will depend to some extent on how many workers choose to take advantage of the matching facility offered under the arrangement
- But overall it is likely that there will not be a significant financial impact in the longer term
- Since any increase in the cost of pension provision is likely to be offset by
- Reducing the cost of other parts of the workers compensation package or by
- Passing on the additional costs to customers

Candidates often failed to focus on the specifics of the question by making many points that were not directly relevant to the actual question asked. This is an important point of exam technique to prevent wasting time.

6 (i) Design points relating to the targeted DC arrangement

- Will review take account of accrued benefit
- Or just future service
- What are the eligibility requirements
- Initial rates of company contribution
- And the ratio of member and company contributions
- Ensuring that they are sufficient to comply with any 'minimum contributions' legislation
- And whether there should be any banding of the rates (noting that individual rates by age/sex will be administratively complicated)
- And whether members should be given the option to pay at a lower rate if they accept that this means they are unlikely to reproduce the defined benefit scheme outcome at retirement
- And whether members should be given the option to pay additional voluntary unmatched contributions
- Whether accrued benefits should be taken in to account in the 'defined benefit' equivalence calculation
- Noting that the final salary link might be lost if the existing arrangement is a final salary scheme
- Investment options during the accumulation phase
- And in particular the various asset strategies that should be made available
- Including any default arrangement
- And any lifestyling opportunities in the period prior to retirement
- Benefit options at retirement
- Including the option to take part of the benefits as a tax free lump sum
- Or by means of income drawdown
- And any constraints on the type of benefits at retirement e.g. requirement to provide a spouses pension if married
- The options to be offered on leaving service with a very short period of service
- And generally whether benefits on leaving can be maintained within the scheme, transferred to an insurer or taken as cash.
- Treatment of contributions on death before retirement
- The frequency of review of the joint contribution rate
- And the actuarial assumptions and method that will be used to assess whether the joint contribution rate needs to change at a review
- Related to investment choice
- Whether there should be any limit to the change in the joint contribution rate after a review (e.g. the maximum increase is limited to 1%)
- And the date that any such change should be implemented

Design points relating to the cash balance scheme

- The amount and basis of calculation of member contributions
- The initial company contribution rate
- Noting that there is a capital value guarantee every year which will need to be underwritten
- So that the availability of funding from the company will need to be established in order that the benefits can be provided

- Note that the same points as set out in relation to the targeted DC scheme apply in relation to:
  - At retirement options
  - Withdrawal
  - Death before retirement

Some general points:

- Will the schemes accept transfers from the current defined benefit arrangement?
- Will members have the right to leave one scheme and join the other scheme?
- And if so, will they also have the right to transfer their accrued benefits to the other scheme?
- And how will the equivalence test work for a member joining the targeted DC scheme with both defined benefit and cash balance service?
- Who chooses investments
- Moral hazard – members choose high risk, employer low risk, due to floor
- How investment return is applied

(ii)

- If the member intends to stay until retirement age, they should consider the benefits that each arrangement is projected to provide at retirement
- Which should be close to the equivalent defined benefit for the targeted DC scheme
- But there is nothing in the question to suggest the target benefit under the cash balance scheme
- As well as the projected benefit, the member should seek to gain some understanding about the level of risk to that benefit
- In terms of investment risk in the accumulation phase
- And any risk that the rebalancing mechanism under the targeted DC scheme will fail to function satisfactorily
- For example, if the employer reserves the right to vary the arrangements
- or there are upper limits to the contributions payable
- In practice, it will be hard for the member to gain a full appreciation of these risks
- Other considerations will include the minimum rate of member contribution payable under each arrangement
- Or higher contributions
- And the ancillary benefits provided under each arrangement
- Such as benefits on death in service and withdrawal
- Note that if the member expects to leave service prior to retirement, they would want to compare the projected benefits at different withdrawal ages
- The member should consider their attitude to risk when making investment choices
- And review the different investment options available
- In terms of the choice of different types of asset strategies
- And any default option

