

# CFA LEVEL II

## Portfolio Management

### Economics and Investment Markets

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#### **CFA L2 Candidates**

*We've been receiving huge number of requests for help in understanding some challenging Case Studies of CFA Institute core.*

*Here, we are providing some support (in the form of audio explanation) to help all L2 candidates understand the same. The Case Studies all belong to the CFA Institute—we are just providing some support to help understand the concepts involved.*

*Hope it helps!*

### **Quantum Credit Advisers Case Scenario**

Andrew Rutherford is a fixed-income analyst with Quantum Credit Advisers, an institutional investment management company. Quantum offers a variety of fixed-income oriented investment strategies, including a core-plus-bond strategy as well as a popular long–short credit hedge fund. Rutherford participates in Quantum’s weekly fixed-income committee meetings.

A macro topic for this week’s fixed-income committee is the possibility that the US Federal Reserve Board (Fed) will raise the federal funds rate (FFR) 25 bps at their next meeting. Quantum’s committee believes that the Fed is likely to hold off raising the FFR for at least six months because of weak economic data, and that weakness will be seen in the upcoming payroll numbers. Quantum expects the monthly non-farm payroll report to show that the US labor market added only 90,000 jobs this month, roughly in line with consensus expectations. The committee is debating what will happen to the short end of the US yield curve (and what will happen subsequently to short-dated bond prices) if the payroll report comes in at the level they expect.

Quantum’s committee forecasts weaker-than-expected GDP growth in the future and expects that GDP growth will be more volatile as the economy ultimately adjusts to a changing interest rate policy. Rutherford believes these factors will exert downward pressure on short-term Treasury Inflation-Protected Securities (TIPS) rates.

As part of Rutherford’s analysis, he forecasts the real one-year risk-free rate to be 0.25% and average inflation over the next year to be 1.5%. A zero-coupon nominal Treasury bond with one year to maturity and a par value of \$100 is currently trading at \$98.05. Rutherford notes the discrepancy in market pricing relative to his forecasts.

Diana Coombs is a senior credit analyst at Quantum. Based on the GDP outlook from the committee, she evaluates three bonds from different sectors (shown in Exhibit 1) for a potential new short position in the company’s hedge fund. All three bonds mature in five years.

## Economics and Investment Markets

### Exhibit 1 Credit Market Observations

	<b>Economic Sector</b>	<b>Debt/Capital</b>	<b>Enterprise Value/EBITDA</b>	<b>Spread to Treasuries (bps)</b>	<b>Credit Rating</b>
Bond 1	Pharmaceutical	52.2%	7.2	255	Baa2
Bond 2	Consumer Discretionary	48.3%	7.8	220	Baa1
Bond 3	Soft Drinks	32.3%	8.5	210	A3

Quantum is looking to enhance its equity offerings. It has recently hired David Wu to help construct a quantitative equity rotation strategy that will use economic input from the fixed-income committee. Wu has a background in quantitative modeling of equity markets and is tasked with developing an aggregate earnings forecasts. He is also working on incorporating a target equity risk premium into an equity rotation model. Wu makes the following observations based on his prior experiences:

**Observation 1** The equity premium should be larger than, and positively correlated with, the corporate bond premium.

**Observation 2** Corporate profitability is a leading economic indicator.

**Observation 3** Equities provide superior consumption-hedging properties to high-quality bonds.

The equity rotation model can allocate between small- and large-cap stocks and growth and value stocks and can take targeted sector positions to enhance returns relative to the broader equity market. As the model is nearing completion, Wu evaluates how it would have performed during previous economic cycles. He runs extensive backtesting and observes the following tendencies of the model in the aftermath of recessions:

- Rotates from consumer discretionary to consumer staple stocks
- Rotates from large-cap growth stocks into large-cap value stocks
- Rotates from small-cap value stocks to mid-cap value stocks

**Question 60**

Which of the following is the most likely impact on short-term bond prices if Quantum's expectations regarding the payroll report are correct?

- A. No change
- B. Fall
- C. Rise

**Answer**

**A is correct.**

Although Quantum is forecasting a fairly low non-farm payroll number, their expectation is in line with market consensus forecasts. Although these data might be considered weak, they provides information that is anticipated and thus already reflected in asset prices. Prices would be more likely to rise or fall if the news is a surprise relative to fully anticipated information.

