LO.a: Describe types of publicly traded real estate securities.

1. Which of the following is *least likely* a type of publicly traded real estate security?
   A. An equity REIT share.
   B. A REOC share.
   C. Bank debt.

LO.b: Explain advantages and disadvantages of investing in real estate through publicly traded securities.

2. Which of the following assets offers the *most* liquidity and the *lowest* investment requirement in real estate investments?
   A. Direct investment in a property.
   B. Public REITs.
   C. Private REOCs.

3. The *most likely* advantage of investing in REITs compared with publicly traded REOCs is:
   A. operating flexibility.
   B. exemption from double taxation of income.
   C. free to change capital structure.

4. Which of the following represents a disadvantage of public REITs compared to direct investment in an income-producing property?
   A. Structural conflicts and related costs.
   B. Real estate portfolio can be diversified by geography and property type.
   C. No property management skills or expertise are required.

LO.c: Explain economic value determinants, investment characteristics, principal risks, and due diligence considerations for real estate investment trust (REIT) shares.

5. Which of the following is *not* an investment characteristic of REITs?
   A. Volatile revenue streams.
   B. High income distributions.
   C. Exemption from income taxes at corporate level.

6. If a real estate investor requires income growth and capital gain potential, he will *least likely* invest in:
   A. REITs.
   B. REOCs
   C. direct property.

7. Which factor is *least likely* significant when evaluating equity REITs composed of multi-family residential properties?
   A. Condominium construction in the region.
   B. State of regional economy.
   C. State of the overall national economy.

LO.d: Describe types of REITs.

8. When analyzing retail REITs, analysts are *least likely* to consider trends in:
    A. population growth.
    B. GDP growth.
    C. retail sales growth.

9. Which of the following statistics is *most likely* relevant for office, hotels and multi-family REITs?
    A. Sales per square foot.
    B. Job creation trends.
    C. Population growth.

LO.e: Justify the use of net asset value per share (NAVPS) in REIT valuation and estimate NAVPS based on forecasted cash net operating income.

10. Compared to book value per share, net asset value per share is a superior measure of the net worth of a company because it considers:
    A. the cost model which accurately represents assets' and liabilities' values.
    B. current market values instead of accounting book values.
    C. the depreciated value of assets.

11. The following financial information relates to a REIT:

NOI	$125 million
Cash and equivalents + Accounts Receivable + Prepaid	$75 million
Market value of debt outstanding	$450 million
Other Liabilities	$65 million
Market cap rate	6.5%
Shares outstanding	105 million
Book value per share	$8.00

The REITs NAVPS is *closest* to:
    A. $10.
    B. $14.
    C. $8.

12. In the context of calculating the adjusted NOI, the term 'non-cash rents' refers to:
    A. the difference between the average contractual rent over the leases' terms and the cash rent actually paid.
    B. rental payments which made are made in advance.
    C. estimated increase in rental income over the next period.

LO.f: Describe the use of funds from operations (FFO) and adjusted funds from operations (AFFO) in REIT valuation

13. FFO is obtained from net earnings after excluding:
    A. interest expense, depreciation and amortization, and including deferred tax charges.
    B. general and administrative expenses, corporate overheads, and interest expense.
    C. depreciation, deferred tax charges, gains or losses from property sales and debt restructuring.

14. AFFO is defined as FFO less:
    A. non-cash rent, capital expenditures related to maintenance and leasing commissions.
    B. non-cash rent, capital expenditures and depreciation.
    C. non-cash rent, capital expenditures and debt restructurings.

15. The purpose of adjusting net earnings to obtain FFO and AFFO in the analysis of REITs is to have a(n):
    A. accounting estimate of economic income dependent upon cash and non-cash rents.
    B. revenue based measure of economic income that includes all non-cash charges.
    C. cash flow based measure of sustainable economic income.

LO.g: Compare the net asset value, relative value (price-to-FFO and price-to-AFFO), and discounted cash flow approaches to REIT valuation.

16. The discounted cash flow model for valuing REITs, is *most likely* sensitive to:
    A. the capitalization rate and values per square foot.
    B. the market forces needed to close the arbitrage gap.
    C. growth and discount rates.

17. Which of the of the following statements is *most likely* true for publicly traded REIT shares?
    A. REIT shares generally trade at discount to NAVPS.
    B. REIT shares generally trade at premium to NAVPS.
    C. REIT shares can trade at a discount or a premium relative to NAVPS.

18. The three most common drivers of P/FFO and P/AFFO are:
    A. growth expectations, risk of the underlying asset and risk associated with company's capital structure.
    B. required return, leverage and earning power of the assets.
    C. current stock prices, gains and losses from property sales, and deferred taxes.

LO.h: Calculate the value of a REIT share using net asset value, price-to-FFO and price-to-AFFO, and discounted cash flow approaches.

19. Consider the following selected financial information of a Health Care REIT:

Net income		\$250,000
Depreciation and amortization		\$100,000
Non-cash rents		\$25,500
Recurring maintenance-type capital expenditures		\$75,500
Shares outstanding		70,000

Expected annual dividend per share next year		$3.80
Dividend growth rate in years 2 and 3		5%
Dividend growth rate (after year 3 into perpetuity)		4.5%
Property subsector average P/FFO multiple		15x
Property subsector average P/AFFO multiple		19x

The values of the Health Care REIT (per share basis) by applying relative valuation subsector averages of P/FFO and P/AFFO are *closest* to:

A. $54, $40.
B. $75, $68.
C. $75, $75.

20. Using the above table, and discount rate of 8%, the value of the Health Care REIT (per share) by applying two-step DDM is *closest* to:

    A. $110.
    B. $100.
    C. $75.

Solutions

1. C is correct. Equity REITs and REOCs are types of publicly traded real estate securities, whereas bank debt is an example of private debt. Section 2.

2. B is correct. Publicly traded equity real estate securities, whether equity REITs or REOCs offer the most liquidity and lower investments than either direct investments in properties or investments in private REOCs. Section 3.3.1.

3. B is correct. REITs are typically exempt from double taxation of income. A & C are advantages of investment in REOCs. Section 3.3.1.

4. A is correct. "The use of UPREIT and DOWNREIT structures can create conflicts of interest between the partnership and REIT shareholders when it comes to making decisions on the disposition of properties or increasing company debt levels and may involve additional administrative costs." B & C are advantages of investing in public REITs. Section 3.3.2.

5. A is correct. REITs regulations require income to be mainly from rents and interest. Because of the contractual nature of income (except for hotel REITs) the revenue streams are stable. B & C are investment characteristics of REITs. Section 3.3.

6. A is correct. Real estate investors with growth objective will invest either in property directly or in REOCs. Section 3.3.2.

7. C is correct. A and B should be considered in analyzing multi-family residential properties. High construction activity implies high anticipated demand which will impact rental income. The state of the regional economy is likely to be correlated with rental income. The state of the overall national economy will have a lower correlation with the dynamics of a particular region. Section 3.5.4.

8. A is correct. While analyzing retail REITs the first three economic factors that analysts consider are GDP growth rates, retail sales growth and job creation. Section 3.6.

9. B is correct. Job creation trends are typically reflected in: increased demand for office space, increased demand for multi-family residential properties, and a greater demand for hotel rooms. Section 3.6.

10. B is correct. NAVPS is often used to value REIT or REOCs. This method considers the market value rather than the accounting book value of assets and liabilities. Section 5.2.

11. B is correct. The NAVPS estimates values by capitalizing NOI, adding cash equivalents, accounts receivable and prepaid, deducting market value of debt and other liabilities and dividing the remaining value by the shares outstanding. NOI/market cap rate =
    125 million/0.065 = 1,923.077 + 75 - 450 - 65 = $1,483.077 million/105 million = $14.1245.
    Section 5.2.

12. A is correct. Non-cash rents are removed from NOI estimates because “these are the result of the accounting practice of “straight lining” the rental revenue from long-term leases.” “The amount of this deduction is the difference between the average contractual rent over the leases’ terms and the cash rent actually paid.” Section 5.2.

13. C is correct. FFO is described as net earnings excluding depreciation, deferred tax expenses, and gains or losses from property sale and debt restructuring. Section 6.2.

14. A is correct. AFFO is obtained by deducting non-cash rent, maintenance-type capital expenditures and leasing costs from FFO. Section 6.2.

15. C is correct. The net earnings are adjusted to obtain FFO and AFFO to obtain a more feasible measure of economic income that is not dependent upon non-cash accounting estimates and non-cash charges. Section 6.2.

16. C is correct. The discounted cash flow approach is sensitive to both growth and discount rates. Section 7.

17. C is correct. REIT shares can trade at a discount or at premium relative to NAV. One of the reasons NAV estimates trade at premiums/discounts to stocks is that the stock market focuses on short term changes in income and asset values whereas the property market valuations are focused on long term. Section 5.3.1.

18. A is correct. The three main drivers of P/FFO, P/AFFO and multiples of most REITS and REOCs are: expectation of growth in FFO/AFFO, risk associated with the underlying real estate, and capital structure risk which includes access to capital. Section 6.1.

19. B is correct. Funds from operations (FFO) = Net Income + Depreciation & amortization = $\$250{,}000 + \$100{,}000 = \$350{,}000, FFO/share = \ 350{,}000/70{,}000 = \$5.0$ Applying the property subsector multiple P/FFO = 15 x 5 = \$75/share. Adjusted funds from operations = $FFO - non - cash\ rent - recurring\ maintenance - type\ capital\ expenditures =$ $\$350{,}000 - \$25{,}500 - \$75{,}500 = \$249{,}000, AFFO/share = \$249{,}000/70{,}000 = \$3.56.$ Applying the property subsector average P/AFFO multiple of 19 x 3.56 = \$67.64/share. Section 6.2

20. A is correct. Using the two-step dividend discount model, value per share of the Health Care REIT is:

	Step 1, Year 1	Year 2	Year 3	Step 2 Year 4
Dividends per share	\$3.80	\$3.8 x1.05 = \$4.00	\$4 x 1.05 = \$4.20	4.2 x1.045 = \$4.40
Value of stock at end of Year 3			\$4.4/(0.08-0.045) = \$125.71	
Using the FC NPV of all dividends	CF1 = 3.8 I = 8, CPT NPV = 110.075	CF2 = 4	CF3 = 129.91	

Section 8.3.

