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Test Prep CFA-Level-2

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QUESTION NO: 1

Jenna Stuart is a financial analyst for Deuce Hardware Company, a U.S. company that reports its results in U.S. dollars. Wayward Distributing, Inc., is a foreign subsidiary of Deuce Hardware, which began operations on January 1,2007. Wayward is located in a foreign country and reports its results in the local currency called the Rho. Selected balance sheet information for Wayward is shown in the following table.

Selected Balance Sheet Accounts Wayward Distributing Inc. (in Rho)

	12/31/07	*12/31/08*
Cash and accounts receivable	5,000	5,200
Inventory	3,800	4,900
Net fixed assets	6,200	7,400
Total assets	15,000	17,500
Current liabilities	2,000	2,000
Long-term debt	9,000	9,500
Shareholders' equity	4,000	6,000

Stuart has been asked to analyze how the reported financial results of Wayward will be affected by the choice of the all-current or temporal methods of accounting for foreign operations. She has gathered the following exchange rate information on the $/Rho exchange rate:

• Spot rate on 1/01/08: $0.35 per Rho

• Spot rate on 12/31/08: $0.45 per Rho

• Average spot rate during 2008: $0.42 per Rho

Suppose for this question only that Stuart has determined that (1) the operating, financing, and investing decisions related to Wayward's operations are typically made by Wayward's local management located in the foreign country; and (2) some of Wayward's accounts receivable are denominated in a different foreign currency called the Del (DI). Which method is the best to use to translate the Del receivables into Rho, according to U.S. GAAP?

A. The all-current method.

B. The temporal method.

C. The method will depend on inflation.

ANSWER: B

Explanation:

In this example, the Del is the local currency, the Rho is the functional currency (because Wayward is an independent subsidiary), and the U.S. dollar is the reporting currency. The appropriate application of U.S. GAAP is to first remeasure the Del receivables from Del to Rho using the temporal method. (Study Session 6, LOS 23.c)

QUESTION NO: 2

Sara Robinson and Marvin Gardner are considering an opportunity to start their own money management firm. Their conversation leads them to a discussion on establishing a portfolio management process and investment policy statements. Robinson makes the following statements:

Statement 1;

Our only real objective as portfolio managers is to maximize the returns to our clients.

Statement 2:

If we are managing only a fraction of a client's total wealth, it is the client's responsibility, not ours, to determine how their investments are allocated among asset classes.

Statement 3: When developing a client's strategic asset allocation, portfolio managers have to consider capital market expectations. In response, Gardner makes the following statements:

Statement 4: While return maximization is important for a given level of risk, we also need to consider the client's tolerance for risk.

Statement 5: We'll let our clients worry about the tax implications of their investments; our time is better spent on finding undervalued assets.

Statement 6: Since we expect our investor's objectives to be constantly changing, we will need to evaluate their investment policy statements on an annual basis at a minimum.

Robinson wants to focus on younger clientele with the expectation that the new firm will be able to retain the clients for a long time and create long-term profitable relationships. While Gardner felt it was important to develop long-term relationships, he wants to go after older, high-net-worth clients.

Which one of the following factors is the least likely to affect the individual investor's ability to accept risk?

A. Required spending needs.

B. Financial strength.

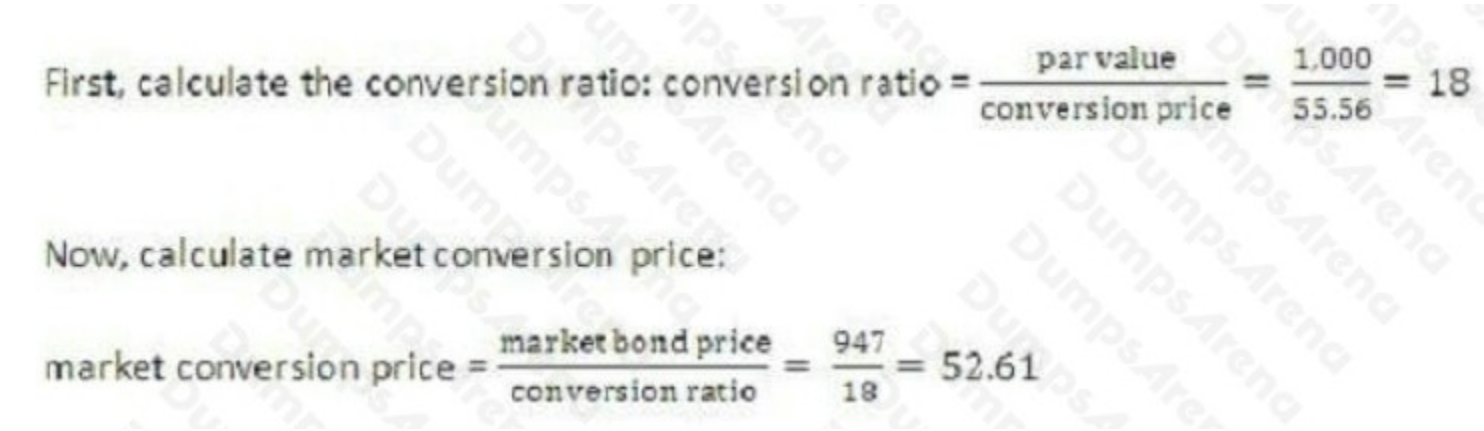
C. Behavioral factors.

ANSWER: C

Explanation:

Specific factors that determine an investor's ability to accept risk include required spending needs, financial strength, and long-term wealth targets. Behavioral factors affect an individual investor's willingness to accept risk. (Study Session 18, LOS 68.c)

QUESTION NO: 3



High-tech industry analysts for Brown & Associates, a money management firm specializing in fixed-income investments, have been closely following MediSoft ever since it went public three years ago. In general, portfolio managers at Brown & Associates do not participate in initial offerings of debt investments, preferring instead to see how the issue trades before considering taking a position in the issue. Since MediSoft's bonds have had ample time to trade in the marketplace, analysts and portfolio managers have taken an interest in the company's bonds. At a meeting to discuss the merits of MediSofVs bonds, the following comments were made by various portfolio managers and analysts at Brown & Associates:

"Choosing to invest in MediSoft's convertible bond would benefit our portfolios in many ways, but the primary benefit is the limited downside risk associated with the bond. Since the straight value will provide a floor for the value of the convertible bond, downside risk is limited to the difference between the market price of the bond and the straight value."

"Decreasing volatility in the price of MediSoft's common stock as well as increasing volatility in the level of interest rates are expected in the near future. The combined effects of these changes in volatility will be a decrease in the price of MediSoft's putable bonds and an increase in the price of the convertible bonds. Therefore, only the convertible bonds would be a suitable purchase."

Assuming that portfolio managers at Brown & Associates purchased the convertible bonds, how many years would it take to recover the premium per share?

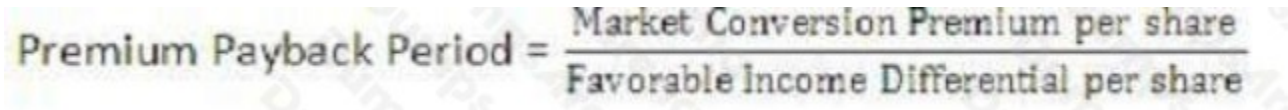
A. 1.17.

B. 1.32.

C. 2.26.

ANSWER: A

Explanation:



We calculated the market premium per share in the previous question so we must now calculate the favorable income differential per share as follows:

$$\frac{\text{Coupon Interest} - (\text{Conversion Ratio X Dividends per Share})}{\text{Conversion Ratio}}$$

$$\text{Favorable Income Differential} = \frac{72.50 - (18 \times 1.80)}{18} = 2.23$$

$$\text{Premium payback period} = \frac{2.61}{2.23} = 1.17$$

(Study Session 14, LOS 54.j)

QUESTION NO: 4

De Jong continues her analysis of O'Connor. She is concerned that along with a dividend discount model approach she would also like to get a measure of the contribution that the key managers, Melanie and Arthur O'Connor, have made to the company's apparent ongoing success.

