EXAMINATIONS

April 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.

Mrs J Curtis
Chairman of the Board of Examiners

17 June 2003

Overall the standard of answers was reasonable. Although no candidates scored outstandingly well on both papers, there were some good papers in each. The examiners were concerned that there was a tendency for candidates to address other issues rather than the investment ones, which were the subject of the questions.

On Paper One, as should be expected, candidates demonstrated a good knowledge of the course reading. However there was difficulty in applying this in unfamiliar situations and most papers displayed poor communication skills in the structure and style of responses or the audience to which they were directed in the case of the friend or chairman of trustees. Too often candidates focussed on the narrow part of the question they were answering instead of taking a more holistic approach that referred back to the introductory data supplied or the other parts of the question.

Questions relating to project finance were the worst answered and this is an area that candidates will need to improve at given the profession's intent to get into wider fields of risk management.

1 (i) Need to identify two recognised UK market indices and compare as follows. (Question refers to market — this would infer exclusion of sub-universe indices e.g. covering small cap or style biased).

	FT Allshare	*FTSE 100*
Measure of short-term market movements	Yes	Yes
Market history	Yes	Yes
Future trend analysis	Yes	Yes
Performance benchmark	Yes	Less so
Valuation of notional portfolio	Yes	Yes
Sub-sector analysis	Yes	Yes
Basis for index funds	Yes	Yes
Basis for derivatives	No	Yes

(ii) All stocks in the index must be legally and practically investable.

Information regarding index constituent companies should be freely and regularly available and on a consistent basis

Construction rules should be clearly agreed and independently verified

Most important decision is whether to have a standard investment index as a benchmark or specialist SRI indices as a benchmark

Choice depends on:

- Purpose of fund and why index is sought
- Belief/evidence that investors will not sacrifice performance by choosing an SRI fund

- Opportunity set for investment, since SRI universe based on SRI index benchmark likely to be smaller
- Manager and peer groups existing or planned SRI management process and research function
- Definition of what "SRI" means
- Could use peer group

1.1 *Bookwork solution that was generally well answered – candidates caused problems for themselves specifying an index that had limited uses or were penalised for statements such as "all (or most) of the above uses" which did not recognise the need to draw out comparative differences.*

1.2 *Generally well answered – most candidates' solutions were biased to SRI specific considerations rather than general features of index construction that would also score marks.*

2 Reference to overall style/layout of presentation

Content:

Introduction
Background to scheme/presenter
Duties, authorities and responsibilities of trustees and other parties in process
Assessment of company and scheme prospects and alternatives including scope for obtaining further funds (unlikely)
Generic analysis on importance of asset allocation and implementation
Distinguish strategy and tactics
Objectives and their prioritisation
Appraisal of current portfolio

Broad theoretical alternative options to consider including expected returns and risks:

Asset allocation to equities, bonds, other, cash
Secondary issues e.g. domestic/overseas split, nature of bonds, choice of benchmark, tactical limits, timing
Risks affecting fund and stakeholders and their priority/relevance — ongoing funding, true solvency, statutory (e.g. MFR, FRS17), general market, currency, peer group comparisons
Details of analysis undertaken
Practical alternative options to consider

Conclusion

Implementation recommendations considering nature of existing and proposed investments, timing, liquidity, income requirements, dealing frequencies, marketability of property, costs of reconstruction

Compliance requirements including risk warnings

Supporting data in appendices

Candidates marks were broadly spread – despite the inference to put together a (short) presentation, most solutions did not follow a succinct style and were poorly structured, either not setting out the key background considerations or options, or making clear recommendations for action

3 (i) Looking for generalised argument with reference to actual history (why did yield gap exist, why was it reversed and what has changed now) and other global market comparisons as well as theoretical ideas e.g. change in taxation policy that makes dividends more attractive as a return to shareholders.

Need to distinguish between secular trend or temporary impact

Assess whether dividends have increased or capital values declined

Need to appraise bond market supply and demand factors and expectations too that stimulate the relative yield gap consideration

What index are we looking at and is it representative
Is the impact attributable to change in construction (e.g. reversal of dominance of TMT companies where income retained rather than distributed)

(ii) Attraction must be referenced to type of investor as well as general market level so consider investment objectives, nature of liabilities, strategy and statutory requirements as well as costs of transition from existing portfolio.

Consider consensus asset allocation trends and forecasts

Other individual indicators would include market index level and trend in direction and analysts forecasts, price/earnings level, dividend growth prospects, details of directors buying

Need to put this in context of other market levels and trends

(iii) **Growth** — Emerging markets can offer attractive growth prospects as poorer economies may have higher growth rates than more developed economies…
…due to industrialisation and increasing exports

Diversification — Investing in these economies may be a useful source of diversification compared to developed world economies…
…which are becoming more closely correlated over time.

