

INSTITUTE AND FACULTY OF ACTUARIES

EXAMINERS' REPORT

April 2011 examinations

Subject SA2 — Life Insurance Specialist Applications

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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The following sets out possible comments that would be expected of a well prepared candidate. The comments below allow for the possibility that candidates approach the questions in different ways. As a result, there are generally more comments set out below than would be required to achieve full marks.

1 (i) Operational risks:

The company will now need to calculate the smoothed unit price. The process by which it does these calculations can lead to risks for the company.

The main risk associated with unit pricing is that different generations of policyholders will not be equitably treated and that their reasonable expectations will not be met, due to:

- errors in the calculation of the unsmoothed prices
- errors in the application of the smoothing algorithm
- the way that compensation for errors or inequities of a material size is determined

Risk can arise with regard to the allowance that needs to be made for tax on unrealised gains and on realised and unrealised losses. The allowance in respect of losses may be overvalued and the actual tax incurred by the company may differ from that charged to prices.

Systems may carry out of date or inaccurate information, for example, on asset values, amounts of accrued income, expenses and management charges deducted from the fund. It can be extremely costly to correct an error in unit pricing which remains undetected for a period of time, both in terms of compensation payments to affected policyholders and also the costs associated with calculating, applying and communicating correct prices and numbers of units.

The company needs to set up a notional ring fenced fund to assess the returns to be fed into the prices. This may involve some rebalancing of assets in order to maintain the required band of EBR. The company has no experience of managing assets in this way and so may end up in a position of having a mismatch between what the policyholder has been told and what the fund is invested in.

Additional risks can arise if the underlying assets are relatively illiquid, for example large property investments. If there are significant withdrawals from the fund and it is necessary to dispose of such assets, this might take some time, or else the assets may need to be transferred into the with profits funds. It is unlikely that the company would include policy conditions that enable them to defer encashment of units in these funds, for this with profits contract.

Given the significant difference in this contract compared to the rest of the company's in force business, there is a risk that the sales staff have not been adequately trained leading to potential mis-selling claims if policyholders did not understand the contract or the marketing literature was mis-leading.

The company runs the risk of system issues
For example, incorrect unit/premium allocation or benefit payment error.
Charges could be incorrectly made as they are variable

Complaints or bad publicity resulting from poor customer service.

For example, if there were high sales at launch and the administration teams could not cope with the volume,

Anti-Selection

The company is at risk of anti selective surrenders, particularly where asset values have fallen, and the smoothed value of the policy is higher than the underlying funds. This represents a risk to the fund that runs the business and, therefore, potentially to other with profits policyholders.

Alternatively, there may be fewer lapses than expected running up to the guarantee point, if the guarantee is likely to be in the money.

The transparent nature of the smoothing formulae is a significant risk to the company. For example, policyholders, or even IFAs could monitor the prices with a view to investing when prices are below their true value and surrendering when above.

Policyholders can switch between different EBR levels which might encourage people to take riskier strategies knowing there is a guarantee.

There is likely to be little/no underwriting and so there is a possibility of someone terminally ill paying a high sum into the product in order to get back the additional death benefit.

This question was a reasonably good differentiating question with the better prepared candidates scoring well. The question asks specifically about the risks that would arise from the launch of this product, therefore comments relating to generic operational risks (such as fraud and disaster) were not given credit. One way to tackle this question was to note all the operational and anti-selection risks relevant to unit linked business and then expand to UWP issues.

(ii) Profitability:

The only charges made are an annual fund charge which covers both expenses and the cost of the guarantees. The company would need to ensure that it is set at a level which meets these costs.

The company is likely to have a defined target level of profits, either in net present value terms or internal rate of return. The charging structure needs to deliver the target levels of profitability. The company will also look at payback period. As the company is a mutual the target profit may be zero.

Profitability is also impacted by the fact that there are guarantees attaching to this contract.

Treating customers fairly:

The company will need to ensure that the product meets TCF requirements.

It will need to ensure that charges are fair (e.g. by reference to unfair contract terms legislation) and are adequately disclosed to policyholders through information given during the sales process.

The charges and smoothing policies are explicit and transparent, and the company needs to ensure that the terms of the product will be clearly understood, and that customers do not face unreasonable barriers to exit.

