INSTITUTE AND FACULTY OF ACTUARIES

EXAMINERS' REPORT

September 2021

SA7 – Investment and Finance
Specialist Advanced

Introduction

The Examiners' Report is written by the Chief Examiner with the aim of helping candidates, both those who are sitting the examination for the first time and using past papers as a revision aid and also those who have previously failed the subject.

The Examiners are charged by Council with examining the published syllabus. The Examiners have access to the Core Reading, which is designed to interpret the syllabus, and will generally base questions around it but are not required to examine the content of Core Reading specifically or exclusively.

For numerical questions the Examiners' preferred approach to the solution is reproduced in this report; other valid approaches are given appropriate credit. For essay-style questions, particularly the open-ended questions in the later subjects, the report may contain more points than the Examiners will expect from a solution that scores full marks.

The report is written based on the legislative and regulatory context pertaining to the date that the examination was set. Candidates should take into account the possibility that circumstances may have changed if using these reports for revision.

Sarah Hutchinson
Chair of the Board of Examiners
December 2021

A. General comments on the *aims of this subject and how it is marked*

The aim of Investment and Finance Specialist Advanced (SA7) is for the candidate to develop a broad working understanding of financial and investment markets, across all major areas of investment expertise. The intent is to achieve expertise up to a level that allows for critical analysis of others, rather than up to the level of full specialist expertise in any particular area. This might be considered the level of expertise needed to be a Chief Investment Officer (CIO) of an investment management organisation or to hold a comparable role in a financial institution with significant involvement in financial markets.

Candidates should ensure that their answers are sufficiently detailed to demonstrate understanding, as there were instances where inadequate explanations led to candidates scoring less well on questions than they might have done. The model solutions are intended to reflect the level of detail that a high scoring candidate might be able to produce. For many questions there are more marks available than the question requires to achieve full marks. This reflects that the examiners will give credit for valid alternative solutions, particularly in questions focussed on higher level skills.

Candidates who make relevant and well-reasoned points, not in the marking schedule, are awarded marks for doing so.

B. Comments on *candidate performance in this diet of the examination.*

Most candidates were able to tackle all four questions, with questions 2 and 4 being more challenging on average. Candidates tended to score less well on the higher order parts of questions, however scored well on knowledge and application parts of questions. Well prepared candidates were able to score highly across the four questions demonstrating their ability to apply their SA7 knowledge and techniques to a range of familiar and unfamiliar scenarios.

Candidates are reminded to ensure that their answers are relevant to the scenario. Candidates are also reminded that to score well they will need to generate a broad range of points, particularly on the longer question parts.

With the online format candidates benefit from the ability to carry out calculations in Excel. It is important that assumptions are stated and intermediate steps shown for calculations are shown so that maximum credit can be given.

C. Pass Mark

The Pass Mark for this exam was 60
72 presented themselves and 26 passed.

Solutions for Subject SA7 – September 2021

Q1

(i)

The QE programme is likely to lead to large asset price increases [1]
and consequently a large 'wealth effect' where people who have assets increase their wealth further [1]
This is because the central bank could increase money printing to buy assets more than usual as it would be less concerned and restricted by any potential short-term increase in inflation [1]
Industries that cater to wealthier people are likely to benefit from this programme (e.g. luxury goods and services) [1]
whilst other sectors will see limited benefit (e.g. mid-market good and services) [1]
At the same time, the pandemic is likely to have cause economic damage to many parts of the economy [1]
Whilst the QE programme will increase demand in some parts of the economy the pace of economic recovery will vary significantly by sector [1]
Without other fiscal measures to increase demand in sectors that have suffered the greatest contraction [1]
the QE policy may not be sufficient to restore economic demand to pre-pandemic levels [1]
[Marks available 9, maximum 6]

(ii)

QE works by increasing asset prices and lowering borrowing costs as a means to drive economic activity [1]
and it is indirectly driven by other sectors of the economy effectively working for less in terms of asset prices [1]
The pandemic will have created economic hardship to a significant part of the population [1]
Since the majority of the population have low to modest amounts of assets, their situation will not be directly improved by QE increasing the value of their assets [1]
The significant QE programme will inadvertently increase inequality as a spur to economic growth [1]
There might be a 'K shape' recovery [1]
In this type of recovery, the wealthy are on the top half of the K and the remaining population with less wealth will most likely be on the bottom half of the K [1]
Therefore inequality is like to rise significantly from the QE programme [1]
and this will be in addition to the unequal economic impacts from the pandemic [1]
If the economic stimulus of the QE programme is significant enough it could result in higher consumer prices [1]
This could result in further inequality, since people working in sectors that are "left behind" will see little benefit from QE and suffer from higher inflation [1]
[Marks available 11, maximum 6]

