

2012 Level II Mock Exam: Afternoon Session

The afternoon session of the 2012 Level II Chartered Financial Analyst (CFA®) Mock Examination has 60 questions. To best simulate the exam day experience, candidates are advised to allocate an average of 18 minutes per item set (vignette and 6 multiple choice questions) for a total of 180 minutes (3 hours) for this session of the exam.

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Marcus Pinto Case Scenario

A struggling asset management company recently hired Marcus Pinto, CFA, as chief operating officer (COO). Pinto's first responsibility is to recommend to the Board of Directors how they can lower costs while still retaining the firm's client base and how to increase assets under management.

Pinto analyzes the firm, its clients' needs, and general market conditions before presenting his findings to the Board of Directors. At the presentation, he makes the following statements:

- Statement 1: "If the company adopts the CFA Institute Standards of Professional Conduct, the CFA Institute Research Objectivity Standards, and the CFA Institute Soft Dollar Standards and publicly discloses the company's compliance, we must be 100% compliant firm-wide. By complying with these standards, our business will grow since clients value the integrity these standards bring to firms that abide by them."
- Statement 2: "The CFA Institute Soft Dollar Standards are easy to adopt because they reflect the fiduciary duty we have to our clients, placing their interests first and foremost. It also allows us to purchase research with cash credits for the investment and administration departments, which will reduce our overhead costs."

Pinto also recommends they outsource the research function of the firm to stockbrokers who will supply all research. He states this will result in a substantial cost savings by reducing the firm's workforce and office space needs.

In Exhibit 1 below, Pinto presents to the board the database he has developed with regard to stockbroker selection:

Exhibit 1
Stockbroker Services

Name of Broker	Gross Commission Fee Charged	Average Trade Execution Period	Services Provided	Additional Information
Stockbroker A	0.30%	2 days	Brokerage/trading services only	Investment management software available (See Note 1 below)
Stockbroker B	0.27%	1 day	Investment bank with mutual fund subsidiary	Negotiable commission recapture/rebates
Stockbroker C	0.27%	1 day	Brokerage/trading services only	Invitation to annual client conference

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Note 1: The software comprises the following applications and estimated usage within the firm:

Daily Portfolio Valuation:	55%
General Financial Accounting:	15%
Economic Statistical Database:	30%

Continuing with his presentation, Pinto states:

- “If we adopt the Soft Dollar Standards, we must provide a statement to existing and potential clients disclosing we use broker-provided research for all clients irrespective of whether client trades were directed to the broker providing the research and whether they involve principal basis trades;
- The statement needs to include the types of research received through proprietary or third-party research arrangements, the extent of use, and whether any affiliated broker is involved; and
- We must also provide a statement to our clients that any Soft Dollar Arrangements with respect to that particular client account conforms to the CFA Institute Soft Dollar Standards.

I suggest we send the disclosure statement every six months.”

After the board presentation, Pinto’s firm decides to implement the Soft Dollar Standards and selects Stockbroker B as its primary broker. Subsequently, Mrs. Choi, a pension fund trustee who is a client of the asset management company, gives instructions that some brokerage transactions be directed to a new brokerage company. Pinto recommends that the firm regularly evaluate the client-directed brokerage arrangements, including:

- a list of stockbrokers;
- the potential for achieving best execution; and
- the targeted percentage of transactions to selected brokers.

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1. Pinto’s first statement is *least likely* correct with regard to which of the following CFA Institute standards?
 - A. Soft Dollar
 - B. Research Objectivity
 - C. Professional Conduct
 2. Does Pinto’s second statement *most likely* reflect the principles of the CFA Institute Soft Dollar Standards?
 - A. Yes
 - B. No, with regard to fiduciary duty
 - C. No, with regard to purchase of research

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3. Based on Note 1 in Exhibit 1, in order to comply with CFA Institute Soft Dollar Standards, the maximum percentage of Stockbroker A's "research" allowed to be purchased with client brokerage is *closest* to:
- A. 55%.
 - B. 85%.
 - C. 100%.
4. Based on Exhibit 1, and assuming equal market impact costs, which stockbroker should the firm *most likely* select as their primary broker?
- A. Stockbroker A
 - B. Stockbroker B
 - C. Stockbroker C
5. Does Pinto's description of the required disclosure statement regarding Soft Dollar Arrangements *most likely* meet the CFA Institute Soft Dollar Standards?
- A. Yes
 - B. No, with regard to frequency of disclosure statement
 - C. No, with regard to availability of additional information
6. Do Pinto's proposed evaluation procedures for client-directed brokerage *most likely* comply with recommended practices of the Soft Dollar Standards?
- A. Yes
 - B. No, with regard to stockbroker list
 - C. No, with regard to target percentage

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Theodore Case Scenario

In a seminar at Bessel University, two economists, Roger Theodore and Chester Yuri, are discussing the sources of economic growth for emerging countries.

Theodore outlines his position on preconditions for economic growth.

"I think the basic preconditions for economic growth are:

1. Democratic political systems in order to stimulate economic growth.
2. Social arrangements that govern the ownership, use, and disposal of factors of production.
3. A monetary system that facilitates the orderly transfer of private property."

Yuri states:

"A country can achieve faster economic growth by encouraging spending, improving education, and restricting international trade. Indeed, the proper mix of these economic policies can lead to an economy with no limits to its growth into the future. Furthermore, a country should encourage foreign direct investment as it is the best way to increase both the financial account and the current account."

Continuing on the topic of international trade, Theodore says:

"In exchange for foreign direct investment in the emerging country, trading partners should limit exports, which will protect jobs in the emerging country. Further, the exporter captures the difference between the domestic price and the exported price of the good."

The seminar concludes with a discussion on regulation and its consequences.

Yuri starts the discussion by noting the benefits of regulation:

"Regulations create a cooperative relationship between industry and regulators and promote the social goals of sound economic policies."

