Chartered Financial Analyst (CFA) Questions and Solutions by Chapter for 7th edition

Chapter 1: Introduction to Mergers, Acquisitions, and Other Restructuring Activities.

1. If the technology for an industry involves high fixed capital investment, then one way to seek higher profit growth is by pursuing:
2. Economies of scale
3. Diseconomies of scale
4. Removal of features that differentiate the product or service provided

Answer: A is correct. Seeking economies of scale would tend to reduce per unit costs and increase profit.

Source: CFA Institute, 2011 Introduction to Industry and Company Analysis, Reading 59, question 18

1. Modern Auto, an automobile parts supplier, has made an offer to acquire Sky Systems, creator of software for the airline industry. Sky Systems managers are not interested in the offer by Modern Auto. The managers, instead, approach HiFly Inc., which is in the same industry as Sky systems, to see if it would be interested in acquiring Sky Systems. HiFly is interested, and both companies believe there will be synergies from the acquisition. The acquisition of Sky Systems by Modern Auto and the acquisition of Sky Systems by HiFly, respectively, would be examples of a:
2. Vertical merger and a horizontal merger
3. Conglomerate merger and a vertical merger
4. Conglomerate merger and a horizontal merger

Answer: C is correct. These are conglomerate and horizontal mergers, respectively.

Source: CFA Institute, 2011 Mergers and Acquisitions, Reading 33, question 1.

Chapter 2: The Regulatory Environment

1. Which of the following is most likely a characteristic of a concentrated industry?
2. Infrequent, tacit coordination
3. Difficulty in monitoring other industry members
4. Industry members attempting to avoid competition on price

Answer: C is correct. The relatively few members of the industry generally try to avoid price competition.

Source: 2011 Introduction to Industry and Company Analysis, Reading 59, question 22

Chapter 3: The Corporate Takeover Market—Common Takeover Tactics, Anti-Takeover Defenses, and Corporate Governance

1. Which of the following is an example of a conflict of interest that an effective corporate governance system would mitigate or eliminate?
2. A majority of the board is independent of management
3. Directors identify with managers’ interests rather than those of the shareholders
4. Directors have board experience with companies regarded as having sound governance practices.

Answer: B is correct. Members of the board of directors serve as agents for the owners, the shareholders, and as a mechanism to represent the investors and to ensure their interests are being well served. An effective corporate governance system helps ensure that directors are aligned with shareholders’ interests rather than management’s interests.

Source: CFA Institute, 2011 Corporate Governance, Reading 32, question 2

1. Which of the following best describes the corporate governance responsibilities of members of the board of directors?
2. Establish long-term strategic objectives for the company.
3. Ensure that at board meetings no subject is not discussable and dissent is regarded as an obligation.
4. Ensure that the board negotiates with the company over all matters such as compensation.

Answer: C is correct. The board of directors has the responsibility to establish long-term strategic objectives for the company with a goal of ensuring that the best interests of shareholders come first and that the company’s obligations to others are met in a timely and complete manner.

Source: CFA Institute 2011 Corporate Governance, Reading 32, questions 3.

1. Modern Auto, an automobile parts supplier, has made an offer to acquire Sky Systems, creator of software for the airline industry. Sky Systems managers are not interested in the offer by Modern Auto. The managers, instead, approach HiFly Inc., which is in the same industry as Sky systems, to see if it would be interested in acquiring Sky Systems. HiFly is interested, and both companies believe there will be synergies from the acquisition. Which of the following defenses best describes the role of HiFly in the acquisition scenario?
2. Crown jewel
3. Pac-Man
4. While knight

Answer: C is correct.

Source: CFA Institute, 2011 Mergers and Acquisitions, Reading 33, question 4.

Chapter 4: Planning—Developing Business and Acquisition Plans

1. A company that is sensitive to the business cycle would most likely:
2. Not have growth opportunities
3. Experience below-average fluctuations in demand
4. Sell products that the customer can purchase at a later date if necessary.

Answer: C is correct. Customers’ flexibility as to when they purchase the product makes the product more sensitive to the business cycle.

Source: 2011 Introduction to Industry and Company Analysis, Reading 59, question 8

1. An industry that most likely has higher barriers to entry and high barriers to exit is the
2. Restaurant industry
3. Advertising industry
4. Automobile industry

Answer: C is correct for the automobile industry, the high capital requirements provide high barriers to entry, and recognizing that auto factories are generally only of use for manufacturing cars implies a high barrier to exit.