(iii)

The significant increase in QE is likely to drive up prices of fixed interest securities [1]
and this drives down their yields [1]
Given the magnitude of the increase in QE, because there is less concern about rising inflation [1]
yields could fall close to zero or go negative [1]

QE will be inflationary due to the likely significant wealth effect [1]
This is offset by the deflationary effect arising from greater inequality meaning those without wealth face a more difficult path to create an aspirational lifestyle [1]
However, the QE impact could dominate in the short term [1]
exacerbated by possible supply issues [1]
causes prices to rise above 2% p.a. [1]
This is likely to make the fixed income markets more fragile [1]
because higher inflation could result in fixed income markets demanding higher yields, causing fixed income securities to become vulnerable to a significant decline in prices [1]

[Marks available 11, maximum 5]

(iv)
A significant rise in inequality is likely to increase existing social tensions [1]
This could result in regional inequalities increasing alongside differentials between the rich and poor [1]
There would be a risk of social unrest if other policies were not implemented to deal with these inequalities [1]
The resulting environment could result in protectionist behaviours increasing [1]
such as reduced immigration and trade, and increased tariffs and other trade barriers [1]
These effects could further negatively impact economic and financial market performance over the medium to long term [1]

[Marks available 6, maximum 4]

[Total 21]

Question 1 was the best answered question on this paper.

Some candidates lost time by describing how QE works in parts (i) and (ii), for which there was no credit in the solution. A significant minority of candidates struggled with part (iv) as they focused solely on economic consequences and didn't comment on the wider political and social consequences.

Q2
(i)
Return seekers:
Ultra-high net worth Individuals: Diversifying portfolio holdings [1]
Institutional investor: Hedging specific liabilities [1]
Pension fund/Insurer: Providing diversification to reduce regulatory capital [1]
Impact maximisers:
Ultra-High net worth Individuals: Provision of funds and/or expertise in order to make ESG impact based on personal preference [1]
Sovereign Wealth Fund: Seeking to make ESG impact in own country or region [1]
Institutional investor: Fulfilling mission statement for a particular fund or entity [1]

[Marks available 6, maximum 4]

(ii)
Fund M provides both types of investors with a diversified pool of assets that have positive social impact [1]
In some cases part of the financial return will be used to create positive impact [1]

Return seekers:
The main objectives of return seekers could be diluted given that some of the assets within the fund are more suitable for impact optimisers [1]
The fund is relatively new so will have no performance track record to help determine potential future returns and correlation with other asset classes [1]
This will make it more difficult to determine the impact of this investment on wider portfolio metrics [1]
Impact maximisers:
Some of the funds may be invested in projects which impact maximisers may not typically support – either because of the impact area or level of impact achieved [1]
There is likely to be an increased level of return achieved given the mix of projects funded in comparison to the projects impact maximisers will typically finance [1]
The scope for impact maximisers to directly influence the direction of projects which they fund will be diminished [1]

[Marks available 8, maximum 5]

(iii)
Differing asset classes will attract differing returns due to different inherent risks (e.g. cash vs fixed income) [1]
Frictional costs of investing in different asset classes could differ significantly which will impact the return achievable [1]
Different asset classes could attract investor types who are willing to forego increased returns in order to achieve positive social impact [1]
Some social impact assets will naturally have a high return (e.g. environmental related projects may be illiquid and require a long-term horizon) [1]
The desire for positive ESG impacts could mean that some assets attract government guarantees or subsidies [1]
The speculative nature of some projects with positive ESG impacts could mean that very low or negative returns are more likely [1]
The popularity of investing in some impact areas may result in investor returns being diminished [1]

[Marks available 7, maximum 5]

(iv)
(a)
Impact investors, philanthropists and other investors might be willing to subsidise the returns of impact assets [1]
Traditional investment processes may overlook ESG investment opportunities that would normally achieve a high return regardless of ESG considerations (e.g. providing loans to less affluent communities who trade in informal markets) [1]
A premium might be paid to certain investors as it might be expected that there would be added benefits of them funding the project [1]
The lack of funds competing for some assets means there is no natural downward pressure on returns due to market forces [1]
There may be additional subsidies and incentives provided by government bodies (e.g. tax breaks) [1]
All of the returns associated with funding ESG projects might be passed on to investors [1]