Theodore responds:

"You and I disagree on some of the benefits of regulation, but I suspect we can agree on one point. Often enough in the past, regulators come to represent the special interests of the industry rather than protection of the public interests."

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7. Which of the preconditions for economic growth stated by Theodore is *least* accurate?
- A. Precondition 1
 - B. Precondition 2
 - C. Precondition 3

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8. Yuri's statement about faster economic growth is *most* accurate with respect to:
- A. spending.
 - B. education.
 - C. international trade.
9. Yuri's view of future economic growth is *most* consistent with:
- A. new growth theory.
 - B. classical growth theory.
 - C. neo-classical growth theory.
10. Yuri's statement about foreign direct investment is *most* accurate with respect to:
- A. the current account only.
 - B. the financial account only.
 - C. both the financial and current accounts.
11. Theodore's suggested policy on international trade and foreign direct investment is *best* described as a:
- A. tariff.
 - B. quota.
 - C. voluntary export restraint.
12. Theodore's statement in regard to regulation is *most* consistent with the:
- A. capture hypothesis.
 - B. corruption hypothesis.
 - C. share-the-gains, share-the-pains theory.

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Dagmar Case Scenario

Dagmar AG is a European-based manufacturing firm that prepares its financial statements according to IFRS. Two members of Dagmar's treasury group, Henrik Ferdinand and Adele Christoph, are reviewing Dagmar's portfolio of investments. They are particularly interested in the investment income reported during the year and if any of the investments should be considered impaired. Exhibits 1 and 2 contain information about the first two investments they are reviewing.

Exhibit 1 Selected Information on Investments For the year ended 31 December 2011 All € figures in '000 except per share data		
Company name	Alme AG	Elbe AG (Additional information in Exhibit 2)
Security description	Bonds maturing 31 December 2020, 5% coupon payable annually, 6% effective market rate when issued 1 January 2010	Common shares
Classification at purchase	Held-to-maturity	Associate company
Date of purchase	1 January 2010	28 February 2000
Amount owned by Dagmar	Face value €4,000	1.8 million shares
Total # of shares outstanding	n.a.*	6.0 million shares
Market value 1 January 2011	€3,600.60	€31.92 per share
Market value 31 December 2011	€3,634.76	€30.20 per share
Net earnings of investee company in 2011	n.a.	€12,375
Dividends paid by investee company in 2011	n.a.	€0.50 per share
*n.a. = not applicable		

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Exhibit 2 Additional Information Investment in Elbe AG (All € figures in '000s except per share data)	
At the date of acquisition (28 February 2000)	
• Price paid	€17 per share
• Total net book value of Elbe	€90,000
• Excess of fair market value of plant and equipment above book value	€5,250
• Expected useful life remaining on plant and equipment	15 years
• Elbe uses straight-line depreciation for all of its tangible assets	
At 31 December 2011	
• Book value of investment on Dagmar's statement of financial position	€59,022

Ferdinand opens the meeting with the statement:

"Before we consider impairment, let's calculate what each investment will contribute to Dagmar's net earnings this year."

Turning to the issue of impairment Christoph says:

"I believe the decline in the share price of Elbe is related to uncertainty surrounding the current status of Elbe's defined benefit pension plan."

At a recent board meeting, Elbe's management disclosed the information in Exhibit 3 concerning the company's pension plan, based on a recent actuarial revaluation. Elbe also announced it was going to change its policy of deferring actuarial gains and losses and instead recognize them as they arise. Elbe's management believes this will increase transparency going forward and that the improved disclosure will help the stock price.

Exhibit 3 Selected Data from Elbe's Pension Plan As at 31 December 2011 (All figures in € '000s)		
	Pension Plan Data before Revaluation	Pension Plan Data after Revaluation
Present value of defined benefit obligation	40,060	45,200
Fair value of plan assets	29,522	29,522
Unrecognized actuarial losses	1,500	4,250
Unrecognized past service costs	433	433

Further Christoph states:

"I think we should consider the investment in Elbe impaired because with the decline in the share price the market value has recently fallen below our book value."

Ferdinand responds:

"I don't think we have to consider it impaired because:

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1. despite the pension plan problems, Elbe has been able to maintain its dividends at its historical rate; and
2. the remaining goodwill from the acquisition has not been fully written off.”

Christoph concludes the meeting by reviewing the events surrounding another fixed income investment Dagmar held. The company owns bonds of Bergenfeld AG having a face value of €5 million and a coupon rate of 6%, payable semi-annually. The bonds have been held for five years and are classified as held to maturity.

“I am concerned about whether the investment in Bergenfeld is impaired for the following reasons:

- In August 2011, Standards and Poor’s lowered the credit rating for Bergenfeld from A to BB.
- In October 2011, the bonds of Bergenfeld were no longer publicly traded due to low volumes.
- In November 2011, Bergenfeld asked holders of the bonds if they would forgo the coupon payment due on 31 December 2011 in exchange for an increase in the coupon rate on future payment dates to 7.5%. The bondholders agreed to the change.”

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13. The contribution from the investment in Alme to Dagmar’s net earnings (in ‘000s) for 2011 is *closest* to:
 - A. €200.
 - B. €224.
 - C. €234.
 14. The contribution to Dagmar’s 2011 net earnings (in ‘000s) from its investment in Elbe is *closest* to:
 - A. €3,607.5.
 - B. €3,712.5.
 - C. €4,507.5.
 15. Which of the following *best* describes the accounting for goodwill in the Elbe investment?
 - A. €2,025,000 included in the investment in Elbe account.
 - B. €3,600,000 included in the investment in Elbe account.
 - C. There is no goodwill arising in an investment in an associated company.

