



**CFA  
LEVEL II**

**QUESTION - ALTERNATIVE INVESTMENT 1**

## Question - Alternative Investment 1

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### Question 1

In a private conversation with his best friend, Harry Veasley, CFA, makes the following statements:

Statement 1: Private equity (PE) firms generally focus on short-term results. For example, they frequently use restructuring of acquired companies in an effort to quickly divest them for a profit.

Statement 2: PE firms also want to ensure that the interests of portfolio company managers and of limited partners are aligned. For example, they frequently tie manager compensation to firm performance and include *tag-along*, *drag-along* clauses to give management a stake in the firm under certain trigger events.

With regard to Veasley's statements:

- A) both are correct.
  - B) only one is correct.
  - C) both are incorrect.
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### Question 2

The *most likely* consequence of the high income distribution that REITs are required to make is:

- A) frequent secondary equity offerings compared to other kinds of companies.
  - B) dividend yields that are nearly on-par with the yields of other publicly traded equities.
  - C) high volatility of reported income.
- 

### Question 3

The rate of population growth is *most likely* to be a top driver of economic value for a(n):

- A) storage REIT.
  - B) office REIT.
  - C) retail REIT.
- 

### Question 4

Private equity firms can maintain control over portfolio companies in a variety of ways. Which of the following contract terms would *least likely* achieve this goal?

- A) Tag-along, drag-along clauses.
- B) Priority in claims.
- C) Board representation.

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### Question 5

Which of the following lists *correctly* identifies exit routes in private equity, arranged from lowest to the highest exit values?

- A) Initial public offering (IPO), management buyout, secondary market sale.
- B) Liquidation, secondary market sale, IPO.
- C) Management buyout, liquidation, IPO.

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### Question 6

Studies using factor models have generally found the largest contributor to hedge fund returns to be:

- A) manager skill.
- B) exotic beta exposures.
- C) traditional market factor exposures.

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### Question 7

Leverage results in higher returns when:

- A) Investment return exceeds cost of debt.
- B) Debt is cheap.
- C) Asset prices are increasing.

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### Question 8

The Milat Private Equity Fund (Milat) makes a \$35 million investment in a promising venture capital firm. Milat expects the venture capital firm could be sold in four years for \$150 million and determines that the appropriate IRR rate is 40%. The founders of the venture capital firm currently hold 1 million shares. Milat's fractional ownership in the firm and the appropriate share price, respectively, is *closest* to:

- | <u>Fractional ownership</u> | <u>Share price</u> |
|-----------------------------|--------------------|
| A) 23.33%                   | \$115.00           |
| B) 89.64%                   | \$3.63             |
| C) 89.64%                   | \$4.05             |

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### Question 9

Which of the following is *most likely* to represent a publicly traded real estate debt investment?

- A) Secured bank debt collateralized by real estate.

- B) A mortgage real estate investment trust (Mortgage REIT).
- C) A real estate operating company (REOC).

### Question 10

A private equity investor makes a \$5 million investment in a venture capital firm today. The investor expects to sell the firm in four years. He believes there are three equally possible scenarios at termination:

1. expected earnings will be \$20 million, and the expected P/E will be 10.
2. expected earnings will be \$7 million, and the expected P/E will be 6.
3. expected earnings will be zero if the firm fails.

The investor believes an IRR of 25% is appropriate. The expected terminal value and the investor's pre-money valuation, respectively, are *closest* to (in \$ million):

<u>Expected terminal value</u>	<u>Pre-money valuation</u>
A) \$80.67	\$33.04
B) \$9.00	\$3.69
C) \$80.67	\$28.04

### Question 11

Dr. Jason Bruno is a qualified investor in the US who is considering a \$10 million investment in a private equity fund. Upon reading the fund's prospectus, Dr. Bruno encounters several contract terms and expressions with which he is unfamiliar. In particular, he would like to know the meaning of *ratchet* and distributed paid-in capital (*DPI*). The *most appropriate* answer by the fund's manager to Dr. Bruno would be that ratchet and DPI, respectively, is:

<u>Ratchet</u>	<u>DPI</u>
A) The general partner's share of fund profits	The general partner's realized return
B) The year the fund was set up	Dividends paid out as a fraction of paid-in capital
C) The allocation of equity between shareholders and management	The limited partner's realized return from the fund