Source: 2011 Introduction to Industry and Company Analysis, Reading 59, question 13

Chapter 5: Implementation—Search through Closing

1. The degree of operating leverage is best described as a measure of the sensitivity of
2. Net earnings to changes in sales
3. Fixed operating costs to changes in variable costs
4. Operating earnings to changes in the number of units produced and sold.

Answer: C is correct. The degree of operating leverage is the elasticity of operating earnings with respect to the number of units produced and sold. As an elasticity, the degree of operating leverage measures the sensitivity of operating earnings to a change in the number of units produced and sold.

Source: CFA Institute, 2011, Measures of Leverage, Reading 46, question 2.

1. The business risk of a particular company is most accurately measured by the company’s:
2. Debt-to-equity ratio
3. Efficiency in using assets to generate sales
4. Operating leverage and level of uncertainty about demand, output prices, and competition

Answer: C is correct. Business risk reflects operating leverage and factors that affect sales.

Source: CFA Institute, 2011, Measures of Leverage, Reading 46, question 4.

Chapter 6: Post Closing Integration

Chapter 7: Merger and Acquisition Cash Flow Valuation Basics

1. A company’s cost of equity is often used as a proxy for investors:
2. Average required rate of return
3. Minimum required rate of return
4. Maximum required rate of return

Answer: B is correct. Companies try to raise funds at the lowest possible cost. Therefore, cost of equity is used as a proxy for the minimum required rate or return.

Source: 2011 Overview of Equity Securities Reading 58, question 24.

1. In the free cash flow to equity model (FCFE), the intrinsic value of a share of stock is calculated as:
2. The present value of future expected FCFE
3. The present value of future expected FCFE plus net borrowing
4. The present value of future expected FCFE minus fixed capital investment

Answer: A is correct. In the FCFE model, the intrinsic value of stock is calculated by discounting expected future FCFE to present value. No further adjustments are required.

Source: 2011 Equity Valuation: Concepts and Basic Tools, Reading 60, question 9

1. Enterprise value is most often determined as market capitalization of common equity and preferred stock minus the value of cash equivalents plus the:
2. Book value of debt
3. Market value of debt
4. Market value of long-term debt

Answer: B is correct. The market value of debt must be calculated and taken out of the enterprise value. Enterprise value is the cost of the purchase of a company, which would include the assumption of the company’s debts at market value.

Source: 2011 Equity Valuation: Concepts and Basic Tools, Reading 60, question 31

1. Consider an asset that has a beta of 1.25. If the risk-free rate is 3.25 percent and the market risk premium is 5.5 percent, calculate the expected return on the asset.

Answer: According to the CAPM, expected return = 3.25 + 1.25(5.5) = 10.125%

Source: 2011 International Asset Pricing, Reading 68, question 1

Chapter 8: Relative, Asset-Oriented, and Real Option Valuation Basics

1. In asset-based valuation models, the intrinsic value of a common share of stock is based on the:
2. Estimated market value of the company’s asset.
3. Estimated market value of the company’s assets plus liabilities
4. Estimated market value of the company’s assets minus liabilities

Answer: C is correct. Asset-based valuation models calculate the intrinsic value for equity by subtracting liabilities from the market value of assets.

Source: 2011 Equity Valuation: Concepts and Basic Tools, Reading 60, question 3

1. An analyst makes the following statement: "Use of P/E and other multiples for analysis is not effective because the multiples are based on historical data and because not all companies have positive accounting earnings.” The analyst’s statement is most likely:
2. Inaccurate with respect to both historical data and earnings.
3. Accurate with respect to historical data and inaccurate with respect to earnings.
4. Inaccurate with respect to historical data and accurate with respect to earnings.

Answer: A is correct. The statement is inaccurate in both respects. Although multiples can be calculated from historical data, forecasted values can be used as well. These multiples are often specific to a company’s industry or sector and include price to sales and price to cash flow.

Source: 2011 Equity Valuation: Concept and Basic Tools, Reading 60, question 23

1. An analyst prepared a table of the average trailing twelve-month price to earnings (P/E), price to cash flow (P/CF) and price to sales (P/S) for the Tanaka Corporation for the years 2005 to 2008.

|  |  |  |  |
| --- | --- | --- | --- |
| Year | P/E | P/CF | P/S |
| 2005 | 4.9 | 5.4 | 1.2 |
| 2006 | 6.1 | 8.6 | 1.5 |
| 2007 | 8.3 | 7.3 | 1.9 |
| 2008 | 9.2 | 7.9 | 2.3 |

As of the date of the valuation in 2009, the trailing twelve-month P/E, P/CF, ad P/S were 9.2, 8.0, and 2.5. Based on the information provided, the analyst reasonably concludes Tanaka shares are most likely:

1. Overvalued
2. Undervalued
3. Fairly valued

Answer: A is correct. Tanaka shares are most likely overvalued. As the table below shows, all the 2009 multiples are currently above their 2005-2008 averages.

|  |  |  |  |
| --- | --- | --- | --- |
| Year | P/E | P/CF | P/S |
| 2005 | 4.9 | 5.4 | 1.2 |
| 2006 | 6.1 | 8.6 | 1.5 |
| 2007 | 8.3 | 7.3 | 1.9 |
| 2008 | 9.2 | 7.9 | 2.3 |
| Average | 7.1 | 7.3 | 1.7 |

Source: Equity Valuation: Concepts and Basic Tools, Reading 60, question 24

1. Which of the following is most likely considered a weakness of present value models?
2. Present value models cannot be used for companies that do not pay dividends
3. Small changes in model assumptions and inputs can result in large changes in the computed intrinsic value of the security
4. The value of the security depends on the investor’s holding period; thus comparing valuations of different companies for different investors is difficult.

Answer: B is correct. Very small changes in inputs, such as required rate of return on dividend growth rate, can result in large changes to the valuation model output. Some present value models, such as FCFE models, can be sued to value companies without dividends. Also, the intrinsic value of a security is independent of the investor’s holding period.

Source: 2011 Equity Valuation: Concepts and Basic Tools, Reading 60, question 36

Chapter 9: Applying Financial Models to Value, Structure and Negotiate Mergers and Acquisitions

1. Which of the following statement about company analysis is most accurate?

a. The complexity of spreadsheet modeling ensures precise forecasts of financial statements.

b. The interpretation of financial ratios should focus on comparing the company’s results over time but not with competitors.

c. The corporate profile would include a description of the company’s business, investment activities, governance, and strengths and weaknesses.

Answer: C is correct. The corporate profile would provide an understanding of these elements.

Source: CFA Institute 2011 Introduction to Industry and Company Analysis, Reading 59, question 31.

1. Discuss how understanding a company’s business might be useful in performing a sensitivity analysis related to a valuation of the company.

Answer: An understanding of the company’s business facilitates a focus on the key business aspects that affect value, and from a practical perspective, highlights the critical inputs to a forecast that should be tested using sensitivity analysis.

Source: CFA Institute 2011 Equity Valuation: Applications and Processes, Reading 35, question 6

1. Modern Auto, an automobile parts supplier, has made an offer to acquire Sky Systems, creator of software for the airline industry. The offer is to pay Sky Systems’ shareholders the current market value of their stock ($25) in Modern Auto’s Systems’ stock. The relevant information is given below:

|  |  |  |
| --- | --- | --- |
|  | Modern Auto | Sky Systems |
| Share price | $40 | $25 |
| Number of outstanding shares (millions) | 40 | 15 |
| Earnings (millions | $100 | $30 |

Although the total combined companies’ earnings will not increase and are estimated at $130 million, Modern Auto believes the merger will result in lower risk for its shareholders.

If Sky Systems were to be acquired by Modern Auto under the terms of the original offer, the postmerger EPS of the new company would be closest to:

1. $2.00
2. $2.32
3. $2.63

Answer: C is correct. Because Modern Auto’s stock is $40 and Sky System’s stock price is $25, the share exchange ratio is $25/$40 = .625. There are 15 million shares of Sky Systems. There acquisition will require Modern Auto to issue 9.375 million shares (15 x .625). The total number of shares after the merger = 49,375 million. The EPS after the merger = 130/49,375 = $2.63

Source: CFA Institute 2011 Mergers and Acquisitions, Reading 33, question 2.

Chapter 10: Analysis and Valuation of Privately Held Companies

1. Using the buildup method and assuming that no adjustment for industry risk is required, calculate an equity discount rate for a small company given the following information:
   1. Equity risk premium = 5.0 percent
   2. Mid-cap equity risk premium = 3.5 percent
   3. Small stock risk premium = 4.2 percent
   4. Total return on intermediate-term bonds = 5.3 percent
   5. Company-specific risk premium = 3.0 percent
   6. 20-year Treasury bond yield as of the valuation date = 4.5 percent

Answer: 4.5 + 4.2 + 3.0 = 11.7 percent

Source: CFA Institute 2011 Private Company Valuation, Reading 46, question 2

1. An appraiser has been asked to determine the combined level of valuation discounts for a small equity interest in a private company. The appraiser concluded that an appropriate control premium is 15 percent. A discount for lack of marketability was estimated at 25 percent. Given these factors, what is the combined discount?

Answer: The discounts are multiplicative since they are interdependent as the smaller the minority interest the greater the marketability discount. Therefore, the combined discount is (1 – 1/ (1+.15)) x (1-.25) = .0978

Source CFA Institute 2011 Private Company Valuation, Reading 46, question 5

Chapter 11: Structuring the Deal—Payment and Legal Considerations

1. Modern Auto, an automobile parts supplier, has made an offer to acquire Sky Systems, creator of software for the airline industry. Sky Systems managers are not interested in the offer by Modern Auto. The managers, instead, approach HiFly Inc., which is in the same industry as Sky systems, to see if it would be interested in acquiring Sky Systems. HiFly is interested, and both companies believe there will be synergies from the acquisition. Hi Fly is willing to pay $400 million in cash. The offer is to pay Sky Systems’ shareholders the current market value of their stock ($25) in Modern Auto’s Systems’ stock. The relevant information is given below:

|  |  |  |
| --- | --- | --- |
|  | Modern Auto | Sky Systems |
| Share price | $40 | $25 |
| Number of outstanding shares (millions) | 40 | 15 |
| Earnings (millions | $100 | $30 |

Suppose Hi Fly acquires Sky Systems for the stated terms. The gain to Sky Systems resulting from the merger transaction would be closest to:

1. $25 million
2. $100 million
3. $375 million

Answer: A is correct. $400 million - $375 (Sky Systems premerger market value $25 x 15 = $375) = $25 million.

Source: CFA Institute, 2011 Mergers and Acquisitions Reading 33, question 5.

Chapter 12: Structuring the Deal—Tax and Accounting Considerations

1. You are researching XMI Corporation (XMI). XMI has shown steady earnings per share growth (18 percent annually for the last seven years) and trades at a very high multiple to earnings (its P/E is currently 40 percent above the average P/E for a group of the most comparable stocks). XMI has generally grown through acquisition, by using XMI stock to purchase other companies whose stock traded at lower P/Es. In investigating the financial disclosures of these acquired companies and taking to industry contacts, you conclude that XMI has been forcing the companies it acquires to accelerate the payment of expenses before the acquisition deals are closed. As one example, XMI asks acquired companies to immediately pay all pending accounts payable, whether or not they are due. Subsequent to the acquisition, XMI reinstitutes normal expense payment patterns.
2. What are the effects of XMI’s preacquisition expensing policies?
3. The statement is made that XMI’s “P/E is currently 40 percent above the average P/E for a group of the most comparable stocks.” What type of valuation model I implicit in that statement?

Answer:

1. Accelerating the payment of expenses reduces the acquired companies’ last reported preacquisition cash flow. Accelerating expense recognition reduces the acquired companies’ last reported preacquisition earnings. XMI’s cash flow and earnings growth rates following the acquisitions would be expected to be biased upwards because of the depressed levels for the acquired firms.
2. This is an example of a relative valuation model (or the method of comparable firms), which compares a company’s market multiple to the multiples of similar companies.

Source: CFA Institute 2011 Equity Valuation: Applications and Processes, Reading 35, question 8

1. The initial measurement of Goodwill is:
2. Not subject to management discretion
3. Based on an acquisition’s purchase price
4. Based on the acquired company’s book value

Answer: B is correct. Initially, goodwill is measured as the difference between the purchase price paid for an acquisition and the fair value of the acquired company’s net assets.

Source: CFA Institute, 2011 Understanding the Balance Sheet, Reading 33, question 10.

Chapter 13: Financing the Deal—Private Equity, Hedge Funds, and Other Sources of Financing

1. Venture capital investments:
   1. Can be publicly traded
   2. Do not require a long-term commitment of funds
   3. Provide mezzanine financing to institutional investors

Answer: C is correct. Venture capital investments can be used to provide mezzanine financing to companies in their early stage of development.

Source: CFA Institute 2011 Overview of Equity Securities Reading 58, question 6

1. Which of the following statements most accurately describes one difference between private and public equity firms?
   1. Private equity firms are focused more on short-term results than public firms.
   2. Private equity firms’ regulatory and investor relations operations are less costly than those of public firms.
   3. Private equity firms are incentivized to be more open with investors about governance and compensation than public firms.

