

# **INSTITUTE AND FACULTY OF ACTUARIES**

## **EXAMINERS' REPORT**

September 2010 examinations

### **Subject CA1 — Actuarial Risk Management Paper Two**

#### **Introduction**

The attached subject report has been written by the Principal Examiner with the aim of helping candidates. The questions and comments are based around Core Reading as the interpretation of the syllabus to which the examiners are working. They have however given credit for any alternative approach or interpretation which they consider to be reasonable.

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Chairman of the Board of Examiners

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### **General comments**

*This subject examines applications in practical situations of the core actuarial techniques and concepts. To perform well in this subject requires good general business awareness and the ability to use common sense in the situations posed, as much as learning the content of the core reading.*

*The examiners therefore look for candidates to apply answers 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, and gain few marks. On the other hand, detailed specialist knowledge is not required nor is very detailed development of particular points.*

*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 later parts of questions to generate ideas for answers to the earlier parts. Time management is important so that candidates give answers to all questions that are roughly proportionate to the number of marks available.*

*The notes that follow are not to be interpreted as model solutions. Although they contain the majority of the points that the examiners were looking for, they also contain more than even the best prepared candidate could be expected to write in the time allowed in the examination room.*

**1** The main basic areas to consider before looking at the guarantee are:

Value of benefits (cost of claims) and contribution to profit (including a loading for contingencies)

The value of the benefit will depend on:

Age and sex

State of health, which will initially be assessed by a medical history declaration, doctor's report or medical examination or other information given at the proposal stage

Healthcare costs e.g. based on the precise form of benefits and terms and conditions.

In particular, it will be necessary to make an allowance for increases in such costs since payments could continue for some time.

It is likely these increases will be above the rate of general inflation.

This is due in part to the sophistication and complexities of tests and treatments increasing.

Without the guarantee, you would expect the premium to rise year on year, because of the above issues (older, inflation, etc).

Hence, intuitively the premium with a guarantee should be higher than a non-guarantee premium.

To allow for the guarantee, more sophisticated modelling extending over a longer time-frame will be needed.

A profit testing model will be used to calculate the premiums under different assumptions using either stochastic simulation or a set of deterministic scenarios, and allowing for the complexities introduced by the guarantee.

In particular, it will be necessary to model the probabilities of when claims will first arise and the value of the benefits payable (e.g. then current healthcare costs) from that date.

The inclusion of the guarantee may mean that higher provisions are needed and the costs of these extra provisions may need to be allowed for in the premium calculations.

A complication may be that the chances of a claim in the future may be less than originally assumed for policyholders who don't claim in the first few years. Or more generally, probabilities of a claim may change over time hence invalidating the original assumptions.

It is possible that the presence of the guarantee will affect the lives selecting the policy. Hence data derived from any existing policies or indeed from other sources may not be very helpful.

It could be argued that healthier lives will be attracted because, long term, the policy probably is better value for healthier people.

Clearly this will depend on the level of underwriting. If underwriting standards are lax, then unhealthy lives may be attracted if the premium is less than other companies would charge them.

An allowance for lapses may be necessary e.g. if rates in the market are falling. Lapses may be a source of profit unless a significant number of policyholders are not expected to claim.

The extra uncertainty, in particular over future healthcare costs or the availability of credible pricing data, will require higher contingency margins.

Depending on whether similar policies exist in the market, the company may be able to allow for a higher profit loading reflecting a unique product or niche market. Alternatively, the market may already be competitive so squeezing margins.

Given the uncertainties and likely changing market conditions, in practice, an open-ended guarantee is unlikely to be sensible. It may be necessary to have a limit on the time the guarantee will apply for and/or an age cap as the expected cost of treatment will increase rapidly at older ages

In any event, changes in regulations and tax will be outside the control of the company. Premium changes due to these factors may need to be excluded from the guarantee.

*Overall candidates answered this question quite poorly, failing to go into much (if any) detail about the impact of the guarantee. Many went through a list of bookwork answers about what needs to be accounted for when setting premiums, without taking into consideration the question specifics.*

- 2** (i) The main steps involved in the initial stages of a general risk analysis can be summarised as follows:

Make a high-level preliminary risk analysis to confirm that the project does not obviously have such a high risk profile that it is not worth analysing further.

