

EXAMINERS' REPORT

June 2025 examinations

Subject F105 — *Finance and Investment* Fellowship Principles

INTRODUCTION

The attached report has been prepared by the subject's Principal Examiner. General comments are provided on the performance of candidates on each question. The solutions provided are an indication of the points sought by the examiners, and should not be taken as model solutions.

QUESTION 1

- i. The principal aims of regulation of financial services are to:
- Promote efficient and orderly markets.
 - Protect consumers of financial products.
 - Maintain confidence in the financial system.
 - Help reduce financial crime.
- ii. The government should consider the following issues:
- Existing legislative framework for domestic and foreign investment.
 - The impact of changes to existing laws and new regulations on investments and how this relates to broader government goals.
 - International best practice – review the regulatory models of investment regulation, and its applicability, in advanced economies.
 - Suitable definitions of “investment” and “investment activity”.
 - The diversity of the investment industry in the country.
 - The level of investor sophistication.
 - The existing financial markets infrastructure.
 - The level and availability of skills in the country – investment market, information technology, administration and regulatory skills.
 - The derivatives market in the country – level of sophistication and usage.
 - The taxation laws for domestic and foreign investment – income and capital gains.
 - Past abuses and measures to prevent recurrence.
 - Levels of financial crime, especially money laundering.
 - Affordability of a suitable funding model for the proposed system.
- iii. A system of regulation that is too:
- Onerous – might be too costly, affect the efficiency of the financial markets and ultimately investment business may move offshore.
 - Simplistic – might provide inadequate protection, detract from investor confidence and not adequately address financial crime – obviating the aims of financial regulation.

Therefore, the correct balance between cost and complexity is desirable.

Examiners comments

Part (i) was bookwork and generally well attempted by most candidates.

For part (ii) many candidates struggled to generate enough distinct points to score a good mark.

For part (iii) most candidates were able to elaborate on the scenario where the system of regulation is too onerous, but omitted to indicate the effects of a system that is too simplistic.

QUESTION 2

i. Features of the consumer goods industry:

- Companies in the consumer goods groups manufacture consumer durables and non-durables. Durables include cars, furniture, televisions and “white goods” such as washing machines. Non-durables include food and drink and tobacco.
- Generally the impact of an economic cycle is less severe on non-durable consumer goods companies than on general manufacturers. This is especially true for companies producing basic necessities, and those producing affordable consumer goods.
- Increasingly capital-intensive – increasing mechanisation of production processes is gradually increasing the proportion of added value from capital (where previously the industry has not been seen as capital intensive), reducing the degree of labour intensiveness in these industries.
- Moderate to high gearing – gearing tends to be highest where profits are most stable, as investors are less inclined to lend at a fixed rate to riskier companies. Generally the impact of an economic cycle is less severe on consumer goods companies than on general industrials. The smaller unit size (of goods sold) for most consumer goods companies (compared with general industrials) also increases stability by reducing the dependence on individual customers.
- Low profit margins – due to extreme competition.

ii. Cash holdings:

- Holding excess cash lowers the return on capital. Shareholders may be better placed to decide how they want to apply their capital.
- Possible ways to reduce surplus cash:
 - Repay any outstanding debt
 - Return the cash to shareholders as a special dividend
 - A share buy-back, if the share price is considered low by the board
 - Take-over of a competitor, or supplier (M&A activity)
 - Use as capital in an organic growth expansion
 - Bonuses for staff

iii. Financial analysis:

- Capital budgeting is the process of considering which projects, and associated real assets, the firm should invest in.
- Financial analysis is the process of analysing the financial implications of different possible courses of action.
 - It relies on estimates and ideas from a variety of disciplines – product development, production, marketing, technology, accounting, tax, law – in order to reveal their financial implications.
 - It is generally difficult to project the prospective cashflows arising from a particular project with any great confidence.
- Financial analysis may be able to:
 - delineate the risks involved in a project,
 - highlight the salient factors – i.e. those that lead to the greatest uncertainty