Answer: B is correct. Regulatory and investor relations costs are lower for private equity firms than for public firms. There are no stock exchange, regulatory, or shareholder involvements with private equity, whereas for public firms these costs can be high.

Source CFA Institute 2011 Overview of Equity Securities Reading 58, question 7

Chapter 14: Highly Leveraged Transactions—LBO Valuation and Modeling Basics

1. The market value of equity can be calculated as enterprise value:
   1. Minus market value of debt, preferred stock, and short-term investments
   2. Plus market value of debt, preferred stock, and short-term investments
   3. Minus market value of debt and preferred stock plus short-term investments

Answer: C is correct. Enterprise value is calculated as the market value of equity plus the market value of debt and preferred stock minus short investments. Therefore, the market value of equity is enterprise value minus the market value of debt and preferred stock plus short-term investments.

Source: CFA Institute 2011 Equity Valuation: Concepts and Basic Tools, Reading 60, question 28

1. Wescott-Smith is a privately held investment management company. Two other investment counseling companies, which want to be acquired, have contacted Wetcott-Mmith about purchasing their business. Company A’s price is $2 million. Company B’s price is $3 million. After analysis, Westcott-Smith estimates that Company A’s profitability is consistent with a perpetuity of $300,000 a year Company B’s prospects are consistent with a perpetuity of $435,000 per year. Westcott-Smith has a budget that limits acquisitions to a maximum purchase cost of $4 million. Its opportunity cost of capital relative to undertaking either project is 12 percent.
   1. Determine which company or companies (if any) Westcott-Smith should purchase according to the NPV rule.
   2. Determine which company or companies (if any) Westcott-Smith should purchase according to the IRR rule.
   3. State which company or companies (if any) Westcott-Smith should purchase. Justify your answer.

Answer:

1. Company A: Let CF = $300,000 be the amount of the perpetuity. With the discount rate, r, of 12 percent, NPV in acquiring Company A would be:

NPV = CF0 + CF/r = -$2,000,000 + $300,000/.12 = $500,000

Company B: Let CF = $435,000 be the amount of the perpetuity. Then with r = 12%, the NPV in acquiring Company B would be:

NPV = CF0 + CF/r = -$300,000 + $435,000/.12 = $625,000

Both Company A and Company B would be positive NPV acquisitions, but Westcott-Smith cannot purchase both because the total purchase price of $5 million exceeds its budgeted amount of $4 million. Because Company B’s NPV of $625,000 is higher than Company A’s NPV of $500,000, Westcott-Smith should purchase Company B according to the NPV rule.

1. Company A: IRR is defined by the expression NPV = -Investment + CF/IRR = 0. Thus, -$2,000,000 + $300,000/IRR = 0 and solving for IRR:

IRR = $300,000/$2,000,000 = .15

Company B: IRR = $435,000/$3,000,000 = .145

Both companies have IRRs exceeding Westcott-Smith’s opportunity cost of 12%, but Westcott-Smith cannot purchase both because of it budget constraint According to the IRR rule, the firm should purchase Company A because it has the higher IRR.

1. Westcott-Smith should purchase Company B. When the NPV and IRR rules conflict in ranking mutually exclusive investments, we should follow the NPV rule because it directly relates to shareholder wealth maximization.

Source: CFA Institute, 2011, Discounting Cash Flow Applications, Reading 6, question 5.

Chapter 15: Business Alliances—Joint Ventures, Partnerships, Strategic Alliances, and Licensing

Chapter 16: Alternative Exit and Restructuring Strategies—Divestitures, Spin-Offs, Carve-Outs, Split-Ups and Split-Offs

Scenario: Mark Zin and Stella lee are CEO and CFO, respectively, of Moonbase Corporation. They are concerned that Moonbase is undervalued and subject to a hostile takeover bid. Lee states that the low valuation reflects current poor performance of a subsidiary of Moonbase. She recommends that the board of directors consider divesting the subsidiary in a manner that would provide a cash inflow to Moonbase. Zin proposes that some action should be taken before a hostile takeover bid is made. He asks Lee if changes can be made to the corporate governance structure in order to make it more difficult for an unwanted suitor to succeed. Lee’s first comment is “Moonbase can institute a poison pill that allows our shareholders, other than the hostile bidder, to purchase shares at a substantial discount to current market value.” Lee’s second comment is: “Moonbase can instead institute a poison put. The put allows shareholders the opportunity to redeem their share at a substantial premium to current market value.