Market inefficiencies — Emerging markets tend to have less efficient investment markets, which can lead to greater opportunities for an active manager to exploit.

Range of companies/industries — Some sectors of the global economy are poorly represented in developed world markets (e.g. generic pharmaceuticals), so investing in emerging markets will enable to manager to gain access to these sectors.

3.1 Most candidates failed to frame their answer in an historical context so tended to score only half the available marks
3.2 Most candidates failed to make reference to the category of investor, again limiting their scope to get more than half the available marks
3.3 Generally well answered with all the relevant points covered.

4 Points to cover:

- (lack of) authority to give personal financial (taxation) advice
- may need further info — was the letter solicited
- what happens to money in employer scheme prior to investment (how is it accrued monthly — held on deposit, if so at what return?)
- what has been track record of company and prospects
- who will be managing the new unit trust and what is their experience, skill and prospects
- how much does he plan to save — has he invested the full 15%, is there a minimum for the new funds, can he afford to invest in both, does he plan to sell his shares (or other investments) to fund the unit trust investment
- is the company plan flexible — can the amount to be invested vary over time subject to the 15% cap
- what are the respective costs — transaction/custody/management (for unit trusts), financial advisers compensation
- personal investment strategy — what is he saving for, why, how and when
- benefits of regular saving (pound cost averaging)
- other investments and assets held
- what other investments have been considered
- personal cash flow — what is the income from the alternatives and their tradeability
- personal tax position — relative advantages of alternatives, including any capital gains liability (has he retained shares or sold them)
- risks — inflation, capital, market volatility, currency, liquidity, concentration
- risk control — benefits of diversification (between markets and within)
- exposure to single company both as shareholder and employee – could lose employment and security if company failed
- benefits (and disadvantages) of unit trusts/professional management
- does he intend to remain with company — would existing shareholdings need to be sold if he terminated involvement with company scheme and/or left employment (do shares have to be held for a minimum period before sale

- is there a minimum plan participation period — can it be made paid up or at least reduce contribution to a minimum %)
- who will monitor the situation going forward
- not making a recommendation
- not able/qualified to give friend advice or appropriate FSA approval statement (either acceptable for point)

Few candidates got more than half marks – although considerations of diversification, tax and cost were well covered, the detail of the share plan and the lack of history of the unit trust were not analysed by most.

5 A value investor will select stocks which are felt to be under-priced relative to their true worth.

- These often have high dividend yields and low P/E ratios…
- …but if dividends have recently been cut they may have a low yield

The investor would hold the stocks with a view to selling them once their capital values have appreciated,
…due to the market re-rating these stock once the under-pricing is corrected.

This re-rating process may take a considerable period of time, during which the investor's returns may appear to be lower compared to the peer group.

Generally well answered with all the relevant points covered, save that a value share may take a long time to correct and indeed may become even cheaper in the interim.

6 (i) Speculators — investors who wish to take a long or short position in the property market, in order to make a profit.

Hedgers — investors who wish to reduce or eliminate risks in the future price of property investments they already hold.

Arbitrageurs — investors who use futures to enter into two or more offsetting contracts in order to profit from price differences.

(ii) Underlying property index or portfolio
Unit of trading
Delivery months/expiry dates
Quotation method/basis
Tick size
Tick value

(iii) Basis risk — future may not move fully in line with the underlying direct property holdings, based on
… the property sector (agricultural, industrial, offices, residential, retail, etc.)
… the geographical coverage
… the quality of the properties
… the mix of lease terms and freeholds

… income levels achieved from rents

The illiquidity of property may mean that the future is more volatile than the underlying property investments as the future is continuously traded

The delivery dates for the future may not correspond to the recommendations

Roll-over risk — the cost of rolling forward a position may be significant if the direct holding is significantly higher or lower than the desired allocation to property

Due to the long timescale needed by the property market to changes in supply and demand, the future price may be above or below the underlying index value for long periods of time.

6.1 Generally well answered with the different categories identified
6.2 Generally well answered with the key features identified
6.3 Poorly answered with most candidates failing to explore how the contract portfolio could differ from the actual holdings

7 (i) **Income**

- During the term of the bond — borrowing at govt bonds less 75bps, lending at govt bonds plus 100bps. So net income of 175bps per year during term.
- Capital repayment equal to initial payment.
- Capital repayment may be earlier than expected, due to risk of default by occupier

(ii) **Risks**

- Bank may find it needs to pay more interest on retail deposits to cover the capital required, reducing net income during the remaining term of the bond.
- Bank is unable to reinvest capital any earlier than maturity (or earlier, in the event of default)
- Due to uncertain repayment date, bank may be unable to sell on or securitize these interest payments, so may be locking up capital.
- Bank may find it faces capital repayments at a time when it has guaranteed interest income for the future to its retail deposits, potentially creating difficulties.