She considers using NOPAT and EVA to assess management performance. She believes that increasing invested capital to take advantage of projects with positive net present values increases both NOPAT and EVA.

However, De Jong decides to use residual income analysis instead. She provides the following justification for using the residual income model:

• The calculation of residual income depends primarily on readily available accounting data.

• The residual income model can be used even when cash flow is difficult to forecast.

• The residual income model does not depend on dividend payments or on positive free cashflows in the near future.

• The residual income model depends on the validity of the clean surplus relation.

She also considers the following assumptions about continuing residual income:

Assumption 1: Residual income is positive and continues at the same level year after year.

Assumption 2: As return on equity approaches the cost of equity, residual income tends to zero. Assumption 3: Residual income growth declines overtime and eventually reaches zero.

De Jong gathers recent financial information data on O'Connor, as shown in Exhibit I.

Exhibit 1: O'Connor Textiles, Inc. Summary Income Statement (U.S. $ thousands, except per share data)

	2008	2009
	Actual	*Projection*
Sales	$509,447	$529,429
Cost of sales	398,100	405,068
Selling and administrative expenses	49,608	59,378
Depreciation and amortization	18,562	22,979
Total operating expenses	466,270	487,425
Earnings from operations	43,177	42,004
Interest expense	28,004	28,906
Earnings before income taxes	15,173	13,098
Provision for income taxes	5,138	4,453
Net earnings for the year	10,035	8,645
Earnings per share: basic	$0.59	$0.51
Fully diluted	$0.56	*

*Non-dilutive

De Jong has also determined that at the beginning of 2008, O'Connor had total capital of $324,000,000, of which $251,000,000 was debt and $73,000,000 was equity. The company's cost of debt before taxes is 7%, and the cost of equity capital is 8%. The company has a tax rate of approximately 34%. Weighted average cost of capital is 5.4%. Net operating profit after tax (before any adjustments) is $28,517,640.

De Jong is interested in obtaining the market's assessment of the implied growth rate in residual income and notes that the book value per share for O'Connor at the beginning of 2009 was $4.29, and the current market price is $70. She forecasts the return on equity (ROE) for 2009 to be 11.84%.

De Jong discusses her analyses with a colleague, who makes the following general statements:

O'Connor's residual income and economic value added (EVA) for 2008 are closest to:

Residual income ;EVA

A. $6.1 million;$11.0 million

B. $4.2 million ;$11.0 million

C. $4.2 million ;$2.6 million

ANSWER: B

Explanation:

Residual income = nci income - equity charge

Equity charge = equity capital x cost of equity capital

Equity charge = $73,000,000 x 0.08 = $5,840,000

Residual income - $10,035,000 - $5,840,000 = $4,195,000

EVA = NOPAT - (C% x TC)

EVA = $28,517,640 - (0.054 x $324,000,000) = $11,021,640 (Study Session 12, LOS 43.a)

QUESTION NO: 5

Russell Larson, CFA, is an investment analyst for Sentry Properties, Inc., a group of wealthy investors that is currently interested in purchasing Riviera Terrace, a 60- unit apartment complex in Southeastern Florida. The current owners of Riviera Terrace have agreed to sell the property for $40,000,000. Larson estimates that Rivjera Terrace's net operating income for the first year after the sale is finalized will be $4,200,000, and it is expected to maintain its historic annual growth rate of 5%.

Selling price	$60,000,000	
Cost of sale (7%)	(4.200.000)	
Net selling price		$55,800,000
Purchase price	$40,000,000	
Less accumulated depreciation"	(6.250.000)	
Adjusted basis (book value)		$33.750.000
Realized gain on sale		$22,050,000
Recaptured depreciation"		($6.250.000)
Long-term capital gain		$ 15,800,000
Tax on recaptured depreciation ($6,250,000 x 0.28)		
Tax on long-term capital gain ($ 15,800,000 x 0.15)		
Total tax due on property sale		

During the due diligence process, Larson has determined that the average selling price for apartment complexes similar to Riviera Terrace is $1,250,000 per unit, with annual net operating income equal to $ 135,000 per unit. Larson has also determined that net operating income is typically 80% of gross income.

Larson has collected the following information to aid in his evaluation of Riviera Terrace.

• The property will be fully depreciated at a rate of S 1,250,000 per year over 32 years.

• Rental contracts are expected to be reissued on the date the sale is completed.

• Sentry has arranged to finance the investment with a 30-ycar, 7% interest-only loan, withmonthly payments and a face value equal to 80% of the initial investment.

• Selling expenses will be 7% of the gross selling price.

• The capital gains tax rate is 15%, the tax on recaptured depreciation is 28%, and the tax rate onordinary income is 40%.

• Sentry Properties' required return on equity is 20%.

• The interest rate on U.S. government bonds after adjustments for real estate based tax savings= 5.0%.

• The premium investors require for the illiquidity of real estate investments = 2.5%.

• The average real estate return net of appreciation = 1.25%.

• The real estate investment risk premium = 3.0%.

• The average internal rate of return for properties that are comparable to Riviera Terrace is 22%.

As part of the diligence process, Larson deems it to be appropriate to estimate the.market value of Riviera Terrace using capitalization rates based on the market extraction and built-up methods.

One of the partners in Sentry Properties has also asked Larson to estimate the market value of Riviera Terrace using: (1) the direct income capitalization approach and (2) the gross income multiplier approach.

There are several indicators that the Florida real estate market may take a downward turn over the next five years. With this in mind, Larson determines that there is a reasonable chance that Sentry will have to terminate its investment in Riviera Terrace at the end of year 3 at the initial purchase price of $40,000,000. Under this scenario, he estimates the equity reversion after tax (ERAT) in year 3 to be $4,934,000. Cash flow after tax in years 1 and 2 are $1,676,000 and $1,802,000, respectively.

In the scenario in which Sentry will sell Riviera Terrace for $45,000,000 at the end of the investment horizon, the equity reversion after tax is closest to:

A. $2,027,500.

B. $4,983,334.

C. $7,822,500.

ANSWER: C

Explanation:

Selling price		$45,000,000
Cost of sale (7%)	(3,150,000)	
Net selling price		$41,850,000
Purchase price	$40,000,000	
Less accumulated depreciation	(6,250,000)	
Adjusted basis (book value)		$33,750,000
Realized gain on sale		$8,100,000
Recaptured depreciation*		($6,250,000)
Long-term capital gain		$1,850,000
Tax on recaptured depreciation ($6,250,000 x 0.28)		$1,750,000
Tax on long-term capital gain ($1,850,000 x 0.15)		$277,500
Total tax due on property sale		$2,027,500

*Accumulated depreciation - 5 x $1,250,000 = $6,250,000
**Whcn net selling price > original cost, recaptured depreciation = accumulated depreciation

Net selling price	$41,850,000
Outstanding mortgage balance	($32,000,000)
Pre-tax sales proceeds	$9,850,000
Less total tax on property sale	(2,027,500)
Equity reversion after tax	$7,822,500

QUESTION NO: 6

In 2001, Continental Supply Company was formed to provide drilling equipment and supplies to contractors and oilfield production companies located throughout the United States. At the end of

2005, Continental Supply created a wholly owned foreign subsidiary, International Oilfield Incorporated, to begin servicing customers located in the North Sea. International Oilfield maintains its financial statements in a currency known as the local currency unit (LCU).

Continental Supply follows U.S. GAAP and its presentation currency is the U.S. dollar.

For the years 2005 through 2008, the weighted-average and year-end exchange rates, stated in terms of local currency per U.S. dollar, were as follows:

LCU/SUS	2005	2006	2007	2008
Average	0.90	1.05	1.05	1.25
Year-end	1.00	1.10	1.00	1.50

International Oilfield accounts for its inventory using the lower-of-cost-or-rnarlcet valuation method in conjunction with the first-in, first-out, cost flow assumption. All of the inventory on hand at the beginning of the year was sold during 2008. Inventory remaining at the end of 2008 was acquired evenly throughout the year.

At the beginning of 2006, International Oilfield purchased equipment totaling LCU975 million when the exchange rate was LCU 1.00 to SI. During 2007, equipment with an original cost of LCU 108 million was totally destroyed in a fire. At the end of 2007, International Oilfield received a LCU 92 million insurance settlement for the loss. On June 30, 2008, International Oilfield purchased equipment totaling LCU 225 million when the exchange rate was LCU 1.25 to $1.

For the years 2007 and 2008, Continental Supply reported International Oilfield revenues in its consolidated income statement of S375 million and $450 million, respectively. There were no inter-company transactions. Following are International Oilfield's balance sheets at the end of 2007 and 2008:

LCU in millions	2008	2007
Cash and receivables	120.0	216.0
Inventory	631.3	650.4
Equipment	820.7	693.6
Liabilities (all monetary)	600.0	600.0
Capital stock	350.0	350.0
Retained earnings	622.0	610.0

At the end of 2008, International Oilfield's retained earnings account was equal to $525 million and, to date, no dividends have been paid. All of International Oilfield's capital stock was issued at the end of 2005.

As compared to the temporal method, which of the following best describes the impact of the allcurrent method on International Oilfield's gross profit margin percentage for 2008 when stated in U.S. dollars? The gross profit margin would be:

A. lower.

B. higher.

C. the same.

ANSWER: B

Explanation:

As compared to the temporal method, the all-current method will result in a higher gross profit margin percentage (higher numerator) when the local currency is depreciating as is the case in this scenario (the exchange rate has risen from LCU 1

per $1 to LCU 1.25 per $1; thus, it costs more LCUs to buy $1 which is the result of a depreciating LCU). Under the temporal method, COGS is remeasured at the historic rate; thus, COGS is not impacted by the depreciating currency. Under the all-current method, COGS is translated at the average rate; thus, COGS is lower because of the depreciating currency. Lower COGS results in a higher gross profit margin percentage. (Study Session 6, LOS 23.d)

QUESTION NO: 7

Matthew Emery, CFA, is responsible for analyzing companies in the retail industry. He is currently reviewing the status of Ferguson Department Stores, Inc. (FDS). FDS has recently gone through extensive restructuring in the wake of a slowdown in the economy that has made retailing particularly challenging. As part of his analysis, Emery has gathered information from a number of sources.

Ferguson Department Stores, Inc.

FDS went public in 1969 following a major acquisition, and the Ferguson name quickly became one of the most recognized in retailing. Ferguson had been successful through most of its first 30 years in business and has prided itself on being the one-stop shopping destination for consumers living on the West Coast of the United States. Recently, FDS began to experience both top and bottom line difficulties due to increased competition from specialty retailers who could operate more efficiently and offer a wider range of products in a focused retailing sector. When the company's main bank reduced FDS's line of credit, a serious working capital crisis ensued, and the company was forced to issue additional equity in an effort to overcome the problem. FDS has a cost of capital of 10% and a required rate of return on equity of 12%. Dividends are growing at a rate of 8%, but the growth rate is expected to decline linearly over the next six years to a long-term growth rate of 4%. The company recently paid an annual dividend of $1.

At the end of 2008, FDS announced that it would be expanding its retail operations, moving to a warehouse concept, and opening new stores around the country. FDS also announced it would close some existing stores, write-down assets, and take a large restructuring charge. Upon reviewing the prospects of the firm, Emery issued an earnings per share forecast for 2009 of $0.90. He set a 12-month share price target of $22.50. Immediately following the expansion announcement, the share price of FDS jumped from $14 to $18.

Exhibit 1: Summary Income Statement, Ferguson Department Stores, Inc. (U.S. $ millions, except per share data and shares outstanding)

	2008	2007
Sales	$6,435.9	$6,322.7
Cost of goods sold, operating, administrative, and selling expenses	6,007.9	5,875.9
Depreciation and amortization	148.7	146.6
Interest expense	59.8	59.5
Unusual items—expense	189.1	5.0
Earnings before tax	30.4	235.7
Income taxes—current	49.3	7.5
Income taxes—future	(71.1)	93.5
	(21.8)	101.0
Net earnings for the year	$52.2	$134.7
Earnings per share: Basic	$0.49	$1.26
Fully diluted	$0.49	$1.26
Weighted average shares outstanding	106,530,610	106,530,610

In 2008, FDS also reported an unusual expense of $189.1 million related to restructuring costs and asset write downs.

Exhibit 2: Selected Industry Information for 2008

Estimated earnings growth rate	0.10
Mean trailing price/earnings (P/E) ratio	22.50
Mean price/sales (P/S) ratio	0.50

In response to questions from a colleague, Emery makes the following statements regarding the merits of earnings yield compared to the P/E ratio:

Statement 1: For ranking purposes, earnings yield may be useful whenever earnings are either negative or close to zero.

Statement 2: A high E/P implies the security is overpriced.

Given Emery's dividend forecast for FDS, is the H-model the appropriate valuation model to use to value FDS?

A. Yes.

B. No, the H-model is appropriate when the dividend growth rate declines at a linear rate for a short period of time during stage one, followed by a 1 -year suspension in dividends before the previous dividend is reinstated, and then dividends grow at a long-term constant rate.

C. No, the H-model is appropriate when the dividend growth rate grows during the first stage followed by a period of stable growth in dividends in stage two, followed by a dividend growth rate that declines linearly in perpetuity.

ANSWER: A

Explanation:

The key assumption underlying the H-model is that the dividend growth rate declines linearly from a high rate in the first stage to a long-term level growth rate. (Study Session 11, LOS 40.j)

QUESTION NO: 8

Voyager Inc., a primarily internet-based media company, is buying The Daily, a media company with exposure to newspapers, television, and the internet.

Company Descriptions
Voyager Inc. is organized into two segments: Internet and Newspaper Publishing. The internet segment operates Web sites that offer news, entertainment, and advertising content in text and video format. The internet segment represents 75% of the company's total revenues. The newspaper publishing segment publishes 10 daily newspapers. The newspaper publishing segment represents 25% of the company's total revenues.
The Daily is organized into three segments: Newspaper Publishing (60% of revenues), Broadcasting (35% of revenues), and Internet (5% of revenues). The newspaper publishing segment publishes 101 daily newspapers. The Broadcasting segment owns and operates 25 television stations. The Internet segment consists of an internet advertising service. The Daily's newspaper publishing and broadcasting segments cover the twenty largest markets in the United States.

Voyager's acquisition of The Daily is The company's second major acquisition in its history. The previous acquisition was at the height of the merger boom in the year 2000. Voyager purchased the Dragon Company at a premium to net asset value, thereby doubling the company's size. Voyager used the pooling method to account for the acquisition of Dragon; however, because of FASB changes to the Business Combination Standard, Voyager will use the acquisition method to account for the Daily acquisition.

(in millions except per share data)	Voyager Inc. (before merger)	The Daily (before merger)
Revenues	$1,800	$7,600
Operating Income	$415	$998
Earnings	$200	$650
Assets	$1,900	$14,700
Debt	$200	$2,500
Equity	$1,100	$7,600
Number of shares	117.6 million	213.1 million
Stock price per share	$68	$35
Earnings per share	$1.70	$3.05
PE ratio	40.0x	11.5x

Voyager has made an all-cash offer of $45 per share to acquire The Daily. Wall Street is skeptical about the merger. While Voyager has been growing its revenues by 40% per year, The Daily's revenue growth has been less than 2% per year. Michael Renner. the CFO of Voyager, defends the acquisition by stating that The Daily has accumulated a large amount of tax losses and that the combined company can benefit by immediately increasing net income after the merger. In addition, Renner states that the New Voyager will eliminate the inefficiencies of the internet operations and thereby boost future earnings. Renner believes that the merged companies will have a value of $17.5 billion.

In the past, The Daily's management has publicly stated its opposition to merging with any company, a position management still maintains. As a result of this situation, Voyager submitted their merger proposal directly to The Daily's board of directors, while the firm's CEO was on vacation. Upon returning from vacation, The Daily's CEO issued a public statement claiming that the proposed merger was unacceptable under any circumstances.

Voyager used the pooling of inierests method when accounting for the 2000 acquisition of Dragon, rather than the acquisition method it would use today. Which of the following is least likely a feature of the pooling of interests method?

A. Operating results for prior periods are restated as though the two firms were always combined.

B. The pooling of interests method combines historic book values and fair values.

C. The pooling of interests method combines historic book values.

ANSWER: B

Explanation:

Historically, two accounting methods have been used for business combinations: (1) the purchase method and (2) the pooling-of-interests method. However, over the last few years, the pooling method has been eliminated from U.S. GAAP and IFRS. Now, the acquisition method is required.

The pooling-of-interests method, also known as uniting-of-interests method under IFRS, combined the ownership interests of the rwo firms and viewed the participants as equals—neither firm acquired the other. The assets and liabilities of the two firms were simply combined. Key attributes of the pooling method include the following:

• The two firms are combined using historical book values.

• Operating results for prior periods are restated as though the two firms were always combined.

• Ownership interests continue, and former accounting bases arc maintained.

Note that fair values played no role in accounting for a business combination using the pooling method—the actual price paid was suppressed from the balance sheet and income statement. (Study Session 5, LOS 21.c)

QUESTION NO: 9

Chester Brothers, LLC, is an investment management firm with $200 million in assets under management. Chester's equity style is described to clients as a "large cap core" strategy. One year ago, Chester instituted a new compensation plan for its equity portfolio managers. Under this new plan, each portfolio manager receives an annual bonus based upon that manager's quarterly performance relative to the S&P 500 index. For each quarter of aut-performance, the manager receives a bonus in the amount of 20% of his regular annual compensation. Chester has not disclosed this new plan to clients. Portfolio managers at Chester are not bound by non-compete agreements.

Fames Rogers, CFA, and Karen Pierce, CFA, are both portfolio managers affected by the new policy. Rogers out-performed the S&P 500 index in each of the last three quarters, largely because he began investing his clients1 funds in small cap securities. Chester has recently been citing Rogers's performance in local media advertising, including claims that "Chester's star manager, James Rogers, has outperformed the S&P 500 index in each of the last three quarters." The print advertising associated with the media campaign includes a photograph of Rogers, identifying him as James Rogers, CFA. Below his name is a quote apparently attributable to Rogers saying "as a CFA chartcrholdcr I am committed to the highest ethical standards."

A few weeks after the advertising campaign began, Rogers was approached by the Grumpp Foundation, a local charitable endowment with $3 billion in assets, about serving on their investment advisory committee. The committee meets weekly to review the portfolio and make adjustments as needed. The Grumpp trustees were impressed by the favorable mention of Rogers in the marketing campaign. In making their offer, they even suggested that Rogers could mention his position on the advisory committee in future Chester marketing material. Rogers has not informed Chester about the Grumpp offer, but he has not yet accepted the position.

Pierce has not fared as well as Rogers. She also shifted into smaller cap securities, but due to two extremely poor performing large cap stocks, her performance lagged the S&P 500 index for the first three quarters. After an angry confrontation with her supervisor, Pierce resigned. Pierce did not take any client information with her, but when she left she did take a copy of a Pierce has not fared as well as Rogers. She also shifted into smaller cap securities, but due to two extremely poor performing large cap stocks, her performance lagged the S&P 500 index for the first three quarters. After an angry confrontation with her supervisor, Pierce resigned. Pierce did not take any client information with her, but when she left she did take a copy of a computer model she developed while working al Chester, as well as the most recent list of her buy recommendations, which was created from the output of her computer valuation model. Pierce soon accepted a position at a competing firm, Cheeri Group. On her first day at Cheeri, she contacted each of her five largest former clients, informing them of her new employment and asking that they consider moving their accounts from Chester to Cheeri. During both telephone conversations and e-mails with her former clients, Pierce mentioned that Chester had a new compensation program that created incentives for managers to shift into smaller cap securities.

Cheeri has posted Pierce's investment performance for the past five years on its Web site, excluding the three most recent quarters. The footnotes to the performance information include the following two statements:

Statement 1: Includes large capitalization portfolios only.

Statement 2: Results reflect manager's performance at previous employer.

When Pierce left her position at Chester, her behavior was inconsistent with the CFA Institute Standards in that:

A. taking the computer model was a violation, but taking the recommended list was not a violation.

B. taking the list of her recommendations was a violation, but taking the computer model was not a violation.

C. both the computer model and the recommended list were Chester property that Pierce should not have taken.

ANSWER: C

Explanation:

Standard IV(A). Pierce should not have taken any employer records, and the computer model was Chester's property, regardless of Pierce's role in developing the model. Pierce has violated

Standard IV(A) Duties to Employers - Loyalty hy taking both items without Chester's consent. (Study Session 1, LOS 2.a)

QUESTION NO: 10 - (SIMULATION)

SIMULATION

Ota L'Abbe, a supervisor at an investment research firm, has asked one of the junior analysts, Andreas Hally, to draft a research report dealing with various accounting issues.

Excerpts from the request are as follows:

• “There's an exciting company that we're starting to follow these days. It's called Snowboards andSkateboards, Inc. They are a multinational company with operations and a head office based in the resort town of Whistler in western Canada. However, they also have a significant subsidiary located in the United States."

• "Look at the subsidiary and deal with some foreign currency issues including the specificdifferences between the temporal and all-current methods of translation, as well as the effect on financial ratios."

• "The attached file contains the September 30, 2008, financial statements of the U.S. subsidiary.Translate the financial statements into Canadian dollars in a manner consistent with U.S. GAAP." The following are statements from the research report subsequently written by Hally:

Statement 1: Subsidiaries whose operations are well integrated with the parent will use the allcurrent method of translation.

Statement 2: Self-contained, independent subsidiaries whose operating, investing, and financing activities are primarily located in the local market will use the temporal method of translation.

Other information to be considered

Fiscal 2007 (average)	1.44
Fiscal 2008 (average)	1.35
October 1,2004	1.50
September 30,2007	1.48
June 30,2008	1.37
September 30, 2008	1.32

• Beginning inventory for fiscal 2008 had been purchased evenly throughout fiscal 2007. Thecompany uses the FIFO inventory value method.

• Dividends of USD 25,000 were paid to the shareholders on June 30, 2008.

• All of the remaining inventory at the end of fiscal 2008 was purchased evenly throughout fiscal2008.

• All of the PP&E was purchased, and all of the common equity was issued at the inception of thecompany on October 1, 2004. No new PP&E has been acquired, and no additional common stock has been issued since then. However, they plan to purchase new PP&E starting in fiscal 2009.

• The beginning retained earnings balance for fiscal 2008 was CAD 1,550,000.

• The accounts payable on the fiscal 2008 balance sheet were all incurred on June 30, 2008.

• The U.S. subsidiary's operations are highly integrated with the main operations in Canada.

• The remeasured inventory for 2008 using the temporal method is CAD 810,000.

• All monetary asset and liability balances are the same as they were at the end of the 2007 fiscalyear, except that long-term debt was USD 467,700.

• Costs of goods sold under the temporal method in 2008 is CAD 1,667,250.

Suppose the parent uses the all-current method to translate the subsidiary for fiscal 2008. Will return on assets and net profit margin in U.S. dollars before translation be the same as, or different than, the translated Canadian dollar ratios?

	Return on assets	Net profit margin
A.	Same	Same
B.	Different	Different
C.	Different	Same

ANSWER: Answer:

Explanation:

Answer: Answer:

Return on assets prior to translation will be different than the ratio after translation because the numerator (net income) is translated at the average rate, and the denominator (assets) is translated at the current rate using the all-current method.

Net profit margin will be the same because both the numerator (net income) and the denominator (sales) are translated at the average rate using the all-current method. (Study Session 6, LOS 23d)

QUESTION NO: 11

Mary Carr is 62 years old, in good health, and will retire in four years from her position as the CEO and chairman of the board of a large professional services firm, Appleton Professional Services, which is located in the midwestern United States. Carr has approached Tim Houlis, her financial planner, for help in preparing an investment policy statement and accompanying asset allocation. Jack Timmons is Houlis' assistant.

In a lunch meeting with Houlis and Timmons, Carr reveals that she is thinking of moving this year to be closer to Appleton's largest client. She is concerned about developing an investment plan now given that she will no longer have contact with Houlis if she does move. Houlis reassures her that this is not a problem. He states that a properly constructed investment policy statement can be readily implemented by her new financial advisor. Timmons states that the investment policy statement is a long-term document that should be changed only if the outlook for equities versus bonds and other assets changes.

Carr's parents were successful business people who owned a series of small firms. Their success, however, did not come without challenges. Twice they had to liquidate businesses in which they were the primary shareholders. As a child, Carr became accustomed to the uncertainties of the entrepreneurial world. When she graduated from college, her parents provided her with the funds to purchase Appleton Professional Services. Appleton was a small firm at that point, but Can-has grown it into one of the larger firms in its industry, even though the professional services industry is cyclical and is susceptible to economic recessions. Appleton went public eight years ago and Carr retained a majority shareholder position when it did. Over time she has sold some of the stock but still has a controlling position in the firm.

Despite the business difficulties Carr's parents experienced, they were able to amass a sizeable fortune in their later years. Including her inheritance and holdings in Appleton stock, Carr has a portfolio with a current value of $6,000,000, most of which is invested in Appleton and other domestic and international equities. Carr has instructed Houlis and Timmons to grow her portfolio over time, focusing on capital appreciation and achieving long-term return goals. She would like to leave her children a sizeable inheritance.

Carr is single with two children. Her oldest child, Mark, is 25 years old and financially independent. Her youngest son, John, is a junior in college at a prestigious liberal arts college in New England. The tuition payment for his last year of college of approximately $40,000 is due at the end of this year. She has no mortgage on her house. Carr is an avid bird watcher and gifts $50,000 a year to a local environmental group. She is concerned with the destruction of bird habitat, so she does not want to invest in highly-polluting industries or firms that are involved in real estate development.

When she retires, Carr will receive a lump-sum, after-tax distribution of approximately $500,000 from her firm. She will also begin collecting an annual pension payment equal to her current salary. The pension payment is indexed to inflation. She will be covered under Appleton's health insurance plan in retirement. Carr spends $ 170,000 a year on vacations and living expenses, which is about equal to her current salary at Appleton.

Houlis estimates that Carr is taxed at an effective marginal rate of 30% on capital gains and income. Houlis estimates an inflation rate of 3% for the rest of Carr's life expectancy, which he projects at 20 years or more, given her good health.

With regard to generating adequate liquidity for Carr's portfolio, Timmons states that she need not invest entirely in income-generating assets. Instead, Carr can generate income from stock dividends, bond coupons, and the sale of assets. By being willing to generate income through the sale of assets, Carr would be able to broaden the types of securities available to her for investment. Timmons states that the problem with most assets that produce income (e.g., dividend paying stocks) is that

their expected return is usually lower. He states that the advantage of his approach is that Carr could pursue higher return assets, such as small company stocks.

Are Carr's willingness to accept risk and her ability to accept risk appropriately matched?

A. No. Willingness is too high for ability.

B. No. Ability is too high for willingness.

C. Willingness and ability match.

ANSWER: C

Explanation:

Carr's willingness to take risk is above average. She is familiar with risk through her

entrepreneurial activities and has directed her advisors to pursue a long-term capital appreciation investment strategy. Her current asset allocation is in equities, which also indicates a willingness to undertake above average risk.

Her ability is above average because she has a substantial asset base, a long-term investment horizon, and relatively low liquidity needs.

Given both an above average willingness and above average ability, her overall risk tolerance is above average. (Study Session 18, LOS 68.c)

QUESTION NO: 12

Matthew Emery, CFA, is responsible for analyzing companies in the retail industry. He is currently reviewing the status of Ferguson Department Stores, Inc. (FDS). FDS has recently gone through extensive restructuring in the wake of a slowdown in the economy that has made retailing particularly challenging. As part of his analysis, Emery has gathered information from a number of sources.

Ferguson Department Stores, Inc.

FDS went public in 1969 following a major acquisition, and the Ferguson name quickly became one of the most recognized in retailing. Ferguson had been successful through most of its first 30 years in business and has prided itself on being the one-stop shopping destination for consumers living on the West Coast of the United States. Recently, FDS began to experience both top and bottom line difficulties due to increased competition from specialty retailers who could operate more efficiently and offer a wider range of products in a focused retailing sector. When the company's main bank reduced FDS's line of credit, a serious working capital crisis ensued, and the company was forced to issue additional equity in an effort to overcome the problem. FDS has a cost of capital of 10% and a required rate of return on equity of 12%. Dividends are growing at a rate of 8%, but the growth rate is expected to decline linearly over the next six years to a long-term growth rate of 4%. The company recently paid an annual dividend of $1.

At the end of 2008, FDS announced that it would be expanding its retail operations, moving to a warehouse concept, and opening new stores around the country. FDS also announced it would close some existing stores, write-down assets, and take a large restructuring charge. Upon reviewing the prospects of the firm, Emery issued an earnings per share forecast for 2009 of $0.90. He set a 12-month share price target of $22.50. Immediately following the expansion announcement, the share price of FDS jumped from $14 to $18.

Exhibit 1: Summary Income Statement, Ferguson Department Stores, Inc. (U.S. $ millions, except per share data and shares outstanding)

	2008	2007
Sales	$6,435.9	$6,322.7
Cost of goods sold, operating, administrative, and selling expenses	6,007.9	5,875.9
Depreciation and amortization	148.7	146.6
Interest expense	59.8	59.5
Unusual items—expense	189.1	5.0
Earnings before tax	30.4	235.7
Income taxes—current	49.3	7.5
Income taxes—future	(71.1)	93.5
	(21.8)	101.0
Net earnings for the year	$52.2	$134.7
Earnings per share: Basic	$0.49	$1.26
Fully diluted	$0.49	$1.26
Weighted average shares outstanding	106,530,610	106,530,610

In 2008, FDS also reported an unusual expense of $189.1 million related to restructuring costs and asset write downs.

Exhibit 2: Selected Industry Information for 2008

Estimated earnings growth rate	0.10
Mean trailing price/earnings (P/E) ratio	22.50
Mean price/sales (P/S) ratio	0.50

In response to questions from a colleague, Emery makes the following statements regarding the merits of earnings yield compared to the P/E ratio:

Statement 1: For ranking purposes, earnings yield may be useful whenever earnings are either negative or close to zero.