- possibly suggest methods by which these risks might be reduced.
 - All decisions are ultimately made by human beings who are not always impartial and objective. Capital budgeting and financial analysis is an attempt to enforce impartiality and realism.
 - Capital budgeting and financial analysis may be particularly relevant for this firm given its growth and profitability, which may otherwise lead to a less disciplined approach in deployment of resources.
- iv. Process in developing a new long-term financial plan:
- The company should have long-term financial plans in place for its existing business. These would need to be reviewed and updated.
 - The business plan for the retail stores will need to be developed, reflecting the planned timing of new store roll-outs.
 - A sensitivity analysis will be done, by exploring business plans under a range of scenarios.
 - The business plan is converted to financial plans by forecasting of future cashflows, with timing and size of capital required.
 - Analysis of the anticipated need for working capital and growth in fixed assets, together with considerations of tax, dividend and interest payments, will enable the financial manager to plan for capital budgeting and structure.
 - Much of the capital may be sourced from the surplus cash. Investment of the cash needs to be considered until it is needed.
 - The capital requirements of the existing business should be combined with those of the new retail stores.
 - Sensitivity analysis will be needed to allow for possible changes in the financial environment and/or innovations by competitors that will impact sales.
 - The results of the financial plan may impact the business plan; this is therefore an iterative process.

Examiners comments

Overall reasonably well done.

Part (i) was bookwork and most candidates scored well.

Part (ii) was well answered by most candidates.

Part (iii) was poorly answered. Few candidates understood Financial Analysis within the context of Capital Budgeting, with many confusing it with Fundamental Analysis.

Part (iv) was relatively well answered. Candidates who did not know their bookwork well could still score marks from learnings outside of this course.

QUESTION 3

i. Infrastructure assets characteristics:

- The assets themselves tend to be single purpose in nature (such as a gas pipeline, toll road or hospital).
- The private investor's participation in the asset is often for a finite period.
- This is generally a function of the agreement the investor has made with the government authority, or a function of the natural useful life of the asset.
- Infrastructure assets are characterised by their long lives.
- The initial development involves high upfront capital costs with payback occurring over the asset's generally lengthy life.
- They tend to be, or exhibit the characteristics of, natural monopolies.
- This provides a level of certainty regarding the income streams that will flow from the asset.
- Economies of scale are such that the unit cost of a product will only be minimised if a single firm produces the entire industry output.
- Firms operating in a natural monopoly, protected from new competitors by the high barriers to entry, may be able to earn abnormal profits by charging higher prices.
- As a result of these monopolistic characteristics, infrastructure assets tend to be subject to varying degrees of government regulation.
- Subject to construction risk and natural disasters.

ii. Advantages:

- By structuring the CDO using a multi-tranche form it may appeal to a wide range of investors each with their own risk/return profiles.
 - This increases the overall demand and the company may obtain better overall funding terms.
- The collateralised nature of the CDO will result in better funding terms than through unsecured loans.
 - By being issued by the SPV investors in the CDO are protected against claims made by creditors of the company, which should lead to better funding terms for the company.
- As the SPV is a legally separate vehicle, the company is protected from any SPV issues such as cash-flow timing problems, rent defaults etc.

iii. Rent default risks and impacts on the top tranche:

- Rent default risk depends on the state of the economy, increasing during an economic downturn.
- Tenants are most likely to be in low-income pay grades and at most risk of retrenchment during an economic downturn.
- This risk can be exacerbated if many tenants are from a small number of industries.
- Regulation giving excessive protection to tenants may amplify the risk of rent defaults if tenants know they cannot be easily evicted.
- The risk to investment-grade tranche stock holders will depend on the size of the lower tranches, as they will absorb defaults first.
 - However risk for first tranche investors should be low.

iv. Reducing the riskiness of the securitisation for first tranche investors:

- The risk to investors of the first (and second) tranche can be reduced by over-collateralising the CDO.
- Rent default risk can be reduced by:
 - Ensuring the tenant application process is done by experienced practitioners.
 - Stringent debt collection process on default.
 - Requirement for tenants to have insurance cover for death, sickness and unemployment.
- Requiring the company to retain some/all of the equity tranche, as it will then be incentivised to manage the development to reduce defaults (which impact the equity tranche first).

v. Deriving values/prices:

- A model of anticipated cashflows is needed that reflects expected rental income:
 - Expected occupancy levels linked to the business cycle.
 - Expected periods of non-payment (if occupied) & agreements with tenants on arrears payments.
 - Prospect for rental growth, including future expected business cycles, inflation, regulation.
 - Occupations and credit profiles of individual tenants.
 - Assessment of treasury management of similar SPV's or run by the same operator (for operational and financial efficiency)
 - Tranche Structuring – i.e. impact of the structure and ranking for interest and capital payments.
 - Including an assessment of impact to each tranche of different scenarios (i.e. scenario/sensitivity testing).
 - A suitable discount rate which reflects:
 - The yield curve.
 - the risk characteristics of each tranche with similar securities already in existence in order to assess an appropriate credit rating for the tranche. Higher predictability and sustainability of income would mean a lower discount rate.

vi. Possible reasons:

- There may be strong demand for medium-dated inflation-linked instruments.
 - E.g. by insurers for their inflation-linked annuities.
 - The company might therefore obtain a better price for its issue.
- The underlying revenue (rent) is inflation-linked, suggesting an inflation-linked instrument might be a better match of revenue and obligation.

Examiners comments

Overall reasonably well done.

Part (i) was bookwork and most candidates scored well. Some candidates wrote about investment vehicles through which investors can access infrastructure instead of focussing on infrastructure itself.

Parts (ii) and (iii) were reasonably well answered by most candidates.

Part (iv) was well answered by most candidates. The question was about modifications to reduce risk, and some candidates suggested changes that completely removed risk.

For part (v) most candidates struggled with this question, providing generic answers, and did not score well.

Part (vi) was well answered by only few candidates.

QUESTION 4

i. Fundamental analysis of equities:

- The objective is to determine whether a share is over- or under-valued by the market, and
 - to do so by obtaining a better estimate of future earnings or dividends than other investors, either by the use of a superior model or by the use of information which hasn't been taken into account by other investors.
- The process can be considered as consisting of two stages:
 - The construction of a model of the company which allows future cash flows and earnings to be estimated.
 - The use of the output from the first stage to determine whether the company's securities are over- or under-valued by the market either by calculating a "true" share value or by calculating an appropriate ratio to compare against other companies or a "normal" value.
- A wide range of techniques is used in practice and the degree of sophistication employed varies greatly.

ii. Actions that will have the effect of reducing inflation:

- Increasing short term interest rates (the repo rate), which will:
 - increase borrowing costs, lower profits for businesses and disposable incomes, whilst encouraging savings, thus reducing demand for goods and services.
- Adjustment of banking sector liquidity setting minimum liquid reserve ratios for banks e.g. through increased fractional reserve requirements, which will:
 - restricts the ability to expand money supply via the money multiplier and ultimately reducing ability to spend.
- Engaging in open market operations e.g. quantitative tightening by selling stock of government bonds/treasury bills which will:
 - reduce liquidity/money in circulation and ultimately ability to spend.
- Setting or reducing interest rate ceilings on bank deposit in order to:
 - reduce the attractiveness for savers and limit commercial banks' access to funds for lending purposes.
- Regulate lending practices/issuing directives to restrict lending e.g. introducing/reducing credit limits and more stringent affordability checks or collateral requirements to:
 - reduce ability to borrow and spend.
- Currency market intervention where the country is a net importer, to avoid supply side inflation in order to:
 - strengthen the local currency and reducing the prices of imports in local currency terms.
- Forward guidance to indicate the trajectory of short-term interest rates to the market:
 - thereby influencing longer term interest rates/yields (through expectations theory) and inflation expectations and inflation (e.g. through wage settlements).

ii.

a. *Industrials*

- Firms in this industry are involved in the supply and production of goods, with many of the goods being of a capital nature e.g. aircraft, ships, machinery and electrical equipment.