There is a need to update the PPFM in order to reflect this new approach to with profits.

The company needs to be very clear about its policy on allocating profits arising from without profits business.

Marketability/competitiveness:

The fact that the design has a guarantee will be attractive to policyholders, particularly in times of market uncertainty. However the relative attraction will depend on the policyholders' perception of the value of the guarantee offered compared with what will be charged for it.

The company will need to consider the levels and shape of competitors' charges, as well as the smoothing policies and levels of guarantees.

Higher charges or lower guarantees than competitors may lead to reduced sales. Lower charges or higher guarantees may lead to more new business than can be supported by admin teams and/or capital resources.

The transparency of the smoothing rules and charges could make the contract marketable if other companies have not made their contracts as transparent.

The choice of different equity backing ratios may be a differentiating marketable feature.

Suitability to meet customer needs for defined target market:

The company will need to consider the needs of the market which they intend to target with this product.

The contract will suit customers who want transparency in the charging structure and benefits, and who want to be able to invest in higher risk assets with some guarantee.

The transparency of the charges and smoothing formula means it is very easy to compare with other similar contracts. If other such contracts exist in the market then market research will need to be done to ensure the product is competitive. The company may need to offer different levels of guarantee to distinguish its product.

If no other similar products exist on the market then it may be easier to sell.

Method of distribution:

As the business is sold through IFAs, other competitive factors may be more relevant to determining whether a sale is made e.g. levels of service. The company may choose to have higher charges to cover better levels of servicing, for customers and advisers, e.g. 24 hour call centres, but higher charges are unlikely to be popular.

When considering the commission structure, the company should consider the market norm, what systems can support, and whether the company has sufficient capital to support any high initial payments.

As the product is new, policyholders will need to have the features explained very carefully in order to avoid mis-selling problems, particularly the asset mix choice.

Financing requirements:

The company will need to consider the expected capital requirements arising from the proposed design of the product.

The insurance company would need to consider the matching of its charges to its expenses in both timing and amount, for example, paying commission at the start of the contract will lead to a capital strain as this is not matched by any initial charges.

If the company has limited surplus capital it will be more important to match expenses and charges which the current design of this contract does not allow.

There are guarantees attached to this contract which means that the capital requirements will be high. The charge does not appear to cover the cost of any capital although this could be in line with how other with profits contracts are treated. However, the estate might also be impacted if the capital is not charged for adequately.

Options and Guarantees:

There are guarantees attached to this contract which need to be charged for.

The company can vary charges to a degree, but in a situation where guarantees are in the money, increasing charges does not help unless there are other policies that are out of the money which can be charged more.

Since the charges are linked to the fund value, there is also the problem that charges received will be lower during conditions that are more likely to result in the guarantee biting.

The company may consider whether it wants to hedge some, or all of this risk.

The cost of the guarantee and its volatility depend on the investment strategy chosen and the charges will need to reflect this.

Risk / sensitivity of profit:

The company is exposed to the risk that policies lapse before sufficient annual charges have been received to recover the initial outlay, in which case it may introduce surrender penalties.

Due to the guarantees offered and the fact that the charges are linked to the fund value, the profits will be highly sensitive to returns earned, volatilities and lapses rates (there could be anti-selection in terms of fewer policyholders lapsing in bad scenarios).

The fact that the charges cannot be increased past an upper limit, and the smoothing algorithm is transparent, makes the profits very sensitive to both the guarantee and to scenarios where the cost of smoothing is significant because there is little scope for management actions.

The charging structure should be tested for sensitivities to profit in respect of the different factors. Changes to the structure may mitigate some of these (e.g. fixed per policy charges remove the exposure to investment returns that an annual management charge of a percentage of funds under management has).

The company may also wish to consider whether there are other events for which the company could charge, such as switching between funds, asking for a surrender value, taking regular income.

The onus of the guarantees, the lack of discretion allowed in terms of smoothing and charges means the company is taking on a lot of risk and it needs to understand this fully relative to its risk appetite.

Cross-Subsidies:

The charging structure relies on cross-subsidies to get to desired profitability targets. This is because large contracts pay more towards the fixed expenses than the small contracts.

Introducing these cross-subsidies introduces a business mix risk. If cross-subsidies exist, the IFA is likely to select against the company – especially if competitors do not have such cross-subsidies.

