

EXAMINATION

September 2008

Subject SA2RSA — Life Insurance Specialist Applications

EXAMINERS' REPORT

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

Comments

The solutions contained in this document are more detailed than what would typically be required for a clear pass. Any relevant points made by candidates were given full marks, even if they are not contained in the solutions presented below. Further comments are given in the solutions presented below.

Question 1

COMMENTS

THE WHOLE OF QUESTION 1 WAS SURPRISINGLY WELL ANSWERED BY CANDIDATES. IN PARTICULAR, MOST CANDIDATES SCORED ALMOST FULL MARKS FOR PART I OF THIS QUESTION.

- (i) The company's rating categories may be out of line with competitors. In that case, buyers of the product might tend to be those people who believe they are likely to claim and who might be rated by other offices.

Claims experience is impacted by inception and termination rates.

Underwriting standards may be different (lighter) than average. This would naturally lead to a higher claims rate.

Claims admission rules may be more generous than average. This would lead to higher claims inception rates.

Claims management may be less active than average. This would mean that claims termination rates are worse.

The replacement ratio (benefit relative to income) may be higher than average. (There is a correlation between replacement ratio and cost of claims, as the incentive to return to work reduces as the replacement ratio increases.)

The company may have a higher than average share, in its business, of those policies / policyholders whose claims experience is poor. This might be due to random fluctuations in experience, possibly exacerbated by possessing a small portfolio of this business, selective withdrawals of 'good' lives, or the target market including sales in a region suffering localised economic recession. (Mark for any other reasonable example.)

This could come about through features of the policy design that encourage anti-selection.

Features of a product which might encourage anti-selection include:

- High replacement ratio.
- Inclusion of a short waiting period.
- Definition of disability.

Anti-selection in the form of withdrawals could result in higher claim inception ratios.

The underlying experience may in fact not be different: the company (or industry) data may be inaccurate (unreliable). Alternatively, the industry data may not be sufficiently recent to be fully comparable.

COMMENTS

VERY FEW CANDIDATES MENTIONED THAT PRUDENT ASSUMPTIONS HAD TO BE USED DUE TO THE FACT THAT THE PREMIUM RATES CANNOT BE CHANGED. THIS WAS DISAPPOINTING IN THAT THIS IS A GENERIC POINT AND DOES NOT PERTAIN SPECIFICALLY TO ANY SINGLE TYPE OF BUSINESS.

- (ii) The company must make prudent assumptions about its future sickness experience, both inception and termination rates, as it cannot adjust future premiums to allow for worsening experience.

This is a particular problem with sickness rates, as past experience is not necessarily as good a guide to the future as in the case of mortality.

The risk of anti-selection can change over time. This could be due to changes in the economic environment or changes (deliberate or otherwise) in the target market.

It will also require prudent assumptions for expenses, particularly claims expenses, and the interest rate.

The adverse effects can be removed by

- redesigning the contract as a unit-linked one with the benefit paid for by deductions from units without guarantees on the charges.
- inserting a clause in the contract permitting the company to review the premiums at regular intervals, say every five years.
- existing policyholders could be offered a “sweetener” to switch to another policy (with less onerous guarantees)

The guarantee increases the capital required to support the product. The extent to which a charge can be included in the premium for the cost of capital will determine the extent to which the feature influences the product’s return on capital.

COMMENTS

THIS PART OF THE QUESTION WAS VERY WELL ANSWERED.

- (iii) The profit target or risk discount rate may be higher than for the existing product. This may be as a result of the increased risk associated with a shorter waiting period, namely:

- greater claims uncertainty and
- higher risk of fraud.

Rates derived through profit testing would have to be compared to competitor rates to ensure marketability. If no competitors offer the shorter waiting period, competitiveness of premium rates will be less important. Rates will still need to be reasonable compared to the next shortest waiting period (own and competitors).

Claims inception and termination rates would be higher than for other waiting periods.

The claim inception and termination rates would probably be estimated using external data sources as the company has no direct experience:

- Reinsurers will be able to assist
- Industry data (local or international) could be used to estimate rates, especially the relationship between inception and termination rates of different waiting periods.
- The company could enforce early reporting on existing policyholders (i.e. require reporting early in the waiting period), which would provide data on claims that might otherwise not be reported.

Care is needed in assessing the relevance of experience from external sources (e.g. definition of disability may differ)

The company may use information from its existing contracts to investigate the relationship between inception and termination rates of different waiting periods.

Claims expense assumptions would be adjusted to reflect changes in the profile of claims to shorter term disabilities. A sharp increase in the number of claims assessed could impact on underwriting staff needs, with a corresponding cost impact.

Other assumptions expected to remain unchanged:

- Mortality
- Non-claim expenses
- Inflation
- Tax
- Lapse rates
- Investment returns

Given that the product is an extension of an existing product, development costs should be relatively low.

Any development costs (e.g. changing systems, literature, etc.) would need to be recouped from the extra profits arising.

Should consider whether underwriting should be made stricter, and if so, what the impact on price would be.

Future business volumes would be estimated. Judgement is required in estimating the degree to which volumes of the new waiting period would cannibalise existing waiting periods.

The aim is to maximize profits over all disability products. This can only be done if the new product has a higher profit margin or the new product results in higher total sales volumes.

COMMENTS

WHILE MOST (NOT ALL) CANDIDATES CORRECTLY IDENTIFIED THE TAX TREATMENT FOR PREMIUMS AND BENEFITS, CANDIDATES SEEMED TO BATTLE WITH HOW INVESTMENT INCOME WOULD BE TAXED UNDER THE DIFFERENT POLICIES (I.E. THERE DID NOT SEEM TO BE A CLEAR UNDERSTANDING OF THE SOUTH AFRICAN FOURFUND TAXATION APPROACH).

- (iv) Premiums for income disability products may be paid from pre-tax income.

Premiums for lump sum disability products are paid from after tax income.

Income disability benefits are taxed as income.

Lump sum disability benefits are not subject to tax.

The assets underlying the liabilities of lump sum disability benefits are invested in the individual policyholder fund and taxed accordingly.

The assets underlying the liabilities of disability income benefits are split between the liabilities in respect of claims in payment and other liabilities.

The assets in respect of claims in payment are invested in the untaxed policyholder fund.

The assets in respect of other liabilities are invested in the individual policyholder fund.

Question 2

COMMENTS

THIS QUESTION WAS A RELATIVELY GENERIC QUESTION AND VERY SIMILAR TO QUESTIONS THAT HAVE BEEN ASKED IN PREVIOUS EXAM PAPERS. MOST CANDIDATES SCORED WELL ON THIS QUESTION. HOWEVER, A NUMBER OF CANDIDATES MADE THE MISTAKE OF ANSWERING THE QUESTION THAT THEY WANTED TO HAVE BEEN ASKED RATHER THAN THE QUESTION THAT WAS ASKED. IN PARTICULAR, A NUMBER OF CANDIDATES SPENT A LOT OF TIME DESCRIBING ALTERNATIVE PROPOSALS (WHICH WAS NOT REQUESTED) RATHER THAN DISCUSSING THE PROPOSAL AT HAND. WHILE ALTERNATIVE PROPOSALS NEED TO BE CONSIDERED IN A QUESTION OF THIS NATURE, THEY SHOULD NOT BE THE PRIMARY FOCUS OF THE ANSWER AND THUS SPENDING MORE TIME ON THE ALTERNATIVES THAN THE PROPOSAL IN THE QUESTION ITSELF MEANS THAT A LOT OF TIME IS SPENT ON ONLY A FEW MARKS.

- (i) The company will project the cash flows of the business during run off, taking into account the factors described below.

This will allow it to calculate the capital support that may be required at each future point in time, the expected transfers each year to the shareholders, and hence the value of the company to the shareholders if the business is allowed to run-off.

This will be compared to the value of the company assuming it continues to write new business.