Hold a brainstorming session of project experts and senior internal and external people who are used to thinking strategically about the long term.

The goal here would be to:

Identify project risks, both likely and unlikely and those positive and negative outcomes.

Consider the interdependency of these risks.

To help assess interdependency, a thorough categorisation of the risks identified may help.

Attempt a broad initial evaluation of each risk focusing on both frequency of occurrence and consequences if it does occur.

Produce initial outline mitigation options.

Attempt to identify further risks (e.g. those arising from earlier mitigations) by carrying out a desk top analysis.

In order to assist in the process, consider similar projects from the past either from the sponsor or other sources.

Carefully set out all the identified risks in a risk register, with cross references to other risks where there is interdependency.

- (ii) The potential cost of such an accident could be huge.

It may take a long time to finally assess the actual liabilities with the likelihood of protracted legal wrangling and political interference.

An insurance company may be unwilling to cover such high impact low probability events – especially given the uncertainties over the level of benefits or data for pricing (probably a unique product).

If an insurer could be found, it is likely the premium charged would be prohibitively high.

Alternatively, there could be a very low maximum payout limit or strict exclusions e.g. concerning negligence of the insured.

- (iii) Given that the source of the radioactive waste is likely to be a government or other public sector type body, the state may in effect act as an insurer or may give an indemnity against certain incidents.

This will be reflected in the terms of the contract (less money to the contractor) and may well involve the company having to comply with strict operating procedures.

Alternatively, the company could try to pass on liability to third parties i.e. only expose itself to low impact risks.

For example, they could lease vehicles, employ agency staff or use disposal sites owned by others. This may limit its liabilities.

This may have an impact on the profitability of the contracts and again care would be needed over the contracts involving other parties to make sure liability is actually transferred.

Other mitigation strategies could be valid if properly explained ie if the “best” options given above aren't possible.

For example:

Care over internal operating procedures e.g. only carry small amounts over short distances on safe routes at night say, to reduce risk of an accident occurring or

Quick and effective post incident responses to minimise impact of any incident eg links to emergency services own containment and clear up teams on standby close to routes used – ways of warning the public etc prepared. Note just saying planning isn't enough specifics of what will be done are needed.

*Part (i) of this question was answered well, most candidates showed their knowledge of the bookwork on this topic. Many candidates did struggle to generate enough points in parts (ii) and (iii)*

**3** (i) Risks can arise:

An imbalance in the economy as more resources are devoted to sectors related to the domestic housing market e.g. the financial services sector, retailing, estate agencies and construction industries for example, lending to and consumption in other sectors is squeezed out.

Over-inflated asset values linked to high levels of personal and corporate debt leading to excessive consumption at the expense of saving.

There may also be problems pre the bubble bursting eg very hard for first time buyers to be able to enter the housing market or local hot spots where high prices makes the recruitment of low paid but essential workers difficult.

The core risk is of course that the bubble bursts and house prices fall.

Much of the price rises were probably due to psychology and confidence rather than underlying sustainable financial reasons. Such confidence is fickle and so the risk is that once prices start to fall they will fall quickly. This may be exacerbated because of the time lag before the supply of new homes can be adjusted downwards to reflect lower prices/profits.

The potential problems are very great since large numbers of people will be employed or exposed.

As the impact of the factors that caused the increase in house prices runs out of steam naturally then prices will fall. In normal circumstances this wouldn't be a major issue, just the routine rhythm of the market.

Many individuals will feel poorer due to the negative equity effect and so they will reduce consumption. Likewise consumption will fall as people will be unable to secure further loans (to fuel consumption) on the back of inflated house prices. Reduced consumption will slow growth so reducing consumption further – a vicious circle.

Labour mobility and hence economic growth will also suffer as many people will have mortgages in excess of the value of their houses ie negative equity issues and so can't sell.

Similar problems will arise if due to say the normal cyclical progress of the economy growth slows or interest rates rise.

Many people will simply not be able to service the debts on their mortgages (or other loans) – in trying they will cut back in other areas, so slowing growth as above.

Many people will default on their mortgages. Mortgage providers will see a rise in bad debts as re-possessed houses are worth less than the loans secured on them. This together with a fall in demand for mortgages causes losses and contraction in the financial services industry. This problem will be magnified if providers have borrowed money to lend it on.

