Chapter Objectives
- To identify basic shareholder rights and the means by which corporations make distributions to shareholders
- To recognize the investment opportunities in various types of stocks
- To understand some stock analysis terminologies
- To understand corporate bondholders rights and the payment characteristics of corporate bonds
- To identify different types and payment characteristics of U.S. government securities and municipal bonds
- To understand default risk and interest rate risk associated with bonds

What does it mean to own a stock – to be a stock shareholder?
- You own part of the company, however small of a part it may be
- You have
  - Right to Vote
    - One Share, One Vote
  - Preemptive Right
    - Allows Shareholders to Maintain Their Proportionate Ownership Share in the Corporation
  - Right to Share in Earnings or Asset Distributions

What kind of claim does the shareholder have on company assets?
- Shareholders come last!
  - Meaning shareholders have only residual claim on assets: All other claims must be paid before shareholders can receive any distribution because other claims, such as bond interest payments, are fixed.
- So what’s good about being a shareholder?
  - If company earning is good and this residual is large, shareholders benefit considerably
  - Poor company earning can be damaging

How does this distribution work? – An example
- Poor Earnings of only $9,000
  - Interest to bondholders $5,000
  - Dividends to preferred shareholders 3,000
  - The balance to common shareholders 1,000
- Good Earnings of $20,000
  - Interest to bondholders $5,000
  - Dividends to preferred shareholders 3,000
  - The balance to common shareholders 12,000

What form do the distributions to common shareholders take?
- Cash Distributions
  - Regular (Quarterly) Dividend
  - Periodic Share Repurchases
- Non-cash Distributions
  - Stock Dividend
  - Stock Split
What are the opportunities in common stocks?

- Growth Companies
  - Earnings Are Expected to Grow Substantially
- Income Stocks
  - Provide a Good Dividend Return
- Blue Chips
  - High Quality Stocks of Established Companies
- Cyclical Stocks
  - Very Responsive to Changes in the Economy
- Special Situations
  - Takeover

How to read a stock quotation?

52 weeks

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Click here to read a Microsoft stock quote on Yahoo:
http://finance.yahoo.com/q?s=msft

How are stock prices determined?

- There are three approaches in stock analysis
  - Fundamental approach – intrinsic value based
  - Technical approach – price movement, empirical models
  - Random-walk approach – unpredictable. Luck is the most important factor

What is the fundamental analysis of common stocks?

- Capital Assets Pricing Model (CAPM)
- Beta and Alpha
- Price-to-Earnings Analysis
- Fundamental Value
- Book Value
- For Fundamental Data, Go To Wall Street Research Net at http://wsrn.com/

What is a stock’s Beta?

- Beta Measures a Stock’s Risk in Relation to the Overall Market Risk
  - <0: price moves in the opposite direction of the market – rare
  - 0: price independent of the market
  - 0-1.0: less risky than market average
  - 1.0: as risky as market average
  - >1.0: riskier than market average
What is a stock’s Alpha value?
- Alpha = Expected Return - Required Return
- Expected Return usually are expert projections based on company financial numbers
- Required Return is the return needed to compensate for the risk level measured by Beta. The higher the Beta, the higher the required return
- The higher the Alpha, the better value the stocks has. In other words, stocks with high Alpha values are good bets.

What is price-to-earnings analysis?
- A Stock’s P/E Ratio is
  - the Ratio of a Stock’s Price (P) to Its Expected Future Earnings Per Share (EