

INSTITUTE AND FACULTY OF ACTUARIES

EXAMINERS' REPORT

April 2019 Examinations

Subject SA2 – Life Insurance Specialist Applications

Introduction

The Examiners' Report is written by the Chief Examiner with the aim of helping candidates, both those who are sitting the examination for the first time and using past papers as a revision aid and also those who have previously failed the subject.

The Examiners are charged by Council with examining the published syllabus. The Examiners have access to the Core Reading, which is designed to interpret the syllabus, and will generally base questions around it but are not required to examine the content of Core Reading specifically or exclusively.

For numerical questions the Examiners' preferred approach to the solution is reproduced in this report; other valid approaches are given appropriate credit. For essay-style questions, particularly the open-ended questions in the later subjects, the report may contain more points than the Examiners will expect from a solution that scores full marks.

The report is written based on the legislative and regulatory context pertaining to the date that the examination was set. Candidates should take into account the possibility that circumstances may have changed if using these reports for revision.

Mike Hammer
Chair of the Board of Examiners
July 2019

A. General comments on the *aims of this subject and how it is marked*

1. The aim of the Life Insurance Specialist Applications subject is to instil in the successful candidates the ability to apply knowledge of the United Kingdom life insurance environment and the principles of the actuarial practice of life insurance to a United Kingdom life insurance company.
2. The Examiners' Report covers more points than would be expected to get full marks. This is so that alternative approaches to questions by different candidates can be accommodated. Whilst candidates are expected to show knowledge of the relevant content of the Core Reading, it is much more important in this exam to tailor answers and apply that knowledge to the specifics of the question than it is in earlier exams.

B. General comments on *student performance in this diet of the examination*

The overall performance was lower than expected when setting the paper, assessment of the minimally competent candidate indicated a pass mark of 54 was appropriate. The pass mark was then scaled to 55 and candidates awarded an upward adjustment.

1(iii) – whilst the solutions from candidates was better than those for a similar question in a past exam, candidates did not approach this logically by considering the impact of each movement on assets, best estimate liabilities, risk margin and SCR. Thus the impacts on available capital and required capital were not clearly made.

2(vii) – candidates did not use the information in the question to identify specific areas where treatment may not be fair, or which would require further investigation.

C. Pass Mark

The Pass Mark for this exam was **55**.

Solutions

Q1

- (i) A 'matching adjustment' is an adjustment to the risk-free discount rate to allow for the movement in the spread in an insurance company's assets. [½]
A matching adjustment may be used for certain and predictable cashflows and will be applied to a specific portfolio of assets and liabilities so would not be applied to all of the business for the company. [½]
An insurance company can use a matching adjustment if it has long-term predictable liabilities that are matched by assets that are held to maturity. [½]
The company is not exposed to the risk of changing spreads on the assets from the liquidity component but are exposed to the risk of default. [½]
The addition of the matching adjustment must be approved by the regulator and there are strict requirements in relation to the eligibility of the assets and liabilities. [½]
The matching adjustment is derived by taking the spread on the assets held and deducting the fundamental spread published by EIOPA. [½]
[Total 3]
[Max 2]
- (ii) **Required capital** is the capital needed to support the business... [½]
...and is the amount of assets in excess of the liabilities... [½]
... so that policyholder claims can be met with a high degree of certainty. [½]
In the context of Solvency II it is the amount of assets that covers the solvency capital requirement (SCR)... [½]
... including the minimum capital requirement. (MCR); [½]
Available capital is the amount of capital a company has... [½]
... to meet the required capital. [½]
Under Solvency II the available capital is known as own funds... [½]
...and is the amount of assets the company has in excess of the technical provisions and other liabilities. [½]
[Total 4 ½]
[Max 2]
- (iii) (a) Increase in the value of equities
Required capital
An increase in the value of equities held by the company will result in an increase in the capital required for equity risk within the SCR [1]
An increase in SCR increases the required capital. [½]
This may impact the diversification benefit. [½]

Available capital
The value of equities directly held by the company would increase in value... [1]
...meaning the available capital would increase. [½]
Unit-linked fund liabilities would be expected to be directly matched by the unit holdings, so there would be no impact on the available capital from the increase in unit-linked fund holdings. [½]
Increased unit fund values would reduce the level of non-unit liabilities... [1]
... because of the increase in fund based charges... [½]

...increasing the available capital. [½]
The increase in the SCR for equity would not impact the risk margin as the risk is hedgeable. [½]

Capital Margin

The margin between available capital and required capital would be expected to increase... [½]
...as the available capital will increase by at least the monetary amount but the required capital will increase by a percentage of the monetary amount. [1]
[Total 8]
[Max 4]

(b) Increase in maintenance expenses

Required capital

Best estimate liability would increase.... [1]
...assuming that the expense assumption is increased to reflect the higher maintenance expenses. [½]
Expense risk is calculated by stressing the expense assumption within an increased best estimate liability... [½]
...expense risk in the life underwriting risk module would increase. [½]
Leading to an increase in the level of the SCR. [½]
Level of increase in the SCR would be mitigated by the diversification benefit within the life underwriting risk module and by the diversification benefit between the life underwriting and other risk modules. [½]
Overall the required capital would increase. [½]

Available capital

Risk margin would also increase as the expense risk/SCR has increased in size. [½]
The available capital would reduce... [½]
as the best estimate liabilities and risk margin increase... [1]
...and the value of the assets would remain unchanged. [½]

Capital Margin

Overall the difference between the available and required capital will reduce... [½]
...and so the capital margin will reduce. [½]
[Total 7 ½]
[Max 5]

(c) Credit spreads widening on corporate bonds

Required capital

The capital required under the spread risk module is dependent upon the market value of assets affected by credit spreads. [½]
A widening of credit spreads would reduce the market value of corporate bonds... [1]
...and would lead to a reduction in the spread risk sub-module capital requirement. [1]
The level of decrease in the SCR would be mitigated by the diversification benefit within the market risk module and by the diversification benefit between the market risk and other risk modules. [½]
Overall the required capital would reduce. [½]

Available capital

The increase in the spread will be offset to some extent by the movement in the matching adjustment. [1]

However the matching adjustment is only going to be applicable to a proportion of the company's business so will not remove the full impact of the credit spread widening.

[1/2]

The extent to which the matching adjustment is effective will also depend upon how much of the widening is due to increasing liquidity risk and how much from increased default risk... [1]

...and the extent of the increase reflected in the fundamental spread published by

EIOPA. [1/2]

The best estimate liabilities would reduce as a result of the increase in the matching adjustment. [1/2]

There may be a change to the Volatility Adjustment, if used. [1/2]

Where the matching adjustment does not apply the value of the liabilities would remain unchanged. [1/2]

For unit-linked funds holding corporate bonds, the fund based charges would fall, increasing the liabilities. [1/2]

The risk margin would remain unchanged as spread risk is not included in the calculation as it is a hedgeable risk. [1/2]

The available capital would reduce as the market value of corporate bonds would reduce in value... [1]

...by more than the reduction in the best estimate liabilities. [1]

Capital Margin

Overall the margin between the available capital and required capital would reduce...

[1/2]

...as the reduction in the asset value would exceed the benefit from the matching adjustment and reductions in risk margin and SCR. [1/2]

[Total 12]

[Max 5]

(d) Increased risk of default from reinsurance counterparties

Required capital

The increased risk of reinsurer default would impact the default risk module calculation... [1/2]

...but this would depend upon whether the credit rating of the reinsurers is lowered as a result of the increased default risk. [1/2]

If the credit rating is not altered then the default risk module capital requirement would not change. [1/2]

If the credit rating is lowered for the reinsurers then the default risk module capital requirement would be expected to increase. [1]

The level of increase will depend upon the collateral agreements in place with each insurer. [1/2]