- And the fund manager that will be managing the assets
- Noting that the cash balance scheme arrangement offers some form of investment guarantee
- And that the employer is underwriting (to some extent at least) investment risk under the targeted DC scheme by offering increased contributions should the fund fall below the target level
- And compare the different lifestyling options available close to retirement to assess the extent to which they offer protection to the retirement pension and lump sum
- If the member can switch between the schemes, they should consider whether there is an optimal switching date which would maximise the projected benefits at retirement
- The member should consider the governance of each scheme
- And the protection against employer insolvency (which might be relevant if the employer is underwriting the investment guarantees in the cash balance scheme)
- Finally, the member might be interested in the quality of the support services available
- Such as access to online platforms offering asset switching facilities etc.
- Possible volatility of contribution rates
- Expected rate of member/employer contributions
- Likelihood of 0% floor i.e. perceived value of guarantee
- Understanding of either scheme
- Availability of advice

Generally quite well answered – again successful candidates demonstrated more depth and breadth to answers with no repetition.

7 (i) *Scheme Experience*

- During the intervaluation period, and in the absence of a financial management plan, the actuary is unlikely to fundamentally change the valuation assumptions
- And so the reported position will relate to actual experience over the intervaluation period compared to the assumptions made by the actuary
- And the assumptions are likely to be reassessed at the date of the next valuation
- In terms of experience items, a failure to achieve the investment returns underlying the basis is a potential risk
- And probably the most significant in terms of likely impact
- Particularly noting the relatively high level of growth asset exposure
- And the fact that the scheme is likely to be disinvesting
- Although changes in the market yields underlying the discount rate assumption may also be significant
- Other experience items will either be financial in nature
  - And will either relate to a change of market view (e.g. a change in the rate of long term price inflation)

    - Or in terms of actual experience being worse than assumed (e.g. salary increases awarded being significantly above the assumed rate or expenses being higher than expected)
- Noting that whilst the scheme is closed to accrual, it is possible that the accrued benefits still enjoy a final salary link
- Or they will be demographic in nature
- For example, an early retirement exercise on terms above those in the past service reserve for the affected members could have a significant impact on the funding position of the scheme
- Or the scheme might experience very low rates of mortality (particularly relating to pensions in payment)
- Although limited impact over 3 year period
- Or the scheme might experience very high rates of mortality (which might have an impact if generous spouses pension and life assurance benefits are offered by the scheme to in service members)
- Without a financial management plan, any adverse experience will emerge as deficit at the time of the next valuation
- Since the employer is only meeting the running costs of the scheme
- And not making any payment to help the trustee reduce the dependency of the scheme on the covenant
- For example, by starting to build up a reserve which would allow the trustees to secure the benefits in the insurance market.

Employer Covenant

- The scheme will also face risks in relation to the strength of the employer covenant
- Although without the financial management plan the impact is unlikely to be assessed until the time of the next actuarial valuation when the trustee next reviews the position
- The trustees are concerned about the level of debt
- And there is a risk that profits will fall
- Due to adverse market conditions
- Or management failures
- To such an extent that interest payments on the debt will not be met
- So that the debt will be called in by the debtholders and replaced on worse terms or not replaced at all
- In which case, scheme benefits would need to be reduced
- Because the scheme is only 67% funded on a solvency basis
- The trustees should be particularly alert to risks that negatively impact both the pension scheme and the employer covenant

Other Issues

- Other risks that might impact the financial position of the scheme relate to retrospective legislation
- Or any legal claims that members might have for higher benefits
- Or the emergence of data errors leading to materially higher benefits

- Or the receipt of additional members (e.g. through a bulk transfer) where the transfer value is insufficient to cover the value of the benefits being transferred)

(ii)

- The trustee requires information about the status of each key risk listed above
- For each risk, the trustee must define a measure (or measures) intended to give information on the status of the related risk indicator
- And obtain information relating to that measure on a timely basis
- The measures can be at the aggregate scheme/employer level or can be at an individual risk level
- For example, the most appropriate measure at the aggregate scheme level would be the ongoing funding level
- Updated to take account of experience and changes in market conditions since the valuation date
- Possibly made available on a daily basis
- And in relation to the employer covenant, the trustees might choose to consider just a single measure such as an average of credit rating agency scores
- However, more information can be obtained by considering measures related to the individual risks themselves
- If it is possible to obtain such information e.g. it may not be possible to obtain up to date market value information for a direct property investment
- At the scheme level, the trustee should expect a breakdown of the reasons for a change in the funding position
- Which attributes the change against each risk indicator ie an analysis of surplus
- Covering actual investment performance
- Changes in market conditions affecting future investment performance/discount rate
- Changes in inflation impacting salary (if accrued benefits retain salary link) and pension increases
- Together with an assessment of any "non-market information" that might impact the next valuation of the scheme e.g. the anticipated introduction of mortality tables reflecting higher life expectancy
- At the employer level, there is no generally accepted measure of employer covenant strength
- And there are a variety of different information sources including
  - sponsors' published accounts
  - published credit ratings
  - information from retained covenant adviser
  - information provided by the company to the trustees
- Which could be used to detect
  - further indebtedness
  - changes in NOI
  - changes in free cash flow

