

## **Subject SA2 — Life Insurance Specialist Applications**

**September 2009 examinations**

### **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.

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Chairman of the Board of Examiners

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**Comments for individual question are given with the solutions below.**

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- (i) The company would use a profit testing model to determine the profitability of the contract and determine an appropriate profit criteria

It would need to determine a set of model points to represent the expected profile of the new business

For example by size of premium (profits would vary due to per policy expenses)

For each model point it would project the expected cashflows from the contract over its possible future lifetime

Assumptions should generally be on a best estimate basis (or perhaps with a small margin for prudence)

The cashflows would be discounted at a suitable risk discount rate

This would be based on the shareholders' required rate of return

Taking into account the inherent level of risk in the product

Alternatively the company may use a market consistent basis for profit testing

It would need to consider how many years to project cashflows as there is no set end date. After enough years the impact of cashflows becomes small due to discounting so it may assume all policies end after say 30 years.

The only item of income would be the AMC net of renewal commission as defined in the contract terms

Costs including initial and ongoing administration and fund management would be the main outgoings. The cost of switching may also be included

Assumptions would be required on what these are on day one and how they inflate over time.

Assumptions would also be required regarding the rate of investment growth over time as this will impact the future revenue.

These may be different by asset class so an assumption would be required on the mix of business across funds.

The product is new and so the company may have limited experience to draw on.

If investment management is provided via a third party costs may be defined contractually.

Administration costs may need to be estimated based on assumptions regarding the staff cost of time spent on relevant activities loaded up for any overhead costs e.g. property costs.

Persistency is one of the most important assumptions as profits only arise if the product remains in-force. Partial withdrawal rates may also be needed if this is allowed in the contract.

It will have to be based on estimates of the likely future experience, taking into account the economic environment

And perhaps also industry data using persistency of similar products launched by competitors

Mortality is less important unless targeted to older ages

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The company would need to allow for reserving requirements in the cashflow projections. Specifically the model should project non-unit reserves where these are required, i.e. in situations where future expenses are greater than charges expected.

The profitability of each model point is the present value of future charges less the present value of future expenses. This may be expressed as a percentage of the investment

A weighted average would be taken across all model points in order to determine the overall profitability of the contract

The company may also consider performing sensitivity analysis to check the impact on profitability

It would also consider whether development costs should be included in the analysis by spreading over estimates of volumes of business

*Part i was generally well answered. Most candidates were able to describe the profit test methodology in detail covering the main assumptions and how they may be derived for this product. Stronger candidates were able to score near full marks on this question.*

- (ii) Offering an investment guarantee may be attractive in the market in particular in times where investment markets are volatile.

The feature may therefore help the company achieve greater sales, cover its fixed costs and increase both total and unit profitability. The company would need to consider whether competition offered such a guarantee

However these may only be replacement sales for its existing with profits business

Offering the guarantee increases the expected cost to the company as there is a chance that it will bite. The cost of the guarantee will depend on the asset class being related to the volatility of their market values.

It will therefore need to consider including an additional charge for those policies that opt to have this guarantee.

For example, by increasing the annual management charge or by unit deduction for those policies.

The AMC increase required may be significant and may make the policy unattractive. The company would need to consider the channel and customer base.

The company would need to consider if the benefits were worth the costs of implementation

A charge would have to be taken for this to be a true option as otherwise all policyholders would opt to take it

To determine an appropriate charge the company should perform some stochastic modelling, running simulations of possible investment returns over time. The cost would be the average

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gap between the value of the investment at surrender and the original investment

The company may choose to add a margin for risk to this figure.

Alternatively the company may use the market cost for derivatives that would provide the protection against this risk. It would be hard to price accurately though as market prices will move with economic conditions

The accumulated charges would only be sufficient to cover the expected cost, so the company would have to decide whether or not to keep the risk of the actual cost of guarantees exceeding this amount.

It might decide to hedge this risk using financial instruments to back the guarantee thereby passing the risk to a third party although there is likely to be some basis risk and it would be hard to eliminate all risk

Or it might decide to keep the risk in which case it should ensure it has sufficient capital to support this

The amount of the shortfall to pay the guarantee in extreme situations may be significant relative to the capital in the business, particularly if the product is successful. There is a risk that it may cause the company to become insolvent

Offering an investment guarantee would also lead to increased reserving requirements.

And it would increase the Pillar 2 requirements in respect of market risk

If the company held financial instruments to back the guarantee this would remove the Pillar 2 market risk calculation.

The overall impact of introducing the option will depend on what proportion of policyholders is expected to stay beyond the fifth anniversary, which is when the guarantee commences.

The company should take into account anti-selective actions; customers may select more volatile funds and if the guarantee looks like it will bite then it is more likely that policyholders approaching the fifth anniversary will not lapse

And policyholders will be more likely to surrender after the fifth anniversary when the guarantee is biting which further increases its cost

The company's admin systems will have to be set up to clearly identify which policies have the guarantee

If the annual management charges differ for each type (in order to recoup the cost of the guarantee) then additional sets of unit prices will also be required

The company would consider adding the guarantee to deaths to avoid reputational issues

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It may also consider cheaper alternatives eg giving a point guarantee at year 5 or through restricting fund choice

*This question part was a good differentiator. Most candidates described the positive marketability impacts and the need to charge for the cost of the guarantee. Fewer candidates described the alternative approaches to deriving a charge or the practical difficulties associated with them.*

(iii) The assets of the with profits fund need to be used for the benefits of the policyholders.

The company would need to demonstrate that this use of the fund's assets is treating the with profits policyholders fairly.

The company could not simply pay the cost of the guarantee from the with profits fund. Charges at least equal to the expected cost of the guarantee would have to be transferred into the with profits fund as compensation.

The appropriate amount should be determined as described in part (ii) and may conform to the guarantee charges taken from the relevant policyholders

The charge should also cover the cost of capital associated with any additional reserving requirements this would give rise to in the fund

However the company would need to consider whether the return to the fund from such charges was appropriate given that the risk that the actual guarantee cost will exceed this expected guarantee cost has also now transferred to the with profits fund.

The proposal is likely to be a substantially different use of the fund's assets than is in place currently. The company would need to consider the expectations of its existing customers and what had been communicated to them about its investment strategy

The company would need to consider what had been written about the investment strategy of the fund in its PPFM and the changes that would be required if it chose to implement them

The company would need to consider the fairness to policyholders across generations and the impact of the downside risk on policyholders.

This use places a risk of loss to the fund that is likely to be way in excess of any charge received as income. The company would need to consider whether the increase in the overall risk profile for the fund's investment return was appropriate.

It may consider placing a cap on the overall exposure by limiting the volume of business it would provide protection on.

The extent to which it takes on this risk would depend on the size of the estate in relation to the overall size of the fund.

The company should consider the probability with which the guarantee provided will cause a material reduction in the solvency of the fund and may wish to do some stochastic modelling or scenario analysis.

In doing this the company would need to allow for the fact that policies sold over a period of time would be exposed to overlapping periods of investment returns. This means that there is a catastrophe risk that the guarantee bites in a large number of policies at once.

In addition when the guarantee bites it will be at a time when equities have fallen in value and solvency of the fund will have naturally declined anyway.

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It would also need to consider the Pillar 1 and Pillar 2 requirements that would come about from providing this guarantee which would act as an immediate increase in capital requirements.

The Board of Directors of the company is responsible for management of the with profits fund so will need to be satisfied that the use is appropriate.

It would need to ensure that the company had properly considered and signed off this use of the inherited estate, clearly documenting the process and decisions.

The Actuarial Function Holder would need to be consulted regarding any risks to solvency.

*This question part was testing whether candidates could apply their knowledge of a With Profit Actuary's role to a real situation. Few candidates demonstrated what factors the WPA would consider. Most seemed to think that the PPFM would be changed without considering the fact that the WPA would need to be satisfied that TCF was covered before making changes to the PPFM.*

2

(i)

Projection approach

Projection over the valuation period of the assets and liabilities

Assets allocated to contracts equal to value of liabilities at start of year

Asset and liabilities projected forward to end of year using start of year valuation assumptions.

End of year position calculated using start of year data.

Repeat changing assumptions from expected value to actual value.

Surplus from each source is the surplus after each less the surplus arising from the previous step.

Amount of surplus from each source depends on the order in which each source is dealt with and direction of the analysis.

No uniquely correct method.

Wouldn't want to change the method from previous analyses.

Given the mechanical nature of the approach a reasonableness check would be required

More widely used approach.

Formula approach

Developed in the context of non-linked without profit contracts

Unlikely to be used for unit-linked contracts due to the complexity of the formulae

Simplifying assumptions would be required

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The value of liabilities at the end of the year is recalculated on the beginning of the year basis, and the contribution to surplus is recalculated. This forms the “change in valuation assumptions” item

The other items of contribution to surplus are then calculated in turn using a set of formulae

For example for the impact of each of investment return, expenses, mortality, withdrawals and new business in turn

Like the projection approach the analysis can be carried out from actual to expected or expected to actual

*This question was well answered by most candidates with most being able to identify and describe the two methods.*

(ii) (a) Higher surrenders

Regulatory reserves do not have to allow for terminal bonus

Payout on surrender is likely to be higher than the regulatory reserve later in the policy term due to terminal bonus

Therefore higher surrenders during these periods would reduce the regulatory surplus emerging.

But early on in the policy term, before terminal bonus is accrued, the regulatory reserve may be higher than the surrender value due to prudence

So higher early surrenders may increase the regulatory surplus (release of prudence from reserves)

The overall impact on the surplus arising over the year therefore depends on the duration of the additional policies that surrendered during the year

Also need to consider if higher surrenders were a one-off or expected to be a trend continuing in the future.

If the latter then would need to revise the lapse assumption in the valuation

This would also impact regulatory surplus, depending on the guaranteed surrender value terms

Although not all companies model lapses for regulatory reserves

There may also be a secondary impact on increased per policy expenses, which could increase regulatory reserves (e.g. if using a gross premium valuation method) and thus reduce regulatory surplus

(b) Increase to maturity payouts:

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The additional loyalty bonus is part of terminal bonus, and does not have to be included in the regulatory reserve.

Hence will not have an impact on the regulatory surplus.

(c) Increased fixed interest yields:

Higher expected fixed interest yields are likely to increase the valuation rate of interest

to the extent that fixed interest yields are hypothecated to these policies

This will reduce the regulatory reserves

Higher yields will reduce the market value of fixed interest bonds held

The extent to which surplus is impacted depends on the degree of mismatching of assets to liabilities.

(d) Higher equity returns over the period

Higher returns over the period have not resulted in higher regular bonus.

Unlikely to impact valuation interest rate unless future earnings yields have changed

Market value of assets will have increased.

Hence regulatory surplus will increase

Across all impacts the company would need to consider the impact on the LTICR

*This was another good differentiating question part. A number of candidates were able to describe the impact of the different situations well. Those who didn't do well tended to not realise that the loyalty bonus was not reserved for. Few really explained well enough how it is the difference between the surrender payout and the release of the reserve which impacts surplus, and that the relationship can vary over time. In addition a number of candidates seemed to think the definition of regulatory XS included the WPICC. A high percentage did not know how yield curve changes impacted assets and liabilities*

(iii) (a) Higher surrenders

Under Peak 2 the loyalty bonus would have to be reserved for as part of the cost of planned enhancements.

Therefore the higher than expected surrenders during the period will generate higher working capital

Because the cost of planned enhancements liability can be released in respect of these policies.

Although for very early surrenders where asset shares are negative, there could be an adverse impact on working capital.



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If higher surrenders are expected to continue in future, then a lower number of policies will be expected to reach maturity.

This will therefore further reduce realistic liabilities due to the lower cost of planned enhancements

and so will also increase the working capital.

There may also be second order effects on other parts of the Peak 2 balance sheet if per policy expenses are expected to be higher as a result of higher expected lapses

For example, the lower resultant projected asset shares could result in an increased cost of guarantees liability (more likely that guarantees will bite)

(b) Increased payout at maturity

Realistic liabilities will have modelled an expected rate of terminal bonus

An increase to the percentage of asset share paid at maturity will increase the realistic liabilities (higher cost of planned enhancements) which will decrease the working capital as asset values will be unchanged

(c) Increased fixed interest yields

To the extent that such assets back asset shares, the with profits benefit reserve will fall.

However, this will be exactly offset by the market value of these assets also falling.

If the increase in gilt yields is consistent with an increase in risk-free yields, then this will increase the expected future investment return in the projection of asset shares in the cost of guarantee liability calculation

This will be offset though by the asset value fall from the change in yields

However, to the extent that the asset shares are invested in fixed interest assets, part of this increase simply compensates for the fall in asset share value due to the change in market value of fixed interest assets (overall, the projected asset shares would be unchanged, if they were 100% invested in matched fixed interest assets)

Overall the cost of guarantees, options and planned enhancements are therefore likely to reduce

But the reduction in cost of guarantees may be offset to some extent if regular bonus rates are assumed to increase.