The higher the level of collateralisation the less the impact will be. [1/2]

The level of impact on the SCR will be mitigated by the level of diversification between the default risk module and the other risk modules. [1/2]

Overall the level of required capital would increase if the reinsurers' credit ratings are reduced. [1/2]

Available capital

The assets will fall as the reinsurance asset is adjusted for the increased default risk. [1]

Best estimate liability would be unaffected. [1/2]

The level of the risk margin would increase if the default risk capital is increased. [1/2]

The level of available capital would reduce... [1/2]

Capital Margin

Overall the margin between the available capital and required capital would reduce... [1/2]

...as the available capital would reduce and the required capital would increase. [1/2]

[Total 8]

[Max 5]

- (iv) The current level of capital held may be high relative to the market. [1]
It would improve the return on capital employed. [1/2]
The current level of capital may be high relative to the company's risk appetite. [1/2]
The company may be finding the cost of capital is high... [1]
... and so may wish to reduce its debt levels. [1/2]
This would mean that less capital would need to be held in the company... [1/2]
... and would enable the company to declare higher dividends... [1]
... but only temporarily... [1/2]
... or spend the capital on strategic projects... [1]
... such as efficiency improvements... [1/2]
... or corporate acquisitions,.. [1]
... or writing more new business/new products... [1]
... which could improve future profitability... [1/2]
... and so be attractive to shareholders. [1/2]
This move may help meet Group targets. [1/2]
There may be tax efficiencies associated with the change. [1/2]
[Total 11]
[Max 5]

- (v) However, following this strategy would mean that there is much less working capital in the company... [1]
... and so there is less ability to invest for future growth or new business. [1]
Any adverse experience over the year would mean that there would be a greater risk that there would be insufficient capital to cover the statutory required capital. [1]
Having a capital position close to the statutory level may attract closer scrutiny from the Regulator... [1]
... so that management may not be able to manage the company as it would like. [1/2]
The company may have to adopt a more cautious investment strategy. [1/2]
Following this approach may mean that the company was perceived as weak. [1]
Investment analysts may be concerned that shareholders may have to provide extra capital... [1/2]
... and so suggest that this would be a company to "sell" ... [1/2]

| | |
|--|--------------|
| ... leading to a reduction in the share price, | [1] |
| Rating agencies would downgrade the company's credit rating... | [1] |
| ... so the company would find it harder to raise capital... | [1] |
| ... as the cost of capital may be high or unaffordable. | [½] |
| Distributors may be unwilling to place business with a weak company... | [1] |
| ... reducing future new business. | [½] |
| Customers may be concerned and so surrender their policies... | [1] |
| ... reducing future profits... | [½] |
| ... and meaning less contribution to cover fixed costs... | [½] |
| ... and overheads. | [½] |
| The Company may become a takeover target. | [½] |
| The auditors may find it difficult to agree. | [½] |
| | [Total 15 ½] |
| | [Max 7] |

(i) and (ii) were knowledge based questions.

Capital Margin. The question defined this as “the difference between the required capital and the available capital”. Some candidates interpreted this literally as

Capital margin = required capital – available capital

Where candidates did this, their solutions were marked reflecting this interpretation. For example, in (iv) and (v) the marking schedule was effectively reversed.

(iii) see general comments above. Those that went through the various metrics systematically gained most marks. Many lost marks for not considering the impact on the risk margin. Very few realised that the increase in default risk only had an impact on the SCR stress if it changed the credit rating.

The above marking schedule treats available capital as assets less technical provisions. Some candidates assumed available assets to be the assets and required capital to be technical provisions plus regulatory capital. Marks were awarded for the latter approach.

(iv) was generally well answered by well prepared candidates, but few noted that the capital may be currently high compared to the market or to the company's risk appetite.

(v) was generally well answered by well prepared candidates.