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16. After the actuarial revaluation of the pension plan and the change in accounting policy related to actuarial gains and losses, the net pension liability (in '000s) Elbe would report on its statement of financial position will be *closest* to:
- A. €11,428.
 - B. €15,245.
 - C. €15,678.
17. Which of the statements concerning whether the investment in Elbe should be considered impaired as at the end of 2011 is *most* appropriate?
- A. Christoph's statement about market value
 - B. Ferdinand's statement about the dividends
 - C. Ferdinand's statement about the remaining goodwill
18. During which month in 2011 would it have been *most* appropriate for Dagmar to consider the value of its investment in Bergenfeld to be impaired?
- A. August
 - B. October
 - C. November

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Ready Power, Inc., Case Scenario

Ready Power, Inc., is a manufacturer of high quality industrial electric generators. While many companies have been negatively impacted by the continued global economic weakness, Ready Power has experienced strong demand for its products largely as a result of several recent natural disasters and many occurrences of rolling brownouts and blackouts arising from excessive strains on power grids. Although this strong demand has resulted in higher inventory costs in recent years, the company has been able to pass them on to customers through higher prices. The company's generators have expected useful lives of about 25 years, and it normally depreciates its assets on a straight-line basis.

Margo Lenz, CFA, an equity analyst at Livermore Investment Council, is reviewing Ready Power's recent financial statements, which are prepared according to U.S. GAAP.

Exhibits 1 and 2 contain selected portions of the company's statement of operations and statement of financial position, while Exhibit 3 contains selected notes from the company's 2011 financial statements.

Exhibit 1 Ready Power, Inc. Consolidated Results of Operations (\$U.S. millions)	
For the Year Ended December 31	2011
Sales	24,910
Cost of goods sold	<u>17,729</u>
Gross profit	7,181
Net profit	2,122

Exhibit 2 Ready Power, Inc. Consolidated Financial Position (\$U.S. millions)		
December 31	2011	2010
Cash	318	665
Receivables	8,983	8,381
Inventories	3,811	3,134
Other current assets	<u>744</u>	<u>1,441</u>
Current assets	13,856	13,621
Net property, plant, and equipment	5,311	4,794
Other assets	<u>11,360</u>	<u>9,826</u>
Total assets	<u>30,527</u>	<u>28,241</u>
Accounts payable	2,451	2,047
Other current liabilities	<u>9,100</u>	<u>9,262</u>
Total current liabilities	11,551	11,309
Long-term liabilities	<u>14,861</u>	<u>11,873</u>
Total liabilities	26,412	23,182
Total shareholders' equity	<u>4,115</u>	<u>5,059</u>
Total liabilities and shareholders' equity	<u>30,527</u>	<u>28,241</u>

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Exhibit 3
Ready Power, Inc.
Selected Notes to Consolidated Financial Statements

Note 1. Operations and Summary of Significant Accounting Policies

D. Inventories

Inventories are stated at the lower of cost or market, with cost determined using the last-in, first-out (LIFO) method.

\$U.S. millions	2011	2010
LIFO reserve	\$1,442	\$1,407
No LIFO liquidation occurred during the years 2009 to 2011.		

F. Depreciation and amortization

Depreciation of plant and equipment is computed using the straight-line depreciation method.

\$U.S. millions	2011	2010
Consolidated depreciation expense	\$332	\$235

J. Income taxes

The company's effective tax rate has been 29% for each of the past 3 years

Note 10. Property, Plant, and Equipment

	December 31	
\$U.S. millions	2011	2010
Land	110	92
Plant and equipment	<u>10,257</u>	<u>9,426</u>
Total plant and equipment	10,367	9,518
Less accumulated depreciation	<u>5,056</u>	<u>4,724</u>
Net property, plant, and equipment	5,311	4,794

Harold Mays, one of Lenz's assistants, made the following comments about Ready Power's inventory policy:

1. "One of the advantages of using LIFO is that it simplifies the accounting process for inventories as it gives the same results for inventory and cost of goods sold whether the company uses a periodic or perpetual inventory system."
2. "Another advantage of using LIFO is that it appears to improve the company's cash conversion cycle."

Lenz mentioned to Mays that earlier that day, she had seen Bill Jacobs, the CEO of Ready Power, in an exclusive interview on a cable news network specializing in financial news. Lenz was particularly interested in the portion of the interview dealing with the company's new program to lease out electrical generators. Selected excerpts from a transcript of the interview are found in Exhibit 4.

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Exhibit 4
Selected Excerpts from a Cable TV Interview of Harold Jacobs
4 March 2012

Jacobs: "The firm is meeting the growing demand for our electrical generators and will be introducing a leasing program to further consolidate our lead in this area. We anticipate that about 80% of the leases we grant will have a term of 20 years or more, with the remainder having shorter terms of around 5 years."

After reading the excerpts from the cable TV interview, Mays wondered what impact the company's new position as a lessor and its classification of leases would have on the company's future financial statements. Finally, he commented:

1. "For a given leased asset, in the initial year of the lease, Ready Power's profits should be higher if the company classifies the lease as an operating lease."
2. "Regardless of how the company classifies a lease, its total cash flow and operating cash flow over the lease term will be the same."

19. If Ready Power had used the FIFO method to account for its inventory, its cost of goods sold (in millions) in 2011 would have been *closest* to:

- A. \$16,287.
- B. \$17,694.
- C. \$17,764.

20. If Ready Power had been using FIFO accounting since incorporation, its retained earnings at the end of 2011 would *most likely* be higher (in millions) by:

- A. \$1,024.
- B. \$1,442.
- C. \$2,927.

21. The statement in Note 1.D (Exhibit 3) concerning LIFO liquidations *most likely* means that for the stated period:

- A. costs and prices must have been rising throughout.
- B. there were no inventory write-downs in any of the three years.
- C. units manufactured (or purchased) equaled or exceeded unit sales for each year.