### Question 12

A private equity firm makes a \$10 million investment in a portfolio company. The founders of a portfolio company currently hold 300,000 shares and the pre-money valuation is \$6 million. The number of shares to be held by the private equity firm, and the appropriate share price, respectively, are *closest* to:

<u>Number of shares</u>	<u>Share price</u>
A) 500,000	\$32.00
B) 480,000	\$20.83

C) 500,000

\$20.00

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### Question 13

A private equity firm is considering the valuation characteristics of both a venture capital and a buyout investment. Increasing working capital requirements and stable EBITDA growth is *most likely* associated with:

<u>Increasing working capital</u>	<u>Stable EBITDA growth</u>
A) Buyout	Venture capital
B) Buyout	Buyout
C) Venture capital	Buyout

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### Question 14

Which of the following *most accurately* describes an approach to REIT valuation?

- A) The discounted cash flow approach typically consists of intermediate-term cash flow projections plus a terminal value based on cash flow multiples.
  - B) The P/FFO approach adjusts for the impact of recurring capital expenditures needed to keep properties operating smoothly.
  - C) The P/AFFO approach avoids estimates and assumptions in its calculation.
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### Question 15

The net asset value (NAV) *after* distributions of a private equity fund is calculated as:

- A) NAV before distributions - Carried interest - Distributions.
  - B) NAV before distributions + Capital called down - Management fees.
  - C) NAV before distributions + Carried interest - Distributions.
- 

### Question 16

The primary difference between the venture capital method using the IRR and NPV approach is that:

- A) the IRR method does not use exit values.
  - B) the NPV approach does not require fractional ownership calculations.
  - C) the IRR approach starts by calculating the investor's expected future wealth.
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### Question 17

An investor considering investing in a hedge fund, would be *most likely* motivated in pursuing replicating strategy, rather than investing in the hedge fund directly when the hedge fund:

- A) returns have a large alpha component.
  - B) has a long lockup period.
  - C) strategies are clearly disclosed.
- 

#### Question 18

The Jefferson Group is a large private equity firm managing a multi-billion dollar portfolio. Which of the following is the *least likely* source of value-added the Jefferson Group would provide to its portfolio companies (as compared to a public firm)?

- A) Aligning the interests between private equity owners and limited partners.
  - B) Reengineering the portfolio companies.
  - C) Obtaining cheap credit.
- 

#### Question 19

Demand for which real estate type is most affected by foreign trade:

- A) Retail
  - B) Industrial
  - C) Office
- 

#### Question 20

Robin Santander is preparing for a meeting with a high net worth client who is looking to gain some exposure to commodities. The client is looking to use commodity futures indexes to gain exposure via an Exchange Traded Fund (ETF) or Commodity Index Certificate. Which of the following statements would be *least appropriate* for Santander to make?

- A) Both ETFs and Certificates have the advantage of exposure to both long term and short term futures contracts.
  - B) Both ETFs and Certificates expose the investor to currency risk.
  - C) ETFs have the advantage of lower credit risk as compared to certificates.
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#### Question 21

If a REIT has assets with a current market value of \$3,000,000, liabilities with a current market value of \$2,000,000, and 100,000 shares outstanding, what is the NAVPS per share?

- A) \$10.00
- B) \$30.00
- C) \$50.00

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### Question 22

Which of the following *most accurately* identifies non-core (i.e., high-risk) income-producing real estate property types?

- A) Retail and multi-family residential.
- B) Office and industrial.
- C) Hotel and hospitality.

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### Question 23

Retail sales growth is *most likely* to be a top economic factor affecting the economic value of a(n):

- A) residential REIT.
- B) health care REIT.
- C) industrial REIT.

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### Question 24

Kent Clarkson, Tony Chekov and Peter Chanwit are investment consultants for a large public pension fund. They are partners in Clarkson, Chekov and Chanwit Consulting also known as 3CC. From previous meetings with the pension board, it has been established there will be an increase in exposure to real estate for the overall portfolio. Because of the defined benefit plan's significant size and their staff's expertise, the pension fund can invest and manage all forms of real estate investments. Partners of 3CC are to recommend a form of real estate investments, and recommend potential investments.