These pressures on the providers of finance means that they will cut back lending to other sectors of the economy or try to make up for losses with higher charges elsewhere. This in turn, pushes the whole economy into recession so lowering house prices further etc. etc.

If these problems became very serious, government intervention may be needed with consequences for fiscal deficits, national debt and taxation/spending policies.

- (ii) Essentially, the consensus may be that rising house prices are good for everyone. Many, many people will have a vested interest in growing the bubble hence measures to limit price rises will be very unpopular and politically difficult. The proposition of “some pain now to prevent greater pain later” will be a hard sell – especially if the economy is doing well.

The most obvious option would be to keep interest rates relatively high. But this is a very blunt tool. It would have implications for the wider economy in terms of reducing growth and employment. The value of the currency could rise, causing problems for exporters.

Taxing capital gains on housing, having high levels of inheritance tax or removing tax perks (eg on mortgage interest payments) would be an option. But this could be undesirable politically. Altering taxation policy has implications for other assets or income sources eg it could create other bubbles. Such consequences are hard to predict or manage.

Requirements on lenders to adopt stricter, legally enforceable practices could be introduced with the aim to stop lenders taking too much risk (not carrying out sufficient checks etc.). Such rules are hard to draw up tightly – providers are adept at finding and exploiting loopholes. Enforcement and sanctions are also issues – the whole process is an administrative burden and expensive to do.

Arguments would be made that such interference in the free market is wrong per se; e.g. restrictions on choice are viewed as bad. Such measures could be viewed as limiting labour or social mobility.

More subtle options such as implicitly or explicitly limiting the amount institutions can lend (overall or to the housing sector) are possibilities. But again there are usually ways round such rules. The effect may be to reduce lending to more productive sectors and maintain it to the (apparently) profitable housing linked sectors.

The government could try to boost the supply of housing but this will take a long time and be politically difficult (NIMBY issues).

Technically policies to boost earnings eg public sector pay awards could alter the ratio but this will only lead to inflationary cycle and further demand for houses – so it won't work.

*A wide variation of scores on this question. Some candidates were surprisingly unfamiliar with a topical issue.*

- 4** (i) The policy is likely to be for cats and dogs but could also be available for other pets.

It is likely to cover:

- Veterinary fees covering illness and injury or ongoing routine treatments
- Death benefit, possibly with a maximum age limit
- Holiday cancellation due to pet illness
- Boarding fees if owner in hospital
- Theft or missing benefit
- Advertising and reward for a missing pet
- Third party liability eg personal injury
- Accidental damage to property caused by pet

- (ii) The expenses incurred can be divided between fixed and variable expenses.

Some expenses may remain relatively fixed in real terms.

Some expenses are broadly fixed but can jump at certain times and remain fixed again. Some staff and accommodation related costs might behave in this way if the company expands or contracts significantly.

Some expenses can be identified directly as belonging to the new class of business. For example direct expenses from a department set up to deal with the new class.

Other direct expenses do not have a direct relationship to any one class of business and need to be apportioned between the appropriate classes eg by a broad split or by looking at extra staff taken on..

Some expenses are indirect. By definition, the departments concerned are not related directly to any particular class of business, but form a support function for the provider. In this case, it is necessary to find a sensible apportionment of the expenses across direct activities. Initially, these costs could simply be added at the end of the analysis as a percentage loading to all the other attributed costs

As well as apportioning expenses to a line of business, costs need to be apportioned by function. Can split this into the costs of:

- securing new business

They will include marketing, advertising, sales and commissions, processing and policy issue and underwriting

- maintaining existing business (renewal and investment)
- terminating business (including claims)

When loading for expenses, it must be ensured that sufficient premiums are charged to cover the costs of expenses relating to the new product and provide a contribution to the general fixed costs of the provider. Loadings should also take into account the timing of expenses and be matched accordingly. Must also consider the competitive position.

The loading for expenses could be allowed for as follows:

- as a fixed amount per contract
  - as a percentage of the premium charged
  - as a percentage of the sum assured
- or a combination of the above.

- (iii) A margin costing approach would only consider expenses directly related to this new product. As such it would be simpler and cheaper to adopt

It will also lead to lower initial premiums, which may make it easier to sell the policies.

If, as a result, the volumes of business are larger than anticipated, fixed costs may be proportionately reduced over all products so creating a virtuous circle.