In addition, due to the lack of discretion allowed in the smoothing policy, there will be cross subsidies in terms of smoothing, or the estate could bear the risk of any smoothing losses over time.

The guarantees inherent in the contract may also be more onerous than other contracts which, if not covered by the charges could also be a drain on the estate.

This could mean that the estate is being used to subsidise these contracts which may not be in line with treating the existing customers fairly. The WPA should review the PPFM to ensure that the product design is compliant with the practices and principles.

A minimum premium could be introduced in order to reduce the cross-subsidy.

Administration systems:

The company will need to consider the extent to which its existing systems can cope with the proposed new design, and the changes required.

The company may not currently track numbers of units or unit prices nor accommodate variable charges, and systems will need to be developed to calculate the value of the policies.

In addition customers can choose the level of EBR that they want, and they may want to be able to switch funds. This could be highly complex and systems will need to be developed.

The investment funds may not currently be set up to allow investments with different EBRs.

Illustration systems may not be able to cope with the proposed charges. If this is the case, then there will be a need either to reconsider the structure or upgrade the systems

Service standards:

These new contracts are different to conventional contracts as they have transparent smoothing algorithms and charges, as well as a guarantee fixed at

outset. The questions which this may generate may be different to the current types of question and staff may need training. In addition any new admin systems will be new to the staff.

The company should consider whether it has the correct skill set within its staff, e.g. investment management, pricing, modelling, hedging expertise.

Company reputation:

The company needs to consider how the product sits alongside its existing brand and how it will impact its reputation.

The design of the contract is very transparent and in this respect this could enhance the company's reputation.

On the other hand, if the contract is loss making and if the estate is impacted by the sale of this contract, then this could be bad for the company's reputation.

Underwriting philosophy:

This is not an issue for the design of this contract since there is little mortality risk it is likely there would be no underwriting.

Reinsurance terms and capacity:

It is unlikely that the risks in this contract could be reinsured, but hedging of the market risk may be possible given the formulaic nature of the smoothing.

Admissibility of assets:

There is no issue with this unless sophisticated derivatives are entered into for hedging purposes.

Taxation:

Charging should fit with the taxation regime (e.g. indirect taxes such as VAT, if they apply). Tax rules should be allowed for when profit testing.

The company should consider whether the tax treatment of the business gives it any disadvantages (or advantages) relative to other types of savings vehicle available to this target market.

And whether there is any risk of these aspects changing adversely in future.

Regulatory constraints:

The company will need to consider the regulatory constraints around charging.

For example if there are any price caps or charge caps imposed by the FSA, the charging structure needs to be within these.

There may also be charge disclosure rules (e.g. 5/10 yr projections on quotes). The company will want to appear favourable in these for marketing reasons and so will need to consider how its proposed structure will look in them.

The company needs to take into account potential future changes in regulation, for example the implementation of Solvency II, and whether this might have any significant impact on the capital requirements or design of the product.

Increments and partial withdrawals:

The company will need to consider whether there is a requirement to allow additional single premium increments or partial withdrawals.

These could impact the profitability and cost of guarantees, and make the design more complex.

Whether or not these are allowed would be driven by what competitors do and how the profitability and risks are impacted

Has the WPA been consulted?

Have the requirements of GN47 been considered in the stochastic modelling of the guarantees

The better prepared candidates gained marks by commenting on all the key areas which form part of product design (as listed in the Core Reading). Those candidates who did well, did so by structuring their answer carefully and by then expanding these areas and discussing points specifically in relation to the product in question, and also by recognising the potential impact on the existing with profits policyholders. There was plenty of scope within the marking to allow candidates to discuss the issues widely, given the high total number of marks available. The highest scores were achieved by those candidates who covered a wide range of areas rather than focussing on a few. It should be borne in mind that the number of points set out in the solution here is considerably more than the number needed to achieve full marks.

(iii) High level check:

Model points would be determined in order to test the stochastic model. These would consist of factors such as an assumed premium, age and sex.

These model points would be run individually through both the stochastic model and the testing model and the results would be compared.

The cost of guarantee at the maturity date would be defined as the difference between the guaranteed payout (i.e. the premium) and the fund value, if this is greater than zero. Hence, although expenses are key to profitability, they do not feed into the calculation for the cost of the guarantee.

Clearly the cost of the guarantee is dependent on the charges applied to the contract (since these reduce the fund value). These are not yet finalised but the calculations should use the same assumption as that used in the full stochastic model, in order to check that model.

The Black Scholes formula is set out as follows:

$$f(t, S_t) = Ke^{-r(T-t)}\Phi(-d_2) - S_t e^{-q(T-t)}\Phi(-d_1)$$

Where $d_1 = \frac{\log \frac{S_t}{K} + \left(r - q + \frac{1}{2}\sigma^2\right)(T-t)}{\sigma\sqrt{T-t}},$

$$d_2 = d_1 - \sigma\sqrt{T-t}$$

Note that the company could use the formula relating to dividend paying shares in order to allow for the charges that are deducted from the fund.

The parameters would be populated with the following:

σ = volatility of assets backing the funds relevant to the maturity period

r = assumed annual continuously compounded risk free rate for the maturity period (allowance for tax)

q = annual fund charge (continuously compounded)

K = premium

S_t = value of the fund, which is the premium at $t = 0$

T = term = 5 years, and for pricing $t = 0$

Parameters should be set to be consistent with those used in the stochastic model.

For example, the volatilities and risk free rate

Carry out the test for all equity backing ratio levels

An allowance for the probability of being in force on the guarantee date could be built in and this would be based on the expected lapses and mortality used in the stochastic models.

The total probability adjusted cost would be determined for each model point using the above formula, and then averaged across them. Weightings could be used within this averaging to allow for the expected mix of new business.

The value from this would be compared to the average of the present value of the costs from the output from the stochastic model runs.

This question part did not require in-depth knowledge either of stochastic modelling or of the Black Scholes formula. The question was testing the candidate's ability to use logic to be able to suggest ways that the output from a model could be checked. Many candidates managed to set out how they would apply Black Scholes using the formula as set out in the actuarial tables, and marks were gained for this. Detailed description of how to set each of the parameters was not required; rather, the few who really differentiated themselves realised that the key was to ensure that for the check to work, the assumptions for the Black Scholes formula had to be consistent to those used in the stochastic model. In addition, only a few realised that decrements could be used in both models – provided they were consistent. Marks were gained for recognising that the application of the charge had an impact on the cost of guarantee and that this also had to be built into the test model. On the whole, this was not as well answered as the previous question parts.

(iv) Reasons for difference:

On exit of the policy, there could be a cost of smoothing as well as a cost of guarantee. The cost of the guarantee could be defined as the guarantee less the asset share or unsmoothed unit fund (where this cost is positive), and the cost of smoothing could be defined as the payout less the asset share/unsmoothed value of the fund less any cost attributed to the cost of guarantees. (Other valid definitions may be used). The cost of smoothing could be positive or negative.

The BS formula cannot measure the cost of smoothing and therefore implicitly assumes a zero cost of smoothing. The stochastic model will measure the cost of smoothing. Depending on how the company defines the cost of the guarantee, the BS method could give a different answer to the stochastic model for the cost of guarantees.

The stochastic model could split the costs on maturity between the pure guarantee cost and a cost of smoothing, using the same definition of cost of guarantees as is assumed in the BS calculation for testing purposes.

The stochastic model may be applying management actions, in terms of varying charges up to the limit, which cannot be replicated in the BS formula.

If this is the case then this functionality should be switched off in the stochastic model for testing purposes.

Similarly the stochastic may either be deliberately applying management actions in terms of changing the EBR levels in different scenarios, or else the EBR ratios may naturally change over time in the model as they earn different rates.

This may invalidate the volatility assumption used in the BS calculation. The stochastic model should be forced to use a constant EBR over time to assess whether this is the cause of the difference.

The volatilities and risk free rate in the stochastic model may vary over time and so may not give the same answer as a spot rate.

For testing purposes, the stochastic model should use the same constant rates as the BS calculation to assess if this is the reason.

There may be asymmetry in the way that tax affects the net returns which cannot be reflected in the BS model. To assess whether this could be a cause, the tax could be set to zero in both models for testing purposes.

The stochastic model may be taking account of policyholder behaviour and may be modelling fewer lapses when the guarantees are in the money.

For testing purposes, and to see whether this is the cause of the difference, the lapses in the stochastic model should be level.

It is possible that there *is* an error in either model

Following part (iii), candidates were asked to comment on why there may be differences. The key thing here was to identify the fundamental differences between the stochastic and closed form approaches. The latter does not model smoothing at all and does not allow for other management actions that may be programmed into the stochastic model. Similarly the stochastic model considers the dynamic lapse assumption given the economic scenario, which the Black Scholes formula does not. The Black Scholes model has limitations due to its simplicity, particularly that the key inputs (risk free rate and volatility) are averages over the period, whereas these more naturally would vary stochastically.

(v) Reasons for the cost of guarantee being higher than expected:

The marketing actuary's expectations may be unrealistic. This could be due to his view on historic data, rather than current market data, or on what competitors are doing.

Particularly since it is difficult to guess guarantee costs, particularly their time value.

The risk free rates don't take account of any risk premium, and may be currently low. This, coupled with charges and tax being applied to the earned rate, could mean that the average earned rate on the fund is low. The marketing manager may not have allowed for this in his estimate.

If the volatilities on the assets assumed to be backing the funds are high, the cost of guarantee will increase. The marketing manager may not have allowed for this in his estimate.

The assumed lapses could take into account the potential anti-selective nature of the contract (i.e. fewer lapses when guarantees are in the money). This will

increase the cost and the marketing actuary may not have factored this into his estimate.

The Marketing Actuary may assume more lapses before the guarantee date. The Marketing Actuary may have assumed more take the lowest equity backing ratio option.

This question part was testing the candidates' ability to analyse the possible drivers for preconceived ideas. The candidates who did well in this question were those who considered and then explained clearly a range of different reasons why the marketing manager may have thought that the cost of guarantees was lower than actually is.

(vi) Other companies charge lower:

The guarantees are stated to be similar but not the same, this could make a difference.

It may be difficult to isolate the level of competitor charge specifically intended to cover the cost of guarantee (e.g. if also covering expenses), so the comparison also might not be like for like in this respect.

There may be a time lag, and competitors may not have repriced their contracts recently.

Other companies may be able to use tax to their advantage.

Other companies may take the view that they do not wish to price using market consistent techniques and they may believe that using real world assumptions with an allowance for the risk premium, and perhaps a lower volatility is more appropriate. This may reduce the cost of the guarantees.

It could be that other companies take the charge as an explicit deduction outside of the fund which would mean that the fund is not reduced by the charge. This could have a significant impact on the cost of the guarantee. As lower charges deducted lead to lower cost of capital

Other companies may have lower EBRs or they may be more dynamic with larger bands so that in bad scenarios, the EBR rate reduces and hence volatility reduces.

Our margin for risk may be higher as other companies may hedge the guarantee, but this is likely to be expensive.

Other companies may accept a lower profit criterion in order to achieve sales.

Other companies may have more experience and so are less prudent in their assumptions.

Other companies may adopt a different approach to smoothing which would lead to different costs of guarantees.

This question part required the candidate to consider all the different reasons why other companies may be charging less for guarantees than the theoretical guarantee cost calculated by this company. This therefore covered not just the differences that there might be between the theoretical cost for the two companies (e.g. different underlying parameters) but also different attitudes towards whether or not to charge the theoretical price (different pricing/charging strategies and risk appetite). Candidates who did well managed to apply their knowledge of pricing and assumptions to the situation given.

(vii) Change the guarantee:

The “Unfair Terms in Consumer Contracts Regulations 1999” gives the FSA power to challenge firms that are using unfair terms in their standardised consumer contracts.

Under the regulations the general test of whether a term is unfair is based on whether, contrary to good faith, it could give a significant advantage to the firm that could cause detriment to the consumer. The proposed option would fail this test.

In particular this suggestion may be considered an unfair term and hence in breach of the Regulations, because it allows the company to change the terms of the contract without consulting the policyholder. Even if this approach was set out in the contract it is unlikely to be considered a valid reason because the whole point of having a guarantee is to protect the policyholder.

Further the terms of the contract could be perceived as being misleading since the policyholder could believe they had a guarantee at 5 years, whereas in fact the guarantee may not be in place until year 7. Alternatively the guarantee may not be in the money at year 5, and the policyholder may expect there to be a guarantee for another two years, which may not be the case. To avoid this, the wording of literature and the sales process would have to be very clear, which might be difficult for the company to achieve.

Well prepared candidates were able to demonstrate clear understanding of this piece of regulation, and how it specifically applies in this situation.

- 2** (i) The information on the non-linked contracts would be contained within the valuation summary forms, Form 51, and that of unit-linked liabilities within Form 53, and index-linked in Form 54.

The total liabilities would be shown within Form 50 (Summary of mathematical reserves) or other forms such as 2, 58, 60.

The information on the reinsurance treaty would be contained in the reinsurance section of the Abstract of the Valuation Report (Appendix 9.4)

And the reinsured liabilities would be shown in Forms 51 (Valuation summary of non-linked contracts (other than accumulating with profits contracts)) and 54 (Valuation summary of index-linked contracts).

The fact that term assurance only started being sold in the year would be seen within Form 47 (Analysis of New Business), and also within the details of new products section within Appendix 9.4

Details of any guarantees offered would be included in Appendix 9.4

The management expenses of the company will be shown in Forms 40 (Revenue account) and 43 (Analysis of expenses).

Well prepared candidates gained full, or close to full marks on this question part. However, it was clear that a number of candidates had very little knowledge of the FSA Returns forms (despite the Core Reading stating that good knowledge of the content of these forms is required for this examination). Marking was relatively generous in that form numbers quoted by students could be close rather than exact; the examiners were testing broad understanding of the contents rather than exact recall of detail.

- (ii) FSA Returns show statutory balance sheet and revenue account items for one year, as well as comparatives for the previous year.

Form 2 (Statement of solvency) will provide details of total capital resources and capital resource requirements and hence the excess assets available.

This will be useful for assessing the solvency position of the company and hence give an indication of potential requirements for capital injections in the future

Form 3 (Components of capital resources) allows Company B to assess the quality of capital within Company A, and the use being made of lower quality capital or debt instruments, or any capital restrictions that are biting. This will be useful in considering how the combined capital position may look.

Form 13 (Analysis of admissible assets) shows the splits of assets within the long term fund and shareholder fund between broad categories. This, together with Forms 48 (Assets not held to match linked liabilities), 49 (Fixed and variable interest assets) and 57 (Analysis of valuation interest rate) will allow Company B to assess the appropriateness of asset holdings to back liabilities.

Form 17 (Analysis of derivative contracts) shows the types of derivatives held. This will allow Company B to understand any hedging strategies Company A may have in place.

The revenue accounts in Form 40 (Revenue account) show whether the fund is growing or contracting, and whether this is a result of investment gains/losses

or through operational movements (premiums – claims – expenses). Company B can compare these movements with its own to gain a view of the combined company and whether it is likely to change the current position of Company B.

It would also give an indication of the taxation paid during the year, although this won't give a full indication of the tax position of the company. Forms 41 (Analysis of premiums), 42 (Analysis of claims) and 43 (Analysis of expenses) will show more detailed splits of premiums, claims and expenses. The most useful would be the splits of expenses between management, commission and acquisition expenses, but it is also useful to understand where the majority of the income and outgo originate from.

Detailed splits of new business premiums contracts will be shown in forms 46 and 47 (Summary of new business and Analysis of new business) which will allow Company B to assess whether the new business is similar to its own or would provide a complementary fit and to assess goodwill.

The assets backing non-linked liabilities are shown in Form 48 (Assets not held to match linked liabilities) and this can provide a useful insight into the matching for the annuity portfolio – Form 49 (Fixed and variable interest assets) will show more detail on the split between government and corporate bonds with their appropriate credit ratings. This may help to determine the potential capital requirements needed for default risk.

Forms 51–4 (valuation summaries) have already been summarised and information provided earlier, however Form 57 (Analysis of Valuation Interest Rates) would show the detailed interest rates being used for valuing liabilities. This would allow comparison with the business within Company B.

Form 58 (Distribution of surplus) shows the surplus arising over the year, and previous year. This would allow Company B to assess whether new business strain is causing solvency issues or whether in force business is potentially generating sufficient surplus to cover new business strain.