- Unexpected inflation may erode the real value of the future capital payment which is fixed in nominal terms.

- Unexpected inflation may erode the real value of the future income payments which are based on the spot yield at the time of issue.

(iii) **Risk discount rate**

This should be in line with the government bond yield of appropriate term

Cashflows

- The key outgoing cashflow from the government's point of view is the ultimate repayment of the initial capital borrowed

- If the occupier maintains payments until the end of the term, then the government will not acquire use of the home at the end of the term.

Asset/provision shown on balance sheet:

$$PV = \sum_{i=0}^{29} q_i v^{i+0.5}\left(H_{i+0.5} - D\right) - Dq_{30}v^{30} + 1.5\% \sum_{i=0}^{29} p_i v^{i+0.5}$$

valued at risk discount rate.

where cashflows are valued mid-year

D is the capital payment payable to the bank

H_i is the value of the home at time I

q_i is the probability of repayment in year i (sum of $q_0, \ldots, q_{30} = 1$)

p_i is the probability of the bond being in force in year i :

$$p_i = \prod_{j=0}^{i}\left(1 - q_j\right)$$

v is $(1 + \textit{risk discount rate})^{-1}$

- Assumptions will need to be made about q_i, the probability of default in year i, and about H_i, the value of the home at time i.

- H_i will need to allow for depreciation in the fabric of the home, and anticipated trends in property prices.

- q_i will reduce if future governments relax the rules and permit transfers of property part-way through the term (transfers are not initially permitted).

- If early repayment is permitted, then q_i will increase.

7.1 Most candidates scored well although struggled to distinguish who was paying what to whom which caused problems for the rest of the question.
7.2 A wide range of scores achieved with many candidates not appreciating the impacts of inflation and/or the problems of contrasting fixed and variable rate contracts
7.3 Generally very poorly answered with many candidates unable to construct a complete or partial formula or even identify most of the components therein.

8 The aim of this question is to get a description of securitisation of a capital project, how it operates e.g. securitisation of tolls from a toll road and the risk involved.

The method of achieving the aim of reducing exposure to a project after the initial construction phase is securitization of a revenue generating asset.

Securitization works by issuing a bond where the income from the asset, or more typically, pool of assets is repackaged as the repayments

The bond may include various levels of transfer of the risk from the underlying asset ; although this will sacrifice some yield .

Asset backed securities have been used to securitize different types of assets including, for example motorway tolls.

Two important types of securitization are:

The first type involves a single pool of asset generating income, where the payments and risk generated by the asset are passed through to every bond holder pro-rata to their holding.

The second type attempts to manage the level of risk from a pool of asset generating income by splitting the securities issued into different classes of tranches.

Each tranche received interest payments at the specified rate, however, the capital repayments are directed at each tranche in turn.

Thus if there were three classes: A, B and C, Class A would receive all the capital repayments until that Class is paid off when the repayments would be directed to Class B, and finally to Class C.

This type gives each the different Classes of bond a different amount of capital security.

Poorly answered with no candidates proposing the securitisation of future income as a solution, although some candidates highlighted the key features of risk transference.

9 (i) The regulatory objectives of the FSA are:

- Maintaining confidence in the UK financial system
- Promoting public understanding of the financial system including awareness of the benefits and risks associated with different kinds of investment or other financial dealings
- Securing the appropriate degree of protection for consumers, having regard to the differing degrees of risk involved in different kinds of investment and other transactions, the differing degrees of experience and expertise which different consumers may have, and the general principle that consumers should take responsibility for their decisions.
- Reducing the extent to which it is possible for a business carried on by a regulated person to be used for a purpose connected with financial crime.

(ii) FSA has supervisory control of:

- Building societies
- Friendly societies
- Insurance
- Investment management
- Retail investment business
- Credit unions' supervision (and the registration and public records of building societies, friendly societies, industrial and provident societies and other mutual societies)
- Securities and derivatives business
- Investment business (including responsibility for supervising exchanges and clearing houses)
- Banking supervision (including the wholesale money market regimes)

A bookwork solution that was very well answered by almost all candidates.

10 (i)

Full replication

+ Value of income from portfolio should exactly match the index by holding every stock in the index proportions

– High dealing costs to maintain exact matching of index

– Full replication involves exact matching of the index at all times, so is exposed to the market selecting against the fund by bidding up the price of companies where shares need to be brought, and bidding down those shares that need to be sold.

Stratified sampling

+ Lower expenses, as holding fewer stocks, and aren't forced to buy and sell particular stocks at a particular point.