Q2

- (i) The two investment funds are trying to achieve different things. [1]
 The NTVOG is invested in less risky assets. So, the company may be aiming to de-risk (i.e. reduce the risk in) its with profits fund. [½]
 When asset shares reduce due to equity market falls... [1]
 ... the NTVOG will correspondingly increase... [1]
 ... due to a higher time value cost of guarantees biting... [½]
 ... and due to needing to smooth upwards... [½]
 ... but the assets backing the NTVOG do not reduce in the same way. [½]
[Alternatively: if equities were used to back the NTVOG then they would fall in value.]
 Fixed interest assets therefore provide better matching of the NTVOG liability than equities. [1]
[Alternatively: equities therefore provide poor matching of the NTVOG liability.]

 The NTVOG is closely linked to the fixed guaranteed benefit payable [1]
 Whereas the asset shares ignore it... [½]
 ... as does the estate [½]
 So it is more appropriate to focus on fixed interest investments for the NTVOG [1]

 By taking less risk in the assets backing the NTVOG, the company may consider that it can invest the asset shares in riskier assets... [1]
 ... potentially generating higher overall returns... [1]
 ... and so allowing it to offer higher bonus rates... [½]
 ... to help retain existing policyholders. [½]

 The approach to investment strategy will be set out in the PPFM. [½]
 Also, it may have been set out in past communications to policyholders. [½]
 Thus, setting the reasonable expectations of policyholders. [½]
 [Total 14 ½]
 [Max 5]
- (ii) The return should be calculated by solving
 $90,000 \times (1+i) + \text{cashflows} \times (1+i/2)$ [or $(1+i)^{0.5}$]. [½]
 This means that the investment return rate should be deducted from the 84,980 in the equation since it includes the investment return earned (and is otherwise double-counted). [½]
 This means that the 10.836% rate is understated. [½]
 The approach is simplistic in that it divides by 2 as opposed to using compounding. [½]

 This could make a significant difference when dealing with large numbers. [½]
 The use of the averaging of the estate at the beginning and end of the year when allocating the return to the estate means that the NTVOG is assumed to change half way through the year when we are told that it changes at the end of the year. [1]
 This impacts both the rate calculated... [½]
 ... and the allocation of the rate between asset shares and the estate. [½]
 The approach taken does not take account of which cashflows are applicable to the asset shares and which apply to the estate. [1]

[Total 5 ½]

[Max 4]

(iii)

| | £000 | Calculation | |
|-----------------------|---------|--|-------------|
| Asset shares start | 70,000 | | 0.5 |
| Investment income | 6,786 | Given | 0.5 |
| Premium income | 100 | All premiums are allocated to asset shares | 0.5 |
| Death claims | -125 | 200/1.6 | Method 0.5 |
| | | | Correct 0.5 |
| Maturities | -10,582 | 10,000/(.9*1.05) | Method 0.5 |
| | | | Correct 0.5 |
| Surrenders | -1,000 | Since asset shares are paid on death | 0.5 |
| Expenses | -5,100 | Since expense accrue to asset shares | 0.5 |
| Shareholder transfers | -400 | Since these are charged to asset shares | 0.5 |
| Other/unexplained | -579 | Balancing item give even if wrong number | 0.5 |
| Asset shares end | 59,100 | | 0.5 |

(iv) This could be due to charges charged to asset shares [½]

but this is only in respect of charges for guarantees/smoothing or cost of capital since expenses are allocated directly. [½]

Or it could be due to approximations in the calculations [½]

For example, not every surrender would get exactly its asset share.