The working capital will also be impacted by market value falls if the working capital itself is partially invested in fixed interest assets.

However, the overall impact is likely to be an increase in working capital due to the increase in discount rate for future policy related liabilities

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- (d) Higher equity returns over the period

Asset shares will have increased by the investment return on assets backing with profits policies

hence the with profits benefit reserve will increase

However the cost of guarantees will have reduced because guarantees will now be further out of the money (or less in the money)

The cost of smoothing over the year will be lower than expected (or may be negative), which will increase working capital

However the cost of smoothing liability (part of the future policy related liabilities) would be expected to increase, and overall this should have a neutral effect on working capital

Market value of assets backing the asset shares will have increased

Which offsets the increase in the with profits benefit reserve

Plus if the existing working capital is invested in equities then this will also contribute to increasing the surplus arising

So overall the working capital would be expected to increase

*A high percentage of candidates were unable to articulate how the changes in asset values and yields fed through into liability values e.g. through impacts on with profit bonus reserves, cost of guarantees etc. Many seemed to think that the realistic liabilities just consisted of the asset share.*

3

- (i) The factors that the Board of Directors of Company A are likely to take into account when deciding whether to make an offer to company B include:

The likely purchase price of Company B and whether this represents good value in terms of return on capital.

The synergies that it believes will arise from the purchase of Company B and what the purchase brings to Company A.

e.g. the purchase may result in economies of scale, that would otherwise be difficult to achieve through organic growth, resulting in lower per policy expenses net of any costs of the transaction

In addition there may be tax advantages

Or the purchase may improve the company's solvency position when combined and so on.

There may also be benefits from cross selling or re-insurance synergies

The company would also consider the different risks and whether there are synergies in exposures

We are told that Company A has a relatively strong free asset position when compared to the rest of the UK market, however that doesn't mean that Company B wouldn't be attractive for Company A to purchase if Company B will provide Co A with a stream of future profits that Company A can use to fund business expansion.

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In particular Company A may need a future income stream to offset new business strain if it intends to expand rapidly, especially by selling capital intensive products.

Since Company B is closed to new business the purchase not going to provide Company A with access to alternative distribution channels.

The company should also consider whether there were benefits from getting exposures to other Geographical regions.

The Board should consider whether the purchase offers the best use of capital.

e.g. The purchase of an alternative company to Company B, that is open to new business, may provide Company A with access to new distribution channels or provide greater opportunities for new business growth.

The Board will need to consider how they will raise sufficient capital to pay for the purchase of Company B.

e.g. The Board may be intending utilising capital that is available already within Company A.....

....., they may have to raise a debt issue e.g. by offering corporate bonds,

.....or they may wish to issue further equity shares on the stock market to finance the purchase.

Since Company A is listed on the UK stock market, the insurer will need to take into account how the stock market is likely to react if it makes an offer for Company B.

In particular, the insurer will need to consider the views/likely views of any large shareholders and whether they will be supportive of the move to make an offer for Company B.

In addition, the Board of Company A will be concerned about how stock market analysts will react to the news of an offer for Company B.

If the analysts' views are favourable, then this is likely to result in an increase in the company's share price on the stock market. However, the converse is also true.

Company A will be particularly sensitive to any changes in its share price if it intends to raise the capital to pay for the purchase of Company B through a share placement,.....

.....since a fall in the share price will mean it has to issue more shares to raise a given amount of capital.

The Board of Company A will also be concerned with how the acquisition of Company B will impact the Company's credit rating — hence the Board will be concerned with the likely views of credit rating agencies such as Moody's if it makes an offer for Company B.

The Board will also want to consider whether it believes it can make the offer — and the offer be accepted — without attracting the interest of other parties who may also wish to purchase Company B.

Company A is likely to be keen on closing a quick deal at a reasonable price, rather than entering a competitive bid scenario, with a number of bidders competing against each other for Company B in protracted negotiations.

The Board of Company A is likely to consider how amenable the Board of Company B are likely to be to an offer. Company A is likely to retain investment bankers/ legal advisors

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and other 3rd party consultants to ascertain the likely response from Company B to an offer.

