EXAMINATIONS

September 2003

Subject 401 — UK Fellowship Investment

Paper One

EXAMINERS' REPORT

Introduction

The attached subject report has been written by the Principal Examiner with the aim of helping candidates. The examiners are mindful that a number of interpretations may be drawn from the syllabus and Core Reading. 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.

The report does not attempt to offer a specimen solution for each question — that is, a solution that a well prepared candidate might have produced in the time allowed. For most questions substantially more detail is given than would normally be necessary to obtain a clear pass. There can also be valid alternatives which would gain equal marks.

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Chairman of the Board of Examiners

25 November 2003

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There were no general issues with the papers and candidates do not appear to have had any time constraints. As in previous years, we remain concerned that candidates focus on asset and liability issues rather than investment issues in answering questions such as Q1, Q3 and Q9 in Paper 1. We would also re-emphasise that candidates should use the information given in a question and frame their answer around that.

1 We shall refer to the two managers as the UK fund manager and the European fund manager.

If the UK fund manager wished to sell one stock and buy another which he thinks has better prospects, he will need to weigh up the potential upside in the other stock against the certainty of the capital gains tax payable on the disposal of the stock he currently holds.

By contrast, the European fund manager does not have his decisions overshadowed by taxation issues as the fund pays no tax on investment income or capital gains.

The UK fund manager will wish to maximise the after-tax returns of his investors whereas the European fund manager will attempt to maximise the gross returns of his investors.

The UK fund will experience higher costs in terms of tax advice, time spent tax planning and tax compliance, compared with the fund management industry in the European country. This will be reflected in higher charges to customers — and hence lower returns.

When there is a difference between the rate of tax on investment income and that on capital gains, the UK fund manager may have to tilt his portfolio towards either stocks with low dividend yield & high capital growth potential or stocks with high dividend yield and low capital growth potential.

This in effect is a constraint on investment policy relative to the European fund manager and may impair the performance of the UK fund manager.

In line with the comments above, poorer candidates did not focus on the two funds but wrote a lot about taxation of life funds. Few gave the required comparison.

2 (i) The two main sources of risk and return in overseas investment are:

The risk and return of the foreign asset within its own market
and the risk and return arising from changes in the exchange rate between the currency of the foreign asset and that of the purchaser's home country.

(ii) Entering into a forward foreign exchange contract can reduce the exchange rate risk.

If the investor believes that the expected return on the currency exposure is zero, then he should fully hedge his foreign exchange rate risk.

If the investor believes that there is a return to be made from the foreign exchange rate exposure, then he may feel that using foreign exchange rate contracts reduces the risk but it also reduces the potential for returns.

If the investor has some strong beliefs about movements in exchange rates or can predict exchange rate movements with a reasonable degree of accuracy, then selectively putting on an exchange rate hedge and taking off an exchange rate hedge may lead to exchange rate profits.
If an investor adopts the strategy in the paragraph above, he would also need to be able to forecast the volatility of the currency pairs in order to manage the extra risk in the strategy.

Transaction costs and interest rate differentials will impact returns

(i) was well answered but many points were missed in (ii).

3 (i) If the assets of the scheme are valued at market value and the liabilities using the yield on a long-dated government bond then there is significant potential for surpluses and deficits where a substantial proportion of the fund is invested in equities.

A significant deficit can arise from a fall in equity values and a fall in long-term interest rates.

Likewise a significant surplus can arise from a rise in equity values and a rise in long-term interest rates.

Swings in the value of a sponsoring company's defined benefit pension scheme surplus/deficit could give rise to significant volatility in the balance sheet of the sponsoring employer.

If the size of the pension scheme surplus or deficit is large relative to the net asset value of the company, then the balance sheet volatility will be all the more extreme.

Such volatility could cause the company to go bust or at the very minimum it could force it to cut its dividend.

The company may wish to persuade the trustees of the pension scheme to reduce the volatility of assets backing the scheme.