#### **Expected Real Estate Market Conditions**

Both residential and commercial real estate prices have fallen over the last five years. This trend is not expected to persist. It is a 'buyer's market' the current supply exceeds the current demand and prices are lower than the intrinsic value. Although interest rates have fallen to historically low rates, the volume of real estate transactions remains low. Current average 20-year commercial mortgage rates are 3.75% and expected to stay relatively flat for at least 7 more years.

Loan underwriting standards have become more stringent and loan-to-value (LTV) ratios are expected to be lower than the earlier average rate of 80%.

The four forms of real estate under consideration as an investment choice for the pension fund are:

- Private: equity option is to buy commercial properties and manage them; debt option is to directly lend to commercial property investors.
- Public: equity option is to buy equity REITs; debt option is to buy mortgage REITs or CMOs.

The following information was collected by 3CC partners to aid their analysis. The returns and standard deviations of the four possible forms of real estate investments considered are listed in Exhibit 1. Correlations of real estate index with Treasury bill returns, US aggregate bond returns and US stock returns are listed in Exhibit 2.

**Exhibit 1: Returns and Standard deviation (past 20 years)**

Asset Class	Returns	$\sigma$
Private Equity	9.5%	6.5%
Private Debt	5.5%	8.5%
Public Equity	11.5%	21.0%
Public Debt	6.2%	22.5%
Treasuries	3.5%	0.6%

**Exhibit 2: Correlation of Real Estate Index With Other Asset Classes (past 20 years)**

Real Estate Index Correlations	$\rho$
US Treasuries	0.35
US Aggregate Bonds	-0.05
US Stocks	0.25

The partners make the following statements:

**Kent Clarkson:** We should eliminate the private debt option from consideration. Returns for private debt are likely to be low since interest rates are likely to remain low and the amount of underwriting that is going to be required as a lender doesn't seem worth it.

**Tony Chekov:** I like the equity options better than the debt options based on Clarkson's private debt expectations.

**Peter Chanwit:** I prefer the private option over the public option since the pension fund staff can better actively manage the real estate projects and possibly outperform the index.

The partners have identified specific REIT managers who have consistently outperformed their indices for the public option. They have also contacted potential high creditworthy borrowers in case of private debt. For the private equity option, the partners are looking at different commercial properties. They have narrowed their choices to hotels and multi-family units.

Peter Chanwit is analyzing two specific buildings. Green Oaks Hotel and Blue Ridge Apartments are next to each other; have exactly the same number of units, same amenities; were built 10 years ago by the same construction company; and managed by the same property management company. They are currently owned by different entities that are also looking to provide the financing on the following basis.

<b>Green Oaks Hotels</b>	$\hat{A}$	$\hat{A}$	<b>Blue Ridge Apartments</b>	$\hat{A}$
Asking Price	\$25,000,000	$\hat{A}$	Asking Price	\$25,000,000
Annual NOI End of Year 1	\$2,187,500	$\hat{A}$	Annual NOI End of Year 1	\$2,125,000
LTV	75.0%	$\hat{A}$	LTV	70.0%
Loan Interest Rate	4.00%	$\hat{A}$	Loan Interest Rate	3.50%
Monthly Debt Service	\$113,621	$\hat{A}$	Monthly Debt Service	\$101,493
Loan Term	20 Years	$\hat{A}$	Loan Term	20 Years
Expected Sales Price in 10 Yrs	\$30,000,000.00	$\hat{A}$	Expected Sales Price in 10 Yrs	\$30,000,000.00
Principal Owed at End of	\$11,222,397	$\hat{A}$	Principal Owed at End of	\$11,144,755

10 Yrs	
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10 Yrs	
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The pension fund can buy one or both buildings provided they meet the minimum criteria of a debt service coverage ratio of at least 1.50X and a levered IRR of at least 17.5%.

The indices under consideration as the benchmark for private real estate equity investing are:

- Jackson Property Index (JPI) is an appraisal based index.
- Taft's Sales Index (TSI) is a repeat sales index.
- Lincoln Hedonic Index (LHI) is a hedonic index.

Concerns regarding the index choice were verbalized at a 3CC meeting:

Kent Clarkson: I'm worried about Lincoln Hedonic Index. This index may adjust for differences in property characteristics but I'm not sure it can be effective given that some properties may not sell more than once during the index's coverage period.

Tony Chekov: I don't like the Jackson Property Index. Appraisals are estimates; there haven't been many transactions lately so I question the reliability of the returns.

Peter Chanwit: I'm not sure about Taft's Sales Index. It relies on actual transactions but there are so few sales recently so how reliable are the returns?

Part 1)

Based on projected real estate conditions and the partners' discussion given in the vignette, 3CC's top recommendation would *most likely* be:

- A) private equity.
- B) public debt.
- C) public equity.

Part 2)

If the pension plan chooses to buy mortgage REITs, the *mostly likely* benefit from real estate investing is the:

- A) current income.
- B) inflation hedge.
- C) capital appreciation.

Part 3)

If the pension fund chooses to invest in hotels over apartments, one possible reason for this is that hotels:

- A) may offer higher rates of returns because of higher operational risk.
- B) are not affected by cost and availability of debt capital.
- C) are commercial properties while apartments are residential properties.

Part 4)

Compared to Blue Ridge Apartments, Green Oaks Hotel has higher:

- A) cap rate.
- B) net operating income because of the higher debt service.
- C) discount rate because the amount of principal owed is higher.

Part 5)

Which choice meets the minimum criteria for investment?

- A) both Green Oaks and Blue Ridge.
- B) Blue Ridge only.
- C) Green Oaks only.

Part 6)

Which statement regarding issues with indices is *least likely* correct?

- A) Chekov's statement.
  - B) Clarkson's statement.
  - C) Chanwit's statement.
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#### Question 25

All of the following statements accurately describe the real estate capitalization rate EXCEPT:

- A) holding all else constant, the risk of a real estate investment is directly related to its estimated value.
  - B) holding all else constant, market value estimates increase as the growth rate in net operating income increases.
  - C) there is an inverse relationship between estimated market values and capitalization rates.
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#### Question 26

All of the following are limitations to the gross income multiplier approach for real estate valuation EXCEPT:

- A) gross rental income may be inappropriate when building-to-land ratios are different among otherwise comparable properties.
  - B) it may be difficult to obtain the necessary data to determine the appropriate capitalization rate.
  - C) sales prices for comparable properties may not be current.
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#### Question 27

A private equity investor is considering making an investment in a venture capital firm. The investor values the firm at \$1.5 million following a \$300,000 capital investment by the investor. The venture capital firm's pre-money (PRE) valuation and the investor's proportional ownership, respectively, are:

- | <u>PRE valuation</u> | <u>Ownership proportion</u> |
|----------------------|-----------------------------|
| A) \$1.2 million     | 20%                         |
| B) \$1.5 million     | 25%                         |
| C) \$1.5 million     | 20%                         |
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#### Question 28

Which of the following is *most* accurate in describing the problems of survivorship bias and backfill bias in the performance evaluation of hedge funds?

- A) Survivorship bias and backfill bias both result in downwardly biased hedge fund index returns.
- B) Survivorship bias results in upwardly biased hedge fund index returns, but backfill bias

- results in downwardly biased hedge fund index returns.  
 C) Survivorship bias and backfill bias both result in upwardly biased hedge fund index returns.

### Question 29

When calculating NAVPS, a real estate company's assets and liabilities are valued at their:

- A) market value.
- B) liquidation value.
- C) book value.

### Question 30

Mavis Krager, manager of alternative investments for the Richmond Group, is considering the merits of some private-equity opportunities. Richmond Group likes to invest in private-equity funds, but will also do its own deals if the opportunity is right. One deal on the table is an equity stake in Melton Motors, a chain of privately held auto dealerships. The company is well run, but has come upon hard times lately because of credit problems. Krager thinks Melton will solve its financial problems and become profitable again. She is considering investing \$7 million in the company. Also under discussion is The Apple House, a large privately held orchard in Wisconsin. Richmond Group is considering investing \$5 million.

To determine whether the deals are worthwhile Krager decides to estimate a price for each company based on a post-money valuation, using a discount rate of 13.7%. The investment firm prefers to focus on companies willing to price their stocks at least 20% below their true value and fund the investments only once. To calculate her valuations, Richmond uses the data below:

< >>	Melton Motors	The Apple House
Stock price offered	\$17	\$42
Number of shares held by current owners	1.5 million	80,000
Estimated value of company at end of investment period	\$51 million	\$29 million
Expected length of investment	5 years	10 years

Just as Krager finishes her assessment of the two private-equity deals, a contact at The Apple House calls her and says the management team is considering a leveraged buyout (LBO) and wants Richmond Group to help finance it. Since the firm hasn't financed an LBO for years, Krager gets out a book she has not read since college to bone up on the valuation equations and acquaint herself with terms specific to LBOs.

What action should Richmond Group take with regard to:

- | <u>Melton Motors</u> | <u>The Apple House</u> |
|----------------------|------------------------|
| A) Buy stake         | don't buy stake        |
| B) Don't buy stake   | don't buy stake        |
| C) Don't buy stake   | buy stake              |

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### Question 31

Kerry Barnton is currently putting together a training manual covering valuation techniques for various classes of assets. Extracts from the draft manual are shown below:

Asset	Class	Notes
Blue Chip Equities	Capital Assets	NPV type valuation models appropriate
Copper	Consumable/Transferable	CAPM based models not suitable
Wheat	Consumable/Transferable	Interest rates significant driver of value

Which of the assets is *least accurately* described?

- A) Wheat as interest rate is not a significant driver of value.
- B) Blue Chip Equities as they are incorrectly described as a capital asset.
- C) Copper as it is a commodity and hence a store of value asset rather than a consumable/transferable asset.

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### Question 32

An appraiser who wishes to value an unusual property is *most likely* to estimate the value of the property using the:

- A) cost approach.
- B) income approach.
- C) sales comparison approach.

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### Question 33

Analysts Jordan Green and Noelle Lafonte are discussing terminal value estimation in venture capital and buyout investments.

Lafonte states: Private equity firms often use scenario analysis in both venture capital and buyout investments to estimate terminal value.

Green adds: Private equity firms only use the multiple of net income approach in leveraged buyout (LBO), but not in venture capital investments to estimate terminal value.

With respect to their statements:

- A) Green is correct but Lafonte is incorrect.
- B) Neither Lafonte nor Green is incorrect.
- C) Lafonte is correct but Green is incorrect.

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#### Question 34

An analyst makes the following statements on the risk and costs of private equity investments:

Statement 1: Committed capital is the initial capital in a private equity fund to obtain first round financing. As committed capital is used up, investors are required to make additional commitments to finance firm projects and expansion.

Statement 2: The J-Curve refers to the risk pattern in a private equity investment over time. Risk in private equity investments initially typically declines as more capital is drawn down but increases closer to exit since exit timing and values are difficult to predict.

With respect to the analyst's statements:

- A) both are correct.
- B) both are incorrect.
- C) only one is correct.

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#### Question 35

The private equity firm Purcell & Hyams (P&H) is considering a \$17 million investment in Eizak Biotech, of which \$10 million is invested today and \$7 million in four years. Eizak's owners firmly believe that with P&H's investment they could develop their wonder drug and sell the firm in six years for \$120 million. Given the project's risk, P&H believes a discount rate of 50% is appropriate for the first four years, and 30% for the last two years. The fractional ownership for P&H at the time of the initial investment would be *closest* to:

- A) 0.79.
- B) 0.71.
- C) 0.27.

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#### Question 36

Which of the following valuation approaches is only applicable in its application to income-generating properties?

- A) Only the direct income capitalization approach.
- B) Both the gross income multiplier approach and the direct income capitalization approach.
- C) Only the gross income multiplier approach.

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#### Question 37

Which of the following is the *least likely* disadvantage in calculating the net asset value (NAV) for a private equity fund?

