**Faculty of Actuaries** **Institute of Actuaries**

# EXAMINATIONS

September 1999

## Subject 401 — UK Fellowship Investment

*Paper Two*

EXAMINERS' REPORT

**1** (a) While it may seem anomalous to hold a greater position in a single UK stock than is held in all US equities, this is a consequence of the scheme benchmark which has been set. The benchmark is set with particular weightings in domestic equities and in overseas equities. The weighting in UK equities predominates, because most of the scheme liabilities are denominated in sterling. Overseas equities are introduced for the purpose of risk diversification.

In terms of the investment risk of different positions held, this risk can be measured by the difference between benchmark weight and portfolio weight. For BP Amoco, the benchmark stock weight is 3.5% (i.e. half of 7.0% index weight) and the portfolio weight is 4.5%. This is a relatively small active overweighting (+1%), chosen because of the favourable outlook for the stock and its expected outperformance. For the US holdings, the position is more extreme. Benchmark weight is 7.5%, while the portfolio weight is only 4%. This is a reflection of our view that the US stockmarket is fundamentally overvalued, and our view of the expected relative future performance of that market.

Comparison of the valuation of the US market with the UK and other overseas regional markets suggests that the valuation of the market is at a high level. This has been the case for some time, and has not prevented the market rising, as economic growth has continued. However, ultimately, investment returns have to be supported by underlying earnings growth, and we believe that current valuations (high price to earnings, low dividend yield levels) cannot be justified by earnings prospects.

(b) TIPS are similar to UK index linked in many ways. They provide inflation protection. However, they are denominated in US$ and they provide protection against US levels of inflation. These securities are held as an alternative to UK index linked securities. The purpose of maintaining a strategic benchmark weight of 15% in UK index linked is to match UK inflation linked liabilities within the scheme. These liabilities are denominated in sterling and linked to UK inflation. The purpose of holding 6% of the index linked exposure in US TIPS is because of the higher yield offered (secured by the US government) relative to the yield on UK index linked. These securities also give a measure of inflation protection, although that protection is linked to US inflation. Part of the inflation experienced in the US will be global inflation and part will be a specific domestic element. So, although there will be some correlation to UK inflation, this correlation will not be 100%. We believe that the additional yield available from TIPS more than compensates for the differential inflation risk. However, currency risk is much more unpredictable. Since this might be of quite large magnitude, the most secure route is to hedge the currency exposure back in sterling. This is carried out particularly to address the issue of matching the liabilities more closely.

For regional equities, there are different considerations. The benchmarks are denominated in local currency. The purpose of investing overseas is to benefit from risk diversification and part of the total return will come from currency impact. Although it is possible to hedge the currency, it is unclear whether such an approach will add or detract from returns over the longer term and it is common to run overseas equity portfolios on an unhedged basis. This is the approach we have adopted.

(c) The neutral position for Japanese equities is to hold benchmark weight in the portfolio, which is 5%. We hold a modest degree of overweighting – 5.5%. You are correct in identifying a large number of structural problems which affect the Japanese economy and the stockmarket prospects. It is for these reasons that the market has suffered from a prolonged bear market, and the Japanese economy has been in deep recession. However, there are many drivers of stockmarket performance, and many influences on investor supply and demand which determine the direction of market movements.

Because of the problems in Japan, many domestic and overseas investors have been reluctant to invest in the market, or to hold a full weighting relative to their benchmarks. An analysis of overseas investors' portfolios revealed this underweighting. The consequences are that if there was a change in perception for the direction of the economic drivers in Japan, there was a prospect of buying interest in the market which would exceed supply, leading to good relative performance. At the same time, the market had fallen over the last 10 years to such an extent that we believed there to be a small chance of a further price decline. The relative trade-off between risk and reward favoured a small overweight position in the market.

A number of the potential issues you cite can be considered to have a positive influence, e.g. the major financial restructuring and the government's economic stimulation packages. These will assist in improving the economic prospects which should lead to improved earnings capacity for a number of the companies. Japan is a major economic bloc, and has many major international companies which are well used to competing in a competitive global environment, and accommodating yen strength. Taking all of this into consideration, we felt that the risk / reward balance favoured overweighting Japan.

**2** There are three managers involved. Each manager uses a different process. The investigation will cover each manager along with the mandate, benchmark, performance target and objective set for the manager. In addition the nature of the pension scheme itself needs to be investigated.

**Pension Scheme**

The three investment mandates cover only the UK equity content of the scheme. The combined UK equity portfolio has underperformed the FTSE All Share (after allowing for fees). However, it is unclear what benchmark or risk parameters were set which might influence the way in which each of the portfolios was managed.

In terms of the scheme, the overall underperformance relative to index will result from the investment performance achieved by each of the managers, reduced by their investment management fees. It has been assumed that the relevant index is the FTSE All Share. So, it will be necessary to identify the investment management fees charged by each manager and the investment performance of each manager relative to the index set, and relative to the FTSE All-Share index. This manager performance data should be obtained on a quarterly basis over the last three years, or a longer period if available.

