Everything You Wanted to Know About Stocks and Their Value

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Let's Review…

- The price (value) of a bond is equal to the __________ __________ of the bond's ___________ cash flows.

Stock Valuation

- The price (value) of a share of stock is equal to the __________ __________ of the stock's ___________ cash flows.

Stock Valuation

- Common Stock Cash Flows:
  1)
  2)

$$P_o = \frac{D_1}{(1+r)^1} + \frac{D_2}{(1+r)^2} + \frac{D_3}{(1+r)^3} + \ldots + \frac{D_{n-1}}{(1+r)^{n-1}} + \frac{D_n + P_n}{(1+r)^n}$$

Example

- Kidd Inc. stock will pay a dividend in one year of \$1 and a dividend in two years of \$1.50. You plan to sell the stock in two years (just after you receive the dividend) for \$27.65. If the market's required return on Kidd Inc. stock is 10%, what is the price today?

Stock Valuation

- 3 Types of Dividends:
  - No Growth or Zero Growth
  - Constant Growth
  - Non-constant Growth

Zero Growth

- Dividends do not increase in dollar amount.
- $D_1 = D_2 = D_3 = D_4 = D$
- Dividends are paid every period forever.
- The price of a share of a zero growth stock is:

Zero Growth Example

- Yostmeister, Inc. just paid a dividend of $10 per share. The company expects to pay the same dividend every year forever. What is the price of a share of Yostmeister stock if the market's required return on this stock is 10 percent?

Constant Growth

- Dividends increase at a fixed rate (g) each period.
- $D_1 = D_0 \times (1 + g)$
- $D_2 = D_1 \times (1 + g) = D_0 \times (1 + g)^2$
- $D_3 = D_2 \times (1 + g) = D_0 \times (1 + g)^3$
- Dividends are paid every period forever.
- The price of a share of a constant growth stock is:

Constant Growth Example

- Tigers, Inc.'s dividends per share are expected to grow indefinitely by 5 percent per year. If next year's dividend is $10 and the market's required return on this stock is 8 percent, what is the current stock price?

Non-constant Growth

- Dividends have supernormal growth for some period of time, then "slow down" and grow steadily thereafter.

or

- Dividends grow erratically for a period of time, then grow steadily thereafter.

- How do I price a non-constant growth stock?

Yost's 3 Steps

1.

2.

3.

Non-constant Growth Example

- Infinite Technology just paid a dividend of \$1.82. The market's required return on this stock is 16 percent. If the company expects the dividend to grow at 30 percent per year for the next three years and 10 percent per year thereafter, what is the current price of the stock?

The Required Rate of Return

- Recall the dividend growth model:

- A little algebra…

The Required Rate of Return

- *Dividend Yield:* The dividend income portion of a stock's return.

- *Capital Gains Yield:* The price change portion of a stock's return.

- Let's look at the Tigers, Inc. example (constant growth example):

Constant Growth Example

- Tigers, Inc.'s dividends per share are expected to grow indefinitely by 5 percent per year. If next year's dividend is $10 and the market's required return on this stock is 8 percent, what is the current stock price?

The Dividend Growth Rate

- How might we estimate the dividend growth rate?

Market Multiples

- P_t = Benchmark PE Ratio x EPS_t

Market Multiples

- Suppose the median PE ratio in an industry is 20. What is your estimate of the price per share of a company that has $1.2 million in net income and 2 million shares outstanding?

Common Stock vs. Preferred Stock

- Common Stock
  - Voting Rights
    - Majority Voting or Straight Voting
    - Cumulative Voting
  - Dividends
  - Classes of Stock

Common Stock vs. Preferred Stock

- Preferred Stock
  - Voting Rights
  - Dividends
    - Cumulative
    - Non-cumulative
  - Stated/Liquidating Value
- Preferred Stock and Debt

Differences Between Debt and Equity

- **Debt**
  - Not an ownership interest
  - Creditors do not have voting rights
  - Interest is considered a cost of doing business and is tax deductible
  - Creditors have legal recourse if interest or principal payments are missed
  - Excess debt can lead to financial distress and bankruptcy
- **Equity**
  - Ownership interest
  - Common stockholders vote for the board of directors and other issues
  - Dividends are not considered a cost of doing business and are not tax deductible
  - Dividends are not a liability of the firm and stockholders have no legal recourse if dividends are not paid
  - An all equity firm can not go bankrupt

Stock Markets

- Primary vs. Secondary Markets
- Dealers vs. Brokers
- NYSE vs. NASDAQ

Looking Up Stock Prices

- Issue (Stock and Sym)
- Volume
- Price (Close)
- Chg (Net Chg)
- % Chg

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Chapter 8 Suggested Problems

- Concepts Review and Critical Thinking Questions:
  - 5, 7, and 11
- Questions and Problems:
  - 1, 2, 3, 5, 8, 15, 17, 18, 19, 20, 21, 22, 24, 25, 31, and 32

Stock Valuation Example #1

- Griffin Corporation will pay a $5.00 per share dividend next year. The company pledges to increase its dividend by 3 percent per year, indefinitely. If you require a 16 percent return on your investment, how much will you pay for the company's stock today?

Stock Valuation Example #2

- The next dividend payment by SAF, Inc., will be $4 per share. The dividends are anticipated to maintain a 6 percent growth rate, forever. If SAF stock currently sells for $45.00 per share, what is the required return?

Stock Valuation Example #3

- Suppose you know that a company's stock currently sells for $60 per share and the required return on the stock is 18 percent. You also know that the total return on the stock is evenly divided between a capital gains yield and a dividend yield. If it's the company's policy to always maintain a constant growth rate in its dividends, what is the dividend per share that was just paid?

Stock Valuation Example #4

- Nematode, Inc., has an issue of preferred stock outstanding that pays a $9.50 dividend every year, in perpetuity. If this issue currently sells for $110 per share, what is the required return?

Stock Valuation Example #5

- Key Corporation, is a start-up tech. firm. No dividends will be paid on the stock over the next five years, because the firm needs the money for growth. The company will then pay a $6 per share dividend and will increase the dividend by 5 percent per year thereafter. If the required return on this stock is 23 percent, what is the current share price?

Stock Valuation Example #6

- Taza Corporation is expected to pay the following dividends over the next four years: $4.75, $3, $2, $1. Afterwards, the company pledges to maintain a constant 9 percent growth rate in dividends, forever. If the required return on the stock is 17 percent, what is the current share price?

Stock Valuation Example #7

- Torsion Corporation stock currently sells for $108 per share. The market requires a 15 percent return on the firm's stock. If the company maintains a constant 7 percent growth rate in dividends, what was the most recent dividend per share paid on the stock?