

EXAMINATION

September 2007

Subject CA3 — Communications

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.

M A Stocker
Chairman of the Board of Examiners

December 2007

Comments

Question 1

Candidates were asked to draft a letter to a member trustee explaining how the pension scheme's investment return compared against a benchmark return and how this return was affected by the pattern of payments into and out of the scheme and fluctuations in investment conditions in the two halves of the year.

The main points that the examiners were looking for and some common problems encountered were as follows.

- 1. Most candidates had a suitable opening paragraph to the letter. Scripts gained marks for a clear summary of the trustee's query, but not where the opening paragraph was lengthy and repetitive or did not refer to the initial query.*
- 2. Some of the scripts failed to define time-weighted rate of return (TWRR) and money weighted rate of return (MWRR) properly. The description was either too brief, contained too much jargon or did not explain the impact of cashflows. In a minority of scripts, there was no explanation of the TWRR or MWRR or the explanation was incorrect.*
- 3. Better scripts confirmed that the rates of return calculated by the trustee and the investment manager were both correct and that the discrepancy was due to different investment conditions in the two halves of the year.*
- 4. A few scripts suggested that the return calculated by the trustee was wrong.*
- 5. Good scripts included a selection of the most important relevant numbers, such as the half-year investment returns and benchmark returns. Some scripts included excessive amount of numbers and calculations.*
- 6. Whilst a large number of scripts included an example of MWRR and TWRR, the candidates did not link the example back to the question. For example, including comments such as "suppose scheme received £25m in transfer payments half way through the year" or candidates did not explain that more assets were invested when markets were falling than when they were rising thus dragging down the overall return.*
- 7. Only a few scripts provided a good example of MWRR and TWRR.*
- 8. A minority of scripts included no examples at all.*
- 9. A few scripts made some inappropriate comments such as "I wish all the trustees had the same level of financial knowledge as you", "cashflows causing changes in investment returns and stock markets".*
- 10. Some candidates lost marks because of the use of jargon such as net cashflows, benchmark index, volatility, non uniformity of transactions and negative growth without an explanation.*
- 11. Some scripts included irrelevant information such as carrying out an investment strategy review.*
- 12. Many scripts gained marks for a good final paragraph which briefly summarised the main points and finished with comments suitable for a letter to a trustee.*
- 13. Most scripts were in a suitable format and tone to be a letter to a pension scheme trustee.*

- 14. A number of scripts suffered from poor spelling, grammar and punctuation.*
- 15. The guideline length was 500 words. Scripts which were below 450 words generally missed out some of the explanation. Scripts which were longer than 550 words often lost marks for including unnecessary repetition or irrelevant detail.*

A possible answer is attached. It is not intended to be a model solution. In practice a wide number of solutions were acceptable.

Mr Colin Spragg
<his address>

<date>

Dear Mr Spragg,

Investment returns for ABC Ltd Pension Scheme

Thank you for your letter of 8 September concerning the investment returns achieved by the scheme investment manager and how they compare to the benchmark. I have looked into this, and have found the explanation for the apparent discrepancy that you have noticed.

Investment performance during the year

This year could be described as “a year of two halves” when looking at the investment performance.

In the first half, the investment return was 14.8%, compared to the benchmark of 14.1%.

In the second half, the investment return was –5.9%, compared to the benchmark of –5.5%.

So in the first half of the year the scheme returns were above benchmark, whilst in the second half, they were below.

Different methods of calculating the investment return

The discrepancy between your calculations and those of the investment manager is caused by the different ways of combining the first and second halves.

- In your calculation, you have looked at the cash flows for the full year, assuming that they all take place at the mid-point, and then correctly calculated that 7.1% return would have been required over the full year. This is equivalent to saying that a 3.5% return would be required in each half-year.*
- The investment manager has calculated each half separately, and then multiplied the returns together to work out the average return.*

$$((1+14.8\%) \times (1 - 5.9\%)) - 1 = 8.0\%$$

I have checked the detailed calculations, and confirm that they are correct.

The reason these produce very different answers is that the amount within the fund varied over time. In particular the mid-year transfer of £0.324m meant that the second half-year was more important in calculating the overall return.

Both methods are useful:

- *Your calculation is correct and says that the fund has grown by the equivalent of 7.1% over the year.*
- *The Investment Manager's calculation is also correct. It is also particularly relevant when comparing with the benchmark. This is because the Investment Manager does not control the payments in and out. To take an extreme example, if the fund had halved at the mid-year, then this calculation would still say that the Investment Manager achieved an 8% return. But the other method would have been heavily influenced by the high return in the first half of the year, giving an overall return of around 12%.*

Conclusion

In conclusion, the Investment Manager is correct to say that the fund has outperformed the benchmark, achieving 8% compared to the benchmark of 7.8%. In making this calculation the Investment Manager has appropriately removed the influence of the cash flows that are beyond his control.

It may however be helpful to draw to the Trustees' attention the matter of the different performance in the two halves of the year.

If you would like to discuss in further detail, please contact me on the number below. Otherwise I look forward to meeting you again at the next Trustees' meeting.