**Passive Manager**

The normal objective of a passive manager is to perform in line with an index, normally measured by the degree of tracking error. In terms of investigating the contribution to performance added by the passive manager, the components are the index benchmark set, the performance of that benchmark relative to the FTSE All-Share index, how closely the passive manager tracks that benchmark, and the fees charged for index management. There is very little else that can be expected of the passive manager.

**Active Managers**

The objective of active managers is to outperform the benchmark set. It is likely that a specific outperformance target would be set. In order to achieve that outperformance, the manager will have to take active bets away from the index, either at the sector or stock level.

**Sector Neutral Manager**

The sector neutral manager holds sector weight in each industry sector of the index. However, it is not clear from the question which index the manager was targeting, although sector weights normally apply to the FTSE All-Share index. The performance contribution of the manager will be the result of the performance achieved relative to index, reduced by the investment fee charged. As a sector neutral manager, the only contribution to out- or underperformance will come from stock selection. However, it will also be worthwhile checking from quarterly valuation data that a sector neutral approach is indeed being followed. The relative performance of the stock positions relative to their sectors means that some re-balancing of the portfolio will be required periodically, in order to maintain sector neutrality. This portfolio re-balancing activity should be documented.

However, the major influence on relative performance is likely to be the success or otherwise of stock selection. The first step in evaluation is to investigate the success of stock selection within each industry sector. The performance should be measured over each quarter, for the last three years, or a longer period if data is available.

The next stage is to determine the process used by the manager. How does the manager choose the stocks within the sector. An interview with the manager will help determine the process chosen, e.g. are there any particular biases used – does the manager favour growth stocks or value stocks, does he have a bias to large cap or small cap stocks, do these biases hold over all of the sectors and are they consistent over time, or does the manager aim to change style over the stockmarket cycle.

How many stocks are held within the portfolio. What is the turnover of the portfolio. Does the extent of stock bets remain broadly consistent over time. Are there any range controls on the extent of stock bets which the manager holds which might have controlled risk or allowed too great a latitude to risk. What risk parameters does the manager set himself, e.g. does the manager have load ratios or differences for stocks relative to index weight. Are these risk controls consistent with the degree of outperformance expected of the manager.

Are there particular characteristics of the way the manager chooses stock relative to stockmarket conditions over the last three years which would suggest how the manager would have been expected to perform, e.g. if the manager had a style which favoured value stocks and smaller companies, the manager would have been expected to underperform over the last three years when large cap and growth stocks outperformed.

Although much of the above analysis is quantitative, some qualitative judgement will need to be made of the abilities of the manager based on the fund manager and his team. How does the performance of the fund compare with the "house" performance of the manager. Is the specific fund manager expected to adhere closely to the "house" selected portfolio. How are the stocks chosen – does the specific fund manager conduct his own research? Is there a team of research analysts within the organisation who recommend the "house" portfolio. What is the record of the team for stock selection?

**Level Weight Manager**

Many of the above aspects can also be investigated for the second manager. However, by virtue of the means by which stocks are chosen there is unlikely to be sector neutrality, and the performance of the portfolio would be expected to be more volatile. In addition, having only 35 stocks is likely to lead to a volatile performance.

The main issues for this manager concern:

- The initial factor based screening system;
- The quality of the subsequent investment analysis;
- The application of any risk control on the 30 stock portfolio; and
- Whether the manager has performed well relative to the FTSE 350 index used in the initial screen (rather than the FTSE All Share.

It is important to understand what biases might be introduced into the initial selection of 70 stocks which arise from the factors used in the screen. Is there a style bias or size bias involved, e.g. liquidity constraints may mean there is a bias to larger stocks, valuation measures may introduce a bias to growth or value stocks, etc.

It is important to judge the quality of the investment analysts, relative to the bias already introduced by the initial screen.

It is important to determine whether the 30 stocks chosen out of this group of 70 are chosen purely on the grounds of investment preference, or whether an attempt is made to control the degree of risk in the resulting portfolio, e.g. to ensure that the portfolio does not contain particular biases to specific sectors, or market capitalisation or themes which are not intentional. Any risk control mechanism employed by the manager should be documented.

Since the manager only screens stocks from the FTSE 350, his performance should be evaluated relative to that index.

**The Managers in Combination**

As well as assessing the managers individually, it is important to see whether they combine well. For example, if analysis of the active managers identified that they both employed similar biases, e.g. towards value stocks or large cap stocks, it may well be that the manager risk will not be diversified because they are too similar. In addition, if the passive manager uses a large cap index benchmark (FTSE 100), and the two active managers favour large cap stocks, there may be a risk that the portfolio is insufficiently exposed to small and medium capitalisation stocks, in a period when they are performing relatively well.

Using all of the above data, it should be possible to identify the various sources of underperformance suffered and to identify which were due to the managers' styles of management and which due to the influence of market conditions. With this information, it should be possible to advise the scheme on the adequacy of its investment arrangements.

*Comment:*

*The main aspect which separated candidates who passed this examination from those who failed was the depth of their answers, e.g. Question 1(b) concerning US TIPS, marks were available for the superior security resulting from US Government backing, the fact that TIPS protected against US inflation and not UK inflation, that there was a core global inflation which would result in some correlation between UK and US inflation, that the yield premium would compensate for the risk, etc.*

*Candidates who made unsubstantiated comments failed to gain sufficient marks to pass.*