

## 2011 Level II Mock Exam: Morning Session

The morning session of the 2011 Level II Chartered Financial Analyst® 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.

[www.VividBook.org](http://www.VividBook.org)  
[VividBookNet@Gmail.com](mailto:VividBookNet@Gmail.com)

By accessing this mock exam, you agree to the following terms of use: This mock exam is provided to currently-registered CFA candidates. Candidates may view and print the exam for personal exam preparation only. The following activities are strictly prohibited and may result in disciplinary and/or legal action: accessing or permitting access by anyone other than currently-registered CFA candidates; copying, posting to any website, emailing, distributing and/or reprinting the mock exam for any purpose



## Victoria Macia Case Scenario

---

Victoria Macia, CFA, is a senior partner at Robon Asset Management, a newly established international equity fund manager affiliated with a global bank. Robon's client base includes segregated retail clients, pension plans, mutual funds, and hedge funds. At the present time, Robon is assessing soft dollar arrangements that would reduce its direct expenses.

Macia is responsible for initiating all of Robon's broker dealer relationships and is currently reviewing a proposal from Diga Securities. Diga, a sister company of Robon, would like Robon to locate their business in the same premises as Diga. Diga has sent Macia the following note. "Our well-located midtown office space provides a full array of business amenities for financial services companies. All offices come fully wired with phones and computers for investment and support staff, as well as a complete trading desk with wide screen televisions and Bloomberg terminals. Since we are both part of the same global bank this move would also look good at a corporate level. Any charges for services and space can be paid for with either hard or soft dollars. To make the move easier we will also cover all charges related to notifying your clients of your relocation. In addition, when you execute at least half of all of your trades with us we will help you raise assets for your hedge fund by connecting you with our clients who are qualified investors."

Diga charges trading commissions that average 2.5 cents per share, which Macia considers to be the best execution Robon could achieve based upon her twenty years of experience at other firms in the investment business. Diga provides proprietary research related to the market for equity securities, such as trade analytics, and advice on execution strategies. Both of these research tools would benefit all of Robon's clients. After considering several other brokers, comparing the quality and range of services offered and their financial position, commission rates and spreads, Macia decides to work out an agreement with Diga.

In order to be competitive and build its business, Macia wants Robon to be able to claim it meets the CFA Institute Soft Dollar Standards. Macia has instituted the following practices to prepare for compliance in making this claim:

1. Provide soft dollar disclosure annually;
2. Provide soft dollar disclosure to all clients; and
3. Provide soft dollar disclosures using complete and full legal terms.

Several of Macia's partners who manage the firm's hedge funds disagree with her attempts to have Robon comply with CFA Institute Soft Dollar Standards. These partners state their objections as follows. "We believe we exceed industry standards so we can claim compliance with the provisions of the CFA Institute Soft Dollar Standards. Our research is fully utilized only for client purposes. In addition, since the research we receive is proprietary and not third party; we are not required to disclose our use of soft dollars."

Next, Macia reviews Robon's brochure for prospective clients which includes the following statement:

"It is our policy to comply with the CFA Institute Soft Dollar Standards. All of our brokerage accounts, including client directed brokerage, may generate soft dollars that Robon uses to purchase equity research. Equity research that Robon pays for with soft dollars may benefit clients other than those

By accessing this mock exam, you agree to the following terms of use: This mock exam is provided to currently-registered CFA candidates. Candidates may view and print the exam for personal exam preparation only. The following activities are strictly prohibited and may result in disciplinary and/or legal action: accessing or permitting access by anyone other than currently-registered CFA candidates; copying, posting to any website, emailing, distributing and/or reprinting the mock exam for any purpose



whose trades generated the brokerage. For the purposes of this brochure, soft dollar brokerage refers to transactions conducted on an agency basis and includes trades conducted on a principal basis. Robon's disclosed brokerage policy is to seek best execution, commingle all trades and average the brokerage costs across all clients so they can benefit from volume discounts."

---

1. The proposed arrangement between Robon and Diga concerning shared facilities *least likely* violates which of the following Standards?

- A. Duties to Clients
- B. Soft Dollar Standards
- C. Communication with Clients

Answer = C

"Guidance for Standards I-VII", CFA Institute  
2011 Modular Level II, Vol. 1, pp. 63-66, 116-118  
CFA Institute Soft Dollar Standards  
2011 Modular Level II, Vol. 1, pp. 191-196

Study Sessions 1-2-a, 2-3-c

Demonstrate a thorough knowledge of the Code of Ethics and Standards of Professional Conduct by applying the Code and Standards to specific situations.

Determine whether a product or service qualifies as "permissible research" that can be purchased with client brokerage.

C is correct as there is no evidence there has been a violation of this Standard since communication with clients in this scenario is not applicable. The Communication Standard deals with disclosure of general principles of the investment process, factors important to the analysis, and distinguishing between fact and opinion.

2. With respect to the asset-raising proposal by Diga Securities, Macia's *most* appropriate course of action is to:

- A. provide full disclosure of the arrangement to all clients.
- B. refuse to allocate client's brokerage based on the amount of client referrals.
- C. determine if the broker provides best execution prior to entering into the arrangement.

Answer = B

CFA Institute Soft Dollar Standards  
2011 Modular Level II, Vol. 1, p. 192  
Study Session 2-3-b  
Critique company soft-dollar practices and policies.

B is correct as an investment manager should not allocate a client's brokerage based on the amount of client referrals the investment manager receives from a Broker.

By accessing this mock exam, you agree to the following terms of use: This mock exam is provided to currently-registered CFA candidates. Candidates may view and print the exam for personal exam preparation only. The following activities are strictly prohibited and may result in disciplinary and/or legal action: accessing or permitting access by anyone other than currently-registered CFA candidates; copying, posting to any website, emailing, distributing and/or reprinting the mock exam for any purpose



3. In Macia's evaluation of Diga's best execution, which of the following recommended practices for selection of brokers is *most likely* missing?

- A. The broker's responsiveness to the manager.
- B. The ability of the broker to trade in large volumes.
- C. The broker's ability to maintain accurate client records.

Answer = A

CFA Institute Soft Dollar Standards  
2011 Modular Level II, Vol. 1, p. 193

Study Session 2-3-b

Critique company soft-dollar practices and policies.

A is correct because the CFA Institute Soft Dollar Standards recommend when evaluating the broker's capability to provide best execution the broker's responsiveness to the investment manager be assessed along with the broker's financial responsibility, the commission rate or spread involved and the range of services offered by the broker.

4. Which of the following would explain why Robon's soft dollar policies are in violation of the CFA Institute Soft Dollar Standards?

- A. Information is not easily understood.
- B. Disclosure is not provided on a timely basis.
- C. Necessary information is not distributed appropriately.

Answer = A

CFA Institute Soft Dollar Standards  
2011 Modular Level II, Vol. 1, pp. 194-195

Study Session 2-3-a

Define soft-dollar arrangements and state the general principles of the Soft Dollar Standards.

A is correct because soft dollar information is provided in legal terms which is not clear and specific.

5. In order to be in compliance with the CFA Institute Soft Dollar Standards, which of the following should *least likely* be disclosed in Robon's brochure?

- A. Whether any affiliated broker is involved.
- B. The brochure serves as an annual soft dollar disclosure.
- C. Research may be also obtained as a result of principal trades.

Answer = B

By accessing this mock exam, you agree to the following terms of use: This mock exam is provided to currently-registered CFA candidates. Candidates may view and print the exam for personal exam preparation only. The following activities are strictly prohibited and may result in disciplinary and/or legal action: accessing or permitting access by anyone other than currently-registered CFA candidates; copying, posting to any website, emailing, distributing and/or reprinting the mock exam for any purpose



CFA Institute Soft Dollar Standards  
2011 Modular Level II, Vol. 1, pp. 194-195  
Study Session 2-3-a  
Critique company soft-dollar practices and policies.

B is correct as the annual soft dollar disclosure must be provided to all clients and it is not sufficient to simply refer clients to the firm's brochure.

6. Are Macia's partners' claims for compliance with the CFA Institute Soft Dollar Standards *most likely* valid?
- A. Yes.
  - B. No, because of definition of research.
  - C. No, because of definition of soft dollar arrangements.

Answer = C

CFA Institute Soft Dollar Standards  
2011 Modular Level II, Vol. 1, pp. 188-189  
Study Session 2-3-a  
Define soft-dollar arrangements and state the general principles of the Soft Dollar Standards.

C is correct, the definition of soft dollar arrangements is incorrect.



## Meredith Whitney Case Scenario

---

Meredith Whitney is a senior consultant in the Swaps Advisory Group of DCM Capital, an independent advisory firm. Whitney will be meeting with three clients who need advice on structuring and implementing swap programs to manage their interest rate exposures.

For her meetings, Whitney plans to use the data presented in Exhibit 1 below.

**Exhibit 1**  
**Current Term Structure of Rates (%)**

Days	LIBOR	EURIBOR	HIBOR
90	1.42	1.86	1.22
180	1.84	2.11	1.53
270	2.12	2.24	1.70
360	3.42	2.34	1.87

Note: LIBOR is the London Interbank Offer rate. EURIBOR is Euro Interbank Offer Rate. HIBOR is the Hong Kong Interbank Offer rate. All rates shown are annualized.

Whitney's first meeting is with Novatel, a U.S. based company that currently has an outstanding loan of \$250,000,000 that carries a 5.15% fixed interest rate. Novatel's managers feel that the current interest rate on the loan is high and they also believe that interest rates are poised to decline. Whitney advises Novatel to enter into a one-year pay floating LIBOR receive fixed interest rate swap with quarterly payments. The notional principal on the swap will be \$250,000,000.

Novatel has asked Whitney to provide recommendations on how it can terminate the swap. Whitney outlines three options:

- Option 1: A cash settlement with the counterparty.
- Option 2: Enter into a payer swaption
- Option 3: Enter into a receiver swaption.

Next, Whitney meets with Grand Manufacturing. This client is based in Hong Kong but requires a €25,000,000 one-year bridge loan to fund operations in Germany. Grand manufacturing is currently able to borrow Euros at an interest rate of 3.75%, but wonders if there is a less expensive alternative. Whitney advises Grand to borrow in HK\$ and enter into a one-year foreign currency swap with quarterly payments to pay Euro's at a fixed rate of 2.32% and receive HK\$ at a fixed rate of 1.84%. The current exchange rate is HK\$11.42 per €1.

The final meeting is with KPS Financial Services, a U.S. based asset manager. KPS wants to increase the equity exposure to the U.S. market in one of its portfolios by \$100,000,000. Whitney advises KPS to

By accessing this mock exam, you agree to the following terms of use: This mock exam is provided to currently-registered CFA candidates. Candidates may view and print the exam for personal exam preparation only. The following activities are strictly prohibited and may result in disciplinary and/or legal action: accessing or permitting access by anyone other than currently-registered CFA candidates; copying, posting to any website, emailing, distributing and/or reprinting the mock exam for any purpose



enter into a one-year equity swap with quarterly payments to receive the return on a U.S stock index and pay a floating LIBOR interest rate. The current value of the U.S. stock index is 925.

Each client follows Whitney's advice and immediately implements the recommended position. Forty five days have passed since Whitney's initial meetings and in the interim a worldwide financial crisis has caused interest rates to rise dramatically. Whitney's clients have asked to meet with her to review their positions.

In order to prepare for the meeting Whitney has obtained updated interest rate data that is presented in Exhibit 2. In addition, she notes that the exchange rate for the Hong Kong dollar is HK\$9.96 per €1 and the U.S. stock index is at 905.

**Exhibit 2**  
**Term Structure of Rates 45 Days Later (%)**

Days	LIBOR	EURIBOR	HIBOR
90	2.21	2.94	1.95
180	2.62	3.03	2.45
270	3.73	3.08	2.70
360	4.92	4.15	3.85

Note: LIBOR is the London Interbank Offer rate. EURIBOR is Euro Interbank Offer Rate. HIBOR is the Hong Kong Interbank Offer rate. All rates shown are annualized.

- 
7. Using data in Exhibit 1, the annualized fixed rate of the swap recommended by Whitney for Novatel is *closest* to:

- A. 2.22%
- B. 3.36%
- C. 5.15%

Answer = B

"Swap Markets and Contracts," Don M. Chance  
2011 Modular Level II, Vol. 6, pp. 265-267  
Study Session 17-63-c

Calculate and interpret the fixed rate on a plain vanilla interest rate swap and the market value of the swap during its life.

By accessing this mock exam, you agree to the following terms of use: This mock exam is provided to currently-registered CFA candidates. Candidates may view and print the exam for personal exam preparation only. The following activities are strictly prohibited and may result in disciplinary and/or legal action: accessing or permitting access by anyone other than currently-registered CFA candidates; copying, posting to any website, emailing, distributing and/or reprinting the mock exam for any purpose



B is correct. The appropriate present value factors are provided below:

Bo(90)	0.9965
Bo(180)	0.9909
Bo(270)	0.9844
Bo(360)	0.9669

For example,  $B_0(90)$  is calculated as:

$$\frac{1}{1 + 0.0142 \times \left(\frac{90}{360}\right)} = 0.9965$$

Other present value factors are calculated in a similar manner.

The fixed rate is calculated as follows:

$$\frac{1.0 - B_0(h_n)}{\sum_{j=1}^n B_0(h_j)} = 0.0084$$

$$\frac{1.0 - 0.9669}{0.9965 + 0.9909 + 0.9844 + 0.9669} = 0.0084$$

The annualized rate =  $0.0084 \times 4 = 0.0336$

8. Using data in Exhibit 2, the market value of Novatel's swap after 45 days is *closest* to:

- A. -\$2,875,000
- B. -\$2,250,000
- C. -\$718,750

Answer = B

"Swap Markets and Contracts," Don M. Chance

2011 Modular Level II, Vol. 6, pp. 267-269

Study Session 17-63-c

Calculate and interpret the fixed rate on a plain vanilla interest rate swap and the market value of the swap during its life.