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22. With regard to Mays' comments about the LIFO method, which of his statements is *most* accurate?
- A. Statement 1 only
 - B. Statement 2 only
 - C. Both statements 1 and 2
23. In 2011, the estimated remaining life (in years) of the company's asset base is *closest* to:
- A. 15.2.
 - B. 15.7.
 - C. 16.0.
24. Which of May's statements about the new leasing program is *most likely* correct?
- A. Statement 1 only
 - B. Statement 2 only
 - C. Neither statement 1 nor 2

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Hi Chu Case Scenario

Hi Chu is a manager of a manufacturing subdivision of Restar Corporation. Restar is a conglomerate with divisions in the container industry. Chu's task is to forecast the profitability of a four-year project for the manufacturing of specialty labeled aluminum cans. Restar has never manufactured such an item before and will require new equipment for the project. Exhibit 1 displays Chu's abridged forecasted financial projections for the project.

Exhibit 1 Specialty Labeled Aluminum Cans Project Financial Projections (Values are year-end totals in '000s)					
	Year 0	Year 1	Year 2	Year 3	Year 4
Fixed Capital	100,000				
Working Capital	0				
Total Investment	100,000				
Sales		60,000	72,000	86,400	103,680
Operating Costs		24,000	28,800	34,560	41,472
Depreciation		25,000	25,000	25,000	25,000
EBIT		11,000	18,200	26,840	37,208
Interest		4,000	3,112	2,154	1,118
EBT		7,000	15,088	24,686	36,090
Tax (40%)		2,800	6,035	9,874	14,436
Net Income		4,200	9,053	14,812	21,654
Dividends		1,680	3,621	5,925	8,662
Addition to Retained Earnings		2,520	5,432	8,887	12,992
Capital Employed	100,000	75,000	50,000	25,000	0
Restar's Cost of Capital and Capital Structure					
Cost of Debt		8.00%			
Cost of Equity		15.00%			
Debt Ratio (Total Debt ÷ Total Assets)		50.00%			

In a meeting with Restar's CFO, Trey Papier, Chu discusses the merits of the project. Chu makes the following points:

- All assumptions in the projections are based on the overall debt and equity mix of Restar and on Restar's corporate policy in regard to dividend payout.
- However, instead of using the weighted average cost of capital (WACC), I think the project should be evaluated with a project-specific market-determined discount rate of 16% because the project is not similar to any of the firm's current manufacturing processes.

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Papier asks Chu if other evaluation methods were considered. Chu replies that he has computed the economic profit instead, and using WACC as the discount rate, he found the market value added (MVA) to be much higher (\$21.9 million) than the previous NPV calculation of \$6.4 million.

Chu states that he is uncertain as to the appropriate cost of equity to use because two weeks earlier, Restar's management announced that the financing mix was going to change by increasing the target debt ratio to 60%. As a result, he says, the choices seem to be the:

- cost of equity for an unlevered firm,
- firm's current cost of equity, or
- cost of equity based on the Modigliani and Miller tax model and the new target debt ratio, assuming that the cost of debt rises to 8.75%.

Papier interjects that the current cost of equity would be better because the implementation of the new financing mix is likely to be delayed. Papier states that the delay is because the structure of the board of directors is about to change in the following ways:

- The CEO will no longer be the chairman of the board.
- The retired original founder of Restar will now become the chairman of the board.
- The board will now have a majority of members who have had past experience at Restar.

Despite these changes, Papier believes it is still important to explore the potential value of this new project.

Three weeks later, Chu and Papier meet again and review Chu's work. After some discussion, they think an alternative project will perform the same task as the original project. The alternative project will cover a six-year period. Chu has calculated its NPV based on after-tax operating cash flows with the same discount rate of 16% used for the original project. Chu and Papier agree that since the two projects are mutually exclusive, they can decide between them using the equivalent annual annuity approach. The NPVs of the two projects are summarized in Exhibit 2.

Exhibit 2		
Comparison of Project NPVs		
Project	Project Life	NPV
Original	4 years	\$6,406,450
Alternative	6 years	\$8,141,220

25. Based on Exhibit 1, the after-tax operating cash flow (in \$1,000) for Year 1 is *closest* to:

- A. 31,600.
- B. 33,200.
- C. 46,600.

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26. Based on Exhibit 1, the economic profit (in \$1,000) for Year 1 is *closest* to:
- A. -8,400.
 - B. -3,300.
 - C. 1,100.
27. The dividend payment policy assumed by Chu in Exhibit 1 is *most* accurately described as a:
- A. stable dividend policy.
 - B. residual dividend payout policy.
 - C. constant dividend payout ratio policy.
28. The cost of equity (%) under the newly announced financing mix using Chu's assumption on the change in the cost of debt and his suggested approach is *closest* to:
- A. 15.1.
 - B. 15.6.
 - C. 16.3.
29. Which changes to the board of directors is *most* consistent with best practices in the composition of a board?
- A. Change regarding the CEO
 - B. Specific choice of the new chairman of the board
 - C. Change in the composition of the board membership
30. Based on the equivalent annual annuity method for the original and alternative projects, the *most appropriate* conclusion is to:
- A. accept the original project.
 - B. accept the alternative project.
 - C. be indifferent between the two projects.

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Metev Case Scenario

Rila Rakia & Beer Ltd. (RRBL), a small privately owned company, produces high quality rakia (a high potency hard liquor), vino (wine), and bira (beer) in Bulgaria. After Bulgaria's accession to the European Union in 2007, international demand for the country's liquor, wine, and beer increased substantially. Most firms in the industry, including RRBL, have been reporting double-digit sales growth on year-over-year basis.

Metiu Metev, a portfolio strategist at a major German investment consulting firm, inherited RRBL from his grandparents. Frankfurter Destillerie & LiqueurFabrik (FDLF), a famous German distillery, which is interested in entering the Bulgarian market, has made a cash offer of BGN 900 million for the company's equity (BGN = Bulgarian Lev; 1€ = 1.95586 BGN, pegged rate). FDLF will assume RRBL's entire outstanding debt, including both current liabilities and long-term debt. If Metev prefers to sell only a non-controlling interest, FDLF is willing to purchase a no less than 40% of equity stake, but at an appropriate discount for lack of control.