The company will consider the following factors:

The company will have to decide whether to allow renewals and/or increments.

The length of time that it will take for the existing book to run off.

During this time period, the company is going to have to employ at least a minimal infrastructure (systems, customer services, actuarial support etc.) to manage that book of business. Alternatively it could employ an outsourcing company.

The costs involved in managing the book during the run-off period. This will include taking into consideration the dis-economies of scale that will arise over time, particularly if kept in-house.

For example, management and premises overheads will far outweigh the incremental per policy servicing costs. In addition, in-force business will have to take the full burden of overheads normally attributed to new business. Hence, the unit cost per policy will increase over time as the book runs off. Outsourcing the administration may mitigate this.

Increased lapses and surrenders following closure to new business will exacerbate this problem. These may occur for example as a result of policyholder concerns regarding the security of the company.

The one-off costs associated with closing the company to new business. For example: redundancy costs associated with making the sales force redundant, plus the staff involved in the production of quotes and administering new business.

The practical issues that the insurer might face as a result of making a large proportion of its staff redundant. For example the ability to retain the remaining staff needed to service the in-force book as it runs-off, and the need to move to smaller premises (or sub-let part of the existing premises) as its need for office space diminishes. (Mark for other suitable examples.)

The effect that closing the company to new business will have on the statutory solvency position of the company. For example, the company will have to recognise all of the costs associated with the closure.

It will also have to allow in the valuation basis for the increase in unit costs over time due to the diseconomies of scale mentioned above, which is likely to worsen its solvency position. The company may be able to pass on some of these costs to policyholders, but only if expense charges are not guaranteed. In practice, the extent of the increases may be limited by policyholders reasonable expectations.

In addition, charge increases may lead to a significant increase in the lapse and surrender rates for the affected business. This may not be in the company's best interests.

Claims volatility is likely to increase as the business runs off, which could increase the margins required in reserves. Alternatively reinsurance could be increased, but at a cost.

Claims could increase as a result of selection withdrawals

Depending on the solvency position prior to the closure, the company may require an injection of capital from its shareholders to ensure that the it remains solvent.

However, it can take into account the fact that it will no longer require free assets to support new business strain.

The impact on the investment policy of the company:

- It would be usual for the company to match its term assurance liabilities through investment in fixed interest assets. Should be unaffected.
- Any non-unit reserves (e.g. required to match guarantees on the unit linked business) are also likely to be invested in fixed interest securities. Should be unaffected.
- The unit fund liabilities would be exactly matched through investment in the chosen unit linked funds.

The assets underlying the unitised with profit products may be invested more conservatively to reduce the risk of the solvency position worsening as the in force book becomes smaller.

This could reduce future bonuses, which will upset policyholders and could increase lapses.

The bonus structure may have to be altered to allow the company greater flexibility in declaring bonuses as the fund runs down.

The investment policy could change to reflect the fact that the company will at some point move from being a cash generating concern to a net cash paying concern.

The impact of closure to new business on the unit-linked funds in which its policyholders invest: the costs of selling assets to meet withdrawals from the fund may get disproportionately large as the fund decreases in size.

In addition, it may be difficult to manage certain funds once they fall below a certain size (e.g. a property fund), since the assets are illiquid and a single property may be large in value. The withdrawal of units from such a fund over time would force the sale of assets, possibly when the asset class is depressed in value.

Some unit-linked funds might need to be combined as they decrease in size.

The company would need to consider the tax position of the company, which could change over time. It could be XSE currently, then move to XSI in the absence of further new business expenses, but eventually return to XSE as the funds under management reduce.

The company would need to consider how the stock market would react to the move.

The company would also consider the alternative of selling the entire book of business to another direct insurer, via a section 37 transfer.

COMMENTS

WHILE THE BETTER CANDIDATES ANSWERED THIS QUESTION WELL, A NUMBER OF CANDIDATES FOCUSED PURELY ON HOW TO REDUCE THE CAR OR, PURELY ON HOW TO INCREASE THE EXCESS ASSETS. IN ORDER TO CHANGE THE CAR RATIO, ONE CAN WORK ON BOTH OF THESE.

