IFT Level III Essay Exam

Code: 2017LIIIEssay01

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Note: The space provided to answer questions is less than what you will on the actual exam. Feel free to use extra sheets when taking this IFT essay exam. To get a better sense for what you'll receive on exam day look at the 2016 essay exam which has been shared by CFA Institute.

QUESTION 1 HAS TWO PARTS (A, B) FOR A TOTAL OF 11 MINUTES.

Carolyn Lopez is a 46-year-old Cardiovascular Surgeon. She is meeting with Andrew Hilton, a financial advisor, to organize her finances. During the interview process, Carolyn tells Hilton that she has been investing in venture capital funds. At the same time, Hilton notes that Carolyn has been purchasing Treasury Inflation Protected Securities (TIPS) with a maturity of 5 years. Carolyn acknowledges that she can earn a higher return by investing in other fixed income securities but the fact that her real return remains unaffected by changes in inflation makes her feel content.

A. **Describe** Carolyn's utility function. **Contrast** her utility function with that assumed in traditional finance theory.

(5 minutes)

Carolyn prides herself on being a long term investor who really commits and backs her investments to perform well and she sticks with them even when markets are not performing well. She sets a return objective of 20% on all her venture capital investments and until that objective isn't met, she does not sell. A doctor by profession, Carolyn is also an avid CNBC and Bloomberg viewer and reads the Wall Street Journal daily so that she can remain informed about any major financial news. Recently her investment advisor recommended her to invest in a small technology company which develops applications for androids and smartphones but after some research on the web, she trusted her intuition and did not invest. After some time, the technology company was acquired by a major mobile phone manufacturer and its stock prices went up drastically.

Hilton believes that Carolyn exhibits behavioral biases that interfere with an optimal investment allocation.

B. **Discuss** how Carolyn's behavior reflects:

i. Anchoring bias.
ii. Overconfidence bias.

Explain how a rational economic individual in traditional finance would behave differently with respect to *each* bias.

(6 minutes)

Answer Question 1 on this Page

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Answer Question 1 on this Page

Template for Question 1-B

Behavioral bias	**Discuss how Carolyn's behavior reflects *each* bias.**	**Explain how a rational economic individual in traditional finance would behave differently with respect to *each* bias.**

QUESTION 2 HAS FOUR PARTS (A, B, C, D) FOR A TOTAL OF 19 MINUTES.

Helen White is 40 years old and works at a textile manufacturing company in the US. She is a single mother and has a son Jeremy who is in his last year of high school. Both Helen and her son Jeremy are in good health and their medical expenses are covered by Helen's employer. Helen's husband passed away a few years ago. He was a director at a technology company which at that time was performing very well. However, according to their latest financial results, the company has declining profits and its share prices are headed downwards.

Helen's annual salary equals USD 250,000 after tax and her living expenses are currently USD 200,000. She expects both her salary and living expenses to grow at the average inflation rate of 3% for the foreseeable future. Helen is confident that her job and earnings potential is secure. She plans to retire in 20 years at the age of 60.

Helen currently lives with her son in a rented home. Rent payment amount to USD 50,000 a year and are expected to grow at the average inflation rate. The rent expense is not included in the living expense of $200,000. Helen's father lives in a nursing home for which the annual expense next year will be USD 20,000. Previously, Helen's brother, Steve, paid for these annual expenses. However, Steve has just lost his job and cannot make the payments anymore. Starting next year, Helen will be paying her father's nursing home expenses. Her first nursing home payment will be made one year from today.

When Helen's husband passed away, his assets were transferred to Helen's name. These include bank deposits of USD 400,000, shares in his company's stock amounting to USD 500,000 and cash savings of USD 200,000.

Jeremy is also applying to colleges this year. Helen expects that his annual education expenses will be USD 50,000 for the next four years.

Helen is worried that her salary will not be enough to support her father and son's expenses. She decides to hire Ben Bourne, CFA, to manage her investable assets. She informs him that she would like to maintain the inflation adjusted value of her portfolio.

A. Prepare the return objectives portion of Helen's investment policy statement.

(3 minutes)

B. **Calculate** the after tax nominal rate of return that is required for the next year. Show your calculations.

(6 minutes)

C. i. **Identify** two factors in Helen's situation that increases her ability to take risk.

i. **Identify** two factors in Helen's situation that decreases her ability to take risk.
ii. **Determine** whether Helen has below-average, average, or above average ability to take risk.

(6 minutes)

D. Prepare the following constraints section of an IPS for Helen White:

i. Time horizon
ii. Liquidity

(4 minutes)

ANY MARKS MADE ON THIS PAGE WILL NOT BE GRADED

Answer Question 2 on this Page

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Answer Question 2 on this Page

Template for Question 2-C

Two factors that increase ability to take risk
Two factors that decrease ability to take risk
Ability to take risk: **(circle one)**   **Below-average** **Average** **Above-average**

QUESTION 3 HAS FOUR PARTS (A, B, C, D) FOR A TOTAL OF 19 MINUTES.

Craig Smith is 65 years old and the owner of an automobile parts business that he founded over three decades ago. Smith has two children, and both are employed in his business for over a decade now. However, his daughter is moving to another city with her family and has shown no further interest to be a part of his business. Smith's son has gone back to college and enrolled into a PhD program after his decision to become a professor of finance. Both his children's departure and plans to pursue other career opportunities have provided the motivation for Smith to consider selling or monetizing his business. Phil Dunby is Smith's financial adviser.

Following is the wealth distribution of Smith shown in risk buckets:

Personal Risk (4%)		**Market Risk (6%)**		**Aspirational Risk (90%)**	
Home	1,300,000	Equities	1,750,000	Family business	38,000,000
Mortgage	0	Long-term bonds	1,250,000	Investment real estate	7,000,000
Cash/T-bills	700,000				
Total	**2,000,000**	**Total**	3,000,000	**Total**	45,000,000

Dunby, after discussions with Smith, and considering his lifetime spending needs, has determined that a primary capital requirement of $36 million should be sufficient to sustain Smith's current lifestyle with very little risk of running out of capital during his lifetime. Dunby also tells Smith about the benefits of diversification and risk mitigation in case of a concentrated position. He further explains that a sale to a strategic buyer or a recapitalization that would satisfy his primary capital requirement. The following facts are also established:

- Smith is attached to his identity as the CEO of his business
- Smith is taxed at 15% capital gains tax rate, and the government is expected to increase the tax rate on capital gains effective the following year
- Smith wants to spend more time with his grandchildren
- Smith believes that his company needs capital infusion to survive in the market place and increase earnings

A. Discuss two factors each that favor a strategic buyer and a recapitalization.

(4 minutes)

Smith decides on recapitalization and receives 85% of the value of the company in cash from a private equity firm, taxed at 15%, with investment real estate included in the transaction. Assume that $9 million is added to Smith's personal risk bucket and the remaining proceeds to his market risk bucket. The private equity firm is ready to extend debt financing to Smith's company on favorable terms.