Metev evaluates the company himself by using the capitalized cash flow method (CCM). He uses the build-up method to estimate the required rate of return on equity and then computes the firm's weighted average cost of capital (WACC). In computations, Metev uses the book values of debt and considers the current weight of total debt in the capital structure to be optimal. Exhibits 1A, 1B, 2, and 3 contain RRBL's financial data and other inputs that Metev used for determining RRBL's value.

Before responding to FDLF's offer, however, Metev meets with Vasil Nenkov, his colleague and a senior equity analyst covering the wine and beer industry in the Balkan region. After reviewing the data and Metev's valuation analysis, Nenkov suggests that 11% would be a more reasonable estimate of RRBL's WACC. He also makes the following two comments:

- (1) CCM is most often used for the valuation of large public companies, and it is less valid for valuing private companies, such as RRBL.
- (2) The excess earnings method is preferable as it provides an estimate of the value of intangible assets by capitalizing future earnings in excess of the estimated return requirements associated with working capital and fixed assets.

Nenkov also suggests that the enterprise value (EV) multiple approach should work well for valuing RRBL. Upon searching his database, Nenkov finds that Rhodopi Wineries PLC, a publicly traded company and a close competitor to RRBL, is currently valued at an EV/EBITDA multiple of 7.2. Nenkov further suggests that RRBL should command an upward adjustment of 25% in the EV/EBITDA multiple, reflecting its lower risk and higher growth relative to Rhodopi Wineries. He also recommends using the forward-looking EBITDA for determining RRBL's value.

On a cautionary note, Nenkov makes two statements regarding the use of the EV/EBITDA approach to valuation.

- (1) It is more appropriate than P/E for comparing companies with different financial leverage.

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(2) EBITDA underestimates cash flow from operations if working capital is growing.

Finally, Metev recalls FDLF's willingness to purchase a non-controlling ownership interest but at a discount for lack of control. Nenkov responds saying that a control premium of 30% is typically applied for purchase transactions of small, privately owned firms similar to RRBL, and proper adjustment for lack of control should be made if the transaction involves a non-controlling interest. Metev thanks Nenkov for his help and goes back to his desk to revise his valuations.

Exhibit 1A Rila Rakia & Beer Ltd. (RRBL) EBITDA and Other Data [All values in millions of Bulgaria Leva (BGN)]		
	FY2011 (Actual)	FY2012 (Pro Forma)
Revenues	248.5	300.6
Cost of goods sold	<u>(132.3)</u>	<u>(172.5)</u>
Gross profit	116.2	128.1
Selling, general & administrative expenses	<u>(19.2)</u>	<u>(23.0)</u>
EBITDA	97.0	105.1
Other Data		
Capital expenditures	2.5	4.0
Interest expense	2.7	3.6
Depreciation and amortization	5.0	6.4
Change in working capital	0.8	1.0
Exhibit 1B		
Additional Information		
Pre-tax cost of debt	10.0%	
Weight of total debt in capital structure	30%	
Tax rate	25%	

Exhibit 2 Rila Rakia & Beer Ltd. (RRBL) Balance Sheet for FY2011 [All values in millions of Bulgaria Leva (BGN)]			
Assets		Liabilities and equity	
Cash & short-term investments	50	Accounts payable	10
Receivables & inventory	40	Notes payable	8
Net fixed assets	50	Long-term debt	30
Patents and trademarks	<u>20</u>	Common equity	<u>112</u>
Total assets	160	Total liabilities and equity	160

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Exhibit 3 Other Data and Inputs	
Bulgarian government's 10-year bond yield	3.9%
Beta of publicly traded firms in the industry	0.75
Equity risk premium	6.0%
Small stock risk-premium	2.5%
Industry risk premium	-1.0%
RRBL's company-specific risk premium	1.5%
Long-term growth rate beyond FY2012	5.0%

31. According to the method used by Metev for computing the cost of equity and the pertinent data in Exhibits 2 and 3, RRBL's WACC is *closest* to:
- A. 8.6%.
 - B. 10.3%.
 - C. 11.3%.
32. According to the method used by Metev and the WACC suggested by Nenkov, RRBL's value of equity (in BGN million) is *closest* to:
- A. 1,130.
 - B. 1,209.
 - C. 1,257.
33. Regarding the two comments that Nenkov made after reviewing Metev's valuation analysis, he is *most likely* correct with respect to:
- A. comment 1 only.
 - B. comment 2 only.
 - C. both comments 1 and 2.
34. Using Nenkov's findings from his search of the database, his suggestions regarding appropriate adjustments, and the EV/EBITDA multiples approach, RRBL's value of equity (in BGN million) is *closest* to:
- A. 916.
 - B. 946.
 - C. 966.
35. Regarding Nenkov's two cautionary statements concerning the use of the enterprise value method of valuation, he is *most likely* correct with respect to:
- A. statement 1 only.
 - B. statement 2 only.
 - C. both statements 1 and 2.

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36. The discount for lack of control, given the typical control premium indicated by Metev, is *closest* to:

- A. 12%.
- B. 23%.
- C. 30%.

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GreenSnacks, Inc., Case Scenario

Peter Tanner recently accepted a position as a domestic equity analyst of a large U.S. pension fund. The fund uses a bottom-up team approach to stock selection. The fund's equity manager, Cindy Bradley, chief investment officer, is responsible for the results of the domestic equity portfolio.

Tanner's first assignment is to evaluate a packaged foods company, GreenSnacks (GNSK), which trades on the NASDAQ. His analysis is to include a long-term outlook for the company in the context of the well-established packaged foods industry, which is dominated by about a dozen companies in the United States.