THE CANDIDATES WHO SCORED HIGHER MARKS TOOK ACCOUNT OF THE TYPE OF POLICIES THAT WERE BEING SOLD BY THE LIFE OFFICE AS OUTLINED IN THE QUESTION AS PART OF THEIR ANSWER. THE BETTER CANDIDATES ALSO IDENTIFIED THAT CHANGES TO PRODUCT DESIGN FOR NEW PRODUCTS COULD HAVE AN IMPACT ON THE CAR RATIO IN THE FUTURE. HOWEVER, THIS POINT WAS MISSED BY MANY OTHER CANDIDATES.

IT WAS A BIT CONCERNING HOW MANY CANDIDATES DID NOT CONSIDER THE POSSIBILITY OF RAISING MORE CAPITAL IN ORDER TO IMPROVE THE CAR RATIO

- (ii) As a number of companies are affected, the FSB may allow insurers a longer period to rectify their solvency positions.

The extent to which the life insurance company will want/need to take actions to improve its CAR cover, will depend on the level of the ratio prior to recent falls and the size of the drop relative to its original level.

The actions the company may take to improve its free asset ratio include:

Reducing the liabilities:

The company could weaken the statutory valuation basis. Any discretionary margins could be removed.

It could do this by reducing the implicit allowance for future bonus declarations, for unitised with profits business, if the company believes that the reduction in stock market returns is permanent and future bonuses will be at a lower level than previously assumed in the valuation basis.

Lowering bonuses will have an effect if the negative bonus stabilization reserve cannot currently be recovered in 3 years through under-distribution.

However, the valuation must make allowance for policyholders' reasonable expectations, so the extent to which the company can assume bonuses will reduce in the future, will depend on PRE.

The company could increase the valuation interest rate if possible.

The valuation interest rate is dependent on the yields on the assets backing the liabilities, so the extent to which the valuation interest rate can be changed must be judged with reference to the redemption yield on fixed interest securities and the expected returns on both equities and property. (This will not affect the liabilities under the unitised with profits business.)

The company could consider reallocating investments into higher expected return asset classes, to increase the valuation rate of interest that can be used to value the liabilities.

However, such assets, e.g. equities, tend to produce more volatile returns, which may further jeopardise the CAR ratio. Such investments will also directly increase the CAR (if the company is on an OCAR basis).

The expense assumption could be reduced through a cost-cutting exercise, e.g. through cutting distribution costs by reducing branch network/cutting size of sales force etc. This would reduce reserves and OCAR.

The matching of assets and liabilities could be improved through the reallocation of assets, which may lead to the ability to release mismatching reserves (if any), or reduce the resilience portion of CAR.

It should be noted that the statutory actuary would have to be satisfied that any changes in the valuation basis are justified, as the authorities would take a dim view of arbitrary changes in the valuation basis.

The company will also be influenced by the impact that changing the statutory valuation has on, for example, the calculation of the embedded value, since the change in the

embedded value from year to year will be used as a performance indicator and may be used to remunerate senior management.

Increasing the value of assets by:

Reducing/eliminating holdings of inadmissible assets and moving into admissible assets.

Use of reinsurance:

- financial reinsurance
- Could use reinsurance to reduce liabilities and/or CAR.

Product changes:

The writing of new products can reduce free assets if there is new business strain, ie the expenses of writing the business and the solvency capital requirements are greater than the premiums received. Products could be redesigned to reduce new business strain, although this could create marketing conflicts.

Financing commission within a reinsurance arrangement could be used to reduce new business strain.

Securitization could be used to improve the solvency position (by bringing some of the value of in force into the excess assets).

Changes could be made to the bonus structure for unitised with profits policies, for example increasing the relative proportion of terminal rather than annual vesting bonus.

Seek a capital injection from its shareholders. The shareholders will only be willing to inject capital where the return on capital is adequate (and they could not earn a higher return from an alternative investment of equal risk).