However, a large increase in volumes may cause a steep rise in fixed costs eg more accommodation or technology so increasing relative fixed costs.

Using marginal costs longer-term would mean that other business was subsidising the new product, possibly affecting sales in other product lines. But moving away from the marginal could mean losing business on the new product.

In practice a lot may depend on how significant the pet product is. Given the nature of the company, it could be that this line is trivial in the overall scheme of things. It may be sold in conjunction with or as a rider on other lines via the same channels. That is, only marginal costs are incurred and they are small anyway so a quick simple approach is valid.

*We had lots of imaginative points on part (i) and many scored very well. In part (ii) the better candidates demonstrated their understanding of the core reading and highlighted the issues arising due to this being a 'new' policy. Part (iii) was less well answered; many did not grasp the concept of marginal expenses.*

**5** (i) (a) The yield gap is defined as:

Equity gross dividend yield ( $d$ ) – GRY on a **long dated** conventional government bond.

(b) The total return on equities can be expressed as  $d + g$  (expected growth in dividend income).

This total return can also be expressed as GRY – inflation risk premium (IRP) + equity risk premium (ERP).

IRP which applies to GRY's on conventional bonds is less of an issue for equities given the implicit inflation hedge. (i.e. total return on equities = risk free real yield + expected inflation + ERP (where ERP also covers any small IRP))

Hence the yield gap can be expressed as

$ERP - IRP - g$ .

If the yield gap is high this may indicate that the ERP (net of IRP) is relatively high, an indication of higher relative equity risk.

... if it isn't simply an indication that  $g$  has fallen as a result of a general deflationary outlook (bonds are relatively more attractive in such circumstances)

(ii) As stated in the question, the gross redemption yield for each bond can be expressed as:

$GRY = \text{risk free real yield} + \text{expected inflation} + \text{IRP} + \text{bond risk premium (BRP)}$

Given that the key features i.e. term, coupon and nature are similar, risk free real yield, expected inflation and IRP can be assumed to be the same for each bond.

(although may be different if yields very sensitive to slightly different durations or other features eg convertibles)

This implies that the 0.5% extra yield on B is due to a higher BRP for B.

The BRP is chiefly dependent on margins required for default risk and lack of marketability risk.

The reasons for extra default risk with B's bond could be due to B being in a more risky sector or because of specific issues relating to B (e.g. higher gearing or poorer management).

For marketability, the issue size of B's bond could be relatively low or it may not be quoted on a recognised exchange.

- (iii) An investor should select investments that are appropriate to the nature, term and currency of any liabilities.

Allowance should be made for the investor's appetite for risk.

Subject to the above, the investments selected should seek to maximise the overall return on the assets.

Where the overall return includes both income and capital proceeds and is net of tax/expenses.

- (iv) The notional portfolio should represent the assets the insurance company could expect to hold in respect of this line of business. *(In effect, instead of assessing the expected returns on a large portfolio of assets, the method involves assessing such returns on a representative sample – quicker and less costly).*

So the answer has two parts:

- Selecting an appropriate investment strategy.
- Selecting a portfolio that represents this strategy.

The assets should match the liabilities. Hence the assets should have a spread of terms (durations) and coupons (proceeds) that are needed to meet liability outgo.

However, this market is likely to be competitive and so the company may wish to move away from a matched position or take other actions to boost expected return (i.e. risk).

Hence a different term/coupon pattern may be appropriate

Some overseas bonds may be deemed to be suitable.

A way to boost expected returns could be to invest in non-government stocks

Hence the company would need to decide on a government/corporate bond split.

Within the corporate bond allocation, proportions reflecting different credit ratings (e.g. AAA, AA, BB etc.) and industry sectors would be needed. An argument could be made for an allowance for unquoted or otherwise less marketable bonds.

It will then be necessary to pick a representative sample together with the relevant weighting given to each constituent of the sample.

Alternatively, market indices may exist that gives an accurate reflection.

In practice, for simplicity, a particular bond may exist in the market that could be viewed as reflecting a group of assets the insurance company would hold.

The insurance company may construct artificial bonds (perhaps using derivative pricing methods) that have the required characteristics.

- (v) A particular problem here is that the portfolio is only looking at conventional bonds. Depending on the types of contract sold, investment in index-linked bonds may be more appropriate. This point could be extended to cover other real assets but, given the nature of the business this is debatable.