(ii) The scheme could match the liabilities of the scheme with bonds rather than equities.

This would reduce the size of the mis-match between assets and liabilities and hence the size of deficits and surpluses.

In turn this should reduce balance sheet volatility.

If funding rates implicitly assume a higher rate of return on equities compared with long-dated government bonds, then this approach would suggest a higher funding rate for the sponsoring employer.

Higher funding rates will impact on the P&L account of the sponsoring employer.

The sponsoring employer is being asked to trade a higher funding rate to reduce balance sheet volatility.

(iii) Equities give rise to the risk of potentially significant surpluses or deficits and hence balance sheet volatility for the finance director.

The problem for the finance director is that equities are expected to give a higher return than bonds over the long-term and therefore have the potential to fund the liabilities at lower cost (but are no means certain to do so).

However, over the shorter term they can exhibit significant volatility, which causes problems for the sponsoring employer's balance sheet.

With the new accounting standard in place, companies sponsoring defined benefit pension schemes are likely to be asked to stump up additional funding for the scheme when equities fall in value. The problem with this approach to investment & funding for companies in general is that their earnings outlook is likely to be poorest when equities fall in value so there is a coincidence of risk. Companies are asked to provide extra cash for the pension scheme just when their own cash flow falls.

The characteristics of the pension fund investment policy that would be most desirable are:

- A portfolio that gave similar returns to equities.

- A portfolio where those returns were not correlated with equities. (i.e. the good and bad months of performance of the pension fund investment returns did not coincide with those of equities)

- A portfolio that had lower risk than an equity portfolio.

- Such a portfolio might be created by mixing together a group of uncorrelated asset classes like some equities, some bonds, some property and some hedge funds whose returns are uncorrelated with the previously mentioned asset classes.

Changing the investment policy may change the liability valuation.

Answers to this question were disappointing with many unable to apply the given information to outlining the relevant points. Comments were made about MFR but these were not relevant to the question set.

4 For investors with small sums to invest, the costs of direct investment in many areas are so large as to prohibit investment in such areas.

For example, institutional property, international equities, currencies and hedge funds.

Collective investment vehicles can however at least provide access to such areas of investment albeit at what might be regarded as relatively high charges.
Collective investment vehicles allow investors with relatively small sums to invest to achieve diversification that they could not otherwise obtain via direct investment.

Collective investment vehicles give investors with relatively small sums of money to invest access to expertise in their chosen area or areas of investment. The costs of procuring such expertise for an investor with a relatively small sum to invest would be prohibitive.

Compared with the option of direct investment, collective investment products simplify the purchase, sale, settlement, investment management, custody and administration of investments.

Certain collective investment vehicles may have tax advantages or may smooth the investment returns from the underlying assets neither, of which features are available through direct investment.

Well answered.

5 (i)

- Maintaining confidence in the UK financial system.
- Promoting public understanding of the financial system and the potential risk and rewards of various investments.
- Delivering an appropriate level of protection for consumers.
- Control as far as possible the extent to which business carried out by regulated people can be used in connection with financial crime.

(ii) Full FSA authorisation could be sought meaning the firm would have to follow all the FSA rules when conducting regulated activities.

This would be the only option if the firm were "multi-disciplinary" or not managed or controlled by actuaries.

Alternatively, if the firm is to be managed and controlled by actuaries, the firm could apply for an Authorised Professional Firm licence from the Institute of Actuaries. Again, the full range of regulated business could be conducted.

A restricted range of services could be provided under a less stringent compliance regime available under the Financial Services and Markets Act (part XX). This could be an option if a licence were to be granted from the Institute of Actuaries under its Designated Professional Body status. The firm would have to be managed or controlled by actuaries.

