Risk and Return

Read:

1. **Chapter 12: Sections 12.1 - 12.3**
2. **Chapter 13 : Sections 13.4 - 13.6**
3. **The CAPM (pages 443-444)**

Risk

- What determines the required return on an investment?
- Two things to remember about risk:
  - There is a reward for bearing risk.
  - The greater the risk, the greater the potential reward.

QUOTE

"October. This is one of the particularly dangerous months to speculate in stocks in. The others are July, January, September, April, November, May, March, June, December, August, and February."

-- Mark Twain

RETURNS

- Cash flows for shares of stock:
  -
  -

RETURNS

- Example: You purchased 100 shares of stock in Golden Child Industries last year for $50 per share. You just received a $5 dividend. The market value of the stock is now $65. What are your dollar and percentage returns?

RETURNS

- Example: You purchased 100 shares of stock in Better Days Ahead, Inc. last year for $30 per share. You just received a $1 dividend. The market value of the stock is now $20. What are your dollar and percentage returns?

RETURNS

$$\text{Percentage return} = \frac{\text{Cash flows over period} + \text{Change in market value}}{\text{Beginning market value}}$$

- What about for bonds?

A FINANCIAL HISTORY LESSON: 1926 - 2016

Investment	Average Return	Risk Premium
Large Company Stocks	12.0%	
Small Company Stocks	16.6%	
Long-Term Corporate Bonds	6.3%	
Long-Term Govt. Bonds	6.0%	
U.S. Treasury Bills	3.4%	

Risk Premium: The excess return required from an investment in a risky asset over that required from a risk-free asset.

Diversification and Risk

- Nondiversifiable Risk: A risk that influences a _____ of assets. Also referred to as _____ risk, market risk, or syncratic risk.

- Diversifiable Risk: A risk that affects at most a _____ of assets. Also referred to as _____ risk, unique risk, asset-specific risk, or _____ risk.

Diversification and Risk

- The Principle of Diversification: Spreading an investment across a number of assets will eliminate _____, but _____, of the risk.

Diversification and Risk

- Unsystematic risk is essentially eliminated by diversification, so a portfolio with many assets has almost no unsystematic risk.
- The expected return on an asset depends _____ _____ that asset's _____ risk.

Systematic Risk and Beta

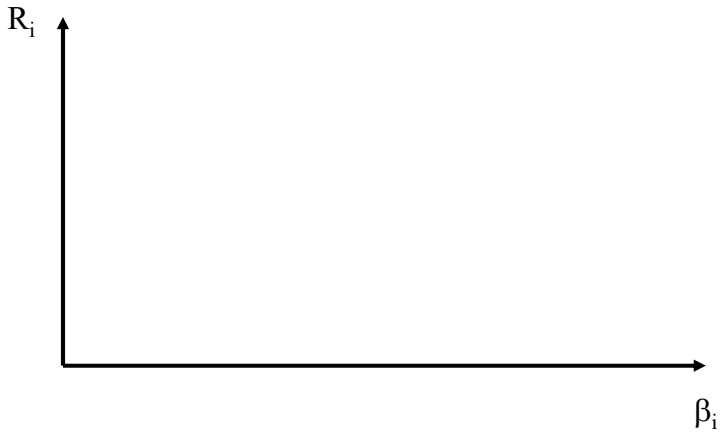
- Beta Coefficient (β): The amount of systematic risk present in a particular risky asset relative to the market portfolio (which has a beta of 1.0).

The Capital Asset Pricing Model (CAPM)

- The CAPM: An equilibrium asset pricing model showing that the expected return for a particular asset depends on the pure time value of money plus a reward for bearing systematic risk.

$$\text{CAPM} \quad \Rightarrow \quad R_i = R_f + \beta_i \left(R_M - R_f \right)$$

Security Market Line



An Example

- What is the expected return on a share of stock whose beta is 1.15 if the risk-free rate is 4% and the expected return on the market is 10%?

- What if the beta is 2?

Suggested Problems

- Concepts Review and Critical Thinking Questions:
  - Chapter 13: 1, 2, and 4

- Questions and Problems:
  - Chapter 12: 1, 2, 3, and 4 (a and b)
  - Chapter 13: 13, 14, 15, and 16