The major players compete vigorously for market share. The industry has been growing at a rate very similar to that of GDP for many years. GNSK competes in the health food category, which has been gaining about 1 to 2 percent of relative share per annum within the broader packaged foods industry due to external factors, such as changes in social preference and an aging population.

Originally a spin-off from a major food company, GNSK has shown promising growth for the past few years due to a newfound process that eases the preserving, packaging, and distribution of fruity snacks. Several patents have been obtained for this process that results in healthy, moist, and flavorful snacks. GNSK's innovative advancement allows it to create products that maintain a fresh taste without preservatives and that have a shelf-life much longer than the established products of the leading brands.

Although the healthy snack category has been gaining market share due to social changes, GNSK was not able to break through the established shelf-space barrier controlled by the large competitors until the newfound process was perfected. As national chains have picked up the product line, GNSK has been gaining substantial market share as sales accelerate. The outlook for the company's future sales growth exceeds 17%, and profit margins are increasing well beyond the levels of competitors.

Tanner expects extraordinary earnings growth of 20% in 2012 for GNSK, with the rate of growth linearly diminishing over the next five years to match industry conditions thereafter. He assumes that starting in Year 6, GNSK's long-term dividend growth rate will be equal to the current level of sustainable growth rate for the industry. Given these assumptions and the data in Exhibit 1, Tanner prefers to use the H-model for valuing GNSK's stock.

Exhibit 1		
Selected Financial Information		
For the Fiscal Year Ended 31 December 2011		
	GNSK	Industry Average
Return on equity (%)	23.1	12.8
Earnings per share (EPS) 2010 (\$)	2.45	n.a.
Dividend payout ratio 2010 (%)	25.0	65.0
Required return (%)	n.a.	11.0
Trailing dividend yield (%)	2.8	3.7

n/a = not available

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Tanner meets with Bradley for her advice. Bradley states that since the packaged foods industry is mature and stable, she would prefer that Tanner calculate the implied long-term dividend growth rate for GNSK using the Gordon model. Further, Bradley believes that the required return and dividend yield for the industry are the most stable indicators and they should be used in the computations.

Bradley makes another suggestion:

“While you are looking at the industry, I believe Star Cakes (STCK) is undervalued, and it would be a more attractive alternative to GNSK. The company paid a dividend of \$2.48 last year. Its earnings are dropping about 2% every year permanently. I assign a required return of 7.4% for this company due to its low beta. It closed at \$15 yesterday.”

After his meeting with Bradley, Tanner discusses the merits of different valuation methods with three of his colleagues: Marcia Stephens, Dale Mathews, and Kevin Baldridge. They make the following statements:

Stephens: “Free cash flow valuation is especially appropriate for investors who want to take a control perspective in takeovers. Also, free cash flow to equity is the cash flow available to be distributed to shareholders without impairing the company’s value.”

Mathews: “Remember that the Gordon growth model is based on indefinitely extending future dividends, and the intrinsic value derived by the model is very sensitive to small changes in the assumed growth rate and required rate of return.”

Baldridge: “You can use the residual income approach as well, a simpler model that does not require clean surplus relation to hold, and the valuation is not impacted by book values either.”

Tanner prepares a list of issues he needs to consider as he begins his analysis for writing his report.

37. Which of the following life cycle phases *best* describes GNSK?

- A. Mature
- B. Growth
- C. Pioneer

38. Which of the following factors have been *most* significant for the sales growth of GNSK products?

- A. Technology
- B. Demographics
- C. Social changes

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39. Using Tanner's preferred valuation approach, the expected rate of return for GNSK is *closest* to:
- A. 8.5%.
 - B. 9.6%.
 - C. 12.2%.
40. Using the approach suggested by Bradley and her preferred assumptions, GNSK's implied long-term dividend growth rate is *closest* to:
- A. 7.0%.
 - B. 7.3%.
 - C. 8.0%.
41. Given Bradley's estimates and assumptions, STCK's intrinsic value is *closest* to:
- A. \$25.85.
 - B. \$26.38.
 - C. \$46.84.
42. The statement by which of Tanner's colleagues regarding valuation methods is *least* accurate?
- A. Stephens
 - B. Mathews
 - C. Baldrige

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Tyra Merinar Case Scenario

Tyra Merinar is a portfolio manager at Ridge Row Capital Advisors (RRCA), a hedge fund based in Charlottesville, Virginia. Merinar is meeting with two assistant portfolio managers, Vinay Jani and Zhong Geng, to review the performance of investments made by RRCA and to evaluate potential new investments. At this meeting they will discuss two recent investments, an equity swap and a swaption, as well as two potential new investments.

RRCA entered into a one-year equity swap 30 days ago. Under the terms of the swap, the fund would receive the return on the S&P/ASX 300 Metals & Mining Index and pay a fixed annual interest rate of 4.8% on notional principal of \$75,000,000. The swap calls for quarterly payments. At the time the swap was initiated, 30 days ago, the S&P/ASX 300 index was 3,250. The value of the S&P/ASX 300 index today is 3,738. Merinar wishes to determine the market value of the equity swap today using the current term structure of interest rates presented in Exhibit 1.

Exhibit 1
Term Structure of Interest Rates (%)

Days	LIBOR
60	1.42
150	1.84
240	2.12
330	3.42

Three months ago, RRCA purchased a European receiver swaption that is exercisable into a two-year swap with semiannual payments. The swaption has a semiannual exercise rate of 2.75% and a notional principal of \$25,000,000. The swaption has just expired, and Merinar asks Jani to determine its cash settlement using the term structure presented below in Exhibit 2.