B is correct. Per \$1 of notional principal the present value of the fixed payments

=  $(0.0084) \times (0.9972 + 0.9903 + 0.9772 + 0.9587) + (1 \times 0.9587) = 0.9917$ . Note that the payments now occur in 45, 135, 225 and 315 days.

Per \$1 the present value of the floating payments = present value of first floating payment + the present value of future floating payments

=  $((.0142 \times 90/360) + 1) \times (0.9972) = 1.0007$

The market value of the pay floating receive fixed rate swap =  $\$250,000,000 \times (0.9917 - 1.0007)$   
= -\$2,250,000

By accessing this mock exam, you agree to the following terms of use: This mock exam is provided to currently-registered CFA candidates. Candidates may view and print the exam for personal exam preparation only. The following activities are strictly prohibited and may result in disciplinary and/or legal action: accessing or permitting access by anyone other than currently-registered CFA candidates; copying, posting to any website, emailing, distributing and/or reprinting the mock exam for any purpose



9. With regard to the recommendations for the termination of Novatel's swap position, Whitney is *least likely* correct with respect to:

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

Answer = C

"Swap Markets and Contracts," Don M. Chance

2011 Modular Level II, Vol. 6, pp. 283,293

Study Session 17-63-f

Explain and interpret the characteristics and uses of swaptions, including the difference between payor and receiver swaptions.

C is correct. A receiver swaption cannot be used to terminate a pay floating receive fixed swap.

10. Using data in Exhibit 2, the market value of Grand Manufacturing's swap after 45 days is *closest* to:

- A. HK\$1,313,300
- B. HK\$35,402,000
- C. HK\$36,500,000

Answer = B

"Swap Markets and Contracts," Don M. Chance

2011 Modular Level II, Vol. 6, pp. 270-275

Study Session 17-63-d

Calculate and interpret the fixed rate, if applicable, and the foreign notional principal for a given domestic notional principal on a currency swap, and determine the market values of each of the different types of currency swaps during their lives.

B is correct. Initially, Grand receives €25,000,000 and pays HK\$285,500,000 based on the current exchange rate of HK\$11.42 per euro. We are told that Grand will pay an interest rate of 2.32% on the euro and receive 1.84% on the Hong Kong dollar.

Forty five days into the swap:

Per HK\$1 of notional principal the present value of the fixed payments received on the Hong dollar

$$= (0.0046) \times (0.9976 + 0.9909 + 0.9834 + 0.9674) + (1 \times 0.9674) = 0.9855$$

By accessing this mock exam, you agree to the following terms of use: This mock exam is provided to currently-registered CFA candidates. Candidates may view and print the exam for personal exam preparation only. The following activities are strictly prohibited and may result in disciplinary and/or legal action: accessing or permitting access by anyone other than currently-registered CFA candidates; copying, posting to any website, emailing, distributing and/or reprinting the mock exam for any purpose



Per €1 of notional principal the present value of the fixed payments paid on the euro  
=  $(0.0058) \times (0.9963 + 0.9888 + 0.9811 + 0.9650) + (1 \times 0.9650) = 0.9878$

Note that based on the exchange rate of HK\$11.42 the actual notional principal =  $1 \div 11.42 =$   
€0.08757

The present value of euro fixed payments =  $0.9878 \times 0.08757 = 0.08649$

The present value of euro fixed payments in HK\$ =  $0.08649 \times 9.96 = 0.8615$

The market value of the swap =  $285,500,000 \times (0.9855 - 0.8615) = \text{HK\$}35,402,000$

11. Using data in Exhibit 2, the market value of KPS Financial Services' swap after 45 days is *closest* to:

- A. -\$4,372,000
- B. -\$2,232,000
- C. -\$2,162,000

Answer = B

"Swap Markets and Contracts," Don M. Chance  
2011 Modular Level II, Vol. 6, pp. 275-280

Study Session 17-63-e

Calculate and interpret the fixed rate, if applicable, on an equity swap and the market values of the different types of equity swaps during their lives.

B is correct. The market value of the swap per \$ notional principal = value of \$1 investment in equity - present value of floating payment.

Value of \$1 investment in equity =  $905 \div 925 = 0.97838$

Per \$1 the present value of the floating payments = present value of first floating payment + the present value of future floating payments

=  $((.0142 \times 90/360) + 1) \times (0.9972) = 1.0007$

Market value of swap =  $(0.97838 - 1.0007) \times \$100,000,000 = -\$2,232,000$

12. At what point in the swap's life is the credit risk with respect to KPS Financial Services' swap position *most likely* the highest?

- A. End
- B. Middle
- C. Beginning

Answer = B

"Swap Markets and Contracts," Don M. Chance

By accessing this mock exam, you agree to the following terms of use: This mock exam is provided to currently-registered CFA candidates. Candidates may view and print the exam for personal exam preparation only. The following activities are strictly prohibited and may result in disciplinary and/or legal action: accessing or permitting access by anyone other than currently-registered CFA candidates; copying, posting to any website, emailing, distributing and/or reprinting the mock exam for any purpose



2011 Modular Level II, Vol. 6, p. 288

Study Session 17-63-i

Evaluate swap credit risk for each party and during the life of the swap, distinguish between current credit risk and potential credit risk, and illustrate how swap credit risk is reduced by both netting and marking to market.

B is correct. Interest rate and equity swaps do not involve an exchange of principal. Therefore, credit risk is greater during the middle of the life of these swaps. KPS Financial has entered into an equity swap, so the credit risk is higher during the middle of its life.

[www.VividBook.org](http://www.VividBook.org)  
[VividBookNet@Gmail.com](mailto:VividBookNet@Gmail.com)

By accessing this mock exam, you agree to the following terms of use: This mock exam is provided to currently-registered CFA candidates. Candidates may view and print the exam for personal exam preparation only. The following activities are strictly prohibited and may result in disciplinary and/or legal action: accessing or permitting access by anyone other than currently-registered CFA candidates; copying, posting to any website, emailing, distributing and/or reprinting the mock exam for any purpose



## Erik Jenkins Case Scenario

---

Erik Jenkins, CFA is Director of Fixed Income Research at Alpha Advisors. Each morning he meets with the firm's key strategists to discuss market conditions and trading strategies. A packet of exhibits is provided at the meeting to facilitate the discussion.

Jenkins asks Jim Jones, the firm's economist to provide his latest view on the direction of interest rates.

Jones responds that he has two scenarios for the direction of interest rates. In the first scenario, he expects interest rates to rise materially over the next six months. In addition, he does not expect the move to be even across the yield curve but rather expects a positive butterfly twist. He notes that under this scenario, some portfolios managed by Alpha may perform poorly based on their current positioning along the yield curve. The key rate duration profiles of these portfolios are presented in Exhibit 1.

**Exhibit 1**  
**Key Rate Duration Profile for Three Treasury Bond Portfolios**

Key Rate	Portfolio A	Portfolio B	Portfolio C
3 months	0.3	0.2	0.9
2 years	0.4	0.2	0.9
5 years	0.4	2.3	1.1
10 years	3.6	0.3	0.9
20 years	0.5	0.3	1.0
30 years	0.4	2.3	0.8

In the second scenario, Jones expects higher volatility and uncertainty to cause a steepening of the yield curve. Under this scenario investors will charge a higher premium for longer maturity issues. Jenkins lists three securities that he is evaluating and asks Jones to indicate the most appropriate approach to assess the relative value of these fixed income securities.

Security A: 3%, non-callable 25 year agency debenture selling at a premium.

Security B: 5%, 10-year corporate bond callable in 3 years, selling at a discount.

Security C: Pool of auto loans of low-quality borrowers with an average coupon 6% and an average maturity of 5 years.

Jenkins tells Jones that, although it depends on the characteristics of each security being valued, he prefers to use the z-spread for most securities.

Jenkins then makes the following statements regarding an alternative valuation measure, the option-adjusted spread or OAS:

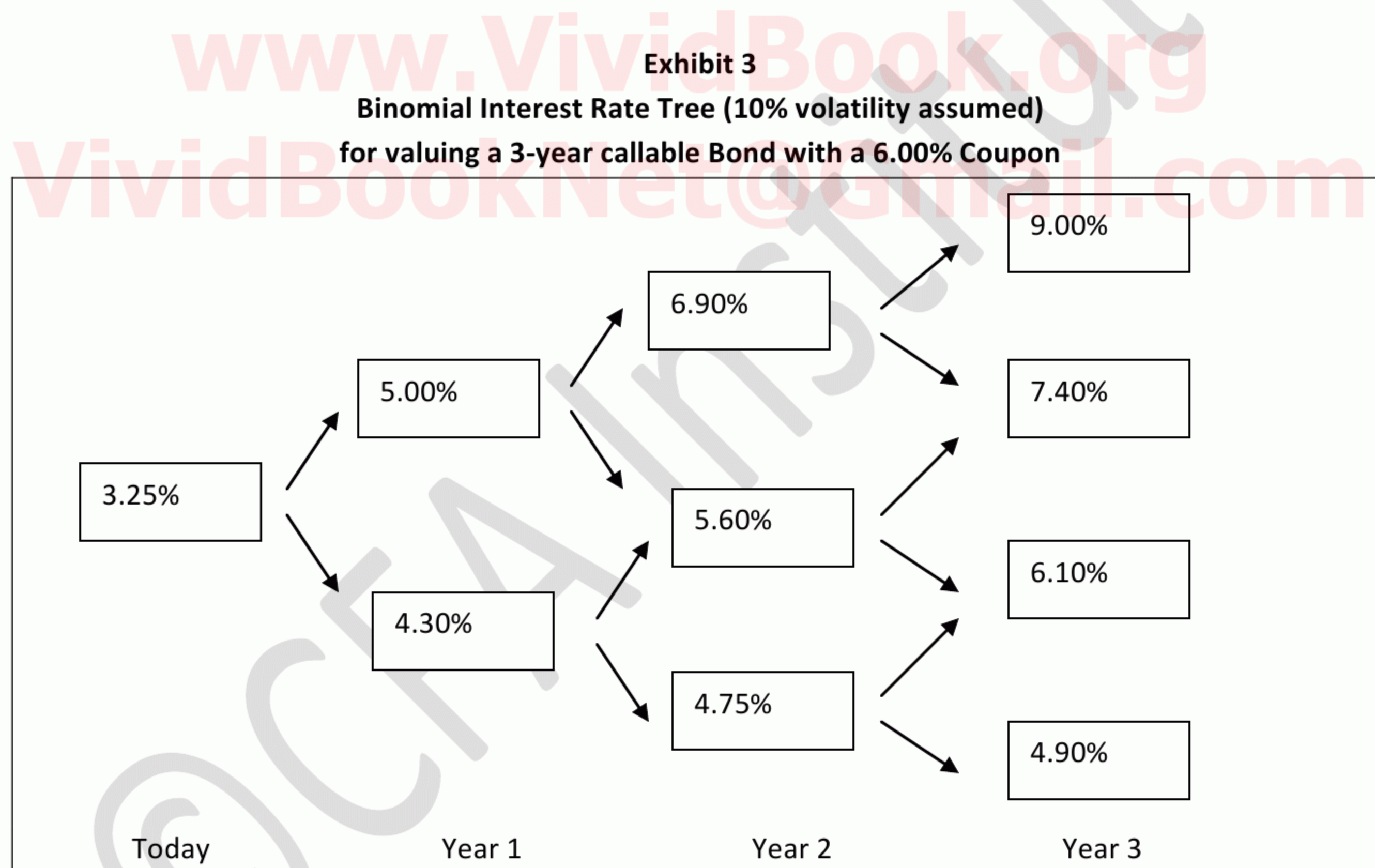
By accessing this mock exam, you agree to the following terms of use: This mock exam is provided to currently-registered CFA candidates. Candidates may view and print the exam for personal exam preparation only. The following activities are strictly prohibited and may result in disciplinary and/or legal action: accessing or permitting access by anyone other than currently-registered CFA candidates; copying, posting to any website, emailing, distributing and/or reprinting the mock exam for any purpose



Statement 1: Monte Carlo simulation can be used to calculate an average option adjusted spread or OAS. The OAS measures the average spread over a Treasury spot rate curve, and not over the Treasury yield.

Statement 2: The OAS represents compensation for credit risk, liquidity risk and modeling risk. Of course, if the security is issued by a government agency, the credit risk component is not relevant in the OAS.

Finally, Ann Gibbons, CFA, Head of Trading, discusses valuations in the corporate bond market. She observes that certain callable bonds may be attractive given Jones' forecast for interest rates. In particular, she will calculate the fair value of a bond issued by Telemoviles, based on the data provided in Exhibit 3. The bond is callable at \$101.00 every year starting one year from today.



Gibbons is also evaluating a convertible bond issued by Autopart Corp. that is currently trading at \$1,125.00 and converts into 26.75 common shares. The common stock currently trades at \$31.75. She estimates that the straight value of the bond is \$992.00.

---

By accessing this mock exam, you agree to the following terms of use: This mock exam is provided to currently-registered CFA candidates. Candidates may view and print the exam for personal exam preparation only. The following activities are strictly prohibited and may result in disciplinary and/or legal action: accessing or permitting access by anyone other than currently-registered CFA candidates; copying, posting to any website, emailing, distributing and/or reprinting the mock exam for any purpose



13. Which of the portfolios in Exhibit 1 is *most likely* to perform the worst if Jones' first interest rate scenario occurs?

- A. Portfolio A.
- B. Portfolio B.
- C. Portfolio C.

Answer = B

"Term Structure and Volatility of Interest Rates," Frank J. Fabozzi, CFA  
2011 Modular Level II, Vol. 5, pp. 229, 246-249

Study Session 14-55-a,f

Illustrate and explain parallel and nonparallel shifts in the yield curve, a yield curve twist, and a change in the curvature of the yield curve (i.e., a butterfly shift);

Compute and interpret the yield curve risk of a security or a portfolio by using key rate duration.

B is correct because in a scenario where interest rates rise in a positive butterfly twist, short and long rates rise by more than intermediate rates. Portfolio B is a barbell portfolio and is expected to underperform because its larger weighting in short and long maturities will underperform intermediate maturities.

14. The theory that *best explains* the term structure of interest rates described in Jones' second scenario is the:

- A. preferred habitat theory.
- B. pure expectations theory.
- C. liquidity preference theory.

Answer = C

"Term Structure and Volatility of Interest Rates," Frank J. Fabozzi, CFA  
2011 Modular Level II, Vol. 5, pp. 238-246

Study Session 14-55-e

Illustrate the theories of the term structure of interest rates (i.e., pure expectations, liquidity, and preferred habitat), and discuss the implications of each for the shape of the yield curve.

C is correct because the liquidity preference theory states that investors will hold longer-term maturities only if they are offered a risk premium and therefore forward rates should reflect both interest rate expectations and a liquidity risk premium.

By accessing this mock exam, you agree to the following terms of use: This mock exam is provided to currently-registered CFA candidates. Candidates may view and print the exam for personal exam preparation only. The following activities are strictly prohibited and may result in disciplinary and/or legal action: accessing or permitting access by anyone other than currently-registered CFA candidates; copying, posting to any website, emailing, distributing and/or reprinting the mock exam for any purpose



15. Jenkins is *least likely* to be **correct** using the z-spread as a valuation approach for?

- A. Security A.
- B. Security B.
- C. Security C.

Answer = B

“Valuing Mortgage-Backed and Asset-Backed Securities,” Frank J. Fabozzi

2011 Modular Level II, Vol. 5, pp. 516-518

Study Session 15-59-i

Determine whether the nominal spread, zero-volatility spread, or option-adjusted spread should be used to evaluate a specific fixed income security.

B is correct because for a bond with an embedded option where the cash flow is not interest rate dependent (such as a callable corporate or agency debenture bond or a puttable bond) the correct approach is the OAS approach.

16. Are Jenkins’ statements describing option-adjusted spreads most likely correct?

- A. Yes.
- B. No, Statement 1 is incorrect.
- C. No, Statement 2 is incorrect.

Answer = A

“Valuing Mortgaged-Backed and Asset Backed Securities,” Frank J. Fabozzi, CFA,

2011 Modular Level II, Vol. 5, pp. 501-502

Study Session 14-59-d

Illustrate how the option-adjusted spread is computed using the Monte Carlo simulation model and how this spread measure is interpreted.

A is correct as both statements are correct. OAS is calculated using a binomial model or a Monte Carlo simulation model. The OAS measures the average spread over the Treasury spot rate curve, not the Treasury yield. It is an average spread since the OAS is found by averaging over the interest rate paths for the possible Treasury spot rate curves. OAS compensates for a combination of credit risk and liquidity risk. The Monte Carlo model uses several critical assumptions and parameters. If those assumptions prove incorrect or if the parameters are misestimated, the prepayment model will not calculate the true level of risk, resulting in modeling risk. If a security is issued by a government agency such as Ginnie Mae, there is no required compensation for credit risk and this will be reflected in the OAS level.

By accessing this mock exam, you agree to the following terms of use: This mock exam is provided to currently-registered CFA candidates. Candidates may view and print the exam for personal exam preparation only. The following activities are strictly prohibited and may result in disciplinary and/or legal action: accessing or permitting access by anyone other than currently-registered CFA candidates; copying, posting to any website, emailing, distributing and/or reprinting the mock exam for any purpose



17. Based on Exhibit 3 and other information provided about Telemoviles' callable bond the current value is *closest* to:

- A. \$100.82.
- B. \$103.50.
- C. \$104.17.

Answer = B

"Valuing Bonds with Embedded Options," Frank J. Fabozzi, CFA,  
2011 Modular Level II, Vol. 5, pp. 298-301  
Study Session 14-56-d

Compute the value of a callable bond from an interest rate tree.

B is correct because the prices are calculated from the tree but replacing any resulting price above 101 by 101 before calculating the next node. The resulting calculation is provided in the tree below.

		99.158 (a)
	100.732 (d)	
103.502 (f)		100.379 (b)
	101.000 (e)	
		101.000 (c)

The calculations are as follows:

$$\begin{aligned}
 & \text{(a) } \frac{106.00}{1.069} = 99.158; \text{ (b) } \frac{106.00}{1.056} = 100.379; \text{ (c) } \frac{106.00}{1.0475} = 101.19 = 101; \\
 & \text{(d) } \frac{\frac{99.158+6.00}{1.05} + \frac{100.379+6.00}{1.05}}{2} = \frac{201.46}{2} = 100.73; \text{ (e) } \frac{\frac{100.379+6.00}{1.043} + \frac{101.193+6.00}{1.043}}{2} = \frac{204.76}{2} = 102.38 = \\
 & 101; \\
 & \text{(f) } \frac{\frac{100.732+6.00}{1.0325} + \frac{101.000+6.00}{1.0325}}{2} = \frac{207.00}{2} = 103.502
 \end{aligned}$$

18. The market conversion premium ratio for Autopart Corp is *closest* to:

- A. 13.4%.
- B. 24.5%.
- C. 32.4%.

Answer = C

By accessing this mock exam, you agree to the following terms of use: This mock exam is provided to currently-registered CFA candidates. Candidates may view and print the exam for personal exam preparation only. The following activities are strictly prohibited and may result in disciplinary and/or legal action: accessing or permitting access by anyone other than currently-registered CFA candidates; copying, posting to any website, emailing, distributing and/or reprinting the mock exam for any purpose



“Valuing Bonds with Embedded Options,” Frank J. Fabozzi, CFA,  
2011 Modular Level II, Vol. 5, pp. 316-317

Study Session 14-56-j

Describe and evaluate a convertible bond and its various component values.

C is correct as shown in the following three-step calculation:

- 1) Market conversion price =  $\frac{\$1,125.00}{26.75} = \$42.05$
- 2) Market conversion premium per share =  $\$42.05 - \$31.75 = \$10.30$
- 3) Market conversion premium ratio =  $\frac{\$10.30}{\$31.75} = 32.4\%$

www.VividBook.org  
VividBookNet@Gmail.com

By accessing this mock exam, you agree to the following terms of use: This mock exam is provided to currently-registered CFA candidates. Candidates may view and print the exam for personal exam preparation only. The following activities are strictly prohibited and may result in disciplinary and/or legal action: accessing or permitting access by anyone other than currently-registered CFA candidates; copying, posting to any website, emailing, distributing and/or reprinting the mock exam for any purpose



## Mary Marconi Case Scenario

---

Mary Marconi is a senior portfolio manager for a U.S.-based investment management firm. Marconi is training two newly hired assistant portfolio managers, Yipeng Liu and Michael Mensah. Marconi indicates that the training session will focus on the evaluation of international securities, the use of the international capital asset pricing model, and management of currency risk.

Marconi presents the data in Exhibit 1 to help illustrate various concepts in international asset pricing.

### Exhibit 1

#### Summary Data for the U.S. and U.K.

U.S. expected inflation over the next year	4.75%
U.K. expected inflation over the next year	1.25%
Current exchange rate (\$/£)	1.724
Risk-free U.S. bond one-year yield	6.50%
Risk-free U.K. bond one-year yield	2.35%
Ratio of U.S. Price Level/U.K. Price Level	1.5:1

Liu begins by stating, “The domestic capital asset pricing model (CAPM) is a useful tool for analyzing the risk-return relationship for securities. I understand that the domestic CAPM can be extended to the international context provided that we make the following additional assumptions:

1. Investors worldwide have identical consumption baskets.
2. Nominal prices of consumption goods are identical in every country.

Marconi responds: “A major problem with this extended CAPM is that it does not account for real foreign currency risk. It would be more appropriate to use an international CAPM. ”

Mensah asks: “How will exchange rate changes impact the dollar returns of a U.S. investor’s investment in U.K. securities?”

Responding to Mensah, Marconi states, “Currency movements can have a significant impact on returns in dollars. For example, if there is 2% appreciation of the pound, a U.S. investor invested in a U.K. security would realize a 2% gain in U.S. dollar terms.

Marconi then poses the following question to Mensah and Liu:

“Assume that you are evaluating a company based in the U.S. that prices its products in U.K. pounds but incurs costs in U.S. dollars. Assuming prices and market share remain the same, if the U.S. dollar appreciates in real terms, versus the U.K. pound, how will the company’s share price be impacted?”



19. Are the assumptions of the extended domestic capital asset pricing model listed by Liu correct?

- A. Yes.
- B. No, assumption 1 is incorrect.
- C. No, assumption 2 is incorrect.

Answer = C

“International Asset Pricing,” Bruno Solnik and Dennis McLeavey

2011 Modular Level II, Vol. 6, pp. 488-489

Study Session 18-68-d

Justify the extension of the domestic CAPM to an international context (the extended CAPM) and discuss the assumptions needed to make the extension.

C is correct. Assumption 2 is incorrect. Extending the domestic CAPM to the international context requires the assumption that *real* prices of consumption goods are identical in every country.

20. Based on the data in Exhibit 1, assuming that inflation is as predicted and the real exchange rate remains constant, the expected nominal exchange rate (in \$/£) at the end of one year is *closest* to:

- A. \$1.666
- B. \$1.784
- C. \$1.836

Answer = B

“International Asset Pricing,” Bruno Solnik and Dennis McLeavey

2011 Modular Level II, Vol. 6, pp. 489-491

Study Session 18-68-f

Calculate the expected 1) exchange rate and 2) domestic-currency holding period return on a foreign bond (security).

B is correct.

The current real rate (X) is calculated as follows

$$S \times P_{UK}/P_{US} = 1.724 \times 1/1.5 = 1.149$$

The expected future exchange rate =  $E(X) \times E(P_{US})/E(P_{UK}) =$

$$1.149 \times (1.5 \times 1.0475)/(1 \times 1.0125) = 1.784$$

By accessing this mock exam, you agree to the following terms of use: This mock exam is provided to currently-registered CFA candidates. Candidates may view and print the exam for personal exam preparation only. The following activities are strictly prohibited and may result in disciplinary and/or legal action: accessing or permitting access by anyone other than currently-registered CFA candidates; copying, posting to any website, emailing, distributing and/or reprinting the mock exam for any purpose



21. Based on the data in Exhibit 1, assuming inflation is as predicted and the actual exchange rate at the end of the year is \$1.587 per pound, the ex-post dollar return on a one-year U.K bond is *closest* to:

- A. -4.54%
- B. -5.79%
- C. -9.29%

Answer = B

“International Asset Pricing,” Bruno Solnik and Dennis McLeavey  
2011 Modular Level II, Vol. 6, pp. 487-488, 490-491

Study Session 18-68-g

Calculate the end-of-period real exchange rate and the domestic-currency *ex-post* return on a foreign bond (security).

B is correct.  $R_{US} = R_{UK} + s + s \times R_{UK} = 0.0235 + (-0.0795) + (0.0235 \times (-0.0795)) = -0.0579$

Where,  $s = (1.587 - 1.724) \div 1.724 = -0.07947$

22. Based on the data in Exhibit 1, if the expected exchange rate at the end of one year is \$1.820 per pound, the foreign currency risk premium is *closest* to:

- A. 1.42%
- B. 4.15%
- C. 5.57%

Answer = A

“International Asset Pricing,” Bruno Solnik and Dennis McLeavey  
2011 Modular Level II, Vol. 6, pp. 491-494

Study Session 18-68-h

Calculate a foreign currency risk premium, and explain a foreign currency risk premium in terms of interest rate differentials and forward rates.

A is correct. The foreign currency risk premium (SRP) can be calculated as the expected movement in the exchange rate minus the difference between the domestic and foreign risk free rate.

$SRP = E[(S_1 - S_0)/S_0] - (r_{US} - r_{UK}) = (1.820 - 1.724)/1.724 - (0.065 - 0.0235) = 0.142$  or 1.42%

By accessing this mock exam, you agree to the following terms of use: This mock exam is provided to currently-registered CFA candidates. Candidates may view and print the exam for personal exam preparation only. The following activities are strictly prohibited and may result in disciplinary and/or legal action: accessing or permitting access by anyone other than currently-registered CFA candidates; copying, posting to any website, emailing, distributing and/or reprinting the mock exam for any purpose



23. The example Marconi provides in response to Mensah's question on currency movements would be *most* accurate if the correlation between U.K. security returns (in pounds) and exchange rate movements is equal to:

- A. -1
- B. 0
- C. 1

Answer = B

"International Asset Pricing," Bruno Solnik and Dennis McLeavey

2011 Modular Level II, Vol. 6, pp. 502-504

Study Session 18-68-k

Define currency exposure, and explain exposures in terms of correlations.

B is correct.

$\gamma$  = currency exposure of U.S. asset (domestic)

$\gamma^{FC}$  = currency exposure of U.K asset (foreign)

$$\gamma = \gamma^{FC} + 1$$

If the correlation between returns on a U.K. asset measured in pounds (local currency return) and exchange rate movements ( $s$ ) is zero, that is  $\gamma^{FC} = 0$ , then  $\gamma = 1$ . That is, the correlation between returns on the U.K. asset measured in dollars (domestic currency return) and exchange rate movements is 1. So, when the pound appreciates by 2%, if the correlation between returns on a U.K. asset measured in pounds (local currency return) and the exchange rate movements is zero, then the U.S. investor gains 2% in U.S. dollar terms.

24. The *most* appropriate response to the question posed by Marconi is that the company's share price will likely:

- A. increase.
- B. decrease.
- C. remain unchanged.

Answer = B

"International Asset Pricing," Bruno Solnik and Dennis McLeavey

2011 Modular Level II, Vol. 6, pp. 504-506

Study Session 18-68-l

Discuss the likely exchange rate exposure of a company based on a description of the company's activities, and explain the impact of both real and nominal exchange rate changes on the valuation of the company.

By accessing this mock exam, you agree to the following terms of use: This mock exam is provided to currently-registered CFA candidates. Candidates may view and print the exam for personal exam preparation only. The following activities are strictly prohibited and may result in disciplinary and/or legal action: accessing or permitting access by anyone other than currently-registered CFA candidates; copying, posting to any website, emailing, distributing and/or reprinting the mock exam for any purpose

B is correct. Share prices will most likely decrease. Revenues are earned in U.K. pounds and costs are incurred in U.S. dollars. As the dollar appreciates, revenues that are earned in pounds are now worth less when converted to dollars. Input costs are denominated in dollars so they will remain unchanged. Earnings will decline and therefore share prices can also be expected to decline.

[www.VividBook.org](http://www.VividBook.org)  
[VividBookNet@Gmail.com](mailto:VividBookNet@Gmail.com)

By accessing this mock exam, you agree to the following terms of use: This mock exam is provided to currently-registered CFA candidates. Candidates may view and print the exam for personal exam preparation only. The following activities are strictly prohibited and may result in disciplinary and/or legal action: accessing or permitting access by anyone other than currently-registered CFA candidates; copying, posting to any website, emailing, distributing and/or reprinting the mock exam for any purpose



## Strong Family Corporation Case Scenario

---

The Strong Family Corporation's portfolio allocation to alternative investments consists of Real Estate and Private Equity. The primary purpose of the Real Estate allocation is to produce high current cash flows, rather than long-term capital gains. The Private Equity allocation is intended to produce capital gains over the long term.

Kathryn Reed, CFA, Strong's portfolio manager, is considering three properties to add to the Real Estate portfolio. After careful analysis of Property A, she has estimated the after-tax cash flows shown in Exhibit 1. Property A is available for \$6.39 million. Investment in the property would be 100% equity, and Strong's effective marginal tax rate is 26%.

**Exhibit 1**  
**Property A Estimated After-Tax Cash Flows**

Year	After-Tax Cash Flow (\$millions)
1	0.26
2	0.44
3	0.74
4	0.91
5	6.11

Reed's analysis of Property B includes an assessment of its eventual sale. Details of this analysis are provided in Exhibit 2.

**Exhibit 2**  
**Information Regarding the Sale of Property B in Year 10**

Purchase price	\$4,570,000
Expected net selling price	\$7,760,500
Expected gain on sale	\$4,710,500
Accumulated depreciation	\$1,520,000
Mortgage balance outstanding	\$1,140,000
Taxes on depreciation recapture	25%
Taxes on capital gains	20%

Reed is also analyzing Property C. The acquisition cost of this property is \$2.3 million. If purchased, 55% of the purchase price will be borrowed at 9.0% through an amortizing mortgage with a 25-year term and monthly compounding. The remaining funds will come from an equity investment. The Strong portfolio's required return for equity investment in properties of this type is 14.5%.

By accessing this mock exam, you agree to the following terms of use: This mock exam is provided to currently-registered CFA candidates. Candidates may view and print the exam for personal exam preparation only. The following activities are strictly prohibited and may result in disciplinary and/or legal action: accessing or permitting access by anyone other than currently-registered CFA candidates; copying, posting to any website, emailing, distributing and/or reprinting the mock exam for any purpose



On the private equity side, Reed is considering an investment in Pegasus Technology b (PTb), a new U.S.-based private equity fund which will acquire firms in the aerospace industry and is currently being formed by Pegasus Technology Options (PTO). While reviewing its prospectus, she learns that PTb will reorganize each company it acquires so that a future acquirer cannot take control without extending a purchase offer to all shareholders, including current management. In a phone conversation with the general partner, he refers to this as a “no-fault divorce” clause.

The PTb prospectus provides performance information for Pegasus Technology a (PTa), PTO’s first aerospace fund, which has the same general partner as PTb. PTa’s committed capital is \$100 million. The fund’s yearly capital calls, operating results, and distributions are shown in Exhibit 3. Its fees consist of a 2.0% management fee and carried interest of 20%.

**Exhibit 3**

**PTa’s Capital Calls, Operating Results, and Distributions (\$ millions)**

	2004	2005	2006	2007	2008
Called-down	40	20	15	15	10
Realized results	0	0	10	25	35
Unrealized results	-10	-5	20	10	25
Distributions	0	0	0	25	40

25. Given the stated purpose of its Real Estate allocation, in which of these property types is the Strong portfolio *most likely* to invest?

- A. Warehouses
- B. Office buildings
- C. Hotels and motels

Answer = A

“Investment Analysis,” James D. Shilling

2011 Modular Level II, Vol. 5, pp.12-16

Study Session 13-47-a

Illustrate, for each type of real property investment, the main value determinants, investment characteristics, principal risks, and most likely investors.

A is correct because warehouses typically provide less price appreciation and therefore offer higher cash flows relative to the level of investment than other property types.

By accessing this mock exam, you agree to the following terms of use: This mock exam is provided to currently-registered CFA candidates. Candidates may view and print the exam for personal exam preparation only. The following activities are strictly prohibited and may result in disciplinary and/or legal action: accessing or permitting access by anyone other than currently-registered CFA candidates; copying, posting to any website, emailing, distributing and/or reprinting the mock exam for any purpose



26. The after-tax return for Property A in the Strong portfolio is *closest* to:

- A. 4.87%.
- B. 5.77%.
- C. 6.58%.

Answer = C

“Investment Analysis,” James D. Shilling

2011 Modular Level II, Vol. 5, pp.22-23

Study Session 13-47-b

Evaluate a real estate investment using net present value (NPV) and internal rate of return (IRR) from the perspective of an equity investor.

C is correct because the after-tax return is the discount rate that equates the price of the property (\$6.39) with its future expected after-tax cash flows (\$0.26, \$0.44, \$0.74, \$0.91, and \$6.11), all values in millions, or

$$\$6.39 = \frac{\$0.26}{(1 + atr)^1} + \frac{\$0.44}{(1 + atr)^2} + \frac{\$0.74}{(1 + atr)^3} + \frac{\$0.91}{(1 + atr)^4} + \frac{\$6.11}{(1 + atr)^5}$$

Using a financial calculator to find this after-tax return using its built-in IRR function provides 6.58%.

27. According to Reed’s analysis, the after-tax equity reversion of Property B would be *closest* to:

- A. \$1,032,400.
- B. \$5,602,400.
- C. \$6,742,400.

Answer = B

“Investment Analysis,” James D. Shilling

2010 Modular Level II, Vol. 5, pp.20-22

Study Session 13-47-c

Calculate the after-tax cash flow and the after-tax equity reversion from real estate properties.

B is correct because, following Figure 10 on page 21, the after-tax equity reversion is calculated as follows:



Gain on sale	4,710,500
Gain on sale less depreciation recapture	3,190,500
Tax on capital gain @20%	638,100
Tax on depreciation recapture @25%	380,000
Taxes due on sale	1,018,100
Net sales price	7,760,500
Less outstanding mortgage balance	1,140,000
Less taxes due on sale	1,018,100
After-tax equity reversion	5,602,400

28. Using the band-of-investment method, the capitalization rate for Property C is *closest to*:

- A. 11.48%.
- B. 12.06%.
- C. 13.68%.

Answer = B

“Income Property Analysis and Appraisal,” James D. Shilling

2011 Modular Level II, Vol. 5, pp.35-36

Study Session 13-48-b

Determine the capitalization rate by the market-extraction method, band-of-investment method, and built-up method, and justify each method’s use in capitalization rate determination.

B is correct because to calculate the capitalization rate using the band-of-investment method, one must first determine the mortgage constant which can be found by first calculating the monthly annuity payment on \$1 principal for the mortgage rate and term (300 payments, \$1 present value, 9%/12 monthly rate implies a monthly payment of 0.008392) and multiplying by 12 ( $12 \times 0.008392 = 0.1007$  or 10.07%). The capitalization rate is the weighted-average of the mortgage constant and the required equity return, or  $(0.55 \times 10.07\%) + (0.45 \times 14.5\%) = 12.06\%$

29. PTb’s general partner’s description of the provision in the prospectus as a “no-fault divorce” clause is:

- A. correct.
- B. incorrect, because it is a “co-investment” clause.
- C. incorrect, because it is a “tag along, drag along rights” clause.

By accessing this mock exam, you agree to the following terms of use: This mock exam is provided to currently-registered CFA candidates. Candidates may view and print the exam for personal exam preparation only. The following activities are strictly prohibited and may result in disciplinary and/or legal action: accessing or permitting access by anyone other than currently-registered CFA candidates; copying, posting to any website, emailing, distributing and/or reprinting the mock exam for any purpose



Answer = C

“Private Equity Valuation,” Yves Courtois, CFA and Tim Jenkinson

2011 Modular Level II, Vol. 5, pp.64-68

Study Session 13-49-f

Explain private equity fund structures, terms, valuation, and due diligence in the context of an analysis of private equity fund returns.

C is correct because a “tag along, drag along rights” clause requires a future acquirer to make an offer for all shares before taking control.

30. In 2006, the carried interest earned by the general partner of PTa was *closest* to:

A. \$0.0 million.

B. \$2.3 million.

C. \$3.0 million.

Answer = A

“Private Equity Valuation,” Yves Courtois, CFA and Tim Jenkinson

2011 Modular Level II, Vol. 5, pp.75-76

Study Session 13-49-i

Calculate management fees, carried interest, net asset value, distributed to paid in (DPI), residual value to paid in (RVPI), and total value to paid in (TYPI) of a private equity fund.

A is correct because in 2006 the NAV before distributions was \$86.5 million, which is less than the committed capital (\$100 million), therefore no carried interest is earned. See below table for results.

Year	Called-down	Paid-in Capital	Mgmt Fees	Operating Results	NAV before Distributions	Carried Interest	Distributions	NAV after Distributions
2004	40	40	0.8	-10	29.2			29.2
2005	20	60	1.2	-5	43.0			43.0
2006	15	75	1.5	30	86.5			76.5

By accessing this mock exam, you agree to the following terms of use: This mock exam is provided to currently-registered CFA candidates. Candidates may view and print the exam for personal exam preparation only. The following activities are strictly prohibited and may result in disciplinary and/or legal action: accessing or permitting access by anyone other than currently-registered CFA candidates; copying, posting to any website, emailing, distributing and/or reprinting the mock exam for any purpose

## Eduardo DeMolay Case Scenario

---

Eduardo DeMolay, a research analyst at Mumbai Securities, is studying the time series behavior of price/earnings (P/E) ratios computed with trailing 12-month earnings ( $E_{\text{trailing}}$ ). He and his assistant, Deepa Kamini, are reviewing the results of the ordinary least squares time series regression shown in Exhibit 1.

### Exhibit 1

#### Results of regression of P/E on lagged P/E.

$$P/E_t = b_0 + b_1 P/E_{t-1} + \epsilon_t$$

	Coefficient	Std. Error	t	Significance of t
Constant ( $b_0$ )	0.143	0.153	0.935	0.176
Lagged P/E ( $b_1$ )	0.991	0.003	292.958	0.000

R Square	Std. Error of the Estimate	Durbin-Watson	F	Significance of F
0.982	0.7428	1.200	85,825.180	0.000

Upon reviewing the results of Exhibit 1, DeMolay states: "The value for  $b_0$  is close to zero and the value of  $b_1$  is close to one. Those values suggest that the time series is a random walk."

Kamini replies: "I'm convinced the P/E series based on trailing earnings truly is a random walk."

Kamini and DeMolay next examine the behavior of P/E ratios calculated using forward 12-month earnings ( $E_{\text{forward}}$ ). Kamini estimates another AR(1) model, but this time using the forward P/E values. She denotes the errors from this second regression as  $\eta_t$  and Exhibit 2 shows the results of testing whether the errors are ARCH(1).



## Exhibit 2

Results of regression of squared residuals,  $\eta_t^2$ , on lagged squared residuals,  $\eta_{t-1}^2$

$$\eta_t^2 = c_0 + c_1 \eta_{t-1}^2 + u_t$$

	Coefficient	Std. Error	t	Significance of t
Constant ( $c_0$ )	0.339	0.039	8.768	0.000
Lag 1 ( $c_1$ )	0.273	0.024	11.405	0.000

R Square	Std. Error of the Estimate	Durbin-Watson	F	Significance of F
0.075	1.48978	2.094	130.066	0.000

After further discussion, DeMolay suggests that he and Kamini incorporate more variables into the analysis. He suggests they use a variation of the Fed Model, in which the Earnings/Price (E/P) ratio is regressed on long-term interest rates.

DeMolay cautions Kamini, "Remember that when we analyze two time series in regression analysis, we need to ensure that:

- (1) neither the dependent variable series nor the independent variable series has a unit root, or that
- (2) both series have a unit root and are not cointegrated.

Unless condition (1) or condition (2) hold, we cannot rely on the validity of the estimated regression coefficients."

---

31. DeMolay's statement that the coefficients depicted in Exhibit 1 are consistent with a random walk is *most likely*:

- A. correct.
- B. incorrect because  $b_0$  should be close to one.
- C. incorrect because  $b_1$  should be close to zero.

Answer = A

"Time-Series Analysis," Richard A. Defusco, CFA, Dennis W. McLeavey, CFA, Jerald E. Pinto, CFA,

By accessing this mock exam, you agree to the following terms of use: This mock exam is provided to currently-registered CFA candidates. Candidates may view and print the exam for personal exam preparation only. The following activities are strictly prohibited and may result in disciplinary and/or legal action: accessing or permitting access by anyone other than currently-registered CFA candidates; copying, posting to any website, emailing, distributing and/or reprinting the mock exam for any purpose



and David E. Runkle, CFA  
2011 Modular Level II, Vol. 1, pp. 466-468  
Study Session 3-13-i

Describe the characteristics of random walk processes and contrast them to covariance stationary processes.

When modeled using a first-order autoregressive (AR(1)) model, as in the formula given in Exhibit 1, random walks will have an estimated intercept coefficient near zero and an estimated slope coefficient on the first lag near one. Therefore his statement is correct.

32. If Kamini is correct regarding the trailing P/E time-series, the best forecast of next period's trailing P/E is *most likely* to be the:

- A. current period's trailing P/E.
- B. average P/E ratio of the time-series.
- C. forecast derived from applying the AR(1) model depicted in Exhibit 1 to the data.

Answer = A

"Time-Series Analysis," Richard A. Defusco, CFA, Dennis W. McLeavey, CFA, Jerald E. Pinto, CFA, and David E. Runkle, CFA

2011 Modular Level II, Vol. 1, p. 466

Study Session 3-13-i

Describe the characteristics of random walk processes and contrast them to covariance stationary processes.

If a time-series is a random walk, "the best forecast of  $x_t$  that can be made in period  $t - 1$  is  $x_{t-1}$ ." (p. 466). So the best forecast of the next period's trailing P/E is the current period's trailing P/E.

33. The results depicted in Exhibit 2 are *best* described as consistent with a regression that has ARCH(1) errors because:

- A.  $c_0$  is significantly different from 0.
- B.  $c_1$  is significantly different from 0.
- C.  $c_1$  is significantly different from 1.

Answer = B

"Time-Series Analysis," Richard A. Defusco, CFA, Dennis W. McLeavey, CFA, Jerald E. Pinto, CFA, and David E. Runkle, CFA

2011 Modular Level II, Vol. 1, p. 486

Study Session 3-13-m

Explain autoregressive conditional heteroskedasticity (ARCH) and discuss how ARCH models can be applied to predict the variance of a time series.

By accessing this mock exam, you agree to the following terms of use: This mock exam is provided to currently-registered CFA candidates. Candidates may view and print the exam for personal exam preparation only. The following activities are strictly prohibited and may result in disciplinary and/or legal action: accessing or permitting access by anyone other than currently-registered CFA candidates; copying, posting to any website, emailing, distributing and/or reprinting the mock exam for any purpose



We can test whether a time-series is ARCH by regressing the squared residuals from a previously estimated time-series model on a constant and one lag of the squared residuals (as in Exhibit 2). If the estimate of the slope ( $c_1$  in Exhibit 2) of the regression of the squared residuals on the lagged one period squared residuals is statistically significantly different from zero, the time series is ARCH(1).

34. Based on the results depicted in Exhibit 2 DeMolay and Kamini should *most likely*:

- A. model the forward P/E data using an AR(1) model.
- B. model the forward P/E data using a random walk model.
- C. model the forward P/E data using a generalized least squares model.

Answer = C

“Time-Series Analysis,” Richard A. Defusco, CFA, Dennis W. McLeavey, CFA, Jerald E. Pinto, CFA, and David E. Runkle, CFA

2011 Modular Level II, Vol. 1, p. 488

Study Session 3-13-m, o

Explain autoregressive conditional heteroskedasticity (ARCH) and discuss how ARCH models can be applied to predict the variance of a time series.

Select and justify the choice of a particular time-series model from a group of models.

“First, if ARCH exists, the standard errors for the regression parameters will not be correct. In case ARCH exists, we will need to use generalized least squares ...” (p.488)

35. DeMolay’s caution given in condition (1) is *best* described as:

- A. correct.
- B. incorrect because only the dependent variable series needs to be tested for the absence of a unit root.
- C. incorrect because only the independent variable series needs to be tested for the absence of a unit root.

Answer = A

“Time-Series Analysis,” Richard A. Defusco, CFA, Dennis W. McLeavey, CFA, Jerald E. Pinto, CFA, and David E. Runkle, CFA

2011 Modular Level II, Vol. 1, pp. 489-490

Study Session 3-13-n

Explain how time series variables should be analyzed for nonstationarity and/or cointegration before use in a linear regression.

When working with two time series in a regression analysis, both of the series must be tested for the presence of a unit root. If neither series has a unit root, we can safely use linear regression.

By accessing this mock exam, you agree to the following terms of use: This mock exam is provided to currently-registered CFA candidates. Candidates may view and print the exam for personal exam preparation only. The following activities are strictly prohibited and may result in disciplinary and/or legal action: accessing or permitting access by anyone other than currently-registered CFA candidates; copying, posting to any website, emailing, distributing and/or reprinting the mock exam for any purpose

36. DeMolay's caution given in condition (2) is *best* described as:

- A. correct.
- B. incorrect because the regression results are valid whether cointegration exists or does not exist.
- C. incorrect because if both series have unit roots, they must exhibit cointegration for the results of the regression to be valid.

Answer = C

"Time-Series Analysis," Richard A. Defusco, CFA, Dennis W. McLeavey, CFA, Jerald E. Pinto, CFA, and David E. Runkle, CFA

2011 Modular Level II, Vol. 1, pp. 489-490

Study Session 3-13-n

Explain how time series variables should be analyzed for nonstationarity and/or cointegration before use in a linear regression.

If the two series each have a unit root, regression results will be consistent provided that the two series are cointegrated.

By accessing this mock exam, you agree to the following terms of use: This mock exam is provided to currently-registered CFA candidates. Candidates may view and print the exam for personal exam preparation only. The following activities are strictly prohibited and may result in disciplinary and/or legal action: accessing or permitting access by anyone other than currently-registered CFA candidates; copying, posting to any website, emailing, distributing and/or reprinting the mock exam for any purpose



## Bianca Puglisi Case Scenario

---

Bianca Puglisi, a telecommunications analyst, was recently hired by Goodwood Securities to follow wireless companies. During an internal meeting to discuss the firm's recommendation on Eagle Technologies, a U.S. based manufacturer of handheld devices, Senior Portfolio Manager Norbert Fong asks Puglisi to explain her analysis.

Puglisi: After reviewing selected data from Eagle's 2010 financial statements (Exhibit 1), I have some concerns about the company's operating performance.

- I think a better representation of operating income before tax would be to expense all software development costs, as is the norm in the industry, and deduct depreciation and amortization expense.
- I have calculated the ratio of cash from operations before interest and taxes to operating income over the past three years as follows:

2010: 1.17

2009: 1.30

2008: 1.50

- I want to complete my analysis by determining the cash-flow-statement-based aggregate accruals.

These issues, as well as information gathered from the Management's Discussion and Analysis section (Exhibit 2) of Eagle's 2010 annual report makes me question the sustainability of the company's stream of earnings and operating cash flow, as well as their quality of earnings.

Fong: I don't understand your concerns. Two of the metrics I would use, Eagle's profitability and cash flow from operating activities, have both increased significantly over the 2008-2010 period, why would there be any concern over cash flow sustainability or earnings quality?

**Exhibit 1**  
**Eagle Technologies Inc.**  
**Prepared according to U.S. GAAP**  
**Selected Financial Data**

**For the years ended 31 December 2010, 2009, and 2008 (\$U.S. thousands)**

	<b>2010</b>	<b>2009</b>	<b>2008</b>
Revenues	\$1,127,043	\$1,051,548	\$965,106
Cost of goods sold	609,168	590,000	517,265
Selling, and administrative expenses	411,194	379,770	375,192
Depreciation and amortization	<u>13,196</u>	<u>12,714</u>	<u>9,324</u>
Earnings before interest and taxes	93,485	69,064	63,325
Interest expense	3,510	3,510	3,510
Income taxes	<u>33,723</u>	<u>19,954</u>	<u>23,715</u>
Net Income	<u>\$56,252</u>	<u>\$45,600</u>	<u>\$36,100</u>
Cash flow from operating activities	\$72,247	\$66,437	\$67,553
Cash flow from investing activities	(\$14,975)	\$(14,500)	(\$30,361)
Cash flow from financing activities	<u>(\$81,465)</u>	<u>(\$17,403)</u>	<u>(\$20,440)</u>
Net change in cash	<u>(\$24,193)</u>	<u>\$34,534</u>	<u>\$16,752</u>

By accessing this mock exam, you agree to the following terms of use: This mock exam is provided to currently-registered CFA candidates. Candidates may view and print the exam for personal exam preparation only. The following activities are strictly prohibited and may result in disciplinary and/or legal action: accessing or permitting access by anyone other than currently-registered CFA candidates; copying, posting to any website, emailing, distributing and/or reprinting the mock exam for any purpose



**Exhibit 2**  
**Selected Information from Eagle's 2010 Annual Report**

**MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS**

This discussion summarizes the significant factors affecting the Company's consolidated operating results, liquidity and capital resources during the three year period ended 31 December 2010 (i.e. fiscal years 2010, 2009, and 2008). This discussion should be read in conjunction with the financial statements and financial statement footnotes included in this annual report.

Net income has grown at an annual compound rate of 24.8% over the past two years from \$36.1 million in 2008, to \$45.6 million in 2009, to \$56.3 million in 2010. As a result, cash earnings as reflected by Earnings Before Interest, Taxes, Depreciation, and Amortization (EBITDA) grew at an annual compound rate of 21.2% (from \$72.6 million in 2008 to \$81.8 million in 2009, to \$106.7 million in 2010). Cash flow from Operating Activities grew at annual compound rate of 3.4% (from \$67.6 million in 2008 to \$66.4 million in 2009, to \$72.2 million in 2010).

Commencing in 2009, the Company capitalizes software development costs incurred between the attainment of technological feasibility and completion of development. Capitalized software costs are amortized using the straight-line method over the estimated economic lives of the assets not to exceed five years.

	<b>Software Capitalization (millions)</b>	
	<b>2010</b>	<b>2009</b>
Capitalized development costs	\$9.0	\$6.5
Accumulated amortization	<u>4.5</u>	<u>2.0</u>
Capitalized software, net	\$4.5	\$4.5

These amounts are included in "Computer equipment and software" on the balance sheet. The Company recorded capitalized software amortization of \$2.5 million in 2010.

We capitalize interest on the construction of a new manufacturing plant as an additional cost of the plant. Interest is capitalized at our weighted average interest rate on long-term debt. Interest capitalization ends when the facility is ready for its intended use.

By accessing this mock exam, you agree to the following terms of use: This mock exam is provided to currently-registered CFA candidates. Candidates may view and print the exam for personal exam preparation only. The following activities are strictly prohibited and may result in disciplinary and/or legal action: accessing or permitting access by anyone other than currently-registered CFA candidates; copying, posting to any website, emailing, distributing and/or reprinting the mock exam for any purpose



Interest Costs (millions)			
	2010	2009	2008
Total interest costs incurred	\$3,534	\$3,540	\$3,574
Less amounts capitalized	<u>24</u>	<u>30</u>	<u>64</u>
Interest expense	\$3,510	\$3,510	\$3,510

Revenue for retail packaged products, products licensed to original equipment manufacturers (OEMs), and perpetual licenses is generally recognized as products are shipped with a portion of the revenue recorded as unearned due to the undelivered elements, including free post delivery, telephone support and the right to receive unspecified upgrades and enhancements.

Deferred Revenue (millions)			
	2010	2009	2008
Deferred revenue	\$210.8	\$243.0	\$92.4

In 2008, after lengthy discussions with our primary suppliers, the Company was able to negotiate more advantageous payment terms. As a result, our number of days of payables increased from an average of 22 days in 2008, to 34 days in 2009, and to 45 days (the maximum time according to the negotiated agreement) in 2010.

37. Compared to reported EBIT, Puglisi's operating income for 2010 would *most likely* be:

- A. lower.
- B. higher.
- C. the same.

Answer = C

"Long-lived Assets: Implications For Financial Statements and Ratios" Elaine Henry, CFA and Elizabeth A. Gordon

2010 Modular Level II, Vol. 2 pp. 57, 65-70

"The Lessons We Learn," Pamela P. Peterson, CFA and Frank J. Fabozzi, CFA

By accessing this mock exam, you agree to the following terms of use: This mock exam is provided to currently-registered CFA candidates. Candidates may view and print the exam for personal exam preparation only. The following activities are strictly prohibited and may result in disciplinary and/or legal action: accessing or permitting access by anyone other than currently-registered CFA candidates; copying, posting to any website, emailing, distributing and/or reprinting the mock exam for any purpose



2010 Modular Level II, Vol. 2, pp. 338-340

Study Session 7-22-a, 7-26-a

Discuss the implications for financial statements and ratios of capitalizing versus expensing costs in the period in which they are incurred.

Distinguish among the various definitions of earnings (e.g., EBITDA, operating earnings, net income etc.).

Puglisi's calculates operating income before tax by expensing all software development costs, \$2.5 million in 2010<sup>1</sup>. But amortization expense would be reduced by the amount of software development costs amortized which is also \$2.5 million in 2010<sup>2</sup>. Because these two amounts are the same in 2010, there would be no change in operating income.

<sup>1</sup> The amount of software capitalized is the change in capitalized costs from 2009 to 2010 ( $9.0 - 6.5 = 2.5$ ).

<sup>2</sup> The amount amortized in 2010 is the change in the accumulated amortization from 2009 to 2010 ( $4.5 - 2.0 = 2.5$ ), also given in the MD&A

38. Eagle's cash-flow-statement-based aggregate accruals for 2010 (in \$ thousands) is *closest* to:

- A. -30,970.
- B. -15,995.
- C. -1,020.

Answer = C

"Evaluating Financial Reporting Quality," Scott Richardson and Irem Tuna

2011 Modular Level II, Vol. 2, pp. 368-372

Study Session 7-27-d

Discuss earnings quality and the measures of earnings quality, and compare and contrast the earnings quality of peer companies.

The cash-flow-statement-based aggregate accruals =  $NI - (CFO + CFI)$   
 $= 56,252 - (72,247 + -14,975) = -1,020$

39. In 2009 which of the following accounting policies *most likely* had the largest effect on the increase in Eagle's EBIT?

- A. Interest costs
- B. Deferred revenue
- C. Software development costs

Answer = A

"Long-lived Assets: Implications For Financial Statements and Ratios" Elaine Henry, CFA and Elizabeth A. Gordon

2010 Modular Level II, Vol. 2 pp. 57, 62-69

"Evaluating Financial Reporting Quality," Scott Richardson and Irem Tuna.

By accessing this mock exam, you agree to the following terms of use: This mock exam is provided to currently-registered CFA candidates. Candidates may view and print the exam for personal exam preparation only. The following activities are strictly prohibited and may result in disciplinary and/or legal action: accessing or permitting access by anyone other than currently-registered CFA candidates; copying, posting to any website, emailing, distributing and/or reprinting the mock exam for any purpose



2011 Modular Level II, Vol. 2, pp. 381-382, 394-397

Study Session 7-22-a, 7-27-f

Discuss the implications for financial statements and ratios of capitalizing versus expensing costs in the period in which they are incurred.

Discuss problems with the quality of financial reporting, including revenue recognition, expense recognition, balance sheet issues, and cash flow statement issues and interpret warning signs of these potential problems.

In 2009, the capitalization of interest costs increased EBIT by \$30 million, whereas the capitalization of software development costs only increased EBIT by \$4.5 million (\$6.5 million capitalized less \$2.0 million amortized in the year). Since deferred revenue increased in 2009, it decreased EBIT, not increased it.

40. Which of the following *most likely* increased both of the metrics that Fong refers to over the 2008-2010 period?

- A. Deferred revenue recognition
- B. Capitalization of interest costs
- C. Extension of payment terms with suppliers

Answer = B

“Long-lived Assets: Implications For Financial Statements and Ratios” Elaine Henry, CFA and Elizabeth A. Gordon

2010 Modular Level II, Vol. 2 pp. 57, 62-65

“The Lessons We Learn,” Pamela P. Peterson, CFA and Frank J. Fabozzi, CFA

2011 Modular Level II, Vol. 2, pp. 343

“Evaluating Financial Reporting Quality,” Scott Richardson and Irem Tuna

2011 Modular Level II, Vol. 2, pp. 381-384, 394-397

Study Session 7-22-a, 7-26-b, 7-27-f

Discuss the implications for financial statements and ratios of capitalizing versus expensing costs in the period in which they are incurred.

Illustrate how trends in cash flow from operations can be more reliable than trends in earnings.

Discuss problems with the quality of financial reporting, including revenue recognition, expense recognition, balance sheet issues, and cash flow statement issues, and interpret warning signs of these potential problems.

The capitalization of interest increases net income and because the interest cost, when it is capitalized to fixed assets, is classified as an investing activity on the cash flow statement instead of an operating activity, it also increases cash from operating activities.

By accessing this mock exam, you agree to the following terms of use: This mock exam is provided to currently-registered CFA candidates. Candidates may view and print the exam for personal exam preparation only. The following activities are strictly prohibited and may result in disciplinary and/or legal action: accessing or permitting access by anyone other than currently-registered CFA candidates; copying, posting to any website, emailing, distributing and/or reprinting the mock exam for any purpose



41. In 2009 and 2010, as a result of the negotiated agreement with suppliers, Eagle *most likely* reported a higher:

- A. current ratio.
- B. cash flow from financing activities.
- C. cash flow from operating activities.

Answer = C

Financial Ratio List

2010 Modular Level II, Vol. 2, pp. 3-4

“Evaluating Financial Reporting Quality,” Scott Richardson and Irem Tuna

2011 Modular Level II, Vol. 2, pp. 408-410

“Integration of Financial Statement Analysis Techniques” Jack T. Cieielski, Jr., CFA

2010 Modular Level II, Vol. 2, pp. 447-451

Study Session 7-27-f, 7-28-d

Discuss problems with the quality of financial reporting, including revenue recognition, expense recognition, balance sheet issues, and cash flow statement issues and interpret warning signs of these potential problems.

Predict the impact on financial statements and ratios, given a change in accounting rules, methods and assumptions.

The increase in accounts payable as a result of the more favorable payment terms negotiated with suppliers would be reported as a source of cash in the operating section of the cash flow statement; hence the change in supplier terms increases cash from operating activities.

42. The *least* accurate reason that Puglisi can give in response to Fong’s criticism is that:

- A. growth in net income exceeds growth in revenues.
- B. growth in net income exceeds growth in cash flow from operating activities.
- C. the ratio of cash from operation before interest and taxes to operating income is decreasing.

Answer = A

“The Lessons We Learn,” Pamela P. Peterson, CFA and Frank J. Fabozzi, CFA

2011 Modular Level II, Vol. 2, pp. 343

“Integration of Financial Statement Analysis Techniques,” Jack T. Ciesielski, Jr., CFA

2011 Modular Level II, Vol. 2, pp. 447-449

Study Session 7-26-b, 7-28-c

Illustrate how trends in cash flow from operations can be more reliable than trends in earnings.

Evaluate the quality of a company’s financial data and recommend appropriate adjustments to improve quality and comparability with similar companies, including adjustments for differences in accounting rules, methods, and assumptions.

Earnings quality is concerned with the level of accruals in net income and whether net income is

By accessing this mock exam, you agree to the following terms of use: This mock exam is provided to currently-registered CFA candidates. Candidates may view and print the exam for personal exam preparation only. The following activities are strictly prohibited and may result in disciplinary and/or legal action: accessing or permitting access by anyone other than currently-registered CFA candidates; copying, posting to any website, emailing, distributing and/or reprinting the mock exam for any purpose

backed by cash flows. The large difference between the growth in net income (24.8% given in the MD&A) and cash from operations (3.4%) would be an indicator of lower earnings quality and lack of cash flow sustainability. Revenue growth (calculated at 8.06% compound growth from 2008 to 2010) would not be as strong an indicator of lower quality earnings as the poor relationship between net income growth and cash from operations growth. The decrease in the ratio of cash from operations before interest and taxes to operating income also indicates that earnings quality is decreasing.

[www.VividBook.org](http://www.VividBook.org)  
[VividBookNet@Gmail.com](mailto:VividBookNet@Gmail.com)

By accessing this mock exam, you agree to the following terms of use: This mock exam is provided to currently-registered CFA candidates. Candidates may view and print the exam for personal exam preparation only. The following activities are strictly prohibited and may result in disciplinary and/or legal action: accessing or permitting access by anyone other than currently-registered CFA candidates; copying, posting to any website, emailing, distributing and/or reprinting the mock exam for any purpose



## Suburban Publishers Case Scenario

---

Claire Munroe, CFA, is the senior publishing analyst at North Star Securities. Munroe has begun to review the recent financial performance of Suburban Publishers, Inc. which reports under U.S. GAAP. Suburban Publishers has a history of purchasing community news groups situated in selected locations around the country and holding them for several years even if they are not initially profitable. The growth of the internet and the current economic downturn has been particularly difficult on many major newspapers around the country, but community newspapers have been particularly resilient, although not all have managed so well.

At the start of 2007, Suburban purchased 24% of the outstanding shares of West Reach Community News Group for \$12,000,000. At the time of the acquisition, there were 1 million shares outstanding of West Reach. West Reach's income and dividends to the end of 2010 are shown in Exhibit 1.

Exhibit 1		
West Reach Community News Group		
Income and Dividends		
	Income	Dividends
2007	\$2,400,000	\$500,000
2008	1,800,000	120,000
2009	1,850,000	48,000
2010	2,000,000	418,000

As Munroe reviewed her working papers on this company, she came across a notation that she had included shortly after the first shareholder meeting following the acquisition, "A very strange long-term acquisition for Suburban. West Reach's majority holder, William French who is now 81 years old, holds 62% of the shares and controls the board with an iron hand. Dividends are paid out according to his needs and preferences. Suburban was unsuccessful in getting any of its preferred candidates elected to the Board or exerting any influence on West Reach's dividend policy. Just before Monroe closed her file on this firm, she added, "Nothing has changed since 2008 -- except, of course, that Mr. French is now a few years older".

By accessing this mock exam, you agree to the following terms of use: This mock exam is provided to currently-registered CFA candidates. Candidates may view and print the exam for personal exam preparation only. The following activities are strictly prohibited and may result in disciplinary and/or legal action: accessing or permitting access by anyone other than currently-registered CFA candidates; copying, posting to any website, emailing, distributing and/or reprinting the mock exam for any purpose



At the start of 2008, Suburban purchased 32.5% of the outstanding shares of Great Lakes Free Press, Inc., a company that owned community newspapers in most of the North-eastern states. Although the majority of these papers were provided free of charge, they maintained strong revenue streams during the economic downturn with their focus on personal interest stories of local individuals and local business advertising. In particular, the automotive sector seemed to be the major reason for their success. Details of this acquisition by Suburban are provided in Exhibit 2.

Exhibit 2		
Great Lakes Free Press, Inc.		
Values at time of Acquisition, Jan 01, 2008		
	Book Value	Fair Value
Current Assets	\$120,000	\$120,000
Plant and Equipment *	2,280,000	2,964,000
Land	<u>1,440,000</u>	<u>1,476,000</u>
	\$3,840,000	\$4,560,000
Liabilities	<u>1,200,000</u>	<u>1,200,000</u>
Net Assets	<u>\$2,640,000</u>	<u>\$3,360,000</u>
Shares outstanding	2,000,000	
Acquisition by Suburban		
• Equity acquired	32.5%	
• Amount Paid	\$1,365,000	
* Estimated useful life remaining as of the date of acquisition is 10 years, with straight line depreciation to be used.		

By accessing this mock exam, you agree to the following terms of use: This mock exam is provided to currently-registered CFA candidates. Candidates may view and print the exam for personal exam preparation only. The following activities are strictly prohibited and may result in disciplinary and/or legal action: accessing or permitting access by anyone other than currently-registered CFA candidates; copying, posting to any website, emailing, distributing and/or reprinting the mock exam for any purpose



Great Lakes Free Press had a very good year in 2008, with the company earning \$1,200,000 and paying dividends of \$504,000. The severe economic downturn that occurred in 2009 and 2010 had a dramatic impact on the company – it curtailed its dividend and reported losses of \$200,000 and \$600,000, respectively, in those years. According to Munroe’s calculations, at the end of 2010 the book value of Great Lakes was \$3,256,000 and the fair value of Suburban’s investment in Great Lakes was \$940,000, with a carrying value of \$1,264,510. Munroe believed that even with government bailouts there was little chance of a permanent recovery in the automotive sector, and with Great Lakes’ reliance on that industry, Suburban would most likely have to treat the investment as being impaired.

At the start of 2010, in an attempt to reduce further erosion of the subscriber and advertising base by the Internet, Suburban decided to provide its publications with a new fresher look that featured among other things, a much larger amount of high quality colored images. To meet this need, Suburban purchased HiQ Printers which had high speed production printing presses in all of Suburban’s distribution areas. Suburban purchased 60% of the company’s shares in exchange for its own shares. At the time of the purchase, there were 8 million shares of HiQ Printers outstanding and they traded at \$14 per share. The fair value of the HiQ Printers’ net identifiable assets at that time was \$99 million. Exhibit 3 illustrates the shareholders’ equity section of both companies prior to the business combination.

<b>Exhibit 3</b>		
<b>Shareholders’ Equity(in \$-millions) for Suburban Publishers &amp; HiQ Printers</b>		
<b>Prior to the business combination in January 2010</b>		
	<b>Suburban Publishers</b>	<b>HiQ Printers</b>
<b>Shareholder’s Equity</b>		
<b>Capital stock (no par)</b>	280,000	40,000
<b>Retained Earnings</b>	185,000	26,000

After Suburban purchased HiQ Printers and announced its new strategy, Munroe gathered some information to try and determine the recoverable value of the company’s other printing facilities particularly during this period of over-capacity. The information is presented in Exhibit 4.

By accessing this mock exam, you agree to the following terms of use: This mock exam is provided to currently-registered CFA candidates. Candidates may view and print the exam for personal exam preparation only. The following activities are strictly prohibited and may result in disciplinary and/or legal action: accessing or permitting access by anyone other than currently-registered CFA candidates; copying, posting to any website, emailing, distributing and/or reprinting the mock exam for any purpose



Exhibit 4	
Estimated Recoverable Value (in \$-millions) of Suburban's Publishing Assets (excluding those owned through HiQ Printers)	
Book value of equipment	\$120.0
Expected future cash flows per year	\$10.8
Undiscounted expected future cash flows	\$108.0
Fair value	\$111.0
Value in use	\$61.0
Estimated remaining life	10 years
Estimated cost of capital	12%

Munroe planned on determining whether these publishing assets were impaired, and if so, what the impact would likely be on Suburban's financial statements.

43. The *most appropriate* way for Suburban to account for changes in the value of its West Reach holdings is to:

- A. include them in shareholders' equity.
- B. include them in the income statement.
- C. ignore them unless there is an impairment.

Answer = A

"Intercompany Investments," Susan Perry Williams  
2011 Modular Level II, Vol. 2, pp. 122, 129-130  
Study Session 6-23-b

Distinguish between IFRS and U.S. GAAP in the classification, measurement, and disclosure of investments in financial assets, investments in associates, joint ventures, business combinations, and special purpose and variable interest entities.

Although Suburban's ownership interest in West Reach exceeds the amount that is normally deemed sufficient to presume significant influence, the inability to elect directors or influence the firm's policy making indicates lack of significant influence. It would therefore be

By accessing this mock exam, you agree to the following terms of use: This mock exam is provided to currently-registered CFA candidates. Candidates may view and print the exam for personal exam preparation only. The following activities are strictly prohibited and may result in disciplinary and/or legal action: accessing or permitting access by anyone other than currently-registered CFA candidates; copying, posting to any website, emailing, distributing and/or reprinting the mock exam for any purpose



inappropriate to account for its holdings under the equity method, but given the long-term duration of the planned investment, an available-for-sale investment would seem to be most appropriate. The investment should be remeasured and recognized at fair value on the balance sheet with any unrealized gains or losses arising from fair value reported in equity as other comprehensive income.

44. At the end of 2008, the balance in the Investment in associate account for Great Lakes Free Press was *closest* to:

- A. \$1,567,800.
- B. \$1,568,970.
- C. \$1,591,200.

Answer = B

"Intercompany Investments," Susan Perry Williams

2011 Modular Level II, Vol. 2, pp. 130-131, 134-137

Study Session 6-23-b

Distinguish between IFRS and U.S. GAAP in the classification, measurement, and disclosure of investments in financial assets, investments in associates, joint ventures, business combinations, and special purpose and variable interest entities.

Analysis of initial investment		
Amount paid in acquisition	\$1,365,000	
BV of acquired equity	<u>858,000</u>	32.5% x \$2,640,000
Excess paid over tangible BV	\$507,000	
Amount attributable to tangible assets	<u>234,000</u>	32.5% x (684,000 + 36,000): Excesses paid for PP&E & Land
Goodwill (residual value)	<u>\$273,000</u>	
Calculation of Investment in associate account		
Start of year investment	\$1,365,000	Amount paid
+ Share of net income	390,000	32.5% x 1,200,000
- Share of dividends received	(163,800)	32.5% x 504,000

By accessing this mock exam, you agree to the following terms of use: This mock exam is provided to currently-registered CFA candidates. Candidates may view and print the exam for personal exam preparation only. The following activities are strictly prohibited and may result in disciplinary and/or legal action: accessing or permitting access by anyone other than currently-registered CFA candidates; copying, posting to any website, emailing, distributing and/or reprinting the mock exam for any purpose



-Amortization of excess amount paid for tangible assets, other than land	<u>(22,230)</u>	32.5% x 684,000/10 years
End of year investment	<u>\$1,568,970</u>	

45. With regard to Munroe's opinion about the possible impairment of the investment in Great Lakes Free Press, the impairment loss is *closest* to:

- A. \$118,200.
- B. \$324,510.
- C. \$425,000.

Answer = B

"Intercompany Investments," Susan Perry Williams

2011 Modular Level II, Vol. 2, pp. 138

Study Session 6-23-b

Distinguish between IFRS and U.S. GAAP in the classification, measurement, and disclosure of investments in financial assets, investments in associates, joint ventures, business combinations, and special purpose and variable interest entities.

Under U.S. GAAP, if the fair value of the investment falls below the carrying amount, and assuming the decline is considered to be permanent (as Munroe expects), the impairment loss is recognized on the income statement and the carrying value of the investment is reduced to its fair value; the impairment loss is the difference between the carrying amount and the fair value, i.e., \$1,264,510 - \$940,000 = \$324,510.

46. Following its business combination with HiQ Printers, the total shareholder's equity (in millions) in Suburban's consolidated financial statements is *closest* to:

- A. \$532,200.
- B. \$571,800.
- C. \$577,000.

Answer = C

"Intercompany Investments," Susan Perry Williams

2011 Modular Level II, Vol. 2, p. 152-156

Study Session 6-23-b

Distinguish between IFRS and U.S. GAAP in the classification, measurement, and disclosure of investments in financial assets, investments in associates, joint ventures, business combinations, and special purpose and variable interest entities.

The shareholders' equity section of the post-acquisition balance sheet will consist of the capital stock and retained earnings account of the parent and the non-controlling interest of the

By accessing this mock exam, you agree to the following terms of use: This mock exam is provided to currently-registered CFA candidates. Candidates may view and print the exam for personal exam preparation only. The following activities are strictly prohibited and may result in disciplinary and/or legal action: accessing or permitting access by anyone other than currently-registered CFA candidates; copying, posting to any website, emailing, distributing and/or reprinting the mock exam for any purpose



minority shareholders. Under U.S. GAAP, the value of the noncontrolling interest is equal to the noncontrolling interest's proportionate share of the subsidiary's fair value.

<sup>A</sup> Amount paid for 60% interest = $60\% \times \$14/\text{sh} \times 8,000,000 \text{ sh} = \$67,200,000$		
Fair Value of Subsidiary = $8,000,000 \text{ sh} \times \$14/\text{sh} = \$112,000,000$		
<sup>B</sup> Non-controlling interest = $\$112,000,000 \times (1-0.60) = \$44,800,000$		
Shareholders' Equity:	In \$-millions	Calculation
Non-controlling interest	\$44,800	See <sup>B</sup> above
Capital stock	347,200	$67,200 + 280,000$ : see <sup>A</sup> above + original
Retained earnings	<u>185,000</u>	Suburban's retained earnings
Total equity	<u>\$577,000</u>	

47. If Munroe's estimates of recoverability in Exhibit 4 are correct, the impairment loss (in millions) that will be reported by Suburban following the acquisition of HiQ Printers is *closest* to:

- A. \$9.0.
- B. \$12.0.
- C. \$59.0

Answer = A

"Long-lived Assets: Implications for Financial Statements and Ratios," Elaine Henry, CFA and Elizabeth A. Gordon

2011 Modular Level II, Vol. 2, p. 74-77

Study Session 5-22-c

Discuss the implications for financial statements and ratios of impairment and revaluation of property, plant and equipment, and intangible assets.

Under U.S. GAAP first recoverability is assessed by comparing the net book value to the undiscounted cash flows: (NBV = 120 > undiscounted cash flows = 108) therefore the asset is impaired and the amount of the impairment loss must be determined as:

Impairment Loss = Carrying amount - Asset's fair value =  $120 - 111 = 9.0$ .

By accessing this mock exam, you agree to the following terms of use: This mock exam is provided to currently-registered CFA candidates. Candidates may view and print the exam for personal exam preparation only. The following activities are strictly prohibited and may result in disciplinary and/or legal action: accessing or permitting access by anyone other than currently-registered CFA candidates; copying, posting to any website, emailing, distributing and/or reprinting the mock exam for any purpose



48. If Munroe's estimates of recoverability in Exhibit 4 are correct, their *most likely* impact on Suburban's financial statements is that:

- A. total asset turnover will increase.
- B. cash flow from operations will decrease.
- C. net profit margin will remain unchanged.

Answer = A

"Long-lived Assets: Implications for Financial Statements and Ratios," Elaine Henry, CFA and Elizabeth A. Gordon

2011 Modular Level II, Vol. 2, p. 74-77

Study Session 5-22-c

Discuss the implications for financial statements and ratios of impairment and revaluation of property, plant and equipment, and intangible assets.

Total Asset turnover = Sales ÷ Total assets; sales will be unaffected, but assets will be written down, resulting in an increase in the asset turnover ratio.



## Clifford Kloth Case Scenario

---

Clifford Kloth is a member of a strategy team for Elemetrics Corporation. The team's task is to determine how to restructure the capital structure of Elemetrics which has deviated from its target capital structure by having proportionately too much debt. With the economy in a recession, alternatives to an issue of equity were being considered. In a meeting with upper management, Kloth began to present the team's suggested strategy proposal.

Kloth: "After careful consideration of many alternatives, the strategy team suggests reducing the dividend payout ratio of Elemetrics from 40% to 20%. Despite how variable earnings can be, the team believes the additional earnings retained by the firm will reduce the debt to target levels in a five year time span and reduce the cost of equity as the debt is decreased."

One member of the management team, Sven Hanson, immediately stated a concern about Elemetrics' value as a result of the proposed reduction in debt.

Hanson: "The debt related tax savings will decrease as the debt is reduced which in turn decreases the value of Elemetrics even though the proposed change in the payout ratio will not impact the value Elemetrics"

Another member of the management team, Inga Trevard, did not believe that the proposal would reduce the value of Elemetrics.

Trevard: "Actually the reduction in potential financial distress costs may more than offset the reduction in the tax savings making Elemetrics more valuable."

Hanson questioned Kloth further about the proposal:

Hanson: "Surely the shareholders will view a reduction in the dividend as bad news. Has the strategy team considered ways to prevent such a situation?"

Kloth responds:

"As part of the proposal, the strategy team suggests having meetings with our largest shareholders to explain the reduction in dividend and the team has also crafted a press release to explain our motives as well. Further, I strongly believe that the proposed financial policy initiatives will increase the shareholder value in three different ways:

1. First, the lower payout ratio will increase the return on equity (ROE).
2. Second, the free cash flow to the firm (FCFF) will increase as a result of a lower payout ratio.
3. Third, although the free cash flow to equity (FCFE) declines in the year when debt is paid down, it will increase in subsequent years.



49. Based on the Modigliani and Miller Propositions without taxes, the initial statement by Kloth is *most likely*:

- A. correct.
- B. incorrect, because Proposition I is violated.
- C. incorrect, because Propositions I and II are violated.

Answer = A

“Capital Structure,” Raj Aggarwal, CFA, Pamela Peterson Drake, CFA, Adam Kobor, CFA, and Gregory Noronha, CFA

2011 Modular Level II, Vol. 3, pp. 101-107

Study Session 8-30-a, b

Discuss the Modigliani-Miller propositions concerning capital structure, including the impact of leverage, taxes, financial distress, agency costs, and asymmetric information on a company's cost of equity, cost of capital, and optimal capital structure.

Explain the target capital structure and why the actual capital structure may fluctuate around the target.

Proposition I is necessary to obtain Proposition II. Proposition II states that the cost of equity ( $r_e$ ) is linearly related to the debt-to-equity (D/E) level (see Exhibit 1, page 107):  $r_e = r_0 + (r_0 - r_d) \times (D/E)$  or  $r_e = r_0 + (r_0 - r_d) \times (1 - \text{tax rate}) \times (D/E)$ , where  $r_0$  is the cost of capital and  $r_d$  is the cost of debt. Consequently, if D/E is lower, the cost of equity is reduced.

50. If the dividend policy proposed in Kloth's initial statement is implemented, future dividends will *most likely* be:

- A. stable.
- B. residual.
- C. variable.

Answer = C

“Dividends and Share Repurchases: Analysis,” Gregory Noronha, CFA and George Troughton, CFA

2011 Modular Level II, Vol. 3, pp. 155-159

Study Session 8-31-f

Compare and contrast stable dividend, target payout, and residual dividend payout policies, and calculate the dividend under each policy.

A constant dividend payout ratio policy will lead to unstable or variable dividends because the dividend is proportionate to earnings which are stated to be variable.

By accessing this mock exam, you agree to the following terms of use: This mock exam is provided to currently-registered CFA candidates. Candidates may view and print the exam for personal exam preparation only. The following activities are strictly prohibited and may result in disciplinary and/or legal action: accessing or permitting access by anyone other than currently-registered CFA candidates; copying, posting to any website, emailing, distributing and/or reprinting the mock exam for any purpose



51. Hanson's statement in response to Kloth's proposal is *most consistent* with:

- A. Gordon's bird in the hand argument.
- B. Modigliani and Miller's Proposition I with taxes.
- C. Modigliani and Miller's Proposition II with taxes.

Answer = B

"Capital Structure," Raj Aggarwal, CFA, Pamela Peterson Drake, CFA, Adam Kobor, CFA, and Gregory Noronha, CFA

2011 Modular Level II, Vol. 3, pp. 105-107

"Dividends and Share Repurchases: Analysis," George Noronha, CFA and George H. Troughton, CFA

2011 Modular Level II, Vol. 3, p. 136

Study Session 8-30-a, d, 8-31-a

Discuss the Modigliani-Miller propositions concerning capital structure, including the impact of leverage, taxes, financial distress, agency costs, and asymmetric information on a company's cost of equity, cost of capital, and optimal capital structure.

Explain the factors an analyst should consider in evaluating the impact of capital structure policy on valuation.

Compare and contrast theories of dividend policy, and explain the implications of each for share value given a description of a corporate dividend action.

Modigliani and Miller's Proposition I with taxes values a levered firm ( $V_L$ ) based on the value of an unlevered firm ( $V_U$ ) and the firm's debt level ( $D$ ) (Exhibit 1, page 107):  $V_L = V_U + D \cdot (\text{tax rate})$ .

Hanson's statement is consistent with a decrease in  $D$  creating a decrease in  $V_L$ .

52. Trevard's statement is *most consistent* with the:

- A. Miller model.
- B. pecking order theory.
- C. static trade-off theory of capital structure.

Answer = C

"Capital Structure," Raj Aggarwal, CFA, Pamela Peterson Drake, CFA, Adam Kobor, CFA, and Gregory Noronha, CFA

2011 Modular Level II, Vol. 3, pp. 109, 112-114

Study Session 8-30-a, b, d

Discuss the Modigliani-Miller propositions concerning capital structure, including the impact of leverage, taxes, financial distress, agency costs, and asymmetric information on a company's cost of equity, cost of capital, and optimal capital structure.

Explain the target capital structure and why the actual capital structure may fluctuate around the target.

Explain the factors an analyst should consider in evaluating the impact of capital structure policy on valuation.

By accessing this mock exam, you agree to the following terms of use: This mock exam is provided to currently-registered CFA candidates. Candidates may view and print the exam for personal exam preparation only. The following activities are strictly prohibited and may result in disciplinary and/or legal action: accessing or permitting access by anyone other than currently-registered CFA candidates; copying, posting to any website, emailing, distributing and/or reprinting the mock exam for any purpose



The trade-off of the tax savings of debt versus the value of financial distress cost is an example of the static trade-off theory of capital structure.

53. Hanson's statement concerning shareholder reaction to the proposal is *most consistent* with the:

- A. clientele effect.
- B. signaling theory.
- C. residual dividend policy.

Answer = B

"Dividends and Share Repurchases: Analysis," Gregory Noronha, CFA and George Troughton, CFA

2011 Modular Level II, Vol. 3, pp. 137-144

Study Session 8-31-b

Discuss the types of information (signals) that dividend initiations, increases, decreases, and omissions may convey.

The reduction in dividends is taken as a negative signal by investors therefore dividend reduction almost always results in a reduction in share price.

54. In his response to Hanson's questions, Kloth is *most* accurate with respect to which of the following?

- A. ROE
- B. FCFF
- C. FCFE

Answer = C

"Discounted Dividend Valuation," Jerald Pinto, CFA, Elaine Henry, CFA, Thomas Robinson, CFA, and John Stowe, CFA

2011 Modular Level II, Vol. 4, pp. 353-357

"Free Cash Flow Valuation," Jerald Pinto, CFA, Elaine Henry, CFA, Thomas Robinson, CFA, and John Stowe, CFA

2011 Modular Level II, Vol. 4, pp. 417-422

Study Session 11-42- n; 12-43-g

Calculate and interpret the sustainable growth rate of a company, and demonstrate the use of DuPont analysis to estimate a company's sustainable growth rate.

Explain how dividends, share repurchases, share issues, and changes in leverage may affect future FCFF and FCFE.

Kloth is correct with respect to his statement concerning FCFE. The FCFE declines in the year when debt is paid down. In the later years, however, it will increase because of the reduced

By accessing this mock exam, you agree to the following terms of use: This mock exam is provided to currently-registered CFA candidates. Candidates may view and print the exam for personal exam preparation only. The following activities are strictly prohibited and may result in disciplinary and/or legal action: accessing or permitting access by anyone other than currently-registered CFA candidates; copying, posting to any website, emailing, distributing and/or reprinting the mock exam for any purpose



interest expense; thus, a higher shareholder value.

[www.VividBook.org](http://www.VividBook.org)  
[VividBookNet@Gmail.com](mailto:VividBookNet@Gmail.com)

By accessing this mock exam, you agree to the following terms of use: This mock exam is provided to currently-registered CFA candidates. Candidates may view and print the exam for personal exam preparation only. The following activities are strictly prohibited and may result in disciplinary and/or legal action: accessing or permitting access by anyone other than currently-registered CFA candidates; copying, posting to any website, emailing, distributing and/or reprinting the mock exam for any purpose



## SMGI Case Scenario

---

### Strongsville Metal & Glass Industries (SMGI)

Rating: **BUY**

Price on 30 August 2010: \$29.64

Analyst: Ellen Chau, CFA

SMGI Strongsville Metal & Glass Industries, located in the northeastern Ohio region of the United States, specializes in preparing scrap metal and glass for recycling. The company buys surplus metal from equipment manufacturers and construction companies, and glass from a local network of individual suppliers. The company sorts its incoming materials by type and quality. Workers use hand-sorting methods to identify and recover the most valuable materials. The company then shreds the metals and crushes the glass, both of which it packages for resale. Metals processing provides 85 percent of SMGI's revenues, and glass the remainder.

### Industry Structure

The industry is capital intensive and is characterized by a steep cost curve, high exit costs and large economies of scale. One peculiarity of the scrap materials industry, however, is that metals are expensive to transport relative to their value per pound; thus, the value-to-weight factor has a significant bearing on the industry cost structure. Firms in the industry face intense rivalry in competing for scrap metal from the limited number of suppliers and they lack attractive opportunities to integrate backwards. Buyers consist of large firms making high-volume purchases and they can integrate backwards should they choose to do so.

The measures of industry competition structure are as follows:

- 10-firm concentration ratio is 20 percent
- Herfindahl index is 0.0032

### Operational Analysis of SMGI

Following more than a decade of mediocre financial results, the firm's revenue growth has benefited from the improved economic environment subsequent to the financial crises 2008-2009 and an expectation for recovery of raw materials prices. Moreover, the firm has taken strong preemptive steps to contain its costs of operation and it seeks to be the industry cost leader. The most notable steps include fuel hedging and the acquisition of more efficient machinery, which are improving the firm's

By accessing this mock exam, you agree to the following terms of use: This mock exam is provided to currently-registered CFA candidates. Candidates may view and print the exam for personal exam preparation only. The following activities are strictly prohibited and may result in disciplinary and/or legal action: accessing or permitting access by anyone other than currently-registered CFA candidates; copying, posting to any website, emailing, distributing and/or reprinting the mock exam for any purpose

profitability. This cost containment strategy is likely to reduce the degree of competitive pressure that the firm experiences.

Exhibits 1 and 2 show selected financial and market information for SMGI and its industry.

**Exhibit 1**

**SMGI and Industry Average  
Selected Financial Information  
For the Fiscal Year Ended 30 June 2010**

	<b>SMGI</b>	<b>Industry Average</b>
Return on assets	10.6%	11.0%
Return on equity	18.4%	16.0%
Net profit margin	4.3%	4.1%
Earnings per share (EPS) 2010	\$2.45	n/a*
Dividend payout ratio 2010	14.0%	10.0%

\* n/a = not applicable

**Exhibit 2**

**Current Market Data for SMGI and Industry Averages**

	<b>SMGI</b>	<b>Industry Average</b>
Current price-to-earnings (P/E) ratio	12.0	9.5
Franchise value P/E ratio	5.0	n/a*
Required rate of return on equity	17.1%	14.7%

\* n/a = not applicable

We are placing a "Buy" rating on the shares of SMGI, with a 12-month price target of \$35.78. This assumes a projected EPS for 2011 of \$2.84. Further, our "Buy" rating is supported by SMGI's three strengths as stated below:

By accessing this mock exam, you agree to the following terms of use: This mock exam is provided to currently-registered CFA candidates. Candidates may view and print the exam for personal exam preparation only. The following activities are strictly prohibited and may result in disciplinary and/or legal action: accessing or permitting access by anyone other than currently-registered CFA candidates; copying, posting to any website, emailing, distributing and/or reprinting the mock exam for any purpose



- #1: SMGI uses less financial leverage than the average firm in the industry.
- #2: SMGI is more efficient in the use of assets than the average firm in the industry.
- #3: Our 12-month price target shows that more than 50% of the stock's value comes from Present Value of Growth Opportunities (PVGO).

The primary risk faced by SMGI is the possibility of another economic recession, resulting in a reduced demand for the firm's output by industrial end users, depressed raw materials prices, lower revenues and a significant reduction in profits.

Given the current economic conditions and outlook, the inflation rate is expected to remain low at 2 percent and the firm's inflation flow-through rate to its earnings is expected to be 75 percent.

---

55. Based on Chau's analysis of the industry structure, SMGI's competitive advantage and ability to capture the value it creates for buyers are *most likely* due to:

- A. barriers to entry.
- B. rivalry among competitors.
- C. bargaining power of suppliers.

Answer = A

"Equity: Concepts and Techniques," Bruno Solnik and Dennis McLeavey, CFA

2011 Modular Level II, Vol. 4, pp. 180-182

"Industry Analysis," Jeffrey C. Hooke

2011 Modular Level II, Vol. 4, pp. 265-266

Study Session 11-38-a; 11-40-a

Distinguish between country analysis and industry analysis, and evaluate an industry's demand, life cycle, competition structure, and risk elements.

Discuss the key components that should be included in an industry analysis model.

According to the description, the scrap materials industry is capital intensive with a steep cost curve, high exit costs and large economies of scale creating high barriers to entry and making it less attractive to new entrants. Thus, the firms in this industry will have a competitive advantage and greater ability to capture the value created for buyers.

56. Based on the measures of competition structure presented in Chau's report, which of the following is the *best* characterization of SMGI's industry? The industry:

- A. is experiencing moderate concentration.
- B. consists of approximately 313 equivalent firms of the same size.
- C. is oligopolistic and game theories are more important than product differentiation.

Answer = B

By accessing this mock exam, you agree to the following terms of use: This mock exam is provided to currently-registered CFA candidates. Candidates may view and print the exam for personal exam preparation only. The following activities are strictly prohibited and may result in disciplinary and/or legal action: accessing or permitting access by anyone other than currently-registered CFA candidates; copying, posting to any website, emailing, distributing and/or reprinting the mock exam for any purpose



"Mergers and Acquisitions," Rosita P. Chang, CFA, and Keith M. Moore, CFA

2011 Modular Level II, Vol. 3, pp. 264-266

"Equity: Concepts and Techniques," Bruno Solnik and Dennis McLeavey, CFA

2011 Modular Level II, Vol. 4, pp. 176-177

Study Session 9-33-h; 11-38-a

Calculate the Herfindahl–Hirschman Index and evaluate the likelihood of an antitrust challenge for a given business combination.

Distinguish between country analysis and industry analysis, and evaluate an industry's demand, life cycle, competition structure, and risk elements.

On the basis of the Herfindahl Index indicating the industry competition structure, the number of equivalent firms of the same size in the industry =  $1/0.0032 = 312.50$

57. The intrinsic P/E ratio of SMGI is *closest* to:

A. 10.9.

B. 12.6.

C. 14.5.

Answer = A

"Market-Based Valuation: Price and Enterprise Value Multiples," Jerald Pinto, CFA, Elaine Henry, CFA, Thomas Robinson, CFA, and John Stowe, CFA

2011 Modular Level II, Vol. 4, pp. 488-490 (Example 7)

"Equity: Concepts and Techniques," Bruno Solnik and Dennis McLeavey, CFA

2011 Modular Level II, Vol. 4, pp. 188-190

Study Session 11-38-b, 12-44-i

Discuss approaches to equity analysis (ratio analysis and discounted cash flow models, including the franchise value model).

Calculate and interpret the justified price-to-earnings ratio (P/E), price-to-book ratio (P/B), and price to sales ratio (P/S) for a stock, based on forecasted fundamentals.

Intrinsic P/E =  $(1 - b) / (r - g)$ ;  $(1 - b)$  = Payout ratio (given) = 14%;

$r$  = Required rate of return on equity (given) = 17.1%;

$g$  = ROE x Retention Ratio =  $18.4 \times (1 - 0.14) = 15.82\%$ ;

Intrinsic P/E =  $0.14 / (0.171 - 0.1582) = 10.9$

58. Which of the three strengths identified in support of the "Buy" rating on SMGI's stock is *most* accurate?

A. #1

B. #2

C. #3

Answer = C

By accessing this mock exam, you agree to the following terms of use: This mock exam is provided to currently-registered CFA candidates. Candidates may view and print the exam for personal exam preparation only. The following activities are strictly prohibited and may result in disciplinary and/or legal action: accessing or permitting access by anyone other than currently-registered CFA candidates; copying, posting to any website, emailing, distributing and/or reprinting the mock exam for any purpose



“Equity: Concepts and Techniques,” Bruno Solnik and Dennis McLeavey, CFA

2011 Modular Level II, Vol. 4, pp. 185-187

“Discounted Dividend Valuation,” Ch. 4, Jerald Pinto, CFA, Elaine Henry, CFA, Thomas Robinson, CFA, and John Stowe, CFA

2011 Modular Level II, Vol. 4, pp. 330-332, 353-354

Study Session 11-38-b; 11-42-e, n

Discuss approaches to equity analysis (ratio analysis and discounted cash flow models, including the franchise value model).

Calculate and interpret the present value of growth opportunities (PVGO) and the component of the leading price-to-earnings ratio (P/E) related to PVGO.

Calculate and interpret the sustainable growth rate of a company, and demonstrate the use of DuPont analysis to estimate a company’s sustainable growth rate.

Using the data financial leverage, asset turnover, and PVGO can be computed as follows:

Ratio	SMGI	Industry Average
Financial Leverage = ROE / ROA	= 18.4 / 10.6 = 1.7	= 16.0 / 11.0 = 1.5
Asset Turnover = ROA / NPM	= 10.6 / 4.3 = 2.5	= 11.0 / 4.1 = 2.7
PVGO = $V_0 - E_1/r$	$E_1/r = \$2.84/0.171 = \$16.61$ $PVGO = \$35.78 - \$16.59 = \$19.17$ $PVGO \% = \$19.17/\$35.78 = 53.6\%$	

From the above computations, it can be seen that SMGI uses higher financial leverage than the average firm in the industry thereby making Strength #1 to be incorrect. On the other hand, efficiency in the use of assets as indicated by the asset turnover ratio is smaller for SMGI compared to the average firm in the industry thereby making Strength #2 to be incorrect. Strength #3 is correct because the PVGO portion of the stock’s value is greater than 50%.

59. Given the characterization of SMGI’s primary risk, the industry in which it operates is *best* classified as a:

- A. growth industry.
- B. cyclical industry.
- C. defensive industry.

Answer = B

“Industry Analysis,” Jeffrey C. Hooke

2011 Modular Level II, Vol. 4, pp. 246-249

Study Session 11-40-c

Analyze the effects of business cycles on industry classification (i.e., growth, defensive, cyclical).

Cyclical industries are those whose earnings track the business cycle with profits benefitting from economic upturns but suffering in downturns. Therefore, the possibility of an economic recession is a significant risk factor for firms in cyclical industries. The primary risk faced by SMGI is the possibility of an economic recession, resulting in lower demand for the firm’s output by industrial end users, depressed raw materials prices, lower revenues and a significant reduction

By accessing this mock exam, you agree to the following terms of use: This mock exam is provided to currently-registered CFA candidates. Candidates may view and print the exam for personal exam preparation only. The following activities are strictly prohibited and may result in disciplinary and/or legal action: accessing or permitting access by anyone other than currently-registered CFA candidates; copying, posting to any website, emailing, distributing and/or reprinting the mock exam for any purpose



in profits. Therefore, SMGI is in a cyclical industry.

60. Taking into consideration SMGI's expected inflation flow-through rate, its flow-through adjusted intrinsic P/E ratio is *closest* to:

- A. 5.9.
- B. 6.4.
- C. 9.5.

Answer = B

"Equity: Concepts and Techniques," Bruno Solnik and Dennis McLeavey, CFA  
2011 Modular Level II, Vol. 4, pp. 192-194  
Study Session 11-38-c  
Analyze the effects of inflation on asset valuation.

SMGI's flow-through adjusted intrinsic P/E ratio is calculated as follows:

$P_0/E_1 = 1 / [\rho + (1 - \lambda) I]$ ;  $r = 17.1\%$ ;  $I = 2\%$ ;  $\rho = (r - I) = 0.171 - 0.02 = 0.151$ ;

Inflation flow-through rate =  $\lambda = 75\%$ ;

$P_0/E_1 = 1 / [0.151 + (1 - 0.75) 0.02] = 6.4$ .

By accessing this mock exam, you agree to the following terms of use: This mock exam is provided to currently-registered CFA candidates. Candidates may view and print the exam for personal exam preparation only. The following activities are strictly prohibited and may result in disciplinary and/or legal action: accessing or permitting access by anyone other than currently-registered CFA candidates; copying, posting to any website, emailing, distributing and/or reprinting the mock exam for any purpose