EXAMINATION

April 2006

Subject ST5 — Finance and Investment Specialist Technical A

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.

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Chairman of the Board of Examiners

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Comments

The solutions should not be taken as comprehensive. There are a number of additional points that can be made in certain questions and these were awarded appropriate marks. There are also a number of different solutions that can be derived for question 5 and these were also awarded appropriate marks despite the fact that it would be unusual to see them in practice. However alternative solutions tended not to give the same degree of information as those shown here and consequently marks in subsequent sections of the question were lost.

In general candidates did bookwork well but failed to carry this through in the application parts of questions and only the better candidates scored anything like reasonable marks in higher skills parts. Roughly half the paper relates to application and candidates often gave us bookwork rather than applying their knowledge to the problem in hand. Questions 2, 3, 6 and 7 were good examples of this with candidates on average scoring under 50% of the marks available. Question 4 was well done by most candidates being bookwork. Question 1, despite being bookwork, was not as well done as other bookwork sections possibly because of the context in which it was framed. As has been the case in the past we were disappointed with answers to question 5 despite the fact that arithmetical errors are not penalised because we are more concerned that candidates understand the methods and assumptions that they are using. In particular candidates show too little working, fail to use all the information that is provided and do not think widely enough. Consequently they did not score well in the second part of the question.

1 Passive management aims to track the performance of a specified benchmark index with no active investment risk.

This approach limits downside risk of poor manager performance.

It also removes scope to benefit from good manager performance.

An under funded scheme may find active management more appealing as a means to catch up some lost capital.

Fees are generally low — however this generalised point is not likely to be true for property where transaction and tax costs are significant.

Does a suitable index exist covering the wide range of properties held?

Property indices have numerous problems — non homogeneity, timing, frequency and availability of prices.

It may be possible to gain better matching of an index through a derivative instrument, but note that derivatives are often based on an investable index.

Active management aims to provide a return in excess of a specified benchmark by taking investment risk within the portfolio.

It is difficult to correctly identify managers who will consistently outperform.

Fees are generally higher than for passive management.

2 Solution not split into (a)–(c) as answers unlikely to conform to split of question.
Prospective tracking error is an estimation of the scale of volatility of prospective relative performance given the current portfolio and benchmark.

It is usually expressed in a number of basis points per year.

It provides an estimate of the aggregate amount of investment risk within a portfolio at the time it is calculated.

It is calculated using a quantitative model and depends on assumptions including: the likely future volatility of individual stocks and markets relative to the benchmark and correlations between different stocks and markets.

Tracking errors make no distinction between upside risk and downside risk.

In this regard it may not fit well with the trustees attitude to risk which will likely be skewed to seek positive performance with a high probability whilst minimising the probability of a significant negative performance.

Retrospective tracking error is defined as the standard deviation of realised past annualised relative performance.

It is also usually expressed in a number of basis points per year.

It seeks to provide an ex post summary measure of investment risk based on the volatility in the monthly (or quarterly) pattern of realised returns.

Prospective and retrospective tracking error will differ because:

Prospective assumes a static and unchanged portfolio and benchmark.

It also relies on many assumptions that are unlikely to be achieved in practice.

Whereas retrospective tracking error is based on the actual portfolio and on the performance of that portfolio against the benchmark

3 By exempting capital gains from tax and taxing investment income at a higher rate than earned income, capital gains will become the most tax efficient method of wealth creation and investment income will become the least tax efficient method of gaining wealth.

Potentially this will encourage companies to retain profits rather than distribute them, leading to higher levels of corporate investment…

…but it may also reduce the average rate of return for new investment opportunities as opportunities that would previously have been ignored will now be developed.

The higher level of corporate investment will not necessarily increase the overall growth rate of the economy as there will be less distributed income reinvested by companies and individuals.

Individuals will be encouraged to pay themselves in the form of capital gains rather than income, if they are able to do so, to minimise their tax liability.

This may lead to the creation of schemes that convert income into capital gains, which across the economy as a whole are unlikely to result in any net wealth creation.