If the shareholder views the injection as necessary to ensure that future new business targets are met, for example, and that without improving the CAR ratio the future new business targets will be under threat then the shareholder may be willing to inject capital.

Raise additional equity through a share placement on the equity market. Equity markets/values are currently depressed, and it is unlikely that the share placement would be viewed favourably, due to the lack of apparent financial strength because of the low CAR ratio.

However, if for example a new management team has recently been put in place, then market sentiment may be more positive and equity placing may be viewed more favourably.

Raise additional equity through a corporate bond placement. (The debt would have to be subordinated to policyholder interests.)

Whether this is likely to be a successful route to improve the CAR ratio will depend on:

- the size of the corporate bond placing required to achieve to raise the required funds
- the extent that the company has issued corporate bonds in the past to raise capital
- the success (or otherwise) of other corporate bond placings of a similar size and nature
- the margin over gilt returns offered on the bond
- the relative levels of supply and demand for bonds
- the perception of the life insurance company's prospects in terms of new business volumes, security, quality of management team.

CAR may be reduced directly, by ensuring that management actions are adequately reflected in the calculation of CAR.

If the company is on an OCAR basis then CAR can be reduced by moving the assets backing CAR into less volatile assets (e.g. cash).

COMMENTS

THIS QUESTION IS VERY TOPICAL AND IS ALSO A MORE DIFFICULT QUESTION. A NUMBER OF CANDIDATES SCORED VERY BADLY HERE AND SIMPLY OUTLINED THE CURRENT REGULATORY SITUATION. THIS WAS NOT WHAT THE QUESTION ASKED FOR. THE QUESTION ASKED FOR DISCUSSION AROUND PROPOSED CHANGES TO THE REGULATION. NONETHELESS, A NUMBER OF CANDIDATES SCORED REASONABLY ON THIS QUESTION AND THIS IS ONE OF THE QUESTIONS WHICH TENDED TO SEPARATE THOSE WHO PASSED FROM THE REST OF THE CANDIDATES.

- (iii) Front end loading describes a charging structure where there is initially a period of nil or reduced allocation to units.

The front end loading is there to recover the heavy initial costs suffered at the point of sale of a contract and in particular to recoup these expenses in a capital efficient way and from plans that may leave early.

An alternative approach to initial expense recoupment is to have a surrender penalty but this also is not being allowed.

The loadings could be removed, or at least modified, if the expenses could be reduced, or spread more across the contract duration.

The largest item is often the up front commission and this can only be changed if there is an overall change in market practice.

A shift away from up front commission would significantly impact on intermediaries, and this would have a knock-on effect on insurers' volumes.

It is also quite possible to make assumptions about rates of withdrawal and through an equation of value to respread the initial expenses over the life of the remaining contracts. However, lapse rates can be volatile being affected by factors such as the economic situation.

Maturity values, surrender values, expense charges, commission and profits can all be changed, but only at the expense of another.

Other considerations include:

- lapse and re-entry risk for existing policies
- the financing strains on the office are heavier and more initial capital may be needed
- there is a cross-subsidy from those who choose to stay to the early leavers
- extra margins (and so extra costs to the policyholders) would be required to allow for the risk of many early surrenders and the volatility thereof
- the combination of high upfront commission and no front end loading opens the door to abuse by agents

In practice, unless the consumers put pressure on the brokers, or the regulator intervenes to limit commissions, then it is possible that higher renewal commissions and thus lower allocations could become the norm.

If allowed under the proposed regulatory framework, techniques such as loyalty bonuses could be used to shift some charges from those who choose to stay to early leavers.

It is likely that lapse rates would be higher for this new product design than for existing designs.

Practical implications of the proposals include:

- system changes and changes to literature will be necessary
- compliance costs may increase.

This proposal would have the benefits that:

- the products may be more marketable
- fewer complaints about poor returns
- greater comparability with other instruments such as unit trusts
- higher sales may reduce unit costs

The costs for an individual company would depend on its persistency experience at early durations. Offices with high persistency may not find the proposal too expensive.