Form 60 (Long-term insurance capital requirement) shows the solvency position and provides information on the different levels of the risk components.

The notes to the returns would provide details of any waivers that have been used in valuing assets or liabilities.

Appendix 9.4 shows the detailed information on the valuation basis which could be compared to that used in Company B to assess general strength.

The details would include valuation interest rates, inflation rates, adjustments to any yields for risk and unit growth rates.

For demographic assumptions it will include details of mortality assumptions and for annuities the details of improvements and annuitants life expectancies.

Detailed breakdown of expense allowances and how these allowances cover actual maintenance expense incurred will allow Company B to assess if there are any expense margins or potential issues with expenses within the company.

Options and guarantees will be set out showing any reserves held within the liabilities – although the products sold do not indicate any would be material

Listings of reinsurers and treaties would be shown which would allow Company B to assess whether there is any potential synergies or additional counterparty risk

The details of new products launched, and existing products amended, would be included and hence Company B may be able to assess how proactive the company might be in product development.

Details of unit pricing practices can be compared to Company B

Details of unit-linked charging structures can be compared to Company B.

Details of the unit funds offered might highlight potential synergies.

The shareholder controller information would allow Company B to assess who actually owns Company A.

Information already obtained gave details for one year only, but can use previous FSA returns to see how the information has moved over time

The Auditors Report would identify any issues they have raised.

If the resilience tests (for example, if they are biting) might give view on matching.

Persistency information is also available in Appendix 9.4, which would provide useful comparisons to Company B.

This question sought to explore the information that an external company could glean from the FSA Returns and how it would then use that information. Specific knowledge of form numbers and names was not required. Candidates who scored well showed reasonable knowledge of the contents of the FSA Returns, but more importantly clearly set out HOW each element could be used to support an external valuation by another company.

(iii) Report and Accounts

The report and accounts will have been produced and lodged with Companies House. This will include accounts on a UK GAAP or IFRS basis and include significant disclosures and management reviews of the operation of the company. This will include a chairman's statement talking about the Company's strategy.

The accounts would also include details of new business volumes, cash emergence, and policies around deferral of acquisition costs.

Disclosures of risk policies would also be made.

If Company A is part of a larger group then the Group accounts may include significantly more information around the governance of the company and links to other companies in the group.

The company may publish embedded value results on an EEV or MCEV basis.

This would provide information on the value of the company, which will be of direct interest in this context.

It also gives more detail on the analysis of change in value over the year and particularly highlights persistency or expense issues. Sensitivities will also be published and may be used.

Commentaries around those results will show how robust assumptions are and how experience is differing from these assumptions.

Embedded value results would provide insight to the value of new business.

New Business statements

The company may have issued new business statements on a regular (quarterly/half yearly) basis, analyst's packs and profit outlooks and trading updates.

This would provide comparisons with previous years and show whether the company is expanding rapidly or not writing significant volumes.

These may also include details of any distribution deals signed and the relative success of existing distribution deals.

Third party reports

There may have been market analyst reports published which related to the company.

These could have related to financial results on EV or statutory basis, or may include comparisons of new business with other providers.

They could include details of market share or premium/annuity rates.

Any fines/complaints that have been received.

News and press search.

Trade publications and industry surveys could also include comparatives of products and/or rates to assess competitiveness of Company A.

There may also be credit rating agency reports available.

These may also comment on the quality of risk management within the company

Company website

The company website would include product details/brochures and ease of customer access to new or existing business.

This could give an indication of the company's customer service and approach to Treating Customers Fairly.

The website may include details of distribution agreements and is likely to have details of any major announcements made by the Company.

Any stock market or related regulatory announcements would also be available from this site.

Stock Exchange

The share price history will be valuable.

If there have been similar takeovers, then they may give some view on the potential price.

This would be particularly true for any unsuccessful takeover attempts on Company B.

Candidates who scored well recognised the wide range of information sources available and how they may be applied. As for other questions, the better answers were those that covered a wide range of different sources rather than only a small number. Many candidates omitted some important sources, such as the published report and accounts. Similarly, whilst a number of candidates identified EV reports as a useful source, it was generally not recognised that these are, primarily, supplements to the report and accounts. There have been several past examination questions on this topic.

END OF EXAMINERS' REPORT