(Give for any reasonable example) [½]

Or due to the approximations in the investment return allocation approach. [½]

There might be other tax adjustments (not related to investment return) which information has not been provided on [½]

There may be a data or model error. [½]

[Total 3 ½]

[Max 2]

(v)

| | £000 | Calculation | |
|-----------------------------|--------|--|-------------|
| Estate start | 20,000 | | [½] |
| Investment income on estate | 2,694 | 9,480 - 6,786 | [½] |
| Death surplus | -75 | 60% of 125 or -200+125 from (iii) | Method [½] |
| | | | Correct [½] |
| Maturity smoothing | 1,058 | 10,582 from (iii) × 10% | Method [½] |
| | | | Correct [½] |
| Estate distribution | -476 | 0.05 × 10,582 × 0.9. this is 5% of the payout absent the estate distribution | Method [½] |
| | | | Correct [½] |
| Investment income on NTVOG | 100 | As per question | [½] |
| Change in NTVOG | 2,000 | Simply change in reserve for NTVOG | [½] |
| Unexplained | 579 | This is the balancing item give mark even if wrong number | [½] |

| | | | |
|------------|--------|--|-----|
| Estate end | 25,880 | | [½] |
|------------|--------|--|-----|

[Total 6]

| | | |
|------|---|-----|
| (vi) | <u>Literature</u> | |
| | marketing and other sales material | [½] |
| | policy documents and policy literature | [1] |
| | any other historic documents | [½] |
| | the PPFM... | [1] |
| | these are relevant because they will set policyholders' expectations | [1] |
| | with regards to: | |
| | payouts | [½] |
| | balance between regular and terminal bonuses | [½] |
| | past commitments (any example: special bonuses/charges/other profits) | [½] |
| | investment decisions | [½] |
| | expenses charged to the policy... | [½] |
| | other charges to the policy | [½] |
| | payouts relative to asset shares | [½] |
| | practices relating to market value reduction (MVR) application | [½] |
| | surrender value practice | [½] |
| | new business strategy | [½] |
| | level of smoothing | [½] |
| | over time and between groups of policies | [½] |
| | rate at which bonuses are smoothed to the required level (or glidepath) | [½] |
| | equity between different groups (see below) | [½] |
| | treatment of the estate | [½] |
| | the split of surplus between shareholders and policyholders | [½] |
| | there may be specific situations where policyholder expectations might have been created, such as endowment policies maturing with sufficient value to repay a mortgage | [½] |
| | this is relevant because the company has policyholders with mortgage related policies and they will expect the maturity value to be at least equal to the mortgage. | [½] |
| | <u>Feedback...</u> | [½] |
| | ... from customers... | [1] |
| | ... through complaints... | [½] |
| | ... and customer surveys... | [½] |
| | ... and from distributors. | [½] |
| | <u>Past practice</u> | [1] |
| | maturity payouts relative to a firm's past record | [½] |
| | surrender value payouts relative to a firm's past record | [½] |
| | early retirement value payouts relative to a firm's past record | [½] |
| | treatment of options to extend or convert a policy relative to a firm's past record | [½] |
| | reversionary bonus rates relative to a firm's past record | [½] |
| | market value reductions relative to a firm's past record | [½] |
| | the current solvency position | [½] |
| | treatment of tax | [½] |

Industry practice

practice in relation to the above across the whole industry is also relevant [1]
because it can set expectations as to the practice in this company [½]

Equitable treatment

practice has to be fair to different classes of policyholder [1]
as well as to policyholders relative to shareholders [½]
it needs to be considered when setting payouts across generations [1]
and also for different types of exits [1]
(any example) [½]
and for different types of with profits contract [½]
it will need to be considered when allocating expenses across types of contracts [½]
it could have an effect on how and to whom the estate is distributed [½]
it should be considered when setting the investment strategy [½]

Other

Feedback from regulators [1]
Projected solvency position [½]
Auditors' report [½]

[Total 30 ½]
[Max 13]

(vii) *[Up to 2 marks were awarded for “framing” the report – that this was written by the Company’s With-Profits Actuary, who the report was for, what actuarial standards it complied with and so on.]* [2]