- A recession is likely to reduce spending by consumers, which should lead to reduced need for items of a capital nature.
 - A recession is therefore likely to lead to a reduction in the level of investment spending and capital formation.
 - This reduces turnover for industrials, and profits are likely to fall if costs cannot be cut quickly enough.
 - Firms are likely to want to maintain manufacturing capacity for when the cycle turns, hence there is limited scope to cut fixed costs.
 - Profitability will also depend on the extent to which firms are reliant on the domestic market as foreign markets may not be in a recession at the same time.
- b. *Financials*
- Financials are likely to have high exposure to the domestic market and are likely to be impacted negatively.
 - Bank profitability is likely to decline due to increased bad debts and provisions for expected future bad debts.
 - Bank profits may also reduce due to a narrowing of the difference in interest rates between loans and deposits (“endowment effect”) as interest rates are reduced by the central bank to stimulate economic growth.
 - Lending volumes are likely to decrease in a recession, thus reducing potential profits.
 - Mergers and acquisitions may also decline impacting investment banking revenues.
 - Insurers’ profits are likely to reduce due to lower policy sales and higher lapses.
 - Insurance claims (short term/life as applicable) may rise due to theft, retrenchment or temporary disability/incapacity due to mental health.
 - Insurers’ investment returns will suffer in a recession, some of which will affect shareholder profitability.

Examiners comments

Part (i) was bookwork and mostly well answered.

Part (ii) answers were mixed. There was some confusion about the division of roles between the central bank and government. A concerning number of candidates did not identify the correct direction of action for reducing inflation (e.g. inflation reduces as a result of a decrease in money supply rather than an increase, and as a result of an increase in short-term interest rates rather than a decrease).

In part (iii) many candidates listed the characteristics of the sectors but did not relate their answers to the impact of recession on profitability of different firms in each sector.

QUESTION 5

i. Calculation:

Assuming no reinvestment of dividends prior to 31 March 2025:

- $TRI(t) = TRI(t-1) \times [I(t) + (1-\text{tax})(XD(t) - XD(t-1))] / I(t-1)$ where $I(t)$ is the capital index
- $TRI(31.3.2025) = 1000 \times [4300 + 0.8(180 - 140 + 50)] / 4250 = 1028.71$

Alternatively

- $TRI(t) = TRI(t-1) \times I(t) / [I(t-1) - (1-\text{tax})(XD(t) - XD(t-1))]$
- $TRI(31.3.2025) = 1000 \times 4300 / [4250 - 0.8(180-140+50)] = 1029.20$

Assuming dividends are reinvested on 31 December 2024:

- $TRI(31.12.2024) = 1000 \times [4150 + 0.8(180 - 140)] / 4250 = 984$
- $TRI(31.3.2025) = 984 \times [4300 + 0.8(50)] / 4150 = 1029.05$

Alternatively

- $TRI(31.12.2024) = 1000 \times 4150 / [4250 - 0.8(180-140)] = 983.88$
- $TRI(31.3.2025) = 983.88 \times 4300 / [4150 - 0.8(50)] = 1029.36$

ii. Difficulties in construction of the index:

- Heterogeneity between cars based on make, model, condition, vintage and mileage making it difficult for the index to be representative of the classic car market as a whole.
- Some cars may be extremely rare exacerbating the problems above.
 - A desirable feature of an investment index is that it should be “investable”, however this will be difficult to achieve given the nature of the asset.
- An investment index should reflect current prices, which may be difficult:
 - Likely to be a lack of reliable and up to date price data on cars.
 - The price only being known on sale.
 - Actual sale prices may be kept confidential or not be publicly available.
 - Car sales may be infrequent, requiring interim valuations.
- While there may be more cars and transactions in a large, developed country, the amount of data will still be small for a useful index.
- Collection of information may be time-consuming and costly.
- It will be difficult to decide on appropriate constituents and weights and changes over time.
- A barometer index might be an alternative, however this is likely to be based on subjective valuations and be potentially costly to maintain.
- Valuations or estimates (in the case of a barometer index) may not coincide with the time of index calculation.

Examiners comments

Overall well answered.

For part (i) some candidates did not take dividends tax or the reset of the XD adjustment on 31 December into consideration. A few candidates did not show sufficient detail of their workings. Credit was given for different approaches based on the assumptions made about the timing of reinvestment of dividends.

Most candidates made good attempts for part (ii). Candidates who did well applied bookwork to the specific features of the classic car market.

QUESTION 6

i. Topix (Tokyo Stock Exchange First Section Index)

- Comprises approximately 1 700 shares.
- Market capitalisation weighted arithmetic index reflecting “free float” from June 2006.
- The constituents represent the leading companies in the market,
- Suitable for use in performance measurement.

ii. Three methods and issues:

Sell equities

- Market risk in that if equities rise, the asset manager misses out on the upside.
- Selling at the wrong time, losing out on dividends.
- Trading costs of selling and re-purchasing to regain exposure after the fall.

Short equity index futures

- Cross-hedging risk and any basis risk between index future and underlying shares.
- Investment performance risk if market rises.

Buy put options (for shares in the portfolio or the index)

- Might not be able to buy puts for all shares in portfolio.
- Option premium payable upfront which will influence net performance figures.
- Counterparty / default risk for OTC transactions.
- Basis risk on any index options.

iii. Beta:

- β can be defined as a measure of a stock's volatility relative to movements in the whole market. It is usually calculated as the covariance of the return on the stock with the return on the market, divided by the variance of the market return.
- β of 1.1 means the change in value of the portfolio should be 10% greater than the change in value of the market, therefore outperforming a rising market and underperforming a falling market.
- If the market falls in the near future, the current β indicates that the portfolio will underperform the market, and to outperform the market, the asset manager would need to rebalance and diversify the portfolio with shares so that the overall β is less than 1, i.e. typically invest in defensive shares.

iv. Tracking error

Historical tracking error

- The annualised standard deviation of the difference between portfolio return and benchmark return, based on observed relative performance.

Forward-looking tracking error

- An estimate of the standard deviation of returns (relative to the benchmark) that the portfolio might experience in the future if its current structure were to remain unaltered.

The two will differ because:

- Forward-looking tracking error assumes a static and unchanged portfolio and benchmark and relies on many assumptions that are unlikely to be achieved in practice.
- Historical tracking error is based on the actual portfolio and on the performance of that portfolio against the benchmark.

Examiners comments

Overall not well done by many candidates.

Part (i) was bookwork-application question and generally well attempted by most candidates.

For part (ii) most candidates were able to state simple derivative strategies but omitted the most simplistic option, which is to sell equities. Those candidates who kept it simple and focused on the basics scored well.

Part (iii) was poorly attempted by most candidates, even though the concept of beta is key in finance and investments.

Part (iv) was generally well attempted by those candidates who were familiar with the bookwork in this instance.