- A) The limited partners use a third party to calculate the NAV of a private equity fund.
  - B) Only capital commitments already drawn down are included in the NAV calculation.
  - C) NAV may be difficult to calculate since firm values are not known with certainty prior to exit.
- 

#### Question 38

Adding long volatility hedge fund strategies to a portfolio of short volatility hedge fund strategies is *most likely* to increase the attractiveness of the portfolio return's:

- A) Sharpe ratio.
  - B) reported volatility.
  - C) skewness and kurtosis exposures.
- 

#### Question 39

Roger Torsten is studying historical data on the commodities markets to assist with his a forecast he is producing in his role as an economic researcher. He has observed long periods in the past when the term structure of the futures market for a commodity displays a negative trend. Which of the following explanations is *most likely* an explanation for this observed trend?

- A) Manufacturers, concerned about increasing commodity prices are buying commodity futures to hedge input costs.
  - B) Producers concerned about a potential drop in price of the commodity are taking hedging positions to lock in a sales price.
  - C) Due to an increase in the supply of the commodity, the convenience yield has dropped to nearly zero.
- 

#### Question 40

Which of the following statements *most accurately* describes the components of returns on a leveraged buyout (LBO) investment:

- A) The return on preference shares, the increase in the price multiple on exit, and the reduction in debt claims.
  - B) The return on common shares, the increase in the price multiple on exit, and the equity held by management.
  - C) The interest earned on debt financing, the return on common shares and the return on preference shares.
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#### Question 41

An analyst is considering the performance of two private equity funds, Delta and Kappa.

##### Performance of private equity fund Delta and Kappa

	Delta	Kappa
DPI	2.0	0.0
RVPI	0.0	2.0

The *most appropriate* conclusion an analyst can draw from the table is that:

- A) Delta has yet to turn a profit.
  - B) Kappa has distributed \$2.0 for every dollar invested.
  - C) Kappa may be a younger fund than Delta.
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#### Question 42

Which of the following *most accurately* identifies one of the characteristics of a private equity investment in income-producing real estate?

- A) Homogeneity.
  - B) Sensitivity to the credit market.
  - C) Passive management.
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#### Question 43

RDO is a private equity fund with \$50 million in committed capital and an investment in three portfolio companies totalling \$30 million. The fund earned a healthy profit of \$5 million after its first year on the sale of one of the companies but suffered a \$2 million loss after its second year on the sale of the second company. The fund pays carried interest of 20% on a *total return basis* using committed capital and also has a clawback provision.

The clawback the general partner must pay at the end of the second year is:

- A) \$400,000.
  - B) \$600,000.
  - C) \$0.
- 

#### Question 44

Compared to a mutual fund, a hedge fund is *most likely* to have lower:

- A) disclosure requirements.
  - B) lockup periods.
  - C) fees.
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#### Question 45

Which of the following statements regarding commodity returns is *least* accurate?

- A) A commodity futures market in backwardation will increase the return on an investor's position via a positive roll yield.
- B) The collateral yield on a commodity futures position is negative if the convenience yield is lower than the storage cost.
- C) Due to roll yield and collateral yield, a commodity futures position may have a positive yield despite a drop in the spot price.

## Question 46

Spanos Klios analyzes investment opportunities for Central Europe Securities. Klios is considering proposals by several of the firm's junior analysts.

Josef Klein, one of the junior analysts, proposes a real estate project in Stuttgart and has put together a comprehensive packet on the project. Klein is optimistic about the potential apartment buildings because it is located in an area densely populated with high-income residents. Klios finds the proposal intriguing, but is worried about the equity needed to make the deal work. Most Central European properties' loan-to-values (LTV) are usually below 80% and Klein's project would require borrowing 60% of the value.

Klios calls Klein in for a conference and asks him some questions about the real estate proposal, including the different ways to value the properties. During the meeting, Klios takes notes based on Klein's findings:

- The market value of the land using comparables is  $\hat{a}, -1.25$  billion. The total area is 2.5 million square feet.
- Replacement cost and developer's profit is  $\hat{a}, -630.00$  per square foot. Curable deterioration is  $\hat{a}, -10.0$  million; total economic life is 75 years and effective age is 15 years. All estimated obsolescence costs are  $\hat{a}, -50.0$  million.
- The expected purchase price is  $\hat{a}, -2.35$  billion and the expected selling price in 10 years is  $\hat{a}, -2.80$  billion. The debt value owed on the mortgage value in 10 years is  $\hat{a}, -909,893,015$ .
- The expected net operating income for next year is  $\hat{a}, -264$  million and the debt service coverage ratio is 2.18X.
- Klein found three comparable properties. Information related to each property are as follows:
  - Property A net operating income,  $\hat{a}, -192$  million; market value,  $\hat{a}, -1.60$  billion.
  - Property B net operating income,  $\hat{a}, -550$  million; market value,  $\hat{a}, -5.50$  billion.
  - Property C net operating income,  $\hat{a}, -715$  million; market value,  $\hat{a}, -6.50$  billion.