(iii) If advice were to be given to individuals, the less stringent compliance regime would not be acceptable. If the firm were to operate under a DPB licence, a fully FSA authorised subsidiary would need to be set up or full FSA authority sought for the whole firm. A firm cannot operate under a DPB licence and be authorised by the FSA at the same time.

(iv) One of the ten principles of the FSA covers conflicts of interest.

The request creates two potential conflicts. Firstly, the firm's interest in advising both sides could be seen as impairing the ability to give good advice to one or both sides.

As soon as the conflict arises, both sides must be informed.

If resources allow, the appointments could be taken on by separate teams within the one firm operating with strict internal rules on confidentiality. Ideally details of the approach should be communicated and agreed with the two clients.

If this approach is not possible, then one of the appointments should be declined.

Well answered.

6 (i) Any four from the list below can be used and a brief definition as in Unit 15 of Core Reading is required for 3 marks each; 1 mark given for just the strategy name. It is likely that candidates will provide the first four as the latter two are not explicitly covered in the Core Reading but are covered in the additional reading.

Strangle, strip, strap, straddle, reverse calendar spread and reverse butterfly spread.

(ii) Both general and specific points need to be made.

A strangle is not as expensive as a straddle, which in turn is cheaper than both a strip and a strap.

The actual cost of a strategy will depend upon the relationship between the exercise price and the strike price i.e. is the exercise price above or below the strike price. Depending on this, the strip will be more or less expensive than the strap.

Likewise, the breakeven points on a strategy also depend on this relationship and so how profitable one strategy will be relative to another varies.

A strip will generate a greater profit when the stock price falls significantly.

A strap will generate a greater profit when the stock price rises significantly. Because a strangle has different strike prices, it usually needs a greater price movement in one direction to be profitable than the equivalent straddle but less in the other direction.

Well answered although a few appeared to know little about the different strategies.

7 (i) Commodity derivatives are investments based on the price of the underlying commodity. They are typically futures, although options on futures themselves are also available. The investments are widely traded on the major exchanges.

The main use of commodity derivatives is to reduce uncertainty in future cashflows for commodity producers and consumers.

Delivery of the actual commodity may take place although contracts are also used purely for hedging purposes.

The contracts have to be very carefully specified to cover all details of the delivery and the underlying product.

(ii) On the basis that the platinum is held as an investment rather than for commercial purposes, a reasonable formula is:

Price of future = *spot price of underlying platinum*
+ *financing cost of holding the platinum*
+ *storage cost of the platinum*

(iii) An institutional investor is likely to select assets on the basis of improving their ability to meet liabilities as they fall due.

Commodity derivatives do not demonstrate reliable correlation with typical institutional liabilities although they could have a role as return enhancing (rather than risk reducing) assets.

The volatility of the markets and the dependence of returns on the fortunes of the specific commodity market on which the contracts are based, means commodity derivatives have not traditionally been a particularly attractive asset class for institutional investors.

Generally well answered.

8 The solution to this question may either be based on core reading and use the data in Unit 9 or use more up to date information.

(i) UK equity markets saw a substantial rise between the early 1990s and their peak in late 2000.

Since then, the market has fallen back with a decline of approximately X% from the high point. Over the decade, the return on the FTSE All-Share Index was on average around Y% per annum.

The major events of the decade have been the correction in 1998 following the "Russian debt crisis", the falls following the terrorist attacks on 11 September 2001 and the more gradual decline in 2002 as fears of a recession, continuing concerns about security and a decline in global corporate confidence pushed stock markets downwards.

Supportive measures over the decade include the move to conditions of relatively low and stable inflation, increased flexibility in labour markets, the low interest rate environment created to stimulate growth following the 11 September attacks and subsequent decline in markets. The general flow of money into long-term investments has been supportive but showed signs of weakening as corporate governance doubts increased at the end of the decade. Offsetting this were accounting irregularities, corporate governance failures, doubts over quality of earnings and volatility in tech stocks.