(b)
The risks inherent in ESG investments might be overstated when using traditional metrics due to a lack of reliable data [1]
The desire for various ESG projects to succeed could lead to various parties providing guarantees and additional incentives which reduce the likelihood of losses [1]
These additional guarantees could also increase the level of return for a similar level of risk [1]
There is likely to be a high degree of scrutiny on projects which social impact assets fund and this will likely reduce potential losses [1]
Social impact assets could provide much lower risk-adjusted returns because the investors are impact optimisers and are less concerned with the level of return given the risk of loss [1]

[Marks available 11, maximum 9]

(v)
Multi-asset funds include an allocation across many assets, with the fund manager rebalancing the allocations in line with the fund's term sheet [1]
A balanced investment approach seeks to invest into various asset classes directly or through many funds in order to achieve an average allocation across the desired asset classes [1]
Investing into a multi-asset fund is an advantage because the fund manager performs a lot of the work required to rebalance the asset allocations when required [1]
Multi-fund asset managers will have the requisite expertise across the asset classes within their asset so there is less performance management and oversight required when compared against a balanced approach [1]
Less work is required under a multi-asset fund approach to meet specific investment objectives as many are met by design for multi-asset funds. [1]
Multi-asset fund assets can provide access to specialist assets which might be difficult to include using a balanced approach [1]
Less work is required to react to material market movements under a multi-asset fund approach [1]

[Marks available 7, maximum 5]

(vi)
A key feature of multi-asset funds is that they will be designed with a specific targeted return or risk objective [1]
However, a key design element for Fund M will be investing in social impact assets [1]
As opposed to targeting a specific return or risk level, comparisons against other funds will not be relevant as a result because of differing fund objectives [1]
Fund M investors may be more concerned with the level of social impact and this is something which may be difficult to compare across multi-asset funds [1]
Diversification will be difficult to achieve for Fund M investors as the asset classes used to support certain ESG projects may be homogenous – and this skews the level of risk within Fund M [1]
It may also be difficult for Fund M to invest in a good mix of time horizons and currencies [1]
Fund M might be able to achieve diversification of losses within the same asset classes by investing in differing project types – however this may increase the exposure for investors to specific risks (e.g. interest rates for fixed income investments) [1]

Fund M may struggle to maintain a certain asset allocation through time due to potentially low volumes of certain asset classes [1]
Fund M would also struggle to quickly react to political or market changes that suddenly increase the risk of loss due to the lack of derivatives on the non-standard assets held within the fund [1]
Due to the lack of data on the assets in the Fund M fund, determining approximate risk or return metrics to market to potential investors will be more difficult [1]
This also impacts the ability to communicate the potential diversification benefits using traditional investment risk metrics [1]

[Marks available 11, maximum 8]

[**Total 36**]

Question 2 was less well answered.

Parts (i) and (ii) were generally well answered with a number of candidates scoring full marks. Parts (iii) to (vi) were less well answered, reflecting their higher skills focus. To score well in part (iii) candidates would have needed to comment both on asset class issues and social impact issues. Marks for parts (iv), (v) and (vi) were low primarily because candidates generated an insufficiently broad range of points, particularly in relation to the objectives and characteristics of multi-asset funds.

Q3

(i)
Successful investing is considered to be more a matter of mental approach than it is of technique [1]
Just as in other competitive environments, psychology is a key factor driving performance [1]

(ii)
The problem with this narrative (Nous) is that it is likely to be shallow [1]
Given the definitive ('black and white') nature of it [1]
the logic (Logos) is likely compromised [1]
and unlikely to have sufficient explanatory power for investment analysis [1]
To adequately set out a narrative for a bubble, it would need to explain why the bubble has arisen [1]
why it might burst [1]
and when it might burst [1]
Other relevant factors to consider are:
It is impossible to be definitive about the future [1]
One can only make a probability-based assessment while recognising that others' views might turn out to be correct [1]
Many market movements have been called bubbles but were not bubbles [1]

[Marks available 10, maximum 8]

(iii)
The investment manager likely under-performed over the period as a whole [1]
achieving positive relative performance during the market falls [1]
Despite this she considers that she was right all along [1]

Her ego is likely to be distorting her reality [1]
Her ego is likely impacting her future ability to invest [1]
because she may be carrying with her the belief that in future she will once again be "proven correct in the end" [1]
She also seems to have a poorly disciplined Logos [1]
because she likely did not manage her losses well during the boom [1]
She likely locked in her out-performance too early during the market sell-off [1]
Otherwise her out-performance would have been greater than marginal [1]
She seems somewhat in denial that her timing was very poor [1]
and that there is a lot more than she can learn [1]

[Marks available 12, maximum 8]

[Total 18]

Question 3 was reasonably well answered.

Some candidates lost marks in answering parts (ii) and (iii) by not framing their answer in terms of ego, logos and nous, and not justifying their assessment of the manager's skill.

Q4

(i)

Manager A is likely to have a weaker culture as it has been created through a corporate merger, whereas Manager B has grown organically [1]
Manager A will have tighter control over its back office as they are directly employed by the company, whereas Manager B will have adopted a more standard approach through outsourcing [1]
Manager A is a less focussed business given its size and much larger assets under management, as well as the insourced back office [1]
Employees at Manager A have fewer "lock-ins" to the firm, which could lead to lower loyalty and higher turnover rates [1]
If ties to the parent banks remain strong, Manager A may have a wide pool of specialist talent to hire from [1]
although this could also dilute the culture [½]
Conversely Manager B may struggle to hire or develop people with specialist skills in private credit [1]
such as loan restructuring, le.g.al documentation, etc. [½]
Manager A will also benefit from the balance sheet strength of its parent banks, particularly if there is significant overlap between the respective client bases [1]
Conversely, Manager B may have a higher level of staff commitment since partners' personal wealth is closely linked to business success [1]
However these assumptions need to be tested before forming a view on the respective managers. [1]

[Marks available 10, maximum 7]

(ii)

Product:
Assets under management [½]
Fee scale [½]
Performance history [½]
Model portfolio / portfolios for past funds [½]

Deal sourcing process [½]
Investment process [½]
Work-out process [½]
Risk management process [½]
Fund details, e.g. open or closed ended, fund raising cycle [½]
ESG integration within investment process [½]

Team:
Size of team divided by function (front office, etc.) [½]
CVs for key individuals including industry experience and tenure with firm [½]
Deferred income or other retention mechanisms [½]
Recent joiners and leavers [½]
Organisation structure [½]
[Marks available 7½, maximum 6]

(iii)
The objective elements of the review might consider:
The depth and breadth of the education, qualifications and skillsets of the team of investment professionals [1]
Technical competencies of the staff in all internal procedures and processes [1]
for example, their understanding of how various instruments are priced in the market [1]
their experience in trading e.g. insights on trading costs in each market [1]
An inventory of the different portfolio management skills amongst the staff [1]
along with an inventory of risk management skills, e.g. proficiency regarding calculating the VaR or PV01 of the portfolio [1]
what is the depth and breadth of the understanding and awareness of in-house risk or positions limits [1]
what are the procedures for adhering to stop losses and actions to be taken if there is a breach [1]
What is the depth and breadth of the understanding of the firm's investment philosophy and strategy amongst the team? [1]
An audit of the potential regulatory and compliance issues [1]
an assessment of familiarity with regulatory guidelines and restrictions amongst the team [1]
Proficiency amongst the staff regarding the objective elements of fundamental and technical analyses could be assessed [1]
The subjective elements of the review might consider
The quality of the fundamental analysis carried out by the firm [½]
this might include a review of historical performance [½]
Comparisons could include how well the firm's methodologies are comparing to expectations [1]
and this could be at an overall level or it could drill down to different markets or sectors [1]
The quality of the technical analysis carried out by the firm could be assessed [½]
How do the methodologies of the firm compare to other firms, what are its strength, weaknesses and competitive advantages [1]
This could include historical performance analysis or back-testing of the firm's technical analysis [1]
The egos of the investment decisions makers could be assessed [½]
What are their individual competitive advantages, [1]
are team dynamics balanced or dominated by some individuals [1]

Is there sufficient diversity of thought and internal challenge within the idea generation process [1]
Is there sufficient diversity of thought and internal challenge within the idea generation process [1]

Are there any obvious behavioural biases amongst the investment team [1]
if so, what actions are being taken to manage these [1]

[Marks available 23, maximum 12]

[Total 25]

Question 4 was less well answered.

Parts (i) and (ii) were generally well answered. However part (iii) was the least well answered part on the paper, reflecting its higher skills focus. To score well in part (iii) candidates would have needed to comment both on objective and subjective elements and explain the relevance of the factors. Many candidates repeated or expanded their list from part (ii), whereas the question was asking for greater explanation. A broad range of factors was also required to score well in this part of the question.

[Paper Total 100]

END OF EXAMINERS' REPORT