Linked to this point is that using a notional portfolio may mean that esoteric bonds or those difficult to categorise are not invested in (when otherwise they might have been) simply because they are hard to fit into a notional portfolio.

Taken further, a notional portfolio approach may lead to a “lazy” approach to actual investment as the notional portfolio ends up driving actual investments. That is there is a tendency just to hold the notional portfolio because it's the easy option.

The main problems will probably relate to selecting the sample.

Representative bonds or indices (e.g. with a long enough term) may simply not exist.

Alternatively, the required portfolio could become so fragmented that it doesn't actually meet its objectives of cost savings.

Likewise, the expense and effort involved in constructing a sample (artificial bonds) may lessen the benefits of the approach.

Making compromises may mean that the portfolio doesn't do what is intended. For example there will be subjectivity over particular choices that appear to be the same but aren't quite.

Even if the portfolio were valid at a particular point in time, it may not be if market conditions were to change – so rebalancing would be needed.

In theory, every time the investment strategy was changed, a new notional portfolio would be needed – so more rebalancing would be needed.

This would be particularly troublesome if the insurance company took an active (as opposed to passive) approach to fund management.

Likewise, every-time the liability profile (or the insurer company's attitude to risk) changed the portfolio would need to be changed.

The insurance company may decide to base the notional portfolio on what the long-termed matched position should be. But this approach would ignore the impact of tactical or strategic investment decisions when pricing the business.

*Part (i) was badly answered for a bookwork question. In part (ii), better candidates explained how the BRP may vary. In parts (iv) and (v) many candidates were unsure about the use of "notional" portfolios in relation to pricing rather than valuation.*

- 6** (i) The first point to make is that the reasons are not necessarily due to the expected total cost of the benefits. It is quite possible to have a defined benefits scheme with cheap benefits and vice versa there is nothing to stop an employer paying a lot towards a defined contribution scheme.

However, this particular scheme may be generous and hence expensive. The risk is that the expected future benefit costs are too high for the employer to meet. The decision to close the scheme may thus be cost driven.

It is more likely that the risks relate to volatility in costs and/or the expenses (including time, hassle and obligations) involved in providing a defined benefits scheme. In particular, the risk of unexpected increases in contributions required from the employer

Under a defined benefits scheme, the benefits payable on any contingency are set out in the Rules of the scheme. Ultimately, if any funds set aside from contributions prove insufficient to provide for these benefits the employer will, most likely, be obliged to meet any shortfall.

In particular, there is the risk that poor investment returns on the scheme's assets will cause such a shortfall.

Likewise, there is the risk that improvements in pensioner mortality will mean that beneficiaries live longer than expected so increasing costs.

Other adverse demographic experience could be a risk. For example if relatively generous benefits are payable on death, ill-health or early retirement, then worse experience than expected could cause volatility in contributions required.

The company is relatively small and hence there is a risk that the expenses required to operate the scheme (paid directly or to 3<sup>rd</sup> parties) will increase to unsustainable levels.

There are considerable regulatory risks as legislation surrounding defined benefits schemes can be considerable, complex and costly to implement.

In particular, it is likely that the authorities will require regular valuations to check on the solvency of the scheme. The authorities may well specify the method and assumptions to be used for such valuations.

This basis may be conservative and so increasing the chances of deficits. The authorities may require significant one-off (or over a short-term) payments from the company to remove these deficits.

Similarly, the authorities may require contribution rates to be calculated using a conservative basis.

Furthermore, the effect of such bases or other specific regulations may constraint the scheme's investment strategy. This could reduce expected returns and so increase contributions.

Accounting regulations in particular concerning the treatment of deficits, discretionary benefits or accrual of benefits could introduce volatility to contributions or reduce profits shown in the accounts.

To a degree, it is not so much the legislation itself, but the uncertainty surrounding changes to legislation or its interpretation that causes problems. Pensions are often a political football. Likewise taxation policy could change, particularly if tax breaks exist.

Such regulation is expensive to implement and maintain. This is particularly true if industry wide compensation schemes are set up. Ultimately, funds to support regulation etc will come from the schemes.

The authorities may interfere with the benefits a scheme must provide. For example they may introduce changes in respect of early leaver benefits, pension increases or death benefits. Such potential interference increases uncertainty.