+ Diversification proportions in specified categories matched that of the index.

Optimization

+ Aims to replicate the index by matching the index's fundamental factors know to affect performance, i.e. price earnings ratio, capitalisation and betas

Synthetic fund

+ By using derivatives to create a synthetic fund tracking the index you get exact matching of price movements of the index but for a lower cost.

– Derivatives reflect movements in capital values and not the income generated, so the income generated by the index is not replicated.

(ii) Index trackers are low fee investment vehicles.

The fees are lower due to the lower investment expenses because there is no need to incur the overhead of investment analysts to assist in selecting companies to invest in.

In an efficient market the price of an individual company's shares is affected by the level of supply and demand based on the fundamentals of the company.

The key factors affecting relative demand for individual shares are investors' expectations for:

- Future capital and dividend growth
- Risk

Factors that drive expectations for capital and dividend growth are estimates of profits, free cash flow and total enterprise value.

However, to determine future expectation for capital and dividend growth requires investment analysts to research the fundamentals of companies.

Actively managed funds use investment analysts to assist in allocating fund for investment in individual shares, so are assisting in the operation of an efficient market.

It costs money to undertake investment research, so there is an economic and monetary cost of operating an efficient mark, and this is met by active funds.

Index fund do not incur this cost because they don't carry out investment research, are therefore not contributing to the cost of operating an efficient market, getting a free ride on the efficient market that actively managed fund create.

Because index fund buy and sell shares based on their net cash flow and the proportion that an individual company's shares represent within the index that than based on a view of the company's future prospects they are naturally inefficient in allocating capital.

The larger the proportion of funds managed on an index basis the less efficient the market will be.

10.1 Generally well answered with marks lost by the inability to differentiate between stratified and optimised sampling or the limitations of using derivatives.
10.2 Poorly answered by most candidates, lacking structure or reasoned argument in their solutions. Most made reference to EMH but did not properly identify and distinguish the processes and costs of active versus passive management.

11 (i) Information that you need to collect on potential new fund managers:

- Scale of operation
- Number of personnel in key investment management sectors.
- Stability of investment personnel
- Size of fund under management
- Number of clients
- Investment process in areas of asset allocation
- Portfolio construction and management style
- Portfolio shapes
- Performance records
- Administrative skills

(ii) Tendering exercise

Stage 1: Decision to start tender process.

Stage 2: Draw up a tender document with broad scheme particulars (1 month).

Stage 3: Announcement of tender, sending out tender documents with questionnaires for completion (1 month).

Stage 4: Using the tenders submitted the investment consultants analyse the questionnaire and draw up a shortlist of fund managers (1 month).

Stage 5: Short-listed investment managers to a presentation to the pension scheme trustees, also known as "beauty parade" stage (1 month).

Stage 6: Fund manager will be selected, and a start date for the portfolio will be agreed. The legal contract will be drawn up between the scheme and the fund manager (several months).

Stage 7: Transfer of assets to new fund manager. A period of up to a year may be allowed for the new manager to re-organise the portfolio before its measurement start in earnest. The period to re-organise the portfolio depends on the extent that changes are required and the size of the fund.

(iii) Outline of reply to chairman to trustees.

We are in a tendering process so I will not comment individually on New Investment co. instead I will set out the general approach used to analyse each fund manager.

The aim of the tendering process is to:

- Identify the capabilities of investment managers.
- To differentiate between the different investment managers that tender.

The tender questionnaire provides key information to allow each investment manager to be assessed and compared.

Examples of how particular information should be used include:

Scale of operations — Could the fund manager cope with managing a large pensions fund?

Size of fund under management — Does the fund manager have experience of, or specialise in managing particular sizes of fund both in terms if individual and aggregate fund size?

Number of key personnel and stability of personnel — Are the key individuals involved in producing the particular fund performance still with the fund manager?

Is turnover of key personnel low? To establish whether key individuals are likely to remain with the fund manager.

Number of clients: Will you get the individual attention and individual focus on the investment management of your pension fund that you want?
Performance records: Consistently good performance in a variety of investment conditions over a long period is preferable. i.e. is the fund manager equipped to be able to produce good performance in the uncertain future investment conditions.

Administrative skills: Can the fund manager's back office handle the administration of your pensions fund? Is the back office already stretched?

Investment style and portfolio construction: Does the fund manager have experience in managing the investment style and portfolio construction required?

11.1 Bookwork solution that saw most candidates obtain full marks
11.2 Generally well answered although many candidates' timescales were unrealistic in practice
11.3 Although most candidates were able to properly critique the new manager's short performance history, rarely was this set in the context of the review exercise that was the subject of the whole question.