After Klios finishes his meeting with Klein, he turns his attention to a proposal from Carlotta Graccos. She is proposing a venture-capital investment in two firms; retail group Belgarrigue and the KinderWerks toy company. Klios reviews a fact sheet prepared by Graccos, considering a number of factors relating to both companies:

$\hat{A}$	Belgarrigue	KinderWerks
Management	Experienced	Strong leader, minimal experience
Best sales strategy	Auction	Private deals
Working capital needs	Moderate	High
Company financing	Private	Public
Exit strategy	Terms specified in contract	Uncertain
Company's chief goals	Cash-flow targets, market expansion	Market-share targets
Risk	Measurable	Difficult to measure

Klios knows most venture capital proposals are risky, and he has several preferred methods to account for unusual risks. In this case, he wants to address the possibility that either or both of the companies under consideration might produce substantially lower profits than expected, as well as the chance that they might declare bankruptcy.

After reviewing the proposal from Graccos, Klios considers Svetlana Nordqvist's recommendation of several hedge funds. Klios reads the proposal, but is concerned about whether the junior analyst has adequately considered the risks of the securities. He is concerned that the stated standard deviation inadequately captures the risk of investing in these funds.

Part 1)

The estimated value of the apartment building project using the cost approach is *closest to*:

- A) \$2.45 billion.
- B) \$1.20 billion.
- C) \$2.95 billion.

Part 2)

The levered internal rate of return for the apartment project is *closest to*:

- A) 19.2%.
- B) 12.3%.
- C) 22.0%.

Part 3)

The *best* estimate for the real-estate project's value using the direct capitalization method is:

- A) \$2.60 billion.
- B) \$2.00 billion.
- C) \$2.40 billion.

Part 4)

What kind of transaction seems *most suitable* for:

- | <u>Belgarrigue</u> | <u>KinderWerks</u> |
|--------------------|--------------------|
| A) Buyout          | Venture capital    |
| B) Venture capital | Buyout             |
| C) Venture capital | Venture capital    |

Part 5)

To address his concerns about lower-than-expected profits and bankruptcy, Klios should:

- A) switch to a target IRR.
- B) adjust the terminal value.
- C) adjust the discount rate.

Part 6)

Which of the following is *least likely* a reason for Klios's concern about standard deviation as a measure of hedge fund risk?

- A) Negative skewness of hedge fund return distribution.
- B) Survivorship bias.
- C) Excess kurtosis of hedge fund return distribution.

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#### Question 47

Which of the following is an expense normally deducted from accounting net earnings but not from FFO?

- A) Property operating expenses

- B) Property taxes
- C) Depreciation expense

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**Question 48**

Which of the following terms *correctly* describes the risk to a private equity firm in long-term interest and exchange rates, and the provision that specifies the method of profit distribution between the limited partners (LPs) and general partner (GP), respectively?

- | <u>Risk in long-term rates</u> | <u>Profit distribution</u> |
|--------------------------------|----------------------------|
| A) Capital risk                | Carried interest           |
| B) Market risk                 | Carried interest           |
| C) Market risk                 | Distribution waterfall     |

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**Question 49**

Compared to a single manager hedge fund, a fund of funds is *most likely* to have higher:

- A) return performance.
- B) management and performance fees.
- C) standard deviation.

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**Question 50**

Mortgage REITs are publicly traded securities that make loans secured by real estate, therefore they are publicly traded debt investments. REOCs are classified as equity (not debt) securities, while bank debt is classified as a private rather than public investment. Which of the following is the *most likely* to represent an advantage of investing in publicly traded real estate securities over direct ownership of property? Publicly traded real estate securities offer:

- A) lower price volatility.
- B) greater liquidity.
- C) more control over investment decisions.



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