- (ii) Changing the nature of the scheme will remove some of the risks described in (i). However, many of those risks are now transferred to the employee.

In particular the benefits of the employee are not defined but are uncertain. The employee is exposed to poor investment returns and increasing longevity (via annuity rates). This uncertainty will not be popular.

It is possible that ancillary, enhanced benefits e.g. on death or ill-health will not be as good as they will now be determined by individual fund values. Such benefits may, however, be insured at the old levels.

If the old scheme regularly gave discretionary benefits, these could be lost. However, such benefits may have arisen due to higher than required contributions which will now be allocated directly to employees' pots.

It is likely that the expenses of running the old scheme were, at least partially, subsidised by the employer. If the running of the fund is transferred to a 3<sup>rd</sup> party, then these expenses will come out of members' funds. Given the potential administrative complications of the new arrangement for a relatively small workforce, expenses may increase significantly.

The company will contribute but at what rate? It may be difficult to convince employees that any given rate will be sufficient especially if employer contribution rates have been volatile in the past.

This problem is exacerbated since the total contribution rate required to fund the future service benefits that would have accrued under the old scheme will be age (and sex) dependent. Older people (and women) will need higher contributions. Whether they get them (unlikely) or not, problems will arise.

Likewise, married employees may want a higher contribution rate since otherwise they will end up with a lower pension than single employees.

Questions may be raised concerning the security of the benefits retained in the old scheme. Employees may be worried that if funds in that scheme are not sufficient, the employer may wind-up the scheme or buy benefits out on terms unfavourable to employees. This is more likely in the future as expenses of running a declining fund increase.

If surpluses were to arise in the old scheme, the employer may try to use them for their benefit.

Irrespective of the company's intentions, employees are likely to take the view that this change (or indeed any change) is being introduced with the intention of cutting costs and so making employees worse off.

Problems will arise if competitors are not (or have not) introducing similar changes.

Employees of an industrial company may well be unionised or otherwise organised and hence be able and willing to take action.

- (iii) The contents can be broken down into factual details concerning the new scheme and forms to enable the employees to make any choices required from them.

The core facts will cover issues such as:

- Date of scheme inception
- Employee and employer contribution rates
- Description of benefits (including options) and how they will be determined i.e. what a defined contribution scheme is and how it works
- Party managing and/or administering the funds
- Range of investment vehicles available
- Expenses and charges deducted from members' funds
- Whether and how accrued benefits can be transferred to the new scheme
- Legislative background e.g. security of benefits, employer's obligations etc.

Simple illustrations may be given of the effect on employees' expected benefits.

The employee will have a range of choices and the documentation will specify what these are, incorporate the relevant forms and say what the employee must do next and what will then happen.

The principal choices will cover whether or not to join the scheme (maybe for death benefits only), treatment of accrued benefits and choice of investment fund.

To protect the employer, there may be a recommendation that employees seek independent financial advice before making any decisions.

- (iv) When communicating potentially complex ideas, it is important to try to ensure that communication is done in such a way that the audience will be able to understand what is being said.

To this end, any documentation should be simple, clear, concise and easy to follow.

The media used (internet say) should be appropriate to the intended audience.

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To this end, the format should be appropriate e.g. Q&A briefers etc

Technical terminology or jargon should be avoided or if this is not possible, explained fully.

The tone and style should be suitable for the employees of this company.

However, it is important not to treat the employees as if they are stupid. So documentation should not be patronising or condescending.

It may be possible to employ communication consultants to help with such stylistic issues.

The documentation needs to relate to the purpose. This is likely to cover keeping the employees informed about the progress of the scheme, describing how the scheme works and enabling them to make informed choices.

Accordingly, this means that the documentation will need to be thorough and comprehensive. This involves a trade off with the need for clarity and simplicity.

It will be important to satisfy any legislation or industry codes of conduct/best practice. Again professional advice may help with content

Anything that is said must be correct and not be ambiguous or misleading.

In particular, any projections of future benefits or comparisons against other types of benefits must be compliant.

The company will probably not want to give specific advice or recommendations nor will it want to make subjective judgements about possible future experience etc. To do so may make it a hostage to fortune and in any event, it is unlikely to be allowed by legislation.