Question 3

COMMENTS

THIS WAS A RELATIVELY EASY QUESTION AND IS A VARIATION OF A QUESTION THAT HAS BEEN ASKED A NUMBER OF TIMES BEFORE. MOST STUDENTS WERE EXPECTED TO DO WELL IN THIS QUESTION. ON THE WHOLE, THE BETTER STUDENTS PERFORMED REASONABLY WELL. HOWEVER, A SURPRISING NUMBER OF STUDENTS BATTLED WITH THIS QUESTION. WE ALSO FOUND THAT STUDENTS WOULD SPEND TIME GIVING ANSWERS THAT WERE NOT ASKED. FOR INSTANCE, THE QUESTION CLEARLY ASKS FOR A DESCRIPTION OF HOW ASSETS AND LIABILITIES ARE CALCULATED. HOWEVER, SOME STUDENTS ELABORATED ON THE CAR REQUIREMENT AS WELL. FURTHERMORE, MOST STUDENTS MISSED THE FACT THAT THE WITH PROFIT FUND WOULD BE SEPARATE AND ASSETS AND LIABILITIES CONSIDERED FOR THAT FUND ON ITS OWN WITH LIABILITIES PERTAINING TO THE BUSINESS WHERE THE SURPLUS WAS NOT SHARED BETWEEN POLICYHOLDERS AND SHAREHOLDERS (E.G. EXPENSE CHARGES WHICH WERE FIXED) NEED TO BE VALUED SEPARATELY. MANY STUDENTS FAILED TO REALISE THAT BOTH A PROSPECTIVE AND RESTROPECTIVE METHOD OF VALUATION WILL BE REQUIRED IN ORDER TO GET THE BASE LIABILITY AND THE BONUS STABILISATION RESERVE.

(i) Assets:

The assets belonging to the with profit policyholders should be ring-fenced.

The assets are valued at market value

Less inadmissible assets

Inadmissible assets are those in disallowed categories or in excess of spreading requirements.

The liabilities of the with profit fund should be considered separately from the liabilities outside the fund.

A gross premium valuation will be used, and using a prospective method.

The projection period should be long enough to ensure that all material cashflows are included.

Liability in with profit fund:

The expected annuity payments are projected, using either full annuitant data or representative model points.

The mortality is an important assumption and will be based on best estimates.

This will be adjusted for a 7.5% compulsory margin.

The compulsory margin will lighten the mortality as the risk is of longevity.

Discretionary margins may also be added.

Annuities are increased each year, where the increase is determined as $[(1 + \text{bonus rate})/1.06] - 1$ (with a minimum of zero)

Expenses are not part of the with profit liability as annuitants do not share in the expense profits and losses.

The assets are projected together with the liabilities to enable the calculation of future bonuses.

The asset share in the with profit fund is the accumulation of past premiums / purchase prices, less the monthly expense charge and 1.5% investment management and capital charge, less annuity payments, all accumulated at the actual return on the underlying assets.

The asset share is then similarly projected into the future using an investment return assumption that is consistent with the underlying assets. There is no tax on the returns as the underlying assets are invested in the untaxed policyholder fund.

Future bonuses will be determined according to a bonus formula used to replicate the bonus philosophy.

The bonuses must take into account policyholders reasonable benefit expectations, as formed by marketing material, the policy contract, bonus history (or other suitable examples).

The bonuses must be consistent with the company's PPFM.

The bonuses may allow for management actions, so long as these are consistent with those approved by the Board. For example, the assets may be invested more conservatively when the funding position is weak.

Once the expected future annuity payments are determined, these are discounted using a rate consistent with the projection rate. It must, however, allow for a 0.25% compulsory margin.

Bonus stabilization reserve:

This is the value of the assets in the with profit fund less the value of the liabilities in the with profit fund.

This may be negative, but only to the degree that the deficit can reasonably be expected to be recouped in the next three years. The Statutory Actuary must be satisfied that it is the case, and the Board must have agreed that bonuses would be reduced accordingly if the assets do not recover.