Statement 2: A high E/P implies the security is overpriced.

Assuming that the cost of equity for FDS does not change, the present value of growth opportunities in the share price following the announcement that the company would be expanding its retail operations, using Emery's 2009 earnings forecast, is closest to:

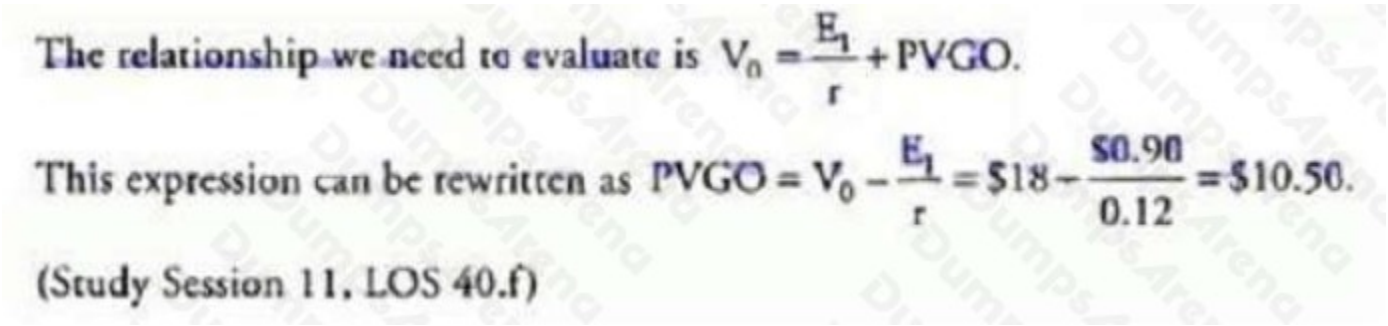
A. $9.00.

B. $10.50.

C. $12.50.

ANSWER: B

Explanation:



QUESTION NO: 13

Jenna Stuart is a financial analyst for Deuce Hardware Company, a U.S. company that reports its results in U.S. dollars. Wayward Distributing, Inc., is a foreign subsidiary of Deuce Hardware, which began operations on January 1,2007. Wayward is located in a foreign country and reports its results in the local currency called the Rho. Selected balance sheet information for Wayward is shown in the following table.

Selected Balance Sheet Accounts Wayward Distributing Inc. (in Rho)

	12/31/07	*12/31/08*
Cash and accounts receivable	5,000	5,200
Inventory	3,800	4,900
Net fixed assets	6,200	7,400
Total assets	15,000	17,500
Current liabilities	2,000	2,000
Long-term debt	9,000	9,500
Shareholders' equity	4,000	6,000

Stuart has been asked to analyze how the reported financial results of Wayward will be affected by the choice of the all-current or temporal methods of accounting for foreign operations. She has gathered the following exchange rate information on the $/Rho exchange rate:

• Spot rate on 1/01/08: $0.35 per Rho

• Spot rate on 12/31/08: $0.45 per Rho

• Average spot rate during 2008: $0.42 per Rho

Will the temporal method report a translation gain or loss for 2008, and will that gain or loss be reported on Deuce's income statement or the balance sheet?

A. Gain on the balance sheet.

B. Loss on the income statement.

C. Gain on the balance sheet and a loss on the income statement.

ANSWER: B

Explanation:

Exposure under the temporal method is cash and accounts receivable minus current liabilities and long-term debt. Beginning exposure is negative ($5,000 - $11,000 = -$6,000) and the change in exposure is also negative [-$6,300 - (-$6,000)] = -$300. Because the Rho appreciated during the year, the temporal method will report a translation loss for 2008. Gains and losses are reported on the income statement under the temporal method. (Study Session 6, LOS 23.d,e)

QUESTION NO: 14

Richard Grass is the healthcare analyst for Furrnon Investments and is reviewing the investment merits of the developing hospice industry. The hospice industry has a short history in the public market, as several companies have recently completed their initial public offering. Hospice services are provided to patients diagnosed with terminal illness as an alternative to aggressive medical management. The use of hospice services at skilled nursing facilities and assisted-living facilities is forecasted to continue its recent growth. Medicare is the primary payer for hospice services, accounting for 85% of the approximately $7 billion in industry's revenues. Hospice providers offer symptom and pain management to patients diagnosed with a terminal illness by their physician. The program was added to the Medicare benefit package in the early 1980s. Growth in the sector has only recently. accelerated due to the emergence of a number of for-profit companies. The caregiver provides a plan for each admitted patient and care is given in any number of healthcare environments, including the patient's home.

Grass's analysis of the hospice industry has uncovered several facts that are outlined below:

• The industry's revenue annual growth rate has increased from 14% in the late 1990s to 25% in2008.

• The average length of stay at facilities for hospice patients is increasing.

• Labor costs account for 75% of total expenses, drugs 15% of total expenses, and medicalsupplies 10%.

• More than 80% of hospice patients are above 65 years old and 30% are above 85 years old.

• Based on the U.S. Census Bureau's statistics, over the next six years (2009-2015), the numberof people in the 65 and older age group will increase annually by 1.4%.

• The Medicare hospice benefit is still underutilized by the terminally ill population, according toMedPac (an independent advisory committee for the U.S. Congress on healthcare issues).

• Only 30% of Medicare beneficiaries enroll in the hospice benefit before they die.

• In recent years, the U.S. government has approved rate increases for the sector compared to flator declining rate trends for other healthcare services.

• The Medicare hospice program has a beneficiary cap which cannot exceed approximately$18,000 annually per person.

• The top six for-profit providers account for about half of the segment's sales.

• The overall hospice provider market is roughly divided into 55% non-profit, 10% U.S.government, and 35% for-profit.

Grass's analysis has narrowed his search to Hope Company. Hope controls about 7% of the total hospice service market or 20% of the for-profit market. The company has the only regulator approved for-profit certificate for the state of Florida, one of the most attractive markets in the United States. In addition to a strong market share in Florida, Hope has a strong presence in urban markets like Dallas and San Francisco. Hope has a more diversified revenue base than other publicly traded for-profit providers.

Grass is concerned about potential risks that would change his view of the investment merits for the hospice industry. Based on the facts presented, identify the greatest risk for the hospice industry, relying on your understanding of Porter analysis.

A. Increased competition among the for-profit companies could lower profit margins (rivalry among competitors).

B. Suppliers could force the hospice industry to pay higher prices for medical supplies (bargaining power of suppliers).

C. Medicare could reduce its benefit program for hospice services (bargaining power of buyers).

ANSWER: C

Explanation:

Medicare represents 85% of the hospice industry's revenues. If Medicare reduces the benefit package, patients are more likely to seek alternative care options. Increasing competition could also be a concern, but the importance of Medicate reimbursements makes C the best answer. (Study Session 11, LOS 37.b)

QUESTION NO: 15

Austin Clark, CFA, has been asked to analyze White Goods Corporation, a $9 billion company that owns a nationwide chain of stores selling appliances and other electronic goods. As part of his analysis of the White Goods Corporation, Clark's supervisor, David Horvath, asks Clark to forecast White Goods' 2009 sales using multiple regression analysis. The following model was developed:

sales = 20.1 + 0.001 GDP+ 1,000.6 TR + 0.1 CC -3.2 PC -40.3 UR t-values: (1.1) (2.3) (1.75) (3.2) (-0.48) (-0.9)

Number of observations: 76

Standard error estimate: 15.67

Unadjusted R2: 0.96

Regression sum of squares: 412,522 Error sum of squares: 17,188

Independent Variable Descriptions

GDP = gross domestic product

TR = average coupon rate on 5-year U.S. Treasury securities

CC = most recent quarter end consumer confidence index value

PC = previous year's sales of personal computers UR = most recent quarter end unemployment rate

Variable Estimates for 2009

GDP =8,000

TR = 0.05

CC =97

PC = 60,000

UR = 0.055

Critical Values For Student's t-Distribution

Degrees of freedom	Level of significance for one-tailed test			
	10%	5%	2.5%	1%
	Level of significance for two-tailed test			
	20%	10%	5%	2%
5	1.476	2.015	2.571	3.365
15	1.341	1.753	2.131	2.602
25	1.316	1.708	2.060	2.485
50	1.299	1.676	2.009	2.403
60	1.296	1.671	2.000	2.390
70	1.294	1.667	1.994	2.381

Clark's supervisor asks him to prepare a report explaining the implications of the regression analysis results. Clark writes the following conclusions concerning regression analysis in his report:

Interpreting the results of regression analysis can be problematic if certain assumptions of the ordinary least squares framework are violated. The regression output for White Goods Corporation is unreliable for the following reasons:

Finding 1: The correlation between regression errors across time is very close to 1.

Finding 2: There is a strong relationship between the regression error variance and the regression independent variables.

Is the regression coefficient of the 5-year U.S. Treasury interest rate statistically significantly different from zero at the 10% level of significance?

A. Yes, because 1.75 > 1.29.

B. Yes, because 1.75 > 1.67.

C. No, because 1.75 < 1.99.

ANSWER: B

Explanation:

Using a two-tail test at the 10% significance level, the critical value of the t-statistic equals 1.67 (degrees of freedom equal N-k-1= 76-5-l = 70). The t-statistic (1.75) exceeds its critical value using a 10% significance level. (Study Session 3, LOS12.b)

QUESTION NO: 16

William Shears, CFA, has been assigned the task of predicting sales for the specialty retail industry. Shears finds that sales have been increasing at a fairly constant rate over time and decides to estimate the linear trend in sales for the industry

using quarterly data over the past 15 years, starting with Quarter 1 of 1994 and ending with Quarter 4 of 2008. On January 1, 2009, Shears estimates the following model:

$$sales_t = b_0 + b_1 t + \varepsilon_t \quad (1)$$

where:

sales = quarterly sales (measured in $ millions) for the specialty retail industry

b_0 = intercept term

b_1 = slope

t = time variable (quarter number)

e = random error

Exhibit 1 provides the results of the linear trend regression.

Exhibit 1: Linear Trend Regression

	Coefficient	*Standard Error*
Intercept	10.0	3.50
Trend	16.0	6.55

Shears also estimates an autoregressive model of order one, AR(1), using the changes in quarterly sales data for the industry from the first quarter of 1994 through the fourth quarter of 2008. He obtains the following results for his AR(1) model:

$$\Delta sales_t = b_0 + b_1 \Delta sales_{t-1} + e_t$$

Exhibit 2: AR(1) Model for Changes in Industry Sales

	Coefficient	*Standard Error*
Intercept	20.00	2.15
Lag 1	0.10	0.04

The autocorrelations for the first four lags from Shears's AR(1) model are provided in Exhibit 3:

Exhibit 3: Autocorrelations from the AR(1) Model

Lag	*Autocorrelation*
1	–0.032
2	–0.200
3	–0.065
4	0.300

Shears also derives a regression using the residuals from the AR(1) model. He regresses the squared residuals (or estimated errors) against the lagged squared residuals. The results of this regression are reported in Exhibit 4.

Exhibit 4: Squared Residuals Regression

	Coefficient	*Standard Error*
Intercept	3.00	0.577
Lagged residual squared	0.28	0.185

Quarterly sales for the Specially Retail Industry during 2008 were:

Exhibit 5: 2008 Quarterly Industry Sales

Quarter	*Sales (in millions)*
Quarter 1, 2008	900
Quarter 2, 2008	925
Quarter 3, 2008	950
Quarter 4, 2008	1,000

Quarterly sales for the Specially Retail Industry during 2008 were:

Shears's supervisor, Sam Kite, expresses concern that equation (1) might be misspecified. Specifically, Kite refers to the finding that "sales have been increasing at a fairly constant rate over time.

Regarding seasonality. Shears should use Exhibit 3 to conclude he should add the following lag 10 his autoregressive model:

A. the 2nd lag.

B. the 3rd lag.

C. the 4th lag.

ANSWER: C

Explanation:

Seasonality refers to repeating patterns each year. Using quarterly data, tests of seasonality focus on the 4lh lag (i.e., "same time, last year"). The autocorrelation for the 4 lag is statistically significant. The f-statistic for the autocorrelation equals the

autocorrelation estimate divided by its standard error, which equals I divided by the square root of the number of quarters used in the regression. (Study Session 3, LOS 13.k)

QUESTION NO: 17

Andrew Carson is an equity analyst employed at Lee, Vincent, and Associates, an investment research firm. In a conversation with his supervisor, Daniel Lau, Carson makes the following two statements about defined contribution plans.

Statement I: Employers often face onerous disclosure requirements. Statement 2: Employers often bear all the investment risk.

Carson is responsible for following Samilski Enterprises (Samilski), a publicly traded firm that produces motorcycles and other mechanical parts. It operates exclusively in the United States. At the end of its 2009 fiscal year, Samilski's employee pension plan had a projected benefit obligation (PBO) of $320 million. Also, unrecognized prior service costs were $35 million, the fair value of plan assets was $316 million, and the unrecognized actuarial gain was $21 million.

Carson believes the rate of compensation increase will be 5% as opposed to 4% in the previous year, and the discount rate will be 7% as opposed to 8% in the previous year.

This past year, Samilski began using special purpose entities (SPEs) for various reasons. In preparation for analyzing the SPE disclosures in the footnotes to the financial statements, Carson prepares a memo on SPEs. In the memo, he correctly concludes that the company will be required under new accounting rules to classify them as variable interest entities (VIE) and consolidate the entities on the balance sheet rather than report them using the equity method as in the past.

Under current U.S. GAAP pension accounting standards, the amount of the pension asset or liability that Samilski should report on its 2009 fiscal year end balance sheet is closes/ to a:

A. $4 million liability

B. $10 million liabilily

C. $14 million liabiliy

ANSWER: A

Explanation:

An higher rate of compensation increase will increase the PBO. It will also increase the overall pension expense by increasing both the service and interest costs. (Study Session 6, LOS 22.b,c)

QUESTION NO: 18

William Shears, CFA, has been assigned the task of predicting sales for the specialty retail industry. Shears finds that sales have been increasing at a fairly constant rate over time and decides to estimate the linear trend in sales for the industry using quarterly data over the past 15 years, starting with Quarter 1 of 1994 and ending with Quarter 4 of 2008. On January 1, 2009, Shears estimates the following model:

$$sales_t = b_0 + b_1 t + \varepsilon_t \quad (1)$$

where:

sales = quarterly sales (measured in $ millions) for the specialty retail industry

b_0 = intercept term

b_1 = slope

t = time variable (quarter number)

e = random error

Exhibit 1 provides the results of the linear trend regression.

Exhibit 1: Linear Trend Regression

	Coefficient	*Standard Error*
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Intercept	20.00	2.15
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Lag	*Autocorrelation*
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3	–0.065
4	0.300

Shears also derives a regression using the residuals from the AR(1) model. He regresses the squared residuals (or estimated errors) against the lagged squared residuals. The results of this regression are reported in Exhibit 4.