There will be a need to take into account data protection issues and not disclose commercially sensitive information or breach confidentiality clauses (e.g. with advisors or insurers).

In the initial documentation it is likely that the employer will want to briefly set out the background to the introduction of the new scheme and give the justification for it.

For example:

The attractions of the new arrangement should be set out. In particular, emphasis will be given to relative simplicity, transparency and a lack of cross-subsidy.

The likely advantages to early leavers i.e. benefits are more portable should be stressed. It will be mentioned that more people are likely to change employment in the future than in the past.

The employer will probably want to stress that they have taken professional advice to ensure, that under the most likely future conditions, employees' expected benefits will not suffer.

- (v) Given the likely reasons for the changes, it is unlikely that the employer will look favourably on this request. The proposal appears to give a guarantee to employees insuring them against poor experience. Presumably if returns had

been very good, the employees wouldn't be offering to pay money back to the employer

Principle of fairness to all employees should apply. That is, those who chose the "wrong" option shouldn't be helped if other employees aren't being helped as well.

When putting their case the employer will need to distinguish between its legal obligations and any compassionate or paternalistic desires it may have (or a need to prevent industrial disputes). The arguments could take the form of "we understand your problems and sympathise with you. Even though none of this is our fault or responsibility, we are prepared to listen and do what we can".

And may offer to consider non-financial changes to how the new scheme is governed, for example works council involvement

Problems could arise if the employer has been negligent or failed to communicate the necessary information clearly enough. They will need to consider what employees were told and if they were potentially misled, the employees may have a case.

The employer's point of view is likely to be that they fully and clearly explained the arrangement and the potential consequences (good and bad). The employees were free to choose whether or not to join the scheme and so the employer is not responsible for any unfortunate developments.

An important consideration is that employees had a range of funds to choose from and they made the choice as to where their money was invested. In particular, the employer was not allowed to influence this choice or give advice and so cannot be held responsible for "poor" choices.

However, if the choices offered by the designated insurance company were narrow (e.g. no fund of funds) then some blame could attach to the employer.

The implication is that some employees who are now receiving pensions invested in the equity fund.

Firstly, those employees were ill advised to put contributions into a volatile fund when they were close to retirement – they should have been made aware of this. The rationale of switching funds into less volatile vehicles as employees get older should apply. In particular, the employer may say that the employees' representatives are responsible for giving such advice

Furthermore, given that they are now in retirement and the new arrangement is only 5 years old, it is likely that the pension relating to the new arrangement is small (either absolutely or relative to the benefits from the old scheme). Clearly, if benefits from the old scheme were transferred into the new scheme, there is more of a problem.

Benefits do not just depend on fund values. If unit prices are low because of high real interest rates, then annuity rates will be attractive to retirees. This link is clearer with bond type funds.

Although depressed equity markets and low bond yields could compound problems.

In the case of members further away from retirement i.e. where equity type investment can be justified, a longer term perspective is needed.

Equity markets are volatile and it is hoped that over the long term, returns will be better than from other assets. Short term falls may not reflect the position over the longer term. In fact, lower prices now could represent an opportunity since if contributions are invested now, there is more upside potential. The effects of regular contributions over a long period can partially offset market volatility.

In particular, any projections are based on specified assumptions and hence they cannot really be relied on to reflect actual benefits payable.

However, if the employer (after taking advice) feels that low returns are not a short term phenomenon, they may be persuaded that an increase in contribution rates could be appropriate. That is, the conditions assumed when the rates were determined are no longer valid.

We are assuming that the price falls are market related. If this is not wholly the case i.e. the chosen insurer or domestic equity fund is doing relatively badly, then, changing the insurer or putting pressure on them to perform better may help.

The conditions associated with poor equity returns could imply falls in salary. Hence benefits from the old scheme would also fall.

Likewise, the business environment may mean that the company is struggling. So despite what it wants to do, it simply cannot afford to make additional contributions.

*In part (i) most candidates were able to discuss cost but only the better candidates picked up on the volatility issues. Part (ii) was generally well answered. In answering parts (iii) and (iv), some candidates focussed largely on pension-specific issues, and did not pay sufficient attention to wider 'communication' points. Part (v) was generally done well, though many candidates did not answer in sufficient length/depth for the marks available.*

## **END OF EXAMINERS' REPORT**