Yours sincerely,

*James Cochran,
Scheme Actuary to the ABC Ltd Pension Scheme
Phone: xxxxxxxx*

Question 2

Candidates were asked to redraft an old training note explaining with-profits endowment policy for the benefit of a new Customer Services Director (who joined from outside the financial services industry). In particular, candidates were asked to cover:

- *How the different elements combine to make up the maturity value*
- *That yearly bonus isn't comparable with bank interest rates*
- *The main elements taken into account in the assessment of bonuses*
- *What happens in the event customers die or cash in their policy*

Many candidates struggled with this question, which largely involved translating technical information provided into layman's language.

The main points that the examiners were looking for and some common problems encountered were as follows

1. *Most candidates had a suitable opening paragraph to the memo. Scripts gained marks for a clear summary of the purpose of the memo, but not where the opening paragraph was lengthy and repetitive or did not refer back to the query.*
2. *Some candidates lost marks because of the use of jargon, such as surplus, mortality, variability, actual versus expected, actuarial assessment, share of fund etc.*
3. *Scripts gained marks for finishing with suitable comments.*
4. *Most scripts were in a suitable format and tone to be a memo to a Director. However, some poor scripts answered the question in a "question and answer" format instead of a memo or the scripts consisted mainly of short bullet-points.*
5. *A number of candidates did not understand the policy or offered a very poor explanation of how the policy works. For example, a few scripts stated that the sum assured was guaranteed to be paid on surrender or that only the sum assured (and not bonuses) was paid on maturity of the policy.*
6. *Many scripts did not explain why the yearly bonus isn't comparable with bank interest rates and therefore failed to answer part of the question. Other scripts did not bring out the key point that, unlike bank interest, the yearly bonus for the endowment is only part of the overall return. Instead they focussed on secondary issues such as the discretionary nature of bonuses. Good candidates attempted to draw the distinction that bank interest would be paid on the premiums but bonuses would be paid on the sum assured.*
7. *Some candidates had difficulty in drafting information in a way which was straightforward and still technically correct. For example, some scripts stated that the cash sum was guaranteed to be paid on surrender or that no benefit would be paid if the policy was cashed in.*
8. *Candidates seemed to use words that the question clearly stated not to use eg terminal and reversionary bonus.*
9. *Some candidates included inappropriate comments such as yearly bonuses are added each year.*
10. *A few scripts incorrectly referred to premiums as contributions and sum assured as benefits.*

- 11. A number of scripts suffered from poor spelling, grammar and punctuation.*
- 12. The guideline length was 450 words. Scripts which were below 400 words generally missed out some of the explanation. Scripts which were longer than 500 often lost marks for including unnecessary repetition or irrelevant detail.*

A possible solution is attached. It is not intended to be a model solution. In practice a wide range of solutions was acceptable.

*Memo to Philip Smith, Customer Service Director
From Peter Green, Actuarial Director*

<date>

With-Profits Endowment Policies

As promised, I am writing to provide you with an outline of the main features of our with-profits endowment policy and its bonuses.

Basic concepts

A with-profits endowment enables customers to save a fixed amount regularly, and assuming all the payments due are made it provides a guaranteed cash sum at the end (the “maturity date”). Each year, the guaranteed sum may be increased by a yearly bonus. At the maturity date a final bonus may also be added, but this is not guaranteed in advance.

If customers die before the maturity date, the full guaranteed cash sum and bonuses are paid. If customers decides to cash in early there are no guarantees, but we aim to ensure that they get a fair return on their payments.

Bonus calculations

The guaranteed cash sum is calculated based on a number of assumptions. These include:

- *how much is to be paid in each month, and for how long*
- *an allowance for a modest rate of growth on the payments*
- *the proportion of customers expected to die before their maturity dates; and*
- *our expected administrative costs*

Each year we compare what has happened in practice with our original assumptions and calculate what bonuses we can add.

As I mentioned above, any yearly bonus increases the guaranteed sum payable at the maturity date. We try to ensure that these bonuses do not change too much from year to year.

The final bonus is designed to ensure that customers receive a fair return on the payments they have made, taking into account what has actually happened for all the factors mentioned above. Final bonuses depend quite heavily on stock market levels, but we make an adjustment to offer some protection against short-term movements in share prices — a process known as “smoothing”.

Comparison of bonuses and interest rates

Customers sometimes compare the yearly bonus rates with the interest rates that they could obtain from bank accounts, but in practice they are quite different:

- *the yearly bonus is only one part of the benefit that customers receive*
- *from the first day of the policy, if the customer dies, then the whole guaranteed cash sum is paid out — far more than the customer has paid in*

- *the bonus is calculated based on this sum assured, again far more in the early years than the customer has paid in*
- *if the policy reaches its maturity date, customers also receive a final bonus*

The way an endowment policy works is therefore quite different from a bank account.

I hope this explanation is helpful to you, but please contact me on <phone number> if you have any questions.

Regards,

Peter

END OF EXAMINERS' REPORT