Chapter 14 Notes

- **Cost of Capital**

  - The discount rate in the discounted cash flow methodology.

  - The appropriate discount rate should reflect the riskiness of the cash flows.

  - Also referred as the required rate of return.

  - The required rate of return from investors vs the firm's cost of capital.

- **Firms Cost of Capital**

  - When the firm has different types of financing in the capital structure, the firms cost of capital is the market value weighted average cost of capital.

  - WACC (weighted average cost of capital) = (equity value / firm value) * return on equity + (debt value / firm value) * return on debt * (1 – tax rate) + (preferred stock value / firm value) * return on preferred stock.

  - WACC is the appropriate discount rate for cash flow similar in risk to those of the overall firm.

- **What if Project Risk Defers from the Firms Risk?**

  - The Pure Play Approach: find one or more companies that specialize in the product or service that are similar to the project under consideration.

  - Considering the projects risk as compared to the firm's risk, adjust the firms WACC accordingly.

- **Cost of Capital for Different Types of Financing**

  - Cost of equity: our focus today

  - Cost of debt: yield to maturity

  - Cost of preferred stock: our focus today

- **Cost of Preferred Stock**

- - P0 (price at the time 0) = D1 (dividend at the end of the year 1) / (required rate of return)

  - In Ch8, we use dividend and required rate of return to calculate equity price.

- **Cost of Equity**

  - Two different ways to calculate cost of equity.

    o Dividend growth model
    o Capital asset pricing model

- **Cost of Equity: Dividend Growth Model**

  - P0 (price at time 0) = D1(dividend at the end of year 1) / (required rate of return – dividend growth rate)

- **Cost of Equity: CAPM**

  - The Capital Asset Pricing Model (CAPM) indicates that the risk premium of a financial asset is proportional to the market risk premium

    o $E(R) - Rf = Beta * (E(M) - Rf)$

  - Where beta measures systematic risk

  - This approach is also referred as the security market line approach (SML)

- **Decomposing the Process**

  - The formula requires two main components: the weights and the cost of return.

  - The most complex scenario we will deal with: the firm is financed with bond, preferred stock and stock.

  - Find the market value, then the weights

  - Find the cost of return

  - Put all components in the formula

- **Final Remarks**

- WACC formula debt cost is: Return on Debt * (1 – Tax Rate)