In addition they would consider how amenable the policyholders are likely to be given they would need to agree to a part VII transfer

The part VII process is considerable. The company may need to incentivise policyholders. In addition there is the risk that shareholders will have to provide capital support in future should the solvency of the fund purchased fall [AAA3]

The Board will particularly want to consider the risks in the event that its bid to purchase Company B fails.

There is a risk that if Company A fails to purchase Company B, it may become a target itself, with other larger insurers looking to purchase company A, which is unlikely to be a desirable outcome for the Board.

There are likely to be other risks, depending on Company A's reason for bidding for Company B in the first place. If Company B would have provided a future stream of profits to fund business expansion, then failure to purchase Company B may mean that Company A is constrained in its future growth plans due to a lack of capital.

The Board of Company A is also likely to take into account the views of the Actuarial Function Holder (and possibly the With-Profits Actuary to the extent that he/she is an expert on with profits matters).

The likely FSA requirements regarding the merger would also be considered

A further issue that the Board will consider is the costs of using actuarial consultants and other advisers e.g. legal, investment bankers and so on, in making an offer for Company B.

It would also consider the costs of rationalisation, eg redundancies

It should also consider the timescales, as this can be a lengthy process to undertake

And it can distract management from other important decisions

The Board might also consider issues such as:

- quality of management and staff of Company B
- reputation of company B and impact on its own brand
- cultural fit with management of own company
- impact on own staff morale
- location of Company B offices
- existence of mis-selling or any other potentially damaging issues within Company B's portfolio
- any litigation / complaints ongoing
- systems fit

*This question part was generally well answered. Most candidates were able to give a lengthy discussion of the issues to consider. Those who scored most highly were those who gave the broadest*

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*perspective including external market considerations and practical staff, systems and branding issues. Those who contained their answers to technical actuarial issues scored less well.*

- (ii) Company A is purchasing all of the profits expected to arise on Company B's book of without profits business and 1/9th of the cost of future bonuses declared on the with profits business of Company B.

*Without profits business*

The company will receive all profit from the without profit business

If Company A had access to all of Company B's policy data and other useful company information then it would build a detailed cashflow model of all of Company B's existing without profits business.

The model should allow for all of the future cashflows on the business, including the following:

- Premium receipts
- .....including increments to existing policies.
- ....and paid-up rates in future years;
- the asset mix backing each block of business and the investment returns expected to be earned for each asset class;
- .....including the impact of tax on investment returns.
- mortality/death claims (and morbidity if relevant);
- surrenders and lapses;
- future expenses — including initial (to the extent that there are any top-up premiums for example), renewal and investment and the impact of expense inflation;
- the supervisory reserves and solvency margins to be held in respect of the business;
- any additional features e.g. the impact of policyholders exercising options (e.g. to extend the term of their policy or to invoke a guaranteed annuity option etc.);
- the impact of tax on the profits arising.

In building the model, Company A will have to make many approximations, even with full company data etc.

e.g. Company A may choose to use model points rather than the full policy data, due to the amount of time it would take to build and run the model using full data.

*With profits business*

For the with profits business, Company A would model the asset shares, by modelling premium receipts plus investment returns, allowing for deaths and surrenders, expenses, other charges and deductions etc.....

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.....and would compare this to the guaranteed benefits that have accrued under each contract (original sums assured plus already attaching bonuses).

Assumptions would be required for the future bonuses expected to be declared on the with profits business (regular and terminal)

These asset shares would then be projected, along with the regular and terminal bonuses, in order to project the likely stream of shareholder income from the with profits business.

The shareholder income would be determined as 1/9 of the cost of projected regular bonus, where this would be assessed on the statutory valuation basis, plus 1/9 of the projected terminal bonus

Company A would also be interested in any estate that has built up in the with profits fund and how this would be distributed to the with profits policyholders over time.

Company A would benefit from this estate distribution at the time it happened since it would get a share of the estate distributed through bonuses due to the 90:10 gate.

*Assumptions*

Assumptions would probably start from best estimates

But may err on the side of prudence as Company A is the purchaser

The assumptions would be set using information obtained from Company B on their experience investigations

And Company A's own view on future experience

Particularly any experience that might change as a result of the takeover, such as persistency

Company A might also allow for expected synergies, e.g. expenses, tax

The projected shareholder profits would be discounted at a risk discount rate

This should reflect the required return on capital of Company A shareholders

Taking into account the inherent level of risk within Company B's business

*Other considerations*

In arriving at the purchase price, the Board will also have to factor in whether any payment over and above the embedded value is to be paid e.g. due to competition, if it suspects there are other willing buyers for Company B in the market.