B is incorrect. Bond prices are unlikely to rise or fall based on this information because it is already anticipated by the market.

C is incorrect. Bond prices are unlikely to rise or fall based on this information because it is already anticipated by the market.

## Question 61

Is Rutherford most likely correct with regard to the impact on short-term TIPS rates?

- A. Yes.
- B. No, with regard to the impact of volatility.
- C. No, with regard to the impact of growth.

## Answer

**B is correct.**

Short-term TIPS are a proxy for real default-free interest rates in the United States. Real default-free interest rates should be positively related to GDP growth and positively related to the expected volatility of GDP growth. Expected increases in GDP volatility would put upward pressure on short-term TIPS rates, all else being held equal.

A is incorrect. Rutherford is incorrect about the impact higher GDP volatility should have on short-term TIPS rates.

C is incorrect. **Rutherford** is correct about the impact higher GDP growth should have on short-term TIPS rates.

## Question 62

Which implied market expectation most likely accounts for the discrepancy in bond pricing that Rutherford notes?

- A. Inflation uncertainty
- B. Interest rate risk
- C. Credit risk

## Answer

**A is correct.**

The breakeven inflation rate incorporates both premiums for expectations about inflation and for the uncertainty of the future inflation environment.

B is incorrect. Interest rate risk is already being incorporated into the term structure of the yield curve and does not need to be separately added.

C is incorrect. Given that this is a Treasury bond, it is considered risk-free and does not include a premium for credit risk.

### Question 63

Based on Quantum's economic forecast and the data in Exhibit 1, which bond is Coombs most likely to recommend as the short position for the hedge fund?

- A. Bond 3
- B. Bond 1
- C. Bond 2

### Answer

**C is correct.**

Bond 1 is in a non-cyclical industry, unlike Bond 2, which is in a cyclical industry. Bond 1 has a slightly higher debt-to-capital ratio than Bond 2 but not material. Bond 2 has a relatively tight spread compared with Bond 1. These factors suggest that Bond 2 is a better candidate for a short position. During an environment in which GDP is forecast to surprise to the downside, higher-rated issues, such as Bond 3, are likely to outperform. Given Quantum's expectation for declining GDP and its relatively tight spread, Bond 2 is the best candidate for a short position.

B is incorrect.

A is incorrect. During an environment where GDP is forecast to surprise to the downside, higher rated issues such as Bond 3 are likely to outperform.

## Question 64

Which of Wu's three observations is least likely correct?

- A. Observation 3
- B. Observation 1
- C. Observation 2

## Answer

**A is correct.**

Observation 3 regarding consumption hedging is incorrect. Because of the procyclicality of economies and corporate profits, equities are not a good hedge against bad consumption outcomes, which is one of the reasons equity investors require a risk premium.

C is incorrect. Corporate profitability tends to sharply recover with any uptick in demand during a recession given leaner cost structures at that time and can be an important indicator of the business cycle.

B is incorrect. Given inferior consumption hedging properties, equity investors should demand a risk premium relative to fixed-income investors. Equity risk premiums tend to be highly correlated with corporate bond spreads.

## Question 65

Based on the backtest, which tendency of Wu's model is he most likely to be satisfied with? The rotation from:

- A. small-cap value to mid-cap value stocks.
- B. consumer discretionary to consumer staple stocks.
- C. large-cap growth to large-cap value stocks.

## Answer

**C is correct.**

Value tends to outperform growth investing in the aftermath of a recession, so the model is correctly rotating into value from growth stocks. Cyclical stocks tend to outperform non-cyclical stocks in the aftermath of a recession, so consumer staples stocks would be likely to underperform discretionary stocks. In addition, smaller capitalization companies tend to outperform in the aftermath of a recession, so the shift from small- to mid-cap stocks would be sub-optimal for the model.

A is incorrect. Smaller capitalization companies tend to outperform in the aftermath of a recession, so the shift from small- to mid-cap stocks would be sub-optimal for the model.

B is incorrect. Cyclical stocks tend to outperform non-cyclical stocks in the aftermath of a recession, so consumer staples stocks would be likely to underperform discretionary stocks.