Private Markets: Mock Exam 1 - Session 1 - Questions

Passage for Questions 1.1–1.4

TOPIC: PORTFOLIO CONSTRUCTION
TOTAL POINT VALUE OF THIS QUESTION SET IS 12 POINTS

After working for several years as an associate portfolio manager, Alejandra Herrera has been selected to oversee her firm's newest fixed-income fund. As manager of the Yield Opportunity Fund, Herrera will have an enhanced indexing mandate with an objective to outperform the fund's benchmark while closely matching its primary risk factors.

In a letter to her firm's clients introducing the new fund, Herrera articulates her willingness to purchase bonds that other investors are unwilling to hold due to liquidity constraints. She adds the following comment: "The Yield Opportunity Fund seeks to earn liquidity premiums, which are negatively related to issue size and credit quality."

In a passage explaining her willingness to hold inflation-indexed bonds in the fund, Herrera includes the following statements:

- Statement 1: "In order to effectively hedge against unanticipated inflation, it is necessary for inflation-indexed bonds to pay coupons based on a floating rate."
- Statement 2: "The volatility of returns on inflation-indexed bonds is primarily determined by the volatility of nominal interest rates."

Later in the letter, Herrera elaborates on her approach to fixed-income portfolio management during periods of market turmoil. After mentioning that her fund's proprietary models allow her to conduct stress testing and scenario analysis, she makes the following statements about her expectations in the event of a period of economic crisis:

- Statement 3: "During periods of extreme market turbulence, the correlation between returns on high-quality government bonds and the returns on high-yield corporate bonds will increase. The correlation between government bonds and equities will also increase."
- Statement 4: “In the event of a higher interest rate volatility during a period of market stress, the increase in near-term return volatility relative to historical average levels will be higher for bonds with longer maturities than it is for bonds with shorter tenors. The relative increase in return volatility will also be greater for bonds with lower yield levels compared to high-yield bonds.”

Question 1.1 3 points

Herrera's comment about factors affecting liquidity premiums is *most likely*:

A. correct.

B. incorrect with respect to issue size.

C. incorrect with respect to credit quality.

Question 1.2 3 points

What is the *most* accurate assessment of Herrera's statements about inflation-indexed bonds?

A. Statement 1 and Statement 2 are both incorrect

B. Statement 1 is correct and Statement 2 is incorrect

C. Statement 1 is incorrect and Statement 2 is correct

Question 1.3 3 points

Herrera's claim in Statement 3 is *most likely*:

A. correct.

B. incorrect with respect to equities only.

C. incorrect with respect to both equities and high-yield bonds.

Question 1.4 3 points

Herrera's claim in Statement 4 is *most likely*:

A. correct.

B. incorrect with respect to maturities.

C. incorrect with respect to yield levels.

Passage for Questions 2.1–2.2

TOPIC: PRIVATE MARKETS
TOTAL POINT VALUE OF THIS QUESTION SET IS 12 POINTS

Valerie Stirling manages the Orion Distressed Debt Fund based in London, United Kingdom. Stirling is analyzing an opportunity to purchase a bond issued by Falstaff Industries, a UK-based manufacturer of industrial equipment that has recently faced declining sales and profitability due to increased competition and deteriorating economic conditions. Stirling believes that despite Falstaff's challenges, this bond may offer an attractive return if priced appropriately.

Falstaff's 8.4% annual coupon bond with one year remaining to maturity is currently priced to yield 45.8% due to concerns about the company's long-term solvency. However, Stirling believes that yield-to-maturity is an inappropriate measure to use when evaluating distressed debt opportunities. Instead, her decision about whether to add Falstaff's bond to her fund's portfolio will be based on a comparison of its current market price to the fair value estimated using the credit valuation adjustment framework.

Stirling estimates that the Falstaff bond has a 40% probability of default over the next year. In the event of default, she expects a 25% recovery rate. The current risk-free rate is 4.8%.

Question 2.1

4 points

Discuss *two* assumptions on which the yield-to-maturity measure is based that make it inappropriate as an indicator of expected return for distressed debt.

Answer:

Question 2.2

8 points

Determine whether Stirling will add Falstaff's bond to her fund's portfolio. **Justify** your answer.

Answer:

Passage for Questions 3.1–3.2

TOPIC: PRIVATE MARKETS
TOTAL POINT VALUE OF THIS QUESTION SET IS 12 POINTS

In the UK government's latest auction for renewable energy projects, WindScot Energy Limited (WSEL) has been granted a contract for difference (CfD) for an 800-MW offshore wind farm located off the West coast of Scotland. The CfD strike price will be £58.90 per MWh during the project's first year of operation and will increase with inflation each year thereafter. Currently, analysts are forecasting that the average intermittent market reference price (IMRP) will be £59.20 during the project's first year.

The project will consist of 320 2.5-MW turbines, which have a 40% efficiency rating, meaning their expected performance will be as if they are operating at full capacity 40% of the time and idle for the rest of the time. Additionally, 4% of all potential generation hours will be lost due to routine maintenance. Operating expenses will be 25% of annual revenue. Maintenance capital spending will be £8 million during the first year of operation and increase annually with inflation, which is expected to be 2.3%.

The total installation cost for the wind farm will be £960 million, with 35% of the capital needed coming from equity investors. To raise the additional capital, WSEL will issue a 6.0% construction and development (C&D) loan secured by the project's assets. When the wind farm becomes operational in three years, the C&D loan will be repaid and replaced with a £624 million loan with a 5.2% coupon rate. This fully-amortizing term loan will be serviced with level monthly payments until it matures after 20 years, which matches the expected life of the turbines.

Alison McGregor, an analyst with WSE, has been asked to forecast the project's expected net cash flow from operations during the first year after construction is completed.

Question 3.1

7 points

Calculate the project's net cash flow from operations based on the information provided in the case.

Answer: