

Question 1 of 11

TOPIC: EQUITY

TOTAL POINT VALUE OF THIS QUESTION SET IS 12 POINTS

Edwin Lister, an analyst at Connelly Investments, is analyzing Tuck Meal Foods. The company is headquartered in Minnesota, USA, and specializes in food ingredients such as spices, nuts, cocoa, and coffee.

Lister studies the impact of inflation on Tuck Meal's 2022 sales volume. He designs three alternative scenarios each of which predicts how the company will react to inflationary pressure. Exhibit 1 shows Tuck Meal's financial results for the most recent financial year (2021) while Exhibit 2 shows the estimates of input prices, volume growth and pricing under the three scenarios.

Exhibit 1

Sales	\$550,420
Cost of goods sold	\$388,940
Gross profit	\$161,480
Gross profit margin	29.34%

Exhibit 2

	Scenario A	Scenario B	Scenario C
<i>Price increases for revenues</i>	0.0%	5.0%	10.0%
<i>Volume growth</i>	12.0%	8.0%	- 17.0%
<i>Total revenue growth</i>	12.0%	13.4%	- 8.7%
<i>Input prices increase</i>	10.0%	10.0%	10.0%

Lister would also like to estimate the impact on gross profit margin if Tuck Meal is unable to pass on the 10% inflation in input costs to its customers. For his analysis, Lister relies on the data in Exhibit 2 and assumes the same financial results hold for 2022.

Lister concludes his analysis by comparing Tuck Meal's operating performance and financial position to its competitors. He decides to rely on return on invested capital (ROIC) and forecasts that the measure will demonstrate a rising trend in the present inflation scenario based on past observations of how this measure reacted to inflation.

Part 1 of 4

If Scenario C materializes and assuming all cost of goods sold are variable, the change in gross profit margin from that reported in 2021 is *closest* to:

- A. - 50%
- B. - 23%
- C. 0%.

Correct Answer: C

Explanation:

C is correct. If Scenario C materializes, the resulting gross profit margin is 29.34% (see below). Therefore, the year-on-year change in the margin figure is 0%.

$$\text{Increase in sales} = (1 + \% \text{increase in price}) (1 + \% \text{increase in volume}) - 1$$

$$\text{Increase in Cost of goods sold} = (1 + \% \text{increase in volume}) (1 + \% \text{increase in prices of inputs}) - 1$$

% increase in price	= 10%
% increase in volume	= -17%
% increase in input costs because of inflation	= 10%

	YOY (%)	
Sales	$(1.10 \times 0.83) - 1$ = - 8.7%	\$502,533
Cost of goods sold	$(0.83 \times 1.10) - 1$ = - 8.7%	\$355,102
Gross profit		\$147,431
Gross profit margin		29.34%

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Part 2 of 4

Considering the data in Exhibit 2, which of the following scenarios *most likely* assumes that the demand for Tuck Meal's products is relatively price inelastic? Scenario:

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

Correct Answer: B

Explanation:

B is correct. When demand is price inelastic, revenues will benefit from inflation. In Scenario B, total revenue growth is + 13.4% compared to a + 12.0% growth observed in Scenario A in which price inflation is absent. Therefore, a price increase is seen to create revenue growth and it is in this scenario that the demand for Tuck Meal's products is assumed to be relatively inelastic.

A is incorrect. Scenario A does not assume any price inflation, therefore the impact of change in unit price on quantity demanded cannot be determined.

C is incorrect. Scenario C assumes that demand is relatively price elastic as an increase in prices is seen to decrease revenue growth.

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Part 3 of 4

Using the data in Exhibit 1, if Tuck Meal is unable to pass on the inflation to its customers, the resulting gross profit margin is equal to:

- A. 22.27%.
- B. 29.34%.
- C. 35.76%.

Correct Answer: A

Explanation:

A is correct. The gross profit margin which results if Tuck Meal is unable to pass the 10% increase in input costs to its customers is calculated below:

Sales	\$550,420
Cost of goods sold (1.1 × 388,940)	\$427,834
Gross profit	\$122,586
Gross profit margin	22.27%

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Part 4 of 4

Which of the following reasons *most likely* supports Lister's preference for the ROIC measure?

- A. The degree of competitive advantage secured by Tuck Meal can be assessed.
- B. Tuck Meal's degree of financial leverage can be compared to its competitors.
- C. The underlying profitability of companies following different tax regimes can be compared.

Correct Answer: A

Explanation:

A is correct. Sustainably high ROIC is a sign of competitive advantage and therefore, the degree of competitive advantage secured by Lister can be assessed using the measure.

B is incorrect. ROIC is not affected by a company's degree of financial leverage.

C is incorrect. ROCE is more useful in the peer comparison of companies in countries with different tax structures.

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Question 2 of 11

TOPIC: ECONOMICS

TOTAL POINT VALUE OF THIS QUESTION SET IS 12 POINTS

Greenwich Ryerson (GR) is a U.S. based provider of information technology services. Three months ago, GR entered into a three-month forward currency contract to hedge a long exposure to the South African Rand (ZAR) by selling ZAR 50 million forward against the USD at an all-in forward price of USD/ZAR 8.7892. GR would now like to roll its position using a currency forward swap. GR's currency advisor has summarized spot and forward quotes for the USD/ZAR currency pair (Exhibit).

Exhibit
Spot and Forward Quotes (Bid-Offer)

Maturity	Spot or Forward Points
Spot (USD/ZAR)	8.7890/8.7895
One month	-7.5/-6.5
Three months	-18.9/-15.8
Six months	-27.3/-22.2

Part 1 of 4

The current all-in offer rate for the purchase of ZAR against the USD in six months' time is *closest* to:

- A. 8.7863.
- B. 8.7870.
- C. 8.7873.

Correct Answer: C

Explanation:

The current 6-month all-in offer rate (rate used to purchase ZAR against USD) is equal to $8.7895 + (-22.2/10,000) = 8.7873$

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Part 2 of 4

Which of the following statements is *most likely* correct regarding the bid-offer spread for forward contracts?

- A. Forward and spot bid-offer spreads are influenced by similar factors.
- B. Quoted forward points need to be scaled according to the maturity of the contract.
- C. In a forward currency swap, an average of the bid and offer forward points will be added to the mid-market spot rate.

Correct Answer: A

Explanation:

Statement A is correct. Both the spot and forward bid-offer rates depend on three factors: the interbank market liquidity of the underlying currency pair, the size of the transaction, and the relationship between the client and dealer.

Statement B is incorrect. The quoted forward points are scaled to each maturity and there is no need to scale them.

Statement C is incorrect. For currency swaps, a mid-market spot rate is applied to the spot leg of the transaction and to the calculation of the forward rate. The forward points will still be based on the either the bid or offer.

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Part 3 of 4

Which factor will *most likely* affect forward bid-offer spreads but not spot bid-offer spreads?

- A. Counterparty credit risk.
- B. The underlying currency pair.
- C. Relationship between the client and dealer.

Correct Answer: A

Explanation:

Statement A is correct. Because foreign currency transactions in the spot market are of shorter duration, counterparty credit risk is less of a concern. However, as the term of the contract increases, counterparty credit risk increases which in turn will widen the bid-offer spread quoted for the contract.

Statement B is incorrect. The underlying currency pair will influence the width of the bid-offer spread in the case of both spot and forward foreign currency transactions.

Statement C is incorrect. The relationship between the dealer and client will influence the width of the bid-offer spread in the case of both spot and forward foreign currency transactions.

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Part 4 of 4

The cash flow realized by GR on the settlement date is *closest* to an:

- A. inflow of USD 194.17.
- B. inflow of USD 2,500.00.
- C. outflow of USD 2,500.00.

Correct Answer: C

Explanation:

90 days ago, the GR sold ZAR 50 million against the USD for 8.7892. To settle the maturing contract, the GR is required to purchase ZAR 50 million today. The ZAR amounts will net to zero on the settlement date. Therefore, the cash position of the GR will need to be measured in USD.

Three months ago, the GR sold ZAR 50 million and will receive USD 439,460,000 ($50,000,000 \times 8.7892$) on the settlement date. Today GR will purchase ZAR 50 million at the mid-market spot rate of 8.78925 (because this is a FX swap) and pay USD 439,462,500 ($50,000,000 \times 8.78925$). Based on the spot transaction, the dealer will pay USD 439,462,500 and based on the forward transaction, the dealer will receive USD 439,460,000; a cash outflow of USD 2,500.

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TOPIC: DERIVATIVES

TOTAL POINT VALUE OF THIS QUESTION SET IS 12 POINTS

Skylar Jones is a currency derivatives specialist at Lakehouse Consultants, an investment advisory firm. Jones is providing consultancy services to Smart Developers, a property development firm based in Australia, and to the plan sponsor of the Ivanhoe pension fund.

Smart Developers is seeking to expand its operations to the UK and will require £30 million for this project. However, the development firm can obtain financing at a lower rate locally. Smart's chief finance officer contacts Jones who advises the firm to enter into a 1-year pay fixed currency swap denominated in £30 million with a quarterly settlement frequency. The current exchange rate is £0.62/A\$ and the 3-month risk-free rates are 0.5% and 0.7% in Australia and the UK, respectively.

Part 1 of 4

At swap initiation, Smart Developers will receive an amount from the counterparty which equals:

- A. £30.00 million.
- B. A\$18.60 million.
- C. A\$48.39 million.

Correct Answer: A

Explanation:

A is correct. At swap initiation, Smart Developers will deliver A\$48.3871 million or A\$48.39 million ($£30 \text{ million} / 0.62$) to the swap counterparty based in the UK and will receive £30 million. This is because they need to exchange their Australian dollars for British pounds to fulfill the terms of the currency swap contract.

B is incorrect because it calculates the amount based on the assumption that Smart Developers will receive Australian dollars, whereas in reality, they will receive British pounds.

C is incorrect because it overestimates the amount by converting £30 million to Australian dollars using the incorrect exchange rate.

Derivatives, Learning Module 1

Part 2 of 4

The amount of interest received by Smart Developers at each settlement period is equal to:

- A. £52,500.
- B. A\$60,483.
- C. A\$24,194.

Correct Answer: B

Explanation:

B is correct. At each quarterly settlement period, Smart Developers will receive A\$0.06048 million or A\$60,483 ($A\$48.3871 \text{ million} \times 0.005 \times 0.25$). This calculation is based on the Australian dollar notional amount multiplied by the quarterly interest rate.

*The notional principal delivered to the counterparty at swap initiation is calculated as $\text{£}30 \text{ million} / 0.62 = \48.3871 million .

A is incorrect. Incorrect because this option does not correctly calculate the interest received by Smart Developers. The interest calculation should account for the Australian dollar amount Smart Developers is effectively 'receiving' in the swap and the Australian interest rate.

C is incorrect because this option does not align with the correct calculation method for quarterly interest received by Smart Developers in the context of the currency swap's terms.

Derivatives, Learning Module 1

Part 3 of 4

In contrast to an interest rate swap, a currency swap is characterized by:

- A. a single swap rate.
- B. zero notional principal values at initiation.
- C. greater counterparty risk exposure towards swap expiration.

Correct Answer: C

Explanation:

C is correct. A currency swap involves the exchange of notional principals at the beginning as well as end of the contract. However, an interest rate swap does not involve the exchange of notional principal throughout the life of the contract. Therefore, counterparties in a currency swap will be exposed to a greater level of risk as they depend on the other party to repay notional principal in addition to the periodic interest payment at swap expiration.

A is incorrect. A currency swap is characterized by at least two swap rates – a foreign and domestic currency swap rate. Thus, a currency swap, unlike an interest rate swap, involves at least two different interest rates since it encompasses swapping interest payments in two different currencies.

B is incorrect. The notional principal values are not equal to zero in a currency swap because, in a currency swap, notional principals are exchanged at the beginning and end of the swap, different from interest rate swaps where no such exchanges occur.

Derivatives, Learning Module 1

Part 4 of 4

How are payments handled in a currency swap?

- A. Payments are netted and made in a single currency.
- B. Payments on each leg of the swap are in different currency units and are not netted.
- C. Only the party with the positive balance makes a payment at the end of the swap term.

Correct Answer: B

Explanation:

B is correct as each payment leg of a currency swap is made in a different currency, and these payments are not combined or netted. This highlights the fundamental nature of currency swaps, where each party makes payments in the currency they owe, without offsetting these payments against each other.

A is incorrect because in currency swaps, payments are made in different currencies for each leg of the swap and are not netted against each other.

C is incorrect because both parties make payments in their respective currencies regardless of the balance. Thus, in a currency swap, both parties are obligated to make payments according to the terms of the swap agreement, regardless of the balance. Each leg of the swap has its own payment stream in a separate currency.

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TOPIC: FINANCIAL STATEMENT ANALYSIS

TOTAL POINT VALUE OF THIS QUESTION SET IS 12 POINTS

Vertex Innovations, Inc. (VII) is a leading player in the renewable energy sector. With over 25,000 employees currently employed with the company, pension obligations have steadily increased year after year. To meet their pension expectations, VII provides its employees with the option to choose between a defined contribution plan and a defined benefit plan. Employees have the option to choose the investment plan that suits them best.

Individual accounts are created for each plan participant under the defined contribution plan, with both the employer and the employee contributing quarterly. Under the defined benefit plan, only the employer is required to make contributions to the scheme. The net present obligation of a defined benefit plan is calculated using the projected unit credit method.

The firm is revamping its executive compensation package and intends to implement a new share-based compensation plan that will incentivize top-performing managers and technical staff by giving them a stake in the company's success. The board, headed by Chairman Laura Williams, and supported by CFO Raj Mehta, is preparing to present the new "2025 Sustainable Growth Incentive Plan" to the shareholders. The plan puts a significant emphasis on share-based compensation to align executives' efforts with the company's long-term goals and shareholder value.

As they prepare for the upcoming shareholder meeting, they ponder how the proposed plan might influence executive behavior and whether the incentives are structured to promote the sustainable growth of Vertex Innovations, considering the complexities involved in striking the right balance between risk and reward inherent in such schemes.

Part 1 of 4

How does VII *most likely* fund its obligations for its defined benefit plan?

- A. By contributing to a pension trust.
- B. Through periodic employee contributions only.
- C. The company does not fund DB plan obligations.

Correct Answer: A

Explanation:

A is correct because companies typically fund DB plans by making contributions to a pension trust, which is used to pay out the future benefits.

B is incorrect because while employees may also contribute to their retirement plans, the company is responsible for funding DB plans to meet future obligations.

C is incorrect because companies usually fund their DB plan obligations, unlike OPEB obligations, which are often unfunded.

Part 2 of 4

What is the nature of an employee's future benefit under a DC plan at VII?

- A. The amount of the future benefit is defined and guaranteed by the company.
- B. The future benefit depends on contributions and the investment performance of plan assets.
- C. The future benefit is based on a formula involving length of service and final year's compensation.

Correct Answer: B

Explanation:

B is correct because the amount of the future benefit in a DC plan is not predefined but rather depends on the performance of the contributions made to the plan.

A is incorrect because in a DC plan, the company does not guarantee the amount of the future benefit; it is determined by the contributions and investment outcomes.

C is incorrect because this describes a DB plan, not a DC plan.

, Learning Module

Part 3 of 4

Which factor contributes to the complexity of share-based compensation?

- A. Fluctuating stock market conditions
- B. Guaranteed cash payouts to employees
- C. Reduced influence over company decision-making by employees

Correct Answer: A

Explanation:

A is correct. The complexity of share-based compensation includes factors like fluctuating stock market conditions. These conditions impact the value of share-based awards and can influence employees' perceptions of the effectiveness of such compensation plans.

B is incorrect because share-based compensation plans do not guarantee cash payouts to employees. Share-based compensation involves granting equity or options to employees, which does not involve cash payouts unless the shares are sold. The value of these awards is subject to market fluctuations and not guaranteed.

C is incorrect because share-based compensation does not necessarily reduce employees' influence over company decision-making. Share-based compensation typically aims to increase employee involvement and alignment with company goals, potentially increasing their influence or at least their investment in company success, rather than reducing it.

, Learning Module

Part 4 of 4

Which of the following is an advantage of share-based compensation over cash compensation?

- A. Reduced liquidity concerns for employees
- B. Guaranteed short-term financial gain for employees
- C. Enhanced alignment of employee interests with shareholders

Correct Answer: C

Explanation:

C is correct. One advantage of share-based compensation is its ability to align employees' financial interests with those of shareholders. This alignment helps in reducing principal-agency conflicts of interest and allows employees to participate in firm value creation

A is incorrect because share-based compensation does not directly address liquidity concerns for employees, rather preserve liquidity, which is especially beneficial for younger companies that might otherwise struggle to attract top talent.

B is incorrect because share-based compensation does not guarantee short-term financial gain for employees. Share-based compensation does not guarantee fixed returns; it is dependent on the company's stock performance.

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TOPIC: ALTERNATIVE INVESTMENTS

TOTAL POINT VALUE OF THIS QUESTION SET IS 12 POINTS

Smart Home Limited (SH) is a company based in United States which specializes in manufacturing smart household equipment. The assembling of finished product is outsourced to an assembling unit (AU) in China. Smart home limited is currently negotiating the purchase of assembling unit with its management and the deal is likely to be a friendly takeover. However, the regulations of merger and acquisition in China pose some risks for the deal. Special regulations have to be followed if the acquirer is a foreign investor and a number of other forms have to be filled. In case of a public company, the merger and acquisition (M&A) related activities require approval from regulatory bodies. The acquirer is required to present 3 years audited financial statements and also a securities valuation report.

Smart Home Limited will go for share for share acquisition with every 1 share of Smart home for 2 shares of assembling unit. The share prices were \$55 and \$15 for acquirer and target firm, respectively. The hedge fund manager bought 20,000 shares of AU and short sell 10,000 shares of SH. With the announcement of takeover, the target's share price rose by \$4 and acquirer's share price declined by \$2.

Part 1 of 4

Which of the following statements is *least likely* a risk of cross border acquisition?

- A. Anti-trust scrutiny
- B. Wider merger spreads
- C. Government approvals

Correct Answer: B

Explanation:

B is correct. The wider the spread, the better it is for the investor. Wider spreads in merger arbitrage typically imply higher returns for the investor. They represent the difference between the market price of the target company's shares and the offer price from the acquirer. In the context of risk, wider spreads can indicate higher uncertainty or perceived risk about the deal's completion. However, from the investor's point of view, wider spreads are not a risk but rather a potential for higher profit, making it the least likely risk.

A is incorrect. Cross-border acquisitions, especially when the acquirer is a foreign entity, often face anti-trust scrutiny, as they may potentially create monopolies or alter market dynamics significantly.

C is incorrect. Governmental approvals are a risk in cross-border acquisitions due to different regulatory environments and the complexity of the approval process, especially when the acquirer is a foreign company.

Part 2 of 4

The spread earned by the manager, if the deal becomes successful will be equivalent to?

- A. 50,000
- B. 150,000
- C. 250,000

Correct Answer: B

Explanation:

B is *correct*. The spread can be calculated by subtracting the cost to buy shares of the target firm (AU) at the current price after the announcement from the proceeds of short selling the acquirer's shares (SH).

Buying 20,000 shares of AU at the increased price of \$19 (original \$15 + \$4 increase) would cost \$380,000.

Short selling 10,000 shares of SH at the decreased price of \$53 (original \$55 - \$2 decline) would yield \$530,000.

Net spread = \$530,000 - \$380,000 = \$150,000.

The difference between these two amounts is \$150,000, which would be the spread earned.

Alternative Investments , Learning Module 4

Part 3 of 4

If the deal becomes unsuccessful, the loss will be equivalent to?

- A. 50,000
- B. 100,000
- C. 150,000

Correct Answer: B

Explanation:

B is *correct*. If the deal is unsuccessful, the manager will have to buy back 10,000 shares of SH at \$55 (pre-announcement value) costing net -20,000 = (-550,000 + 530,000) for SH and net -80,000 (-380,000 + 300,000) for AU, for a total loss of 100,000.

If the deal fails, the manager will likely have to buy back shares of SH at the pre-announcement price of \$55, resulting in a loss of \$20,000 (-\$550,000 to buy back + \$530,000 from short sale) for SH.

For AU, the manager would sell the shares at the pre-announcement price of \$15, resulting in a loss of \$80,000 (-\$380,000 from buying shares at the increased price + \$300,000 by selling them at the original price).

Alternative Investments , Learning Module 4

Part 4 of 4

The deal's return profile is similar to:

- A. riskless bond + long put option
- B. riskless bond + short call option
- C. riskless bond + short put option

Correct Answer: C

Explanation:

C is correct. The deal resembles holding a riskless bond + a short binary put option.

The deal is equivalent to holding a riskless bond with a face value of \$150,000 and a short binary put option, which expires worthless if the merger succeeds but pays out \$100,000 if the merger fails.

Calculating the Return Profile: for Candidate's Understanding Only

When the deal is successful (the merger goes through):

- The arbitrageur captures the spread on the target's shares: They bought 20,000 shares of the assembling unit (AU) at \$15 and the price rose by \$4 to \$19, so the increase in value is $20,000 \times \$4 = \$80,000$.
- They also short-sold the acquirer's shares (SH): They short-sold 10,000 shares of SH at \$55, but the price declined by \$2 to \$53, so the decrease in value they benefit from is $10,000 \times \$2 = \$20,000$.
- The total gain from the spread if the deal is successful is $\$80,000 + \$20,000 = \$100,000$.

When the deal is unsuccessful (the merger fails):

- The price of the target's shares likely falls back to pre-announcement levels, and the arbitrageur sells the shares at a loss.
- The short position in the acquirer's stock would result in a loss as well since the arbitrageur would have to buy back the shares at the higher pre-announcement price.
- The loss if the deal fails is calculated as \$100,000, as explained previously.

Question 6 of 11

TOPIC: PORTFOLIO MANAGEMENT

TOTAL POINT VALUE OF THIS QUESTION SET IS 12 POINTS

Dave Gilbert is a portfolio manager and economic analyst at Western Alliance, a wealth management firm operating in Regine, a country with an emerging market. In an effort to diversify his clients' holdings, Gilbert has decided to allocate fixed-income securities to their portfolios. He decides to consider risky corporate bonds as potential asset classes and identifies four bond issues each with a different maturity (Exhibit 1).

Prior to allocation, Gilbert decomposes the value of each issue into two components, the risk neutral present value and discount for risk. The latter represents the covariance between the intertemporal rate of substitution and the future price of the investment one year from today.

Exhibit: Potential Bond Issues for Client Portfolios

Bond Issue	Risk Neutral Present Value*	Discount for Risk*
A	0.8943	0.045
B	0.9021	0.061
C	0.7654	- 0.034
D	0.8993	0.000

*Per \$1 of Par Value

After collecting the data in the exhibit, Gilbert aims to address the following questions:

Question 1: Which bond issue carries a positive risk premium?

Question 2: Which bond issue can be classified as a one-period default-free bond?

Question 3: Which bond issue will be least suitable for those investors who expect their labor income to shrink in the future due to poor economic conditions?

Erin Poninski, an intern at Western Alliance, is assisting Gilbert in evaluating potential securities. Poninski asked Gilbert the following question about default-free interest rates and economic growth.

“Is real risk-free rate is positively related to real GDP growth and the volatility of real GDP growth?”

Part 1 of 4

The *most* appropriate response to Question 1 is bond issue:

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

Correct Answer: C

Explanation:

A negative covariance term will result in a positive risk premium. Based on the pricing formula (below) a negative covariance term will result in a lower current market price today. A lower price today will result in a higher required return over time according to the present value model (below).

$$P_t^i = \sum_{s=1}^N \frac{E_t[\overline{CF}_{t+s}^i]}{(1 + l_{t,s} + \theta_{t,s} + \pi_{t,s} + \gamma_{t,s}^i + \kappa_{t,s}^i + \phi_{t,s}^i)^s}$$

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Part 2 of 4

The *most* appropriate response to Question 2 is bond issue:

- A. A.
- B. C.
- C. D.

Correct Answer: C

Explanation:

For a one-period default-free bond, the covariance term (or discount for risk) is zero because the future price is a known constant and the covariance of a random quantity with a constant is zero. Given that issue D is the only security with a zero-risk discount factor it is classified as a one-period default-free bond.

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Part 3 of 4

The *most* appropriate response to Question 3 is bond issue:

- A. B.
- B. C.
- C. D.

Correct Answer: C

Explanation:

Bond issue D will be least suitable for investors who expect their income to shrink due to poor economic conditions. This is because a decline in income corresponds to a decline in consumption today which in turn increases the marginal utility of future consumption the intertemporal rate of substitution. In addition, poor economic conditions are associated with declining asset payouts for risky securities leading to declining asset prices. Investors will be exposed to declining asset prices and higher risk of bond defaults.

, Learning Module

Part 4 of 4

The *most appropriate* response to the Poninski's query is that real risk-free rate is:

- A. positively related to real GDP growth and the volatility of real GDP growth.
- B. negatively related to real GDP growth and the volatility of real GDP growth.
- C. positively related to real GDP growth and negatively related to the volatility of real GDP growth.

Correct Answer: A

Explanation:

A is correct. The real risk-free rate is positively correlated with real GDP growth because, as real GDP growth increases, investors' need to save for future consumption decreases and their expectation of future income increases. Therefore, a higher real yield is required to encourage investors to save for future consumption.

The volatility of real GDP growth is also positively related to the real risk-free rate. The greater the volatility of real GDP growth, the greater the risk that income available for consumption is less than expected. In such cases, investors seek a higher real rate of return as compensation.

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TOPIC: CORPORATE ISSUERS

TOTAL POINT VALUE OF THIS QUESTION SET IS 12 POINTS

Capulet is a research firm specializing in equity investments and is headquartered in New York. Equity markets covered by analysts at Capulet include emerging, non-U.S. developed, and U.S. markets.

Rupert Vazquez, CFA is one of Capulet's senior research analysts covering emerging markets. For his present research assignment, Vazquez is attempting to determine the equity risk premium for securities traded in Homali, an emerging economy situated in Northern Africa. The Homalian equity market is newly established and does not have a proper functioning trading platform. Any foreign investors seeking Homalian investments will additionally face significant political risk, which provides the potential to earn high returns. Vazquez has decided to derive a local equity risk premium using historical estimates. He justifies his decisions using three arguments.

Argument 1	Historical estimates can be readily used to derive risk premium estimates for the purposes of my analysis.
Argument 2	The method is based on objective data.
Argument 3	Given the harsh and uncertain political climate, historical estimates will allow for scenario analysis to be conducted, using different parameter estimates, to help produce a range of premium estimates.

Vazquez next collects relevant historical market data to develop a historical risk premium estimate for local investments in Homali (Exhibit 1).

Exhibit 1: Homali Market Data: 2000 - 2022

Proxy equity index	Developed market-value weighted index (comprising of fifteen countries)
Time period for computing the estimate	2000 – 2022 (22 years)
Risk-free return proxy	20 Year U.S. government bonds
Type of risk premium to be calculated	Compounded annual excess returns of local equities over the 20 Year U.S. government bond yield

James Devos, an analyst at Capulet, specializes in equity securities in international markets. Currently, Devos is assessing the country risk premium (CRP) of Nassai Corporation, a company that operates solely in a developing country.

Erica Morris, CFA is Capulet's developed market research analyst, who is evaluating potential equity risk premiums on stocks of a Japanese automobile manufacturer. Morris intends to use the Constant Growth Dividend Discount Model (DDM) estimate the expected premium for the manufacturer. To facilitate this estimation process, Morris has gathered relevant information as shown in Exhibit 2.

Exhibit 2

Japan	
Nikkei 225 total dividends paid*	175.59
Nikkei 225 index current price level	9,556.00
Japanese long-term average earnings growth rate (%)	2.54
10-year Japanese government bond yield (%)	1.34

*Aggregate forecasted dividends for the following year

Which of Vazquez's arguments support the use of historical estimates to formulate risk premium estimates for an investment made in Homali?

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

Correct Answer: B

Explanation:

Argument 1 fails to support the use of historical risk premium estimates for the purpose of estimating risk premiums on Homalian equity securities. Historical estimates may be readily used when reliable long-term records of equity returns are available. Given that local markets are not well established, the obtaining historical data may be problematic.

Argument 2 supports the use of historical estimates. Historical estimates are based on data, rather than forecasts, which gives them an objective quality.

Argument 3 fails to support the use of historical risk premium estimates for estimating equity risk premiums. In using a historical estimate to represent the equity risk premium going forward, the analyst assumes that returns are stationary and that the parameters describing the return-generating process are constant in the past and future. This does not allow for scenario analysis to be conducted, whereby an analyst needs to use different estimates for the parameters to arrive at a range of possible outcomes.

Corporate Issuers , Learning Module 3

Part 2 of 4

Using the information in Exhibit 1, the issues associated with the data collected by Vazquez *least likely* include:

- A. index representativeness.
- B. nonstationarity of returns data.
- C. appropriateness of risk-free return proxy used.

Correct Answer: C

Explanation:

In order to develop a historical risk premium estimate, it is necessary for the analyst to select:

- I. an equity index that accurately represents the returns earned by average equity investors in the markets examined.
- II. the time period of the estimate
- III. the type of mean calculated
- IV. the proxy for risk-free return

Vazquez has failed to select a representative market index. He should have selected Homali's national equity index or an emerging market African index.

Although choosing a twenty-two-year time period will help to increase the precision of sample data, issues related to nonstationarity in data will need to be dealt with. Given the significant political risks to be encountered by foreign investors investing in Homali, it is highly likely that risk premiums will fluctuate considerably over the long term, in addition to the short-term. Thus, Vazquez may have to deal with nonstationarity in the returns data used.

Generally, a risk-free return can be represented using long-term government bond returns or short-term government debt instrument returns. A risk premium relative to long-term government bonds is generally preferred over the latter in a multi-period context of valuation. Using the yield on 20-year U.S. government bonds as proxy for the risk-free rate is appropriate and does not pose any issue.

Corporate Issuers , Learning Module 3

Part 3 of 4

The most suitable approach for Devos to estimate the CRP of Nassai is:

- A. GCAPM
- B. ICAPM
- C. Sovereign yield approach

Correct Answer: C

Explanation:

C is correct. The GCAPM and ICAPM are appropriate methodologies to use if the company's operations are global but limited to developed countries. If the company operates in developing countries, the process is unclear. The **sovereign yield approach** may be suitable for estimating the CRP, although past rates may not reflect future risk premiums.

Sovereign yield spread is calculated as follows:

Sovereign Yield Spread = Yield on emerging market bonds (denominated in the currency of the developed market) – yield on developed market government bonds

Corporate Issuers , Learning Module 3

Part 4 of 4

The equity risk premium calculated by Morris is *closest* to:

- A. 3.03%
- B. 4.37%
- C. 5.68%

Correct Answer: A

Explanation:

ERP using Constant Growth DDM

$$\text{ERP} = E\left(\frac{D_1}{V_0}\right) + E(g) - r_f$$

$$\text{Forward dividend yield} = E\left(\frac{D_1}{V_0}\right) = \frac{\text{Forecasted Total Dividends}}{\text{Current Price Level}} = \frac{175.59}{9,556} = \mathbf{1.837\%}$$

$$E(g) = 2.54\%$$

$$r_f = 1.34\%$$

$$\text{ERP} = 1.837\% + 2.54\% - 1.34\% = \mathbf{3.0375\%}$$

Question 8 of 11

TOPIC: FIXED INCOME

TOTAL POINT VALUE OF THIS QUESTION SET IS 12 POINTS

Laura Peterson is the senior fixed income manager at Leopard Limited, a portfolio management firm. She is attempting to explain to her subordinate, Clark Marshall, how the binomial model can be applied to the valuation of fixed-income securities. Peterson has drawn a list of objectives, which she intends to achieve during the discussion.

Objective 1	Value a 5% annual coupon-paying option-free bond using the binomial model.
Objective 2	Determine the impact of changing volatility on forward rates.
Objective 3	Determine what calibrating an interest rate tree implies for arbitrage profits.
Objective 4	Compare the valuation of a bond issue using spot rates to that performed with a binomial interest rate tree.

To achieve the first objective, Peterson constructs a binomial interest rate tree using one-, two-, and three-year spot rates of 3%, 6%, and 8% respectively (Exhibit 1). A 10% volatility assumption is used for the analysis.

After deriving the binomial interest rate tree, Marshall asks his supervisor how the model can be used to value the subject bond. Using the rates in Exhibit 1, Peterson tasks her subordinate with valuing the bond issue (Objective 1). Exhibit 2 summarizes the results of his efforts.

Exhibit 1: Binomial Interest Rate Tree

Year 0	Year 1	Year 2
		Node 3-1
	10.254%	
3.000%		Node 3-2
	8.395%	

Exhibit 2: 5% Annual Coupon-Paying Bond Value Derived Using the Binomial Interest Rate Tree

Year 0	Year 1	Year 2
		PV = 90.882 Coupon = 5
	PV = 87.994 Coupon = 5	
91.962		PV= 93.153 Coupon = 5
	Node 1-2: PV =? Coupon = 5	
		PV = 95.098 Coupon = 5

The value of the bond at Node 1-2 (Exhibit 2) is *closest* to:

- A. 86.84.
- B. 91.45.
- C. 96.45.

Correct Answer: B

Explanation:

The value of the bond at Node 1-2 is equal to 91.1448 (see below):

$$0.5 \left[\frac{93.153 + 5}{1.08395} \right] + 0.5 \left[\frac{95.098 + 5}{1.08395} \right] = 91.448$$

A is incorrect. The calculated value excludes the coupon payments in Year 2.

C is incorrect. The value of a bond at any particular node is exclusive of coupon at that date.

, Learning Module

Part 2 of 4

The process of interest rate tree calibration will *most likely* result in the implied opportunities for arbitrage:

- A. increasing.
- B. decreasing.
- C. remaining the same.

Correct Answer: B

Explanation:

The process of calibration ensures that the interest rate tree generated is arbitrage-free. This implies that the process eliminates any opportunity to earn arbitrage profits. The interest rate tree is fit to the current yield curve so that the model produces benchmark bond values and thus there is no security mispricing.

, Learning Module

Part 3 of 4

In contrast to the valuation of option-free bonds using spot rates, the binomial interest rate tree will produce values which are:

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

Correct Answer: C

Explanation:

A binomial interest rate tree should produce the same value for the bond as discounting by spot rates. This is because the binomial interest rate tree is calibrated to be arbitrage-free. Similarly, the process of discounting a bond's cash flows using spot rates is arbitrage-free and thus the two methods should produce identical valuations.

, Learning Module

Part 4 of 4

The rate at Node 3-1 is equal to:

- A. 11.508%.
- B. 12.718%.
- C. 15.534%.

Correct Answer: C

Explanation:

Forward rate (Node 3-1) = $10.413e^{(4 \times 0.10)} = 15.53437\%$ or 15.534%

, Learning Module

Question 9 of 11

TOPIC: EQUITY

TOTAL POINT VALUE OF THIS QUESTION SET IS 12 POINTS

Time Corporation has been in the watch making business since 1932. The watchmaker was founded by brothers Earl and Jeremy Montessori. The corporation is now managed by Derek Montessori, who has inherited the business as part of his deceased father's estate.

Ownership of the corporation is limited to immediate and distant family members. The firm prefers to keep the business close knit and each family member is responsible for managing corporate affairs in addition to his/her ownership position. Time Corporation has never applied for a public listing in the past but is considering doing so in the future. The corporation is an established watchmaker in the U.S. with a high level of expertise.

Nicole Jones is the CEO of a large manufacturing firm with operations worldwide. The firm is considering the purchase of a private entity, Vibrant Manufacturers Inc (VMI) that has recently been put up for sale by its owners. VMI targets a niche market where it has just begun producing and distributing its product. Since the firm's product is unique, Jones believes that it has the potential to operate as a large successful firm sometime in the future. However, the entry of new competitors and changes in the industry's structure may erode value and cause profit margins to diminish.

Part 1 of 4

Given the present circumstances of Time Corporation, which of the following factors will *most likely* categorize the watchmaker as a private equity corporation?

- A. Agency issues
- B. Reduced marketability of equity interests
- C. Pressure to achieve above-average returns for shareholders

Correct Answer: B

Explanation:

B is correct. Time Corporation, being a privately held company, has its equity interests not traded on a public stock exchange. This results in a reduced level of marketability for its shares compared to those of public companies. The equity interests in private companies like Time Corporation are more difficult to buy and sell, which can affect their liquidity and valuation. Being privately traded, the stock of Time Corporation will, as a privately traded stock, have a reduced level of marketability.

A is incorrect. Agency issues typically refer to the conflicts that arise between management (agents) and shareholders (principals), especially in companies where ownership and management are separated. In the case of Time Corporation, the ownership is closely held within the family, and family members are involved in managing the company, which likely minimizes agency issues due to the alignment of ownership and management interests.

C is incorrect. Time Corporation does not face the same level of scrutiny and short-term performance pressure from the stock market as public companies do. Private companies often have more flexibility to focus on long-term goals without the constant pressure to meet quarterly earnings expectations. Given Time Corporation is privately owned it will least likely face the same pressure from external investors as public companies. For that reason, private company management may be able to take a longer-term perspective in their decisions and not face the pressure to achieve above-average returns.

Part 2 of 4

Based solely on its stage of development and maturity, which of the following valuation approaches is *most* suitable for valuing Time Corporation?

- A. Income approach
- B. Market approach
- C. Asset-based approach

Correct Answer: B

Explanation:

B is correct. Based on Time Corporation's stage of development and maturity, a market approach is most suitable for valuing the established watchmaker. Time Corporation, being an established and mature company, can be most effectively valued by comparing it to similar companies in the watchmaking industry. The market approach uses market indicators of value, such as transaction multiples or trading multiples of similar companies, to estimate the value of the business. This approach is appropriate for an established company with a track record and presence in its industry.

A is incorrect. Although the income approach is suitable for companies with predictable future earnings, the question suggests that Time Corporation's stage of development and maturity makes the market approach more suitable. The income approach is often more applicable to companies in high-growth stages or industries, where future earnings can be a strong indicator of value.

C is incorrect. Asset-based approach is not used for valuing an established and mature company like Time Corporation primarily because this method focuses on the net asset value (assets minus liabilities) and may not capture the full value of the company's earnings potential, brand, or market position. The asset-based approach is more commonly used for companies that are asset-intensive or in the early stages of development where future earnings are more uncertain.

Part 3 of 4

Which approach to private company valuation would be *most* appropriate to value Vibrant Manufacturers Inc. (VMI)?

- A. Income approach.
- B. Market approach.
- C. Asset-based approach.

Correct Answer: C

Explanation:

C is correct. Since Vibrant Manufacturers Inc. (VMI) has just begun producing its product, it is most likely in the developmental stages of the lifecycle. This also means that the company is still small, and since the future of the firm is uncertain, the going concern premise of value may also be doubtful. This means that future cash flows are difficult to estimate and hence, the income approach is not appropriate. Also, the firm's product is unique so similar public firms may not be present. Hence, in the earliest stages of development, when the going concern premise may be uncertain, future cash flows are difficult to establish and competitors are not present, the asset-based approach is most appropriate.

A is incorrect. Because the income approach relies on estimating future cash flows and discounting them to their present value. Given VMI's early stage in its lifecycle and the unique nature of its product, accurately forecasting future cash flows is challenging. The uncertainty surrounding the company's ability to maintain profit margins in the face of potential new competitors and industry changes further complicates the use of this approach. The income approach is more suitable for companies with more predictable and stable cash flows.

B is incorrect. Because the market approach values a company based on comparable market transactions and pricing multiples of similar companies within the same industry. However, VMI's unique product offering and its nascent stage in the market may make it difficult to find comparable companies or transactions. The lack of similar public firms for comparison renders this approach less applicable for accurately valuing VMI.

Part 4 of 4

Which of the following approaches *most likely* values an asset as the present discounted value of the income expected from it?

- A. Income approach.
- B. Market approach.
- C. Asset-based approach.

Correct Answer: A

Explanation:

A is correct. The income approach values an asset as the present discounted value of the income expected from it. Income approach specifically values an asset by estimating the present discounted value of the future income it is expected to generate. This method takes into account the expected cash flows from the asset and applies a discount rate to calculate the present value of those cash flows. It is directly aligned with the concept of valuing an asset based on its ability to generate income in the future

B is incorrect. The market approach values an asset based on pricing multiples from sales of assets viewed as similar to the subject assets. This method values an asset based on the observed prices of similar assets in the market. It relies on comparative data from the sale or listing of comparable assets to estimate the value of the subject asset. This approach does not directly calculate an asset's value based on the discounted future income it might generate, but rather on how similar assets are valued in the market.

C is incorrect. Asset-Based Approach values a company based on its net value of its assets minus liabilities. It is typically used for private companies, where the value is calculated by subtracting the total liabilities from the total assets.

Question 10 of 11

TOPIC: ETHICAL AND PROFESSIONAL STANDARDS

TOTAL POINT VALUE OF THIS QUESTION SET IS 12 POINTS

Alpha and Beta Associates (A&B) is a small U.S. based investment management firm that provides asset management services to private wealth clients. Ryan Becker is the chief investment officer (CIO) at A&B who oversees a team of portfolio managers and research analysts at the firm. Becker has just assigned two clients to Adam Levin, a portfolio manager.

When Levin reviewed the clients' IPS, he determined that Client A was in the later stage of his life and wanted to minimize risk and increase cash flow certainty. Client B, on the other hand, was young, had no dependents, and had a job in a stable industry. After a comprehensive analysis of the clients, and a meeting with each of them, Levin made the following statements to the clients with regards to appropriate investment opportunities:

Client A: "Since your risk tolerance is low you should shift a portion of your investments from equity to bank-sponsored fixed certificates of deposit. This will ensure that your principal is 'guaranteed' up to the insured limit."

Client B: "Even though you can tolerate significant risk, I would still advise you to invest at least a portion of your investment in agency CMOs, like 'interest-only strips'. These derivatives are 'guaranteed' by the U.S. government and hence, limit your risk."

Levin is evaluating the future of the technology sector and is trying to pick stocks that would promise above-average returns. For this, he followed business news and read publications in financial and technology journals. Levin recently read an article published in 'The Capital Markets'. The article was written by Walter Laws, a financial journalist and a technology industry analyst. The article stated that technology stocks were going to outperform the market over the next quarter, and that this trend was expected to continue in the near future. Levin decided to use this information in his own paper, so he contacted Laws' firm to get a copy of the original article. He then included the complete study in his paper and cited only Walter Laws.

After writing his paper, Levin met with Becker to discuss the future of the utilities sector. Levin knew that Becker is a senior analyst and has gained considerable trust and respect in his field. During a discussion with Levin, Becker stated that due to changes in the market and industry structure, he believes the major utilities giants will see a drastic drop in earnings in the coming quarter. Becker continued by stating that he was going to change his 'buy' recommendation to 'sell' and was going to express his opinion in an interview on a global news channel the next day. After his talk with Becker, Levin decided to ask his brother, who worked in the utilities industry for ten years, to advise him on buying or selling utilities stocks. He stated that Levin should follow the 'sell' recommendation, since he believed that the industry was going to see a downfall. Levin quickly sold 10,000 utilities shares that he held in his own portfolio.

Levin is responsible for the management of two equity funds: The Beta Fund and The Equatic Fund. Both funds have 5% of their worth invested in the stock of QUIN Technologies, but their investment guidelines indicate this to be an excessive amount. Because QUIN's stock has low liquidity in the stock market, Levin decided to trade portions of the stock back and forth between the two funds so as to increase liquidity. Due to his trading, Levin managed to bring the amount invested within the guidelines of the two funds.

With respect to his comments to his clients, is Levin *most likely* in violation of the Standard I(C) 'Misrepresentation' of the Standards of Professional Conduct?

- A. No.
- B. Only with respect to Client A.
- C. Only with respect to Client B.

Correct Answer: C

Explanation:

Levin is not in violation with respect to Client A. Bank-sponsored certificates are insured by the government so using the term 'guaranteed' in this context is not inappropriate.

Levin is in violation with respect to Client B. Although the underlying mortgages are guaranteed by the government, the interest stream on the IOs is not, which changes when interest rates in the market change.

, Learning Module

Part 2 of 4

With respect to the inclusion of the article in his paper, is Levin *most likely* in violation of Standard I(C), Misrepresentation?

- A. No.
- B. Yes, because he did not mention 'The Capital Markets' in references.
- C. Yes, because he did not make efforts to determine whether the study was comprehensive and not misrepresented.

Correct Answer: A

Explanation:

Levin is not in violation. Since Levin has obtained the complete study from the original author, he need only cite that author and not the intermediary.

, Learning Module

Part 3 of 4

With respect to trading utilities shares, did Levin violate Standard II(A), Material Nonpublic Information?

- A. No.
- B. Yes, because he traded on Becker's advice before it became public.
- C. Yes, because he traded on his brother's advice before it became public.

Correct Answer: B

Explanation:

Levin violated the Standard because he traded on Becker's change of opinion. Becker is a renowned analyst, and his appearance on the TV channel where he would discuss the changed recommendation is bound to have a material impact on the stock. On the other hand, Levin's brother is not a reliable source, so trading on his advice is not a violation.

, Learning Module

Part 4 of 4

With respect to the Beta and Equatic Funds, has Levin *most likely* violated Standard II(B), Market Manipulation?

- A. Yes.
- B. No, because he was working in the best interest of his clients.
- C. No, because he did not manipulate the market with the intentions of profiting from the trading.

Correct Answer: A

Explanation:

Even though Levin's trading will benefit the fund's participants, his actions are leading to an artificial distortion of trading volume, and, in turn, the price of the stock.

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Question 11 of 11

TOPIC: PORTFOLIO MANAGEMENT

TOTAL POINT VALUE OF THIS QUESTION SET IS 12 POINTS

Wesley Ragland is an equity analyst at Fadel Capital, an investment advisory company in the United States. Ragland specializes in evaluating equity strategies and heads the company's quantitative research team. Primal Capital Fund, one of Fadel Capital's clients, has asked Ragland to assist in creating a new investment strategy to provide superior risk-adjusted absolute returns for his clients, and examine the risk and return profiles of the current approach using backtesting methods.

Ragland explains how his business employs backtesting techniques to develop successful investing strategies during a discussion with Loretta Brady, CEO of Primal Capital Fund. Loretta asks the following questions:

Question 1: "Can backtesting approximate the real-life investment process?"

Question 2: "Financial data often contains structural breaks. Which type of backtesting technique is suitable for assessing the strategy's performance in different structural regimes?"

Ragland instructs his assistant Elmer Kelly to prepare the backtesting strategy framework to evaluate the performance of the strategy. The exhibit below is the framework prepared by Kelly.

Exhibit

Goal	Superior risk-adjusted absolute return
Hypothesis	Performance of value investing stocks based on earnings yield factor
Specifications of Key Parameters	<ul style="list-style-type: none">• Investment universe - Russel 3000• Return Definition - All investment returns are in the U.S. dollar.• Rebalancing Frequency - Monthly including transaction costs.• Start and end date - June 2001 to June 2021

Part 1 of 4

Which of the following is the *most appropriate* response to Loretta's Question 1?

- A. No, backtesting cannot approximate the real-life investment process.
- B. Yes, the backtesting approach fully accounts for the dynamic nature of financial markets by including extreme upside and downside risks that have not occurred before.
- C. Yes, backtesting approximates the real-life investment process by using historical data to evaluate whether a strategy would have produced desirable results.

Correct Answer: C

Explanation:

C is correct. Backtesting approximates the real-life investment by using historical data to evaluate whether a strategy would have produced desirable results. Although not all strategies that perform well in a backtest will produce excess returns in the future.

B is incorrect. Backtesting implicitly assumes that the past is likely to repeat itself, but this assumption does not fully account for the dynamic nature of financial markets, which may include extreme upside and downside risks that have never occurred before.

A is incorrect. Because backtesting approximate the real-life investment process. See above.

, Learning Module

Part 2 of 4

The *most appropriate* response to Lorretta's Question 2 is:

- A. Historical scenario analysis
- B. Rolling windows backtesting
- C. Backtesting multifactor models

Correct Answer: A

Explanation:

A is correct. Historical scenario analysis is a type of backtesting that explores the performance and risk of an investment strategy in different structural regimes and at structural changes.

B is incorrect. Rolling windows is a backtesting method that uses a rolling window structure to rebalance the portfolio after each period and then tracks the performance over time.

C is incorrect. Backtesting multifactor models use multifactor structure instead of single factor for stock screening.

, Learning Module

Part 3 of 4

Based on Exhibit, which of the following will *least likely* be a concern, if Kelly chooses to backtest the investment strategy using daily rebalancing frequency?

- A. Transaction costs will be increased
- B. Price data will likely be biased by bid-ask spreads
- C. The likelihood of the structural breaks occurring in the data will be increased.

Correct Answer: C

Explanation:

C is correct. Structural breaks in the data may occur if Kelly uses long data history. Simply changing the rebalancing frequency from monthly to daily not effect on regime changes or structural breaks.

A is incorrect. Greater frequency rebalancing often results in higher transaction costs. Kelly will pay more in transaction fees if she chooses to backtest the investing strategy with a daily rebalancing frequency.

B is incorrect. Because if Kelly uses daily rebalancing frequency, price-data will likely be influenced by bid-ask spreads.

, Learning Module

Part 4 of 4

All else equal, which of the following will most likely be correct, if Kelly chooses to backtest the investment strategy using the start date of June 2011 rather than June 2001 in Exhibit?

- A. Non-stationary data problems will be increased.
- B. The usefulness of backtest findings may be decreased.
- C. Higher statistical confidence in the results will be achieved.

Correct Answer: B

Explanation:

B is correct. Using a short time period of (2011 to 2021 versus 2001 to 2021) for the backtest is likely to make the findings less useful. This is because the backtest findings may capture only a limited experience.

A is incorrect. Non-stationary data issues may arise when a long data history is used which includes regime changes and structural breaks.

C is incorrect. Investment managers typically prefer to backtest investment strategies using long data history because a larger sample indicates greater statistical confidence in the results.

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