It is worth noting that wealthier individuals will typically be least dependent on earned income, and will therefore be most able to structure their affairs to minimise their tax liabilities.

Conversely poorer individuals are unlikely to have such flexibility and will therefore pay more tax than if they were remunerated through capital gains.

Overseas investors are similarly likely to be able to structure their affairs in a way that minimises tax.

Attempts to prevent this (e.g. withholding taxes) may inadvertently result in the country's assets commanding a lower purchase price, impacting on the wealth of the nation as and when domestic assets are sold to overseas investors.

4 (i) The key principles are:

Integrity — high standards and fair dealing.

Skill, care and diligence.

Market practice — observe proper market conduct.

Information about customers — details of circumstances and investment objectives.

Information for customers — comprehensive and timely information in all dealings.

Conflicts of interest – should be avoided where possible, but otherwise full disclosure to client.

Customer assets — proper safeguard, segregation and management of all assets.

Financial resources — firm must have sufficient assets to meet its business risks.

Internal organisation — properly trained and supervised staff, proper record keeping.

Relations with regulator — open and co-operative manner.

(ii) A "Statement of Investment Principles" should set out:

Who is taking what decisions and why this structure has been selected.
Fund's investment objective.

Fund's planned asset allocation strategy, asset class projected returns and how strategy has been arrived at.

What mandates have been given to all advisers and managers.

Nature of fees structures for all advisers and managers, reason behind why set of structures selected.

5 (i) Assumption: net new investment occurs in middle of period. Simplification (1+*i*/2) allowed. *[Whilst candidates were not asked for formulae, it would be good practice to write out what formulae were used as this shows how the table of results is arrived at. Since no marks were being awarded for formulae, the report does not specify them.]*

	Fund Rtn	*Bmark Rtn*	*Curr Rtn*	*Alloc*	*Curr*	*Stock*	*Alt Rtn*	*Stock*
US	24.49%	30.29%	8.57%	0.00	0.00	-2.90	0.24	-3.14
Japan	46.15%	16.92%	-5.00%	0.03	-0.35	5.85	0.45	5.62
Europe	-13.33%	-13.67%	-6.67%	2.99	0.86	0.07	-0.14	-0.07
Asia	40.00%	53.03%	8.57%	1.84	0.33	-1.30	0.4	-1.30
Cash	0.00%	0.00%	0.00%	0.00	0.00	0.00	0	0.00
Total	22.81%	16.23%	1.96%	4.86	0.85	1.71	22.20%	1.10

(ii) (a) Fund outperformed by 6.58%/5.97%.

Stock selection added 1.71/1. 1%.

Asset allocation added 4.86%.

Currency added 0.85% of the 4.86%.

Under weight Europe and over weight Asia were positive asset allocation contributions.

Good stock selection for Japan, offset by poor US and Asia stock selection.

(b) Income needs investigating as looks like growth stocks in US but value stocks in rest of world — check style.

Check if any currency hedging in place as Japan return very high vis a vis benchmark

6 (i) (a) The manager's valuation model may prove incorrect and if it does investors will lose money on the transaction as the share bought falls in value while the share shorted rises in value.

The manager takes on a very high degree of stock specific risk with this strategy.

In particular, PharmaUP may suffer a significant fall in price due to a factor that is specific to PharmaUP.

For example, an announcement that the Federal Drug Administration in the US is withdrawing its approval for one of the drugs that contributes significantly to PharmaUP's profits as a result of the deaths of several individuals using the drug while the majority of other pharmaceutical companies may see their share price generally rise.

(b) There is an assumption in the strategy that the manager will be able to borrow the shares for a period of one year and this may not be possible in practice.