Death claims are 60% higher than asset shares, [1]
and as such more is being paid out on death than it is on maturity or surrender. [1]
This is likely to be due either to the guarantees on death biting... [½]
... or to the approach taken by the company to allocate bonuses... [½]
... for example the absolute terminal bonuses may be the same as for maturities of the same duration, which are likely to have higher asset shares (relatively). [½]
This in itself is not necessarily a cause for concern, as death claims are not material... [½]
... but the WPA may consider whether it is worth investigating the fairness between death claims and maturities... [½]
... and potentially reducing the death benefits [½]

Even though maturity payouts have been increased due to the distribution of the estate... [1]
... the amount paid out remains lower than the asset shares. [1]
And lower than that being paid out on surrender [1]
Since smoothed asset shares are currently lower than unsmoothed... [½]
... this is unlikely to be seen as fair by policyholders who do not surrender. [½]
It also seems contradictory to be distributing the estate and increasing it (through smoothing costs) at the same time. [½]
The WPA is likely to want to take action on this aspect as soon as possible. [½]
For example changing its smoothing level/approach [½]
Or the estate distribution rate/approach [½]

| | |
|---|-------|
| Surrendering policyholders receive their unsmoothed asset shares with no estate distribution. | [1] |
| This in isolation may appear fair... | [1] |
| ... but not when compared to the maturing policyholders. | [1] |
| There were no surrender profits made which needed to be allocated to asset shares or the estate, | [1/2] |
| and as such this does not need to be considered. | [1/2] |
| But those who surrender may feel that they are being unfairly treated at times when unsmoothed asset shares are lower than smoothed asset shares... | [1/2] |
| ... especially early on. | [1/2] |
| So the WPA may reconsider having different smoothing approaches applied to maturities and surrenders | [1/2] |
| Expenses appear very high... | [1] |
| ... at around 7% of asset share. | [1] |
| This could be for the following reasons: | |
| a) the numbers of policies is reducing but the overheads remain the same. | [1] |
| - If this is the case, the WPA should take action to reverse this | [1/2] |
| - such as reducing expenses through efficiency savings | [1/2] |
| - merging with another company | [1/2] |
| - arranging an expense deal with the shareholders | [1/2] |
| - outsourcing (any sensible examples) | [1/2] |
| b) there could be one-off expenses in the year | [1/2] |
| c) e.g. a new IT system (any example) | [1/2] |
| - If this is the case, the WPA should consider whether some of these are attributable to the estate | [1/2] |
| - or whether they should be spread over a number of years. | [1/2] |
| - Bearing in mind the fact that new business sales have dropped, any new development costs should be scrutinised to ensure they give fair value to the policyholders. | [1/2] |
| The WPA should also consider how the expenses have been allocated across different groups of policyholders... | [1/2] |
| .. and should ensure they are each fairly charged. | [1/2] |
| Shareholder transfers appear to be quite high | [1] |
| Being nearly 4% of total claims | [1] |
| This could suggest that regular bonus allocated to in-force business is relatively high | [1/2] |
| So a higher weighting towards terminal bonus may be preferred | [1/2] |
| The unexplained change in the analysis of change in asset shares is quite high | [1] |
| ... and it is resulting in lower asset shares | [1/2] |
| So this would need to be better understood, in case there are issues that need to be addressed | [1/2] |
| A small part of the estate has been distributed (c2%)... | [1] |
| ... but the estate has grown due to the returns made... | [1/2] |
| ... and also due to smoothing profits. | [1/2] |

| | |
|--|-----|
| The estate is a large percentage of the overall assets, relative to asset shares | [1] |
| Policy volumes appear to have reduced... | [1] |
| ... by in excess of 15% (based on the asset shares exiting). | [½] |
| The WPA should consider whether new business is likely to increase in the future. | [½] |
| If not, then there is a strong chance of a tontine effect occurring... | [½] |
| ... and there being an inequitable allocation of the estate across generations of policyholders. | [½] |
| The WPA therefore may need to take steps to manage this | [½] |
| E.g. by increasing the pace of the estate distribution approach | [½] |
| Or using a special one-off bonus | [½] |
| Consideration should be given to closing the fund to new business and/or producing a run-off plan. | [½] |
| Investment income on the estate is high. | [½] |
| However, it is not necessarily the case that this will continue. | [½] |
| The WPA may wish to consider whether the estate should be invested in less volatile assets. | [½] |
| And whether it should improve the matching of assets and liabilities | [½] |
| E.g. through the use of derivatives | [½] |