1. The divestiture technique that Lee is recommending is most likely:
2. A spin-off
3. A split-off
4. An equity carve-out

Answer: C is correct. An equity carve-out involves sale of equity in a new legal entity to outsiders, and would thus result in a cash inflow for Moonbase. A spin-off or split-off does not generate a cash flow to the firm.

Source: CFA Institute, 2011 Mergers and Acquisitions, Reading 33, question 14.

1. With respect to poison pills and puts, Lee’s comments are;
2. Correct
3. Incorrect with respect to poison puts
4. Incorrect with regard to poison pills

Answer: B is correct. The first comment about the poison pill is correct, but the second comment is incorrect. Shareholders do not “put” their shares to the company, rather bondholders can exercise the put in the event of a hostile takeover. Bondholders have the right to sell their bonds back to the target at a redemption price that is pre-specified in the bond indenture, typically at or above par value.

Source: CFA Institute, 2011 Mergers and Acquisitions, Reading 33, question 15.

Chapter 17: Alternative Exit and Restructuring Strategies—Bankruptcy Reorganization and Liquidation

1. An investor worried that a company may go bankrupt would most likely examine its:
2. Current ratio
3. Return on equity
4. Debt-to-equity ratio

Answer: C is correct. The debt-to-equity ratio tells how much financial risk a company is exposed to

Source: CFA Institute, 2011, Understanding the Balance Sheet, Reading 33, question 21.

1. An analyst has calculated a ratio using as the numerator the sum of operating cash flow, interest, and taxes, and as the denominator the amount of interest, What is this ratio, what does it measure, and what does it indicate?
2. This ratio is an interest coverage ratio, measuring a company’s ability to meet its interest obligations and indicating a company’s solvency.
3. This ratio is an effective tax ratio, measuring the amount of a company’s operating cash flow used for taxes, and indicating a company’s efficiency in tax management.
4. This ratio is an operating profitability ratio, measuring the operating cash flow generated accounting for taxes and interest and indicating company’s liquidity.

Answer: A is correct. This is the interest coverage ratio using operating cash flow rather than earnings before interest, tax, depreciation, and amortization (EBITDA).

Source: CFA Institute, 2011, Understanding the Cash Flow Statement, Reading 34, question 23.

1. In general, a creditor would consider a decrease in which of the following ratios to be positive news?
2. Interest coverage ratio
3. Debt to total assets
4. Return on assets

Answer: B is correct. In general, a creditor would consider a decrease in debt to total assets as positive news. A higher level of debt in a company’s capital structure increased the risk of default and will result in higher borrowing costs for the company to compensate lenders for assuming greater credit risk.

Source: CFA Institute, 2011, Financial Analysis Techniques, Reading 35, question 20.

Chapter 18: Cross-Border Mergers and Acquisitions—Analysis and Valuation

1. A. List reasons that an international extension of the CAPM is problematic.

b. In an international extension of the CAPM, why would the optimal portfolio differ from the world market portfolio, as suggested by the traditional CAPM, even if the markets are fully efficient.

Answer: A. The derivation of the traditional CAPM relies on assumptions about investors’ expectations and market perfection. In the international context, tax differentials, high transaction costs, regulations, capital, and exchange controls are obvious market imperfections. Their magnitude is greater than in a domestic context and is more likely to create problems in the model.

B. Because of deviations from purchasing power parity (real exchange rate movements), investors from different countries have a different measure of the real return of a given asset. For example, if the euro depreciates by 20 percent, a U.S. investor may obtain a negative (real dollar) return on his Club Med investment, while a French investor could obtain a positive (real Euro) return on Club Med.

Source: CFA Institute 2011 International Asset Pricing, Reading 68, question 14.

1. Assume that the Eurozone risk-free interest rate on bonds with one year to maturity is 4.78 percent and the U.S. risk-free interest rate on one-year bonds is 3.155 percent. The current exchange rate is $.90 per euro. Assume that the U.S. is the domestic country.
2. Calculate the one-year forward exchange rate
3. Is the euro trading at forward premium on discount?
4. Is your answer to Part B consistent with interest rate parity? Explain

Answer:

1. The forward rate = .90(1.0315/1.0478) = $.886
2. The euro is trading at a forward discount = (.886-.90)/.90 = -.0156 or -1.56%
3. The interest rate differential between the domestic interest rate and the foreign interest rate (U.S. minus Eurozone is 315 – 4.78 = -1.63%. This is in line with the forward discount on the foreign currency (euro) of 1.56 percent. This result is consistent with interest rate parity.

Source: CFA Institute 2011 International Asset Pricing, Reading 68, question 8