SLIDE 27 - **Assessment of Risk (Cover Page)**

SLIDE 28

Risk

Investment risks come from a variety of general sources, including the market, business operations, the value of money, and changes in the interest rate.

SLIDE 29

Business risk – Changes in the operation of a business with which your investment is connected may reduce or eliminate the income- and appreciation- earning capacity of your investment.

SLIDE 30

Financial risk – Changes in financial markets, particularly in interest rates, may reduce the value of your investment by making it less desirable to others and by making it more expensive for you to maintain.

An investment may fail to produce any or all of the desired investment rewards listed earlier. The expected income may not be realized. The invested asset may fail to appreciate as expected. It may even decline in value. Perhaps even worse, you may be called on to add to the investment just to keep it in place. Your leverage may turn against you, becoming negative leverage. This is the situation when your cost of borrowing funds to make the investment becomes greater than the income the investment returns to you. Finally, your expectation of a tax advantage may be disappointed. Tax laws are constantly changing

SLIDE 31

Purchasing power risk – Changes in the value of money as an exchange medium, such as through inflation, may decrease the practical value of your invested resource.

SLIDE 32

Interest Rate Risk – The investor must consider if the capitalization rate of the investment is being negatively impacted by the interest rate being paid on the loan. Also of importance, how will future markets and interest rates impact the investment.

SLIDE 33

Liquidity Risk – The investor must consider how long he/she needs to hold on to the property to turn a profit and if money tied up in that investment worth the risk.

Market risk – Changes in the demand for your invested resource may cause your investment to lose value and to become illiquid.

Risk of default - Another risk of the investment property is the cost of development or operation. If start-up costs or ongoing operating costs exceed rental income, the owner must dip into additional capital resources to maintain the investment until its income increases. If income does not rise, or if costs do not decline, the investor can simply run out of money.

Leverage is a constant risk in real estate investment. If the property fails to generate sufficient revenue, the costs of borrowed money can bankrupt the owner, just as development and operating costs can.

Investors often overlook the fact that leverage only works when the yield on the investment exceeds the costs of borrowed funds.

Real Estate Applications

Appreciation

1: Formulas: Total appreciation = current value - original price

$$\text{Total appreciation rate} = \frac{\text{Total appreciation}}{\text{Original price}}$$

$$\text{One-year appreciation rate} = \frac{\text{One-year appreciation}}{\text{Prior year value}}$$

2: Example: A house bought for $100,000 appreciates $10,000 each year for 3 years.

Total appreciation = $130,000 - 100,000 = $30,000

Total rate = $30,000 ÷ $100,000 = 30%

First- year rate = $10,000 ÷ $100,000 = 10%

Real Estate Applications

Equity

1: Formulas: Equity = current value - current loan amount

2: Example: A buyer bought a property for $200,000 with a loan of $150,000. The house has appreciated $20,000 and the buyer has reduced the original loan by $10,000. The buyer's current equity is:

Equity   = ($200,000 + 20,000) - ($150,000 - 10,000)

= $80,000

Real Estate Applications

Pre-tax cash flow

Formula and example:

potential rental income	$ 50,000
– vacancy and collection loss	3,000
= effective rental income	47,000
+ other income	$ 2,000
= gross operating income (GOI)	49,000
- operating expenses	20,000
- reserves	3,000
= net operating income (NOI)	26,000
- debt service	$ 15,000
= pre-tax cash flow	11,000

Real Estate Applications

Annual depreciation (cost recovery) expense

1: Calculation steps:
  (1) Identify improvements-to-land ratio

  Identify value of improvements: ratio x property price

  divide value of improvements by total depreciation term

2: Example: A property was bought for $100,000. 75% of the value is allocated to the improvement. The property falls in the 39-year depreciation category.

(1) Improvement-to-land ratio	= 3:1 or 75%
(2) Improvement rate	= $100,000 x 75% = $75,000
(3) Annual depreciation	= $75,000 ÷ 39 = $1,923

Real Estate Applications

Capital gain

Formula and example (residential property):

Selling price of property	$ 300,000
– Selling costs	24,000
= Amount realized (ending basis)	276,000
Beginning basis (price) of property	$ 250,000
+ Capital improvements	10,000
– Total depreciation expense	0
= Adjusted basis of property	260,000
Amount realized (ending basis)	$ 276,000
– Adjusted basis of property	260,000
= Capital gain	$ 16,000

Real Estate Applications

Return, rate of return, and investment amount

1: Formulas: (1) $\dfrac{\text{Net operating income}}{\text{Price}}$ = return on investment (ROI)

(2) $\dfrac{\text{Cash flow}}{\text{Cash invested}}$ = Cash on cash return (C on C)

(3) $\dfrac{\text{Cash flow}}{\text{Equity}}$ = Return on equity (ROE)

2: Example: A property is bought for $200,000 with a $50,000 down payment and a $150,000 interest-only loan. The net income is $20,000 and cash flow is $ 8,000. The property has appreciated $30,000.

ROI = $20,000 ÷ $200,000 = 10%

C on C = $8,000 ÷ $50,000 = 16%

ROE = $8,000 ÷ $80,000 = 10%