(ii) UK short-term interest rates started the decade at around 9%, fell to around 4% in 1994, and rose to almost 7% in 1998 as the government fought to control inflation in a strong economy.

Rate cutting was rapid and significant following the terrorist attacks on 11 September 2001 as the government attempted to boost the economy.

Real short-term rates fluctuated between 3% and 4% for most of the period.

For the decade rates have averaged around 6%.

(iii) In an atmosphere of declining interest rates, index-linked and conventional gilt returns have been positive over the decade. The return from both "risk free" assets have exceeded the return on the equity market.

Issuance of gilts has fallen as a strong economy allowed the chancellor to produce budget surpluses and retire debt.

Demand has increased as regulation encouraged a switch to fixed interest investments.

Index-linked Gilts returned less than gilts as inflation fell to low and stable rates

Gilts have had their best periods in times of severe equity market falls as investors sought to improve the security of their portfolios.

(iv) There are significant periods of negative correlation. This is highly significant when considering asset allocation because it indicates markets moving in different directions.

In this climate, asset allocations are crucial decisions since the investor can be either "very right" (the chosen asset increasing whilst the rejected asset declines) or "very wrong" (the chosen asset declining whilst the rejected asset increases).

In the absence of perfect foresight about the future, a diversified portfolio will generally be beneficial for the average investor seeking to optimise the balance between risk and return. The benefits of diversification are likely to be greater in periods of negative correlation.

In light of the correlation one might not take as large an asset allocation bet.

(i), (ii) and (iii) were reasonably answered. Answers to (iv) were generally disappointing.

9 (i) As an investment manager, you will be able to provide a financial assessment as to the company's ability to effectively "self insure" the risk which the trustees are looking to reduce.

This will involve a quantitative assessment of the balance sheet/profit and loss account relative to the likely demands of the plan and a forward looking analysis of profits in the economic conditions that would be likely to challenge the pension plan funding position.

(ii) The plan actuary is likely to be involved in the liability side of the analysis.

Also, a qualitative assessment of the company's commitment to the plan would be required. This, along with legal comment on the potential for the trustees to accept the company's request, would be a matter of judgement for the trustees in consultation with their lawyers.

(iii) The liabilities are valued using bond yields plus a margin for equity outperformance. Moving to a lower equity content could lead to a lower margin for equity outperformance being possible and hence a higher cost of accrual and a higher deficit. This could be undesirable from a profit and loss or cashflow point of view.

More simplistically, if equities are indeed at a low, selling now would look unfortunate were they to rapidly rebound in value. Pension fund investment is a long-term business and current conditions may prove to be only a temporary problem.

The company may not be sensitive to the funding rate.

Funding a deficit now which is rapidly corrected by market movements is unlikely to be desirable when the money could have been better used within the business.

(iv) The trustees' duty is to pay the benefits as they fall due. They need to strike a balance between security of the accrued benefits and affordability of the plan.

A higher bond content will improve security but if it puts the contribution rate for the company up too much, then the risk of the company no longer being able to fund the plan might become a factor.

Of concern would be the fact that the company has only agreed to contribute at 14%–6% below the total rate required to fund accruing benefits and pay off the deficit (which has since increased) over the members' future working lifetime.

The view of the company's commitment to the plan and their ability to pay future contributions will be crucial. If the company was committed and financially sound, the request would be more acceptable than if the company were seen to be making the request only because they were unable to afford the current deficit.

(v) On the basis that the company's commitment is sound, deferring the transition with periodic review or phasing the move over time might be an acceptable compromise.

Ideally, this concession to the company would be accompanied by an increase in the contribution rate as a prudent measure in turbulent times.

We were disappointed by the answers to this question. Many candidates made the assumption that they were "equity only" managers. Additionally candidates appear not to realise that research is done for bond investment as well. Consequently answers lacked the detail expected in (i) and (ii). In (v) many saw derivatives as a no cost solution and obviously did not understand the impact of their proposals.