Generally, the WPA may need to improve or increase communications to policyholders. [½]

[Total 43 ½]

[Max 20]

- (viii) The suggestion means that as asset shares reduce with policies exiting, the estate would be distributed consistently. [1]
- The suggestion ensures that for a high estate, action is taken... [1]
 ... whilst ensuring judgement can be used where the estate falls within a band. [½]
 This will help to prevent a tontine effect occurring... [1]
 ... and therefore unfairness between generations of policyholders. [1]
- The suggestion takes no account of the fact that the company also has to hold the NTVOG... [1]
 ... and also under Solvency II, the risk margin... [1]
 ... and SCR. [1]
- So either x and y have to be so large as to ensure there is sufficient capital... [1]
 ... meaning there is little chance of distributing the estate [1]
 ...or there is a danger that the company distributes too much... [1]
 ... meaning the company cannot cover its capital requirements. [1]
- The estate is invested partly in risky assets, making the estate volatile [1]
 Even though it moves in line with asset shares, it is likely that if equities fell, there would not be adequate assets to cover the capital requirements... [1]
 ... or, if equities rose, then too much might be distributed. [1]

| | |
|---|--------------|
| The suggestion does not allow for the possibility of changes in capital requirements due to risk management. | [½] |
| - As expenses are high, the risk margin in respect of expenses could be high. | [½] |
| - This may be something that is addressed at some stage, resulting in a step change in the technical provisions. | [½] |
| - De-risking the assets backing the estate, or other hedging strategies could reduce the SCR, freeing up capital. | [½] |
| The proposal takes no account of the possibility of new business increasing... | [1] |
| ... which would require capital. | [1] |
| From a practical perspective, x% and y% will be difficult to set | [1] |
| It would need to be agreed whether they would be fixed or could be changed if conditions vary materially | [1] |
| Or over time | [½] |
| And how that decision to change would be governed | [½] |
| There may need to be more clarity or boundaries given around the "some of the estate" rule | [½] |
| Overall it is unlikely that this would be a suitable approach to take in its current form. | [1] |
| However, the suggestion to make the estate distribution more formal is an appropriate suggestion. | [1] |
| It is easy to explain and calculate. | [½] |
| If distributions are through final bonus, and so distributions could be clawed back, then it might be acceptable. | [½] |
| But it does not give any indication about how the estate is to be distributed... | [1] |
| ... specifically, how it would be distributed between cohorts of policyholders. | [1] |
| There is room, therefore, for expert judgement. | [½] |
| | [Total 27 ½] |
| | [Max 10] |

(i) The candidates that scored well considered how the underlying liabilities (specifically the asset shares and the NTVOG) would act and, hence, why the investment strategy might be different.

(ii) Those candidates that considered how the return might be derived from first principles were able to recognise the errors in the method set out in the question.

(iii) to (vi) were generally well answered by well prepared candidates.

(vii) This part, asset out in the general comments above, was not well answered.

The question provided a lot of information that would prompt questions about whether the treatment was fair. Good candidates recognised, for example, that:

- *The surrender value close to maturity was likely to be higher than the maturity value.*
- *Surrendering policies were not benefiting from any estate distribution.*
- *The estate had grown rapidly over the year.*
- *The estate at the end of the year was very high relative to asset shares and yet the distribution rate was modest.*

(viii) This question part was answered better than was expected by well prepared candidates. Most candidates noted the difficulty in setting x and y , but some failed to consider the advantages and then why it was not a good idea (as, for example, it takes no account of capital requirements).

END OF EXAMINERS' REPORT