  - and changes in market capitalisation
- A poor covenant may trigger an update of the solvency position

(iii)

- If the funding level falls below a specified level
- Or if the chosen measure of employer covenant strength gives a trigger reading
- The financial management plan is likely to give the trustees a number of different powers
- Such as demanding the introduction of employer contributions (in excess of expenses)
- Noting that it is difficult to specify in advance the size of such payments
- So that it is more likely that the power would relate to the ability to call an early valuation
- Giving both parties the opportunity to consider the issues within the standard timelines of such a valuation
- The trustees will be keen to ensure that any free cash in the business is used for the benefit of the business or ideally paid in to the scheme
- So the plan might state that the company will not make any dividend payments to shareholders whilst the valuation is being undertaken
- Including making capital payments to the parent company
- Or give effect to any share buybacks
- Or that the company will not increase its level of debt without the consent of the trustees
- Or that a temporary charge over assets is put in place
- The plan might also cover circumstances where changes to the investment strategy would be undertaken to reduce the risk of the strategy
- Noting that it is likely that moving a portion of growth assets to matching assets will reduce the expected return from the asset portfolio
- So increasing expected long term costs
- And potentially making it even more likely that contributions will need to be introduced in the short term (particularly if an early valuation has also been triggered)
- So placing even more dependence on the employer covenant
- At the extreme, the trustees might want to consider what protections could be available to protect the scheme in the event of an employer default
- And insurance or other financial instruments where a payment is triggered by such a default could be considered
- Although this will be very expensive and therefore unlikely to be a practical option.

(iv)

- Failure to achieve investment returns assumed by the actuary
  - Insurance contracts generally offer only a very low guaranteed rate of return
  - And are unlikely to be helpful in mitigating this risk
- Reductions in market yields leading to lower growth returns being assumed by the actuary when setting the discount rate

  - If it is possible to transfer some of the accrued benefits to an insurance company on terms that are similar to the actuarial reserve
  - Such as those relating to pensions in payment
  - Which are already matched by government debt
  - Then the insurance contract will protect the scheme from adverse changes to market yields having a negative funding impact for this tranche of liabilities
- Changes to the rate of price inflation
  - An index linked annuity will be effective in protecting the scheme from inflation in relation to pension liabilities that increase in line with price inflation
  - Again assuming such annuities are available at a price that is similar to the reserve being held in the scheme relating to these liabilities
- Changes to salary inflation
  - Insurance is not effective to mitigate salary inflation risks
  - Since these are in the control of the sponsoring employer
- High incidence of early retirement on preferable terms or low level of withdrawals or receipt of underfunded bulk transfer
  - Again insurance is not effective to mitigate these risks since they are largely in the control of the sponsoring employer
- Low rates of mortality
  - The scheme could transact a longevity swap to protect against this risk
  - If the assumption made by the actuary is very strong and it is possible to trade it in the open market at a lower rate
- High level of death in service claims
  - Insurance is effective at mitigating this risk
  - Since insurers hold a lot of information on mortality rates which make them relatively predictable on an aggregate basis
- Impact of retrospective legislation, data risks or risk of legal claims
  - Specialist insurers might offer protection against these risks
  - Although the underwriting process is uncertain
  - And the costs can be prohibitive
- Deterioration of the employer covenant
  - Insurance contracts are not generally available to protect against this risk
  - Although some protection can be achieved through investment markets by trading in credit default swaps in the sponsoring employer

This question was less well answered. Answers were often incomplete. For example, in (ii) some candidates focused only on monitoring the covenant and did not discuss monitoring the scheme experience. In part (iv) quite a few candidates only considered the appropriateness of buying out the benefits entirely - they overlooked other possible insurances, for example, death in service, longevity swaps etc.

END OF EXAMINERS' REPORT