Given that Company B is closed to new business, Company A is not really purchasing a brand name/a future book of new business that will be written due to purchasing Company B's name i.e. it is not paying goodwill.

However Company B may be attractive to a number of Company A's competitors and hence the amount that it will offer for the company may be driven by e.g. other similar deals that have taken place in the market recently, what it believes others in the market would be willing to pay for the company etc.

Company A is likely to take advice from external advisers in arriving at the amount to be offered for Company B

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The price is also likely to be adjusted to reflect the factors that were considered under part (i), e.g. the cost of doing the transaction, the potential for legacy issues to arise etc

*Many candidates scored well on this question and were equipped to describe Embedded Value methodology. Stronger candidates were able to describe separately the additional considerations associated with With Profit business and the practical considerations that may influence the parameters chosen for various assumptions.*

(iii) Practical difficulties it is likely to face include:

It appears that Company A is making an unsolicited offer for Company B. Company B has not put itself up for sale. This means that Company A will not, at the first offer stage, have had access to any documents to carry out any form of due diligence.

At a very basic level, Company A may not have detailed knowledge of all of the different types of contracts written by Company B in the past that are still in force, e.g. it may not understand embedded options and guarantees

Some information can be gleaned from the FSA returns.

Company B's past mortality/morbidity experience, surrender and lapse experience and so on may be identifiable. although it may be able to get limited information relating to this from the FSA Returns.

In addition if reporting on a realistic basis the VIF will be shown on form 19.

Company B's PPFM may also be a useful source of information.

For example information on bonus policy will be shown

It could consider other deals but this will be difficult as each deal will have its own considerations.

Company A will have to use its own past experience on similar contracts to determine a set of assumptions on which to project the future cashflows of the business of Company B.

In addition, Company A will overlay its general knowledge of Company B e.g. in respect of the distribution channels through which the business was sold in the first place — which will impact things like the general level of mortality and items such as lapses.

Company A may have limited expertise in performing such calculations

Company A may employ an actuarial consultant to assist in building the models, especially if Company A is aware that the consultant has acted for many other parties in similar situations in the past.

Company A will have to estimate the distribution of business in order to determine appropriate model points

It is unlikely that Company A will have any real knowledge of items such as guarantees and options — and the likely size of liabilities that these might represent, although limited information may be available in the FSA Returns.

Hence, in building the model, to calculate the expected stream of profits from the without profits and the with profits funds, company A will have to build in some pragmatic assumptions regarding this.

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Company A is also likely to make an offer subject to a detailed due diligence exercise being carried out, to ascertain if there are any problematic areas that it needs to additionally reserve for if it were to purchase the business.

Company A will not be able to predict with certainty the impact of the takeover of Company B by Company A on policyholder behaviour e.g. whether lapses/ surrenders will increase etc, but it will make some sensible assumptions in this regard.

Company A is likely to be hoping that expense synergies will arise as a result of purchasing Company B. Hence it is likely to base the expense assumptions on its own current expense assumptions, possibly improved to allow for synergies from the merger.

For the profit stream arising from Company B's with profits business, this will heavily depend on the relationship between the asset shares of the with profits policies and the guaranteed benefits under the policies (original sum assured plus already attaching bonuses), and the projection of these items, as well as the extent of any free estate available in the with profits fund that could be distributed over time, since these factors will influence the rate of regular bonuses declared.

The rate of regular bonuses will also depend on a variety of other factors, including the rate of regular bonuses declared in the past, the rate of change allowable in the regular bonus declaration (e.g. the PPFM may restrict the extent to which regular bonuses can change from year to year) and investment returns.

The rate of regular bonuses likely to be declared in the future will be difficult to predict with certainty and a best estimate approach is likely to be followed, with some sensitivity runs carried out to understand the impact on the stream of future profits in the event that investment returns are greater/less than expected etc.

Overall, in determining the PVFP, Company A will have to carry out a number of sensitivity runs to understand how the profit stream changes given different sets of economic circumstances

The company will not know whether it is the only bidder so will not know how aggressively to pitch its offer

In addition the company will have no information on Company B's operations so the additional implementation costs eg from rationalisation will be unknown

The work itself will be time consuming and a drain on management resource

**END OF EXAMINERS REPORT**