If the lender of the shares recalls the loan of the shares the manager may have to unwind his strategy at a point in time when the share bought has fallen in value while the share shorted has risen in value forcing investors to realise a loss

(c) The strategy will not be profitable unless the difference between the rise in value of PharmaUP and the fall in value of PharmaDOWN is sufficient to cover all the following costs:

Bid-Offer spreads
any impact on market depth
stamp duty and other levies
commission/brokerage fees

The manager will have to fund the cost of any dividends arising on the shares borrowed and this adds to the minimum return necessary to make the strategy profitable.

These costs will be offset to some extent on the interest income arising on the cash generated by shorting the shares.

(d) If some investors redeem their shares during the one-year holding period at a point where the value of PharmaUP is less than its value on the date the transaction is initiated
or the value of PhamaDOWN is above its value on the date the transaction is initiated
this may distort the relationship between the pair of stocks and make the entire trade unprofitable
if the price of PharmaDOWN rises unexpectedly on the forced buying in operation
and the price of PharmaUP falls unexpected from the forced sale of shares.

(ii) To reduce stock specific risk, the manager might buy in a sector of the market he forecasts will outperform over the next year and go short in a sector of the market that will under perform in the same period.

This could be achieved using exchange traded funds.

(iii) The manager could insist on a minimum investment term of one-year so as not to interrupt investment strategies with redemptions.

7 (i) The asset is being used as collateral to back a loan issue.

The asset is intended to provide higher security than an unsecured loan issued by the company.

As the ABS is issued through a SPV, purchasers are protected against other claims made against the company.

These factors will provide lenders (purchasers of the ABS) with more certainty of repayment than purchasers of an unsecured loan stock, reducing the company's cost of capital.

The yield on the ABS will therefore be lower than the yield on an unsecured loan stock of similar term and structure.

Furthermore, it may not be possible for the company to borrow funds in the market at a realistic rate (e.g. the issuer credit rating is weak).

Using the asset in this way would potentially lead to a more efficient balance sheet structure, as the asset is illiquid and not receiving any investment return.

However, this must be offset against the transaction costs of the ABS issue, …
… and the issue may have negative implications for the company's credit rating as it will reduce asset and income cover for existing unsecured creditors.

(ii) The equity tranche has been created to protect purchasers of higher tranches against the value of the asset being lower than calculated in the prospectus.

Defaults in the customer contracts would first be set against the equity tranche, then the mezzanine tranche and finally the senior tranche.

The default risks are reflected in the credit ratings, and the equity tranche is unrated.

The ABS has been structured in this way to reduce the cost of borrowing.

The spread (additional yield) increases steeply as the credit rating declines.

The company may wish to purchase the equity tranche if it is confident that the asset has been conservatively valued,

and therefore does not want to give up excess returns to other parties.

The nominal return on the equity tranche is likely to be well over 10%, and therefore higher than the company's average (and possibly marginal) cost of capital.

In practice it may be difficult to market the equity tranche as contract and customer retention is to some extent under the control of the company, and some level of company participation in the issue would be needed to avoid moral hazard.

(iii) There is some switching risk, although this should be low as subscribers will have a penalty if they terminate contracts prior to the minimum period ending. If the nature of the marketplace changes then this may result in losses.

There is some default risk if subscribers are unable to meet their remaining contract payments. This risk would be higher if the contract automatically terminates in certain situations (e.g. redundancy) and losses are likely to increase in an economic downturn.

Most of the risk is likely to be restricted to the equity tranche.

(iv) The key factor determining whether a loss will occur is how actual switches and defaults compare to what has been assumed in the asset valuation.

The switching risk would increase materially as there will be a high expected number of switches once the minimum contract period ends and the number of switches is likely to remain at a moderate level for the duration of the 5 year period

The default risk will also be higher although this is likely to remain broadly stable over the 5 year period.

A possible exception to this pattern might be if subscribers with lower default risk were "cherry picked" by a competitor.

In contrast to the previous scenario, it is likely that the mezzanine tranche will have significant exposure to these risks, in addition to purchasers of the equity tranche.

These additional risks would, all other things being equal, result in a higher spread on the ABS particularly on the mezzanine tranche.

END OF EXAMINERS' REPORT