QUESTION 7

i. LDI approach:

- Asset allocation is determined in whole or in part relative to a specific set of liabilities –
 - the approach is used to manage the mismatch between assets and liabilities by setting a benchmark directly linked to the actual liabilities.
- Where the nature of the liabilities is expected to change frequently, the benchmark will be dynamic rather than static (e.g. it may be reviewed weekly or monthly).
- Under an LDI approach it is possible to closely match:
 - Interest rate sensitivity (duration) of the liabilities
 - Inflation linkage of the liabilities
 - Shape (cashflows) of the liabilities
- LDI approaches can focus on cashflow matching or balance sheet hedging (i.e. aligning asset and liability sensitivities for changes in interest rates and inflation expectations).
- LDI approaches commonly incorporate the use of swap portfolios or long-duration bond management.

ii. Type of assets:

- The type of assets chosen may depend on the features of the liabilities the insurer chose to prioritise (e.g. cashflows over balance sheet hedging) but are likely to include:
 - Inflation(CPI)-linked bonds will provide cashflows that increase in line with the liabilities, and if of suitable term should also provide balance sheet hedging.
 - Money-market/cash instruments will provide liquidity to meet short-term obligations without needing to sell assets before maturity.
 - Real type assets such as equity and property will provide returns that should match inflation-linked cashflows over the long term, however due to volatility of returns and resulting balance sheet impacts inclusion of these may be limited
 - Fixed interest bonds may provide some balance sheet hedge properties depending on interest rates used to value the liabilities.
- The type and mix of assets chosen may also depend on the availability of various assets in the country. In the absence of suitable bonds the insurer may have been able to invest in:
 - Inflation swaps (RPI and LPI swaps) may provide a better match by term and be more liquid than CPI-linked bonds.
- The insurer may have chosen to invest in suitable LDI funds that are managed by specialised asset managers.
- The insurer may have invested in a longevity swap which exchanges known fixed payments (e.g. payments based on expected mortality) in return for uncertain floating payments (based on actual payments made to annuitants) to manage longevity risk.
 - Longevity insurance policies might also be used for this purpose.

iii. Discussion of the suggestion:

- ALM is similar to LDI in that they both assist with determining an investment strategy for a specific set of liabilities.
- They can both be used to investigate the best strategies to match liabilities with respect to specified characteristics (e.g. cashflows, or interest rate sensitivity).

- However ALM differs from LDI in that it can be used to investigate several objectives at the same time in a quantifiable way.
 - In order to do this, ALM requires the directors to explicitly specify their objectives and priorities.
 - In particular, ALM allows the directors to consider deliberate mismatching to pursue higher returns within a specified risk tolerance.
- ALM is useful in providing a greater amount of information:
 - This is done by projecting both the assets and liabilities over time under various scenarios and measuring key metrics in each scenario.
 - A summary of key metrics can be used to measure in a quantifiable way how well a selected investment strategy performs relative to specified objectives; LDI will not have this information available.
- Whether ALM or LDI should be used will therefore depend on:
 - Availability of specialist expertise to build and run the ALM model.
 - Availability of budget and time to build and run the ALM model.
 - The need for the additional information to be obtained from the ALM modelling exercise.
 - The need for additional objectives other than matching to be considered.

Examiners comments

Overall this question was not done well.

For part (i) only a few candidates knew their bookwork well enough to score well.

For part (ii) most candidates provided only one or two types of assets, and reasons provided were mostly very weak showing weak understanding of LDI principles and bookwork.

Part (iii) answers were mostly disappointing and reflected weak understanding of ALM by many candidates. Many candidates wasted time giving a description of how to perform an ALM exercise which was not required by the question.

QUESTION 8

i. 4 reasons to measure performance:

- To improve future performance.
 - Data collected during performance monitoring can form inputs for planning future strategy.
 - It gives fund managers extra incentive to maximise returns if they know their performance is being measured.
- To compare the rate achieved against a target rate.
 - Not achieving a target rate may require management actions e.g. insurance companies and pensions may need to review bonuses, premium rates, reserves, benefit levels.
- To compare against the performance of other portfolios, an index and/or a benchmark portfolio.
 - Analysis of performance against a notional portfolio may enable strengths and weaknesses of managers to be assessed (e.g. stock and sector selection).
 - Analysis is necessary to determine whether to change a manager.
- To appraise and remunerate managers.