Exhibit 2
Term Structure of Interest Rates (%)

Days	LIBOR
180	1.95
360	3.68
540	4.11
720	4.65

The meeting's focus turns to potential new investments. Geng has been studying an investment strategy that involves potential changes in credit ratings of individual securities. Geng states, "I have been evaluating bonds of Onex Corporation, which are currently rated BBB. Onex has just announced an acquisition that we believe will likely weaken its credit metrics over the next two years. However, longer term, say 4 to 5 years, Onex should generate enough cash flow to improve credit quality to pre-acquisition levels. We could use forward contracts on a credit default swap (CDS) index, such as the CDX, to take advantage of this. The best way to do this is to buy CDX investment grade expiring in 5 years and sell CDX high yield expiring in 2 years."

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Merinar asks Jani to assess potential mispricing in equity futures markets with a view to implementing an investment strategy to take advantage of any mispricing. Specifically, she asks him to evaluate a futures contract on the S&P 400 Mid Cap stock index expiring in 145 days. The annual risk-free rate is 3.5%, and the index is at 840 today. The accumulated value of dividends reinvested over the life of the futures contract is expected to be \$3.15 per contract.

Merinar explains the investment strategy to be implemented if the stock index futures contract is mispriced. She states, "If futures sell for less than our fair value calculation, the appropriate strategy would be to purchase futures on the index and short the index."

Merinar closes the meeting by asking if Geng and Jani can explain the relation between futures prices and expected spot prices. Geng responds, "Futures prices are an accurate estimate of expected future spot prices." Jani argues, "I disagree. Expected spot prices are equal to futures prices plus a risk premium." Merinar concludes the discussion saying, "You are both incorrect. Expected spot prices are equal to futures prices minus a risk premium."

-
43. Using the information provided in Exhibit 1, the market value of the equity swap is *closest* to:
- A. \$7,717,500.
 - B. \$7,665,000.
 - C. \$9,997,500.
44. Using the information in Exhibit 2, the market value of the receiver swaption is *closest* to:
- A. \$106,250.
 - B. \$495,508.
 - C. \$687,500.
45. Is Geng's strategy to take advantage of his credit expectations *most likely* appropriate?
- A. Yes.
 - B. No, the appropriate strategy would be to sell 2-year CDS and buy 5-year CDS for Onex Corporation.
 - C. No, the appropriate strategy would be to buy 2-year CDS and sell 5-year CDS for Onex Corporation.
46. Assuming a 365-day year, the S&P 400 Mid Cap stock index futures price is *closest* to:
- A. 836.85.
 - B. 848.11.
 - C. 854.71.

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47. Is Merinar's investment strategy using stock index futures contracts *most likely* correct?

- A. Yes.
- B. No, the correct strategy would be to only purchase stock index futures.
- C. No, the correct strategy would be to purchase the stock index and sell stock index futures.

48. Who correctly states the relationship between futures prices and expected spot prices?

- A. Jani
- B. Geng
- C. Merinar

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Lima Case Scenario

Jose Ortega, CFA, is director of Research at Lima Bond Advisors. He asks Manuel Asuncion, a credit analyst at Lima, to assess the credit worthiness of several companies whose bonds are current or potential investments in the firm's fixed income portfolios.

Ortega states that he is concerned about the credit risks posed by three companies currently held in portfolios. Each company will report earnings next week. Given the recent volatile business environment, he expects actual results will vary from Wall Street analysts' consensus estimate of earnings. Asuncion compares Lima's internal earnings estimates with consensus and provides the variance or "surprise," in Exhibit 1 along with other relevant data.

Exhibit 1
Credit Data for Lima's Portfolio Companies

	Andes	Barranca	Cuzco
Credit Rating	Baa3	B1	Caa1
Rating Outlook	Positive	Negative	Stable
Earnings Surprise	-15%	+5%	-2%
Credit Spread to Treasury	200	290	600
Average Spread for Eating	225	300	590

Ortega asks Asuncion to prepare credit analyses on three companies Lima is considering for investment. In the analyses, Asuncion reviews key credit metrics, such as solvency, capitalization, and coverage ratios. Financial data for the three companies are provided in Exhibit 2.

Exhibit 2
Selected Financial Data for 2011

(in \$)	Aymara	Bajamar	Chimbote
Current Assets	13,585,000	39,182,000	16,705,000
Current Liabilities	6,175,000	17,810,000	9,263,000
EBITDA	3,412,500	6,864,000	3,073,000
Operating Income	2,730,000	5,558,000	2,145,000
Interest Expense	420,000	1,287,000	676,000
Long-Term Debt	5,980,000	17,160,000	8,450,000
Shareholders' Equity	14,950,000	29,250,000	10,725,000

Asuncion asks Ortega what factors are important in credit analysis in addition to financial ratios. Ortega responds, "Cash flow is an important component of credit analysis. Please review the data in Exhibit 3 to see if it confirms the findings of your ratio analyses regarding the creditworthiness of these companies."

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Exhibit 3
Cash Flow Data for 2011

(in \$)	Aymara	Bajamar	Chimbote
Funds from Operations	2,218,125	4,461,600	1,997,450
Operating Cash Flow	3,218,125	461,600	2,997,450
Free Operating Cash Flow	1,718,125	-1,538,400	97,450
Discretionary Cash Flow	1,418,125	-1,538,400	-2,550

Ortega adds, "The character of a corporation, which is closely related to the quality of its management, is also an important part of a company's credit strength. There is an inherent agency problem in corporate governance, which occurs when management, the agent, acts in its own self-interests rather than the interests of shareholders. Agency problems can be mitigated using a number of practices:"

- Practice 1: Agency problems can be mitigated by reducing the size of the board of directors.
- Practice 2: Agency problems can also be mitigated by choosing board members with no ties to the company or its management.
- Practice 3: Agency problems can be mitigated by compensating management primarily through fixed salaries and cash bonuses based on operating results.

Ortega is evaluating convertible bonds issued by each of the companies Asuncion analyzed. He uses the data in Exhibit 4 to assess the value offered by each bond.

Exhibit 4
Convertible Bond Characteristics

	Aymara	Bajamar	Chimbote
Current Market Price	\$ 980.00	\$ 1,250.00	\$ 1,025.00
Conversion Ratio	65.00	33.00	24.00
Bond Straight Value	\$ 950.00	\$ 1,020.00	\$ 940.00
Current Market Stock Price	\$ 10.15	\$ 32.05	\$ 25.50

Finally, Asuncion asks Ortega about the various measures to evaluate bonds. Ortega tells Asuncion, "Option-adjusted spread, or OAS, is particularly useful when analyzing bonds with embedded options. The value of OAS is that it is independent of assumptions such as volatility. It adjusts the bond's cash flows for the embedded option when computing the spread to the benchmark interest rates."

49. Based on the information in Exhibit 1, the bonds issued by Andes, Barranca, and Cuzco, respectively, *most likely* pose which of the following credit risks?
- A. Downgrade risk, credit spread risk, and default risk
 - B. Credit spread risk, default risk, and downgrade risk
 - C. Credit spread risk, downgrade risk, and default risk
50. Based on the credit metrics that Asuncion uses in his analyses, which company in Exhibit 2 *most likely* has the strongest credit quality?
- A. Aymara
 - B. Bajamar
 - C. Chimbote
51. Based on the data in Exhibit 3, Asuncion's cash flow analysis *most likely* reveals which of the following?
- A. Bajamar paid the highest amount in dividends, and Chimbote generated cash from working capital.
 - B. Aymara used cash in its working capital, and Chimbote funds its capital expenditures from operations.
 - C. Aymara paid the highest amount in dividends, and Bajamar cannot fund its capital expenditures from operations.
52. Which of Ortega's practices regarding management is *most likely* correct?
- A. Practice 1
 - B. Practice 2
 - C. Practice 3
53. Based on the data in Exhibit 4, which company's convertible bond *most likely* requires Ortega to pay the highest market conversion premium percentage?
- A. Aymara
 - B. Bajamar
 - C. Chimbote
54. Is Ortega *most likely* correct in his statements regarding option-adjusted spread?
- A. Yes.
 - B. No, he is incorrect regarding volatility.
 - C. No, he is incorrect regarding cash flows.

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Jongmoo Choi Case Scenario

Jongmoo Choi is a portfolio manager at Silver Oak Capital Management based in Omaha, Nebraska. Silver Oak provides customized portfolio management and investment consulting services to institutional clients. Choi is meeting with a new assistant, Raul Fernandez, to review the firm's portfolio management models and techniques. Choi begins the meeting with the following statement:

Statement 1: "We use multifactor models to estimate the expected return and risk of securities we are evaluating. Depending on the situation, we use one of three types of multifactor models: a macroeconomic factor model, a fundamental factor model, or a statistical factor model. For macroeconomic factor models, the factors are the value or level of selected macroeconomic variables. For fundamental factor models, the factors are company share attributes, such as price-earnings ratio and market capitalization. Finally, when using statistical factor models, we apply statistical techniques, such as factor analysis or principal component analysis, to historical returns to identify factors that best explain historical variances and covariances."

Fernandez asks Choi: "How is arbitrage pricing theory (APT) related to these multifactor models?"

Choi responds, "APT helps us determine the appropriate number of factors to use in a multifactor model, the identity of those factors, and the expected return of the investment being evaluated."

Choi continues with the discussion of multifactor models by stating:

Statement 2: "Multifactor models are particularly useful in analyzing the active risk of a portfolio. Specifically, we carry out our analysis using active risk squared, which can be decomposed into two components: active factor risk and active specific risk. Active factor risk is the risk that is due to variation between factor exposures in the portfolio and the benchmark. Active specific risk identifies the residual risk exposure of the portfolio."

The discussion turns to international investing. Choi says one must take into account exchange rates, inflation, and interest rates in order to properly evaluate international investments. He presents the information in Exhibit 1 to illustrate his point.

Exhibit 1
Selected Economic and Financial Data
Current Values and Expected Values in One Year

	Current Value	Expected Value
Current exchange rate (USD/EUR)	1.33	1.38
Risk-free U.S. bond one-year yield	1.20%	—
Risk-free German bond one-year yield	1.64%	—
German Consumer Price Index	144.7	146.3
U.S. Consumer Price Index	211.7	218.3
One-year return U.S. stock index ¹	—	9.40%
One-year return German stock index ¹	—	6.75%

¹Stock index returns are measured in local currency terms.

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Choi makes the following statement:

Statement 3: "In order to evaluate an investment in the German stock market index, we use an international asset pricing model (ICAPM) to estimate the return on the German stock index in dollar terms as a function of:

- the German risk-free rate, plus
 - the world market risk premium times the German market's beta with the world market index, plus
 - the foreign currency risk premium times the German index's currency exposures."
-

55. In Statement 1, Choi is *least likely* correct with respect to:

- A. statistical factor models.
- B. fundamental factor models.
- C. macroeconomic factors models.

56. Choi's response to Fernandez is *most likely* correct with regard to the:

- A. expected return.
- B. number of factors.
- C. identity of the factors.

57. In Statement 2, does Choi correctly explain active factor risk and active specific risk?

	Active Factor Risk	Active Specific Risk
A.	Yes	Yes
B.	Yes	No
C.	No	Yes

58. Based on the data in Exhibit 1, assuming actual price levels, exchange rate, and stock index values at the end of the year are as expected, the one-year dollar return on the German stock index is *closest* to:

- A. 3.13%.
- B. 10.76%.
- C. 12.76%.

59. Based on the data in Exhibit 1, the foreign currency risk premium is *closest* to:

- A. 3.32%.
- B. 3.76%.
- C. 4.20%.

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60. In Statement 3, does Choi accurately describe the model used to estimate returns on the German stock index?

- A. Yes.
- B. No, the U.S. risk-free rate must be used.
- C. No, German stock index returns must be measured in local currency terms.

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