Exhibit 4: Squared Residuals Regression

	Coefficient	*Standard Error*
Intercept	3.00	0.577
Lagged residual squared	0.28	0.185

Quarterly sales for the Specially Retail Industry during 2008 were:

Exhibit 5: 2008 Quarterly Industry Sales

Quarter	*Sales (in millions)*
Quarter 1, 2008	900
Quarter 2, 2008	925
Quarter 3, 2008	950
Quarter 4, 2008	1,000

Quarterly sales for the Specially Retail Industry during 2008 were:

Shears's supervisor, Sam Kite, expresses concern that equation (1) might be misspecified. Specifically, Kite refers to the finding that "sales have been increasing at a fairly constant rate over time.

Assuming the AR(1) model in Exhibit 2 is appropriate, Shears should conclude that the change in sales is likely to:

A. fall from Quarter 4, 2008 levels.

B. rise from Quarter 4, 2008 levels.

C. remain unchanged from Quarter 4, 2008 levels.

ANSWER: A

Explanation:

The mean reverting value equals the intercept divided by 1 minus slope = 20/(1-0.10) = 20 / 0.90 =

$22.22 million. The last change was $50 million as shown in Exhibit 5 (1000 - 950). Therefore, the AR(1) mode! predicts that the series will fall anytime the current value (the last quarter in 2008) is above the mean reverting value. The change in sales for the last quarter in 2008 was $50 million, which exceeds the mean reverting value. (Study Session 3, LOS 13.e)

QUESTION NO: 19

Josh Atwell recently inherited a large sum of money and wants to invest a portion of the inheritance into a real estate investment that provides a tax shelter. Atwell wants to take a limited management role in the real estate investment, and avoid the expense of hiring professional project management. Also, Atwell requires that the real estate investment generate high cash flows. Atwell hired Kellogg Investments to provide him potential real estate investments. Kellogg created Exhibit 1 outlining alternative real estate investments, from which Atwell can make his selection. Atwell's cost for any loan is 8%. The loan would be amortized over 20 years with annual payments. His required rate of return is 11%.

Exhibit 1

Property Type	*Net operating income*	*Growth rate*	*Property value*	*Loan-to-Value*
Raw land	N.A.	N.A.	$5 million	50%
Office building	$600,000	3%	$8 million	50%
Warehouse	$600,000	5%	$10 million	70%
Hotel	$900,000	7%	$9 million	70%

After reviewing the potential real estate investments generated by Kellogg, Atwell decided against all of the choices. Instead, Atwell requested a detailed report on the investment merits of an apartment complex. In Exhibit 2, Kellogg details the operating income of a targeted apartment complex investment. Atwell will make an equity contribution of $1,000,000. The loan-to-value ratio for the apartment complex investment would be 75%.

Exhibit 2

Year	Operating Income	Tax Payable
1	$400,000	$40,000
2	$420,000	$42,000
3	$441,000	$44,000
4	$463,000	$46,000
5	$486,000	$49,000
After-tax equity reversion	$2,000,000	

An adviser from Kellogg states that Atwell should purchase the apartment complex because the net present value of the investment is positive. The adviser also states, however, that the investment's IRR is less than Atwell's required rate of return. After reviewing the historical financial statements of the potential hotel investment, the advisor notes its erratic net operating income. In fact, the hotel generated several years of growing cash flow followed by two negative years and then a return back to a positive cash flow.

Based on the historical financial statements of the hotel, which of the following valuation techniques would be most appropriate?

A. The internal rate of return (1RR) approach

B. The direct capitalization approach.

C. The net present value (NPV) approach.

ANSWER: C

Explanation:

If a real estate property's cash flow fluctuates, the best valuation approach is the net present value. IRR analysis of real estate investments has a number of limitations including multiple solutions when the investment has positive cash flow one year and a negative cash flow the next year. The direct capitalization approach is best used when the investments net operating income is stable. (Study Session 13, LOS 45-d and 46.d)

QUESTION NO: 20

Ryan Hendricks serves as a security analyst for Investment Management, Inc. (IMI), which employs the Treynor-Black model to evaluate securities and to make portfolio recommendations. IMI uses the capital asset pricing model (CAPM) to determine the degree to which securities may be mispriced relative to IMFs forecasts.

Hendricks evaluates the common shares of Computer Software Associates (CSA), a small company specializing in a unique computer software market niche. Hendricks obtains the following market model results for CSA, using monthly returns for the past 60 months:

$$R_{CSA} = -0.02 + 1.75\, R_{s\&p500} + \epsilon_{CSA} \qquad (1)$$

where:

R_{CSA} = the return on the CSA stock

$R_{S\&P500}$ = tne return on tne S&P500 stock market index

ϵ_{CSA} = random regression error term

Hendricks uses the adjusted beta method to derive his forecasts for companies' future betas. In deriving his forecast for any company beta, Hendricks uses the following first-order autoregressive formula:

forecast beta = 0.33 + 0.67 x (historical beta) (2)

Hendricks derives required returns for individual securities using the CAPM after making appropriate adjustments using his adjusted beta formula in equation (2).

IMI provides Hendricks with the following capital market forecasts to use as inputs for the CAPM.

Exhibit 1: Capital Market Forecasts

Economic Variable	*Expected Return*
S&P 500	12%
1-year Treasury bill	4%

IMI asks Hendricks to make decisions to take long and short positions in individual securities for

IMI's actively managed portfolio, IMI-Active. Specifically, Hendricks is asked to examine CSA and Millennium Drilling (MD), an oil and gas drilling company specializing in deep sea drilling. After a thorough examination of the prospects for each company, Hendricks derives the following alpha forecasts for CSA and MD.

Exhibit 2: Alpha Forecasts

Company	*Alpha*
CSA	0.04
MD	0.08

Hendricks forecasts that the unsystematic variance (the variance of the market model regression error) for MD will be more than double that of CSA.

After determining the appropriate allocations across securities within the IMI-Active portfolio, Hendricks derives the portfolio predictions shown in Exhibit 3.

Exhibit 3: Forecasts for the IMI-Active Portfolio

Forecast Variable	*Forecast Value*
Alpha, α	5.33%
Beta, β	1.35%
Total standard deviation, σ	40.00%
Unsystematic standard deviation, $\sigma(\varepsilon)$	30.00%

IMI forecasts that the total standard deviation for the S&P500 returns will equal 20%. After examining the historical forecasting abilities of Hendricks, IMI determines that Hendricks has demonstrated perfect forecasting ability in regards to CSA stock, but imperfect forecasting abilities in regards to MD stock. IMI finds that the correlation between the realized alphas for MD and the forecast MD alphas provided by Hendricks equals 0.50.

Referring to the Treynor-Black model, Hendricks makes the following statements:

Statement 1: All else equal, the Treynor-Black model increases the weight to the active portfolio as its unsystematic risk increases.

Statement 2: The Treynor-Black model is based on the premise that only a limited number of stocks should be included in the actively managed portfolio.

Using the Treynor-Black model along with the alpha and unsystematic variance information for CSA and MD, should CSA or MD receive a larger weight within the IMI-Active portfolio?

A. CSA should receive a larger weight.

B. MD should receive a larger weight.

C. They should be weighted equally.

ANSWER: A

Explanation:

The Treynor-Black formula for the CSA weight within the IMI-Activc Portfolio equals:

$\frac{\alpha_{CSA}}{\sigma^2(\epsilon_{CSA})}$ divided bv the sum of the $\frac{\alpha_i}{\sigma^2(\epsilon_i)}$ for all securities included in the IMI-Active portfolio. Notice that $\frac{\alpha_{CSA}}{\sigma^2(\epsilon_{CSA})} > \frac{\alpha_{MD}}{\sigma^2(\epsilon_{MD})}$ MP— because the MD alpha is twice

C2(ECSA) a (£MD) as large as the CSA alpha, but the MD unsystematic variance is more than twice as large as the CSA unsystematic variance. Therefore, CSA should receive larger weight than MD. (Study Session 18, LOS 67.b)