ii. Performance assessment:

- Fund return:
 - Return is based on actual weights by sector and actual stock returns.
 - $\text{Return} = 1/2[(1.07)(1.03)(1.10) + (1.03)(1.06)(1.04)] - 1 = 5.5\% \text{ p.a.}$
- Benchmark return
 - Return is based on benchmark weights by sector and index stock returns.
 - $\text{Return} = 3/10[(1.10)(1.07)] + 7/10[(1.04)(1.04)(1.05)] - 1 = 4.7\% \text{ p.a.}$
- Hence outperformance = 0.8% p.a. (i.e. overperformance)
- This performance can be split as follows:
- Notional fund return (benchmark sector weights, actual stocks):
 - $\text{Return} = 3/10[(1.07)(1.03)(1.10)] + 7/10[(1.03)(1.06)(1.04)] - 1 = 5.0\% \text{ p.a.}$
 - Hence sector selection profit = 5.5% - 5.0% = 0.5% p.a.
 - And stock selection profit = 0.8% - 0.5% = 0.3% p.a.
- Alternatively: Notional fund return (actual sector weights, benchmark stocks):
 - $\text{Return} = 1/2[(1.10)(1.07) + (1.04)(1.04)(1.05)] - 1 = 5.0\% \text{ p.a.}$
 - Hence sector selection profit = 5.0% - 4.7% = 0.3% p.a.
 - And stock selection = 0.8% - 0.3% = 0.5% p.a.
 - Results differ from first split due to the different order of calculations
- Comments:
 - The fund manager is better at picking small & mid cap shares than large cap, and overall added value through stock picking:
 - *Small & Mid cap shares:*
 - Fund performance = $[(1.07)(1.03)(1.10)]^{1/3} - 1 = 6.6\% \text{ p.a.}$
 - Benchmark performance = $[(1.10)(1.07)]^{1/3} - 1 = 5.6\% \text{ p.a.}$
 - *Large cap shares:*
 - Fund performance = $[(1.03)(1.06)(1.04)]^{1/3} - 1 = 4.3\% \text{ p.a.}$
 - Benchmark performance = $[(1.04)(1.04)(1.05)]^{1/3} - 1 = 4.3\% \text{ p.a.}$

- By being overweight small & mid cap shares (which outperformed) this contributed to a positive sector selection performance.
- Overall the manager outperformed on stock and sector selection, although performance for large cap might suggest more of an index-tracking approach.
 - However annual returns per year differed from the benchmark, so this is unlikely to be the case.

iii. Limitations:

- Past performance is unlikely to be repeated.
- Three years is not long enough to assess manager performance through several cycles.
- The summary information provided may mask some important detail, in particular relating to risks taken by the fund manager, and more information is needed e.g.
 - Risk performance measures such as standard deviation, tracking error, etc
- More information is needed about the fund manager and investment processes, in particular whether there have been any important changes to the investment team or process, and also any particular style bias.
- It's not clear how, and whether, tax and expenses have been considered and if the comparisons are valid.
- As this analysis is part of a broader review, the trustees should ensure that the trust is not over-exposed to specific risk factors overall across all its investments e.g. to small stocks, or to a particular style bias, through other investments.
- The definition of small, medium and large cap and how there could be shifts over time and possibly skew the outcomes.
- Reasonability of assumption that the benchmark is not rebalanced at least annually.

Examiners comments

Overall this question was done reasonably well.

For part (i) only a few candidates knew their bookwork well.

Part (ii) calculations were done reasonably well by a number of candidates, however many used calculations that implicitly assumed annual rebalancing. Comments on results were disappointing – a number of candidates simply re-stated in words the results of their calculations without any attempt to add insight. A number of candidates only showed cumulative performance over the period without annualising the returns and lost some marks for this. A few students attempted to calculate results for each individual year and were given appropriate credit for correct approaches.

Part (iii) was reasonably attempted by most candidates.