Liabilities outside the fund:

These represent the cashflows in respect of shareholders. They are based on projections consistent with those of the with profit fund, and consist of:

Income: the monthly policy fee and investment management and capital charges

Outgo: expenses at a realistic level, including margins. Grown at an inflation rate consistent with other interest rates used.

Shareholder injections of capital into the with profit fund.

The value of the capital injections would be determined using a stochastic model, making use of at least 2000 simulations, as described in PGN110.

Injections would be made, at a minimum, to be able to pay the guaranteed level of the annuities when the assets in the with profit fund are exhausted, but more likely when needed to preserve a minimum acceptable level of increases.

These injections would be consistent with the rules approved by the Board.

COMMENTS

THIS WAS ONE OF THE TOUGHER QUESTIONS IN THE PAPER AND, AS ANTICIPATED, IN MANY CASES THIS SEPARATED OUT THOSE WHO PASSED FROM THOSE WHO DID NOT. HOWEVER, IT WAS DISAPPOINTING TO NOTE THAT THE MAJORITY OF STUDENTS WERE UNABLE TO IDENTIFY THE KEY POINT THAT THE UNDERLYING GUARANTEES IN THE PREMIUM RATES WERE RELATIVELY HIGH (ESSENTIALLY A 7.5% INVESTMENT GUARANTEE BEING A 6% DISCOUNT RATE PLUS 1.5% CHARGES). STUDENTS WHO PICKED THIS UP WERE ABLE TO DEVELOP THEIR ANSWER BETTER USING THIS AS A BASE.

- (ii) In a low interest rate environment, nominal investment returns are expected to be lower.

Ignoring mortality profits and losses, investment returns have to exceed (approximately) 7.5%, the sum of the discount rate and charges, before there is a surplus available to provide annuity increases.

There is therefore a significant risk that, even over an extended period, there may be no surplus.

This risk is aggravated by the high proportion of equities.

When considering the possible actions to mitigate the risk, the insurer would have to consider policyholders' reasonable benefit expectations, especially those expectations created by historical increases, the expectation of large bonuses when investment returns are high, marketing material and contracts.

This would have to be weighed together with:

- the need to keep the product sound,
- the desire to avoid long periods without annuity increases,
- the actions taken by competitors on similar products,
- the reputational risks of making changes, and

- the potential cost to shareholders of supporting the product in adverse circumstances. (1 mark per bullet, maximum 4)

Possible actions to mitigate the risk:

Adjust the bonus philosophy, particularly with a view to spreading the release of the large BSR over an extended period. This may coincide with the use of derivatives on the equity holdings to protect the BSR.

Adjust the investment strategy away from volatile assets. This would, however, reduce expected future returns: the possibility of extended periods without increases would be reduced, but the likelihood of large increases would also be reduced.

The investment strategy could be refined by matching a proportion of the current guaranteed level annuity liability with appropriate bonds.

Matching with higher yielding corporate bonds with low liquidity, with a view to holding them to maturity, could take advantage of a high illiquidity premium.

Longevity risk (particularly rapidly improving mortality rates at higher ages) would make matching more difficult.

If the reputational risk is considered sufficiently severe, shareholder funds may be used to support future increases. This may be accomplished through a capital injection or subsidized loan to the with profits fund. This would have to be carefully communicated: an increase in the BSR as a result of a capital injection, designed to support increases over the long term, must not be allowed to lead to annuitants expecting large increases in the short term.

Similarly, the charges may be reduced to allow more of the investment returns to be used to provide increases.

Annuitants could be offered a voluntary conversion option to an alternative annuity product, possibly with guaranteed increases. However, this could lead to client dissatisfaction if the increases under the with profit annuities are subsequently greater than those under the alternative product offered.

The company may implement a strategy to reduce expenses. This is particularly challenging as the book will decline over time as the annuities run off (seeing that the product is no longer being sold).

END OF EXAMINER'S REPORT