INSTITUTE OF ACTUARIES OF INDIA

EXAMINATIONS

23rd March 2021

Subject SA7 – Investment and Finance

Time allowed: 3 Hours 30 Minutes (14.30 - 18.00 Hours)

Total Marks: 100

INSTRUCTIONS TO THE CANDIDATES

1. ***Please read the instructions to examinees sent along with hall ticket carefully and follow without exception.***

2. ***The answers are expected to be India Specific application for the syllabus and corresponding core reading. However, substantially the core reading material is still taken from material supplied by Actuarial Education Company which is meant for UK Fellowship examination. The core reading also contains some material which is India Specific, mostly the IRDA regulation. In view of this, it should be noted that focal point of answers is expected to be India Specific application. However, if application specific to any other country is quoted in the answer the candidate should answer the question with reference to Indian environment.***

3. ***Mark allocations are shown in brackets.***

Q. 1) You are a group Actuary primarily responsible for investment department of large life insurance company which is also a subsidiary of a large private sector financial institution. The institution has other operations including banking, general insurance, asset management company, specialised home loan company, private equity and investment banking etc. The client base of the conglomerate is quite diversified and includes appropriate proportions of low, middle and high income category. The subsidiaries are closely linked and able to cross sell products across the all subsidiaries. The group mandates its subsidiaries to provide financial products catering to the needs of each category of its clients.

The group CIO (Chief Investment Officer) organised a meeting with his team to review the compliance with above mandate and proposed the following agenda:

- Recent developments in investment strategy which may be adopted by company
- The investment strategy for the most popular product in high income category
- Investment strategy for a new product designed by the regulator for low income category
- Alignment of interest between the life insurance company and AMC subsidiary of the bank.

The meeting was held and CIO gave some context for each of the above to you and asked to prepare notes against each of the above points.

i) Recently market neutral strategy is recent development in investment strategy domain with the success of this strategy by hedge funds (though in slightly different format).
The note should cover following items.

a) Overview of Market neutral strategies (4)

b) Suitable example of market neutral strategy (4)

c) any of its limitations, additional considerations. (4)

ii) One of the most recent popular product in high income category has been the recently launched ETF based on factor style investment strategy and designated as "Alpha smart, low volatility ETF". The fund is managed by AMC subsidiary of the group.

The objective of fund is as follows:

"The investment objective of the scheme is to provide returns before expenses that closely correspond to the total return of the underlying index subject to tracking errors.
However, there can be no assurance or guarantee that the investment objective of the Scheme would be achieved."
The note should cover following items.

a) Salient features of multi factor style of investment management (4)

b) Comment on style adopted by the fund manager for this ETF (3)

c) List the benefits of investing in such an ETF (4)

d) AMC has also created an index to be used as benchmark for the performance of this ETF. Discuss the salient features of index suitable for ETF (4)

The Government is concerned about low penetration of life insurance savings products and has conducted a market research to determine the needs of the low income segment which constitute major chunk of the population. Market research has determined that the following product attributes of savings products will make the product attractive to the low earner segment.

- Protection of capital and growth of the purchasing power of their investments
- Accessibility of savings i.e. accessibility to funds when required
- Products that are easy to understand

The regulator has mandated each insurance company to develop **non-linked** products covering the above objectives/features for low income category.

The note should cover following items.

iii) Benefits and limitations of using above attributes to construct the investment portfolio pertaining to the said product. (5)

iv) Passive investment strategy for this product range covering the following items

a) Overview of passive investment strategy (3)

b) Availability of passive vehicles for investment (1.5)

c) Choosing a tracking index (1.5)

d) Choosing "Smart passive" strategy (2)

v) The AMC arm has indicated its willingness to align its interest with those of the life company when negotiating the structure of fees on the mandates related to the new products.

The note should cover the following:

How the features of the fee structure might be designed in order to align the interests of both parties, noting any potential drawbacks to these design features. (5)

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Q. 2)

i) In reference to (Investment) regulations-2016 published by IRDAI, list the instruments / assets under the following categories:

a) Money market instruments (1.5)

b) Approved Investments (3)

c) Deemed as Approved instruments (2.5)

ii) "Inter creditor agreement is an important step in IBC (Insolvency and bankruptcy code) framework but only allows RBI regulated lenders to be part of it." Please comment on the major shortcoming of this and what steps should be taken to make this a robust framework. (3)

iii) Recently SEBI has approved the proposal to create a 'side pocket' for mutual funds.

a) Explain what is meant by "Side Pocketing". (2)

b) What are the advantages of side pocketing? (2)

c) Explain the general functioning of this process. (3)

d) Identify the potential misuse of this provision and how these can be minimised. (3)

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Q. 3) You are a new investor to the stock market. You meet a friend who runs a portfolio management service. Following are the notes you have made from the meeting

- He tells you that his fund has provided 35% return in the last 3 months whereas the benchmark LOFTY produced only 25% returns.
- His fund has a Sharpe ratio of 1.7 and Beta of 0.7.
- He has a simple algorithm which spots stocks that have risen consistently over the past five years, and whose current PE is less than historical PE.
- He sets the target for such stocks and sells them once the desired return is achieved.
- Fees at 1.5% p.a of the portfolio with a hurdle rate of 15%. Above the hurdle rate 20% is charged as the profit share.

i) Explain Sharpe ratio and Beta in the context of this fund. (2)

ii) Why are they important ratio's in portfolio management? (2)

iii) Give 3 Key limitation of Sharpe ratio in this case? (3)

iv) What are the key questions you must ask your friend about the fund performance? (2)

v) Why is PE of a stock considered an important metric to evaluate a stock? (2)

vi) What are the limitations of the above mentioned algorithm? Suggest a key non-financial additional metric that the fund can measure. (4)

vii) Comment on the fee structure & hurdle rate with a suitable benchmark in the Indian financial industry. (2)

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Q. 4) You are a fund manager of a large Life Insurance company. 65% of your portfolio is currently in Govt. securities, 15% in equity and 20% money market instrument.

Your CEO sends you a report which states that in recent budget there will be a "bad" bank created under which, all PSU banks will package a large portfolio of their non-performing corporate loans plus good quality residential mortgages, securitise it and sell it funds (such as your own) offering yields above Government bonds.

The CEO has found out more that this portion of "residential mortgages" are of good quality. He also believes that if the recovery process is strengthened, then the recovery of corporate loans will also be decent. He believes there is a big margin being provided which can enhance the returns. He has suggested that to enhance your portfolio returns it would be good to subscribe 10% of the fund into this to get better returns.

i) Describe how assets-backed securities are typically structured. (3)

ii) Indicate to the CEO your main concerns about such an investment and the principal risk for you as an investor. (7)

Given the COVID situation in India, there has been news that the Government may introduce policies to stimulate the economy and abandon previous controls on inflation. With Gold price picking up and rising demand for commodities, the company is considering investment into Gold market and also commodities.

iii) Define hyperinflation and indicate how the performance of the Commodity and Gold market could be expected to change during a period of hyperinflation. (2)

Your CEO has read that many major economies have resorted to Quantitative easing by the central banks. There have been several debates on the quantitative easing. Explain to him the following:

iv) How Quantitative Easing operates? (2)

v) Explain the impact, including the secondary effects, that Quantitative Easing is likely to have on the:

a) bond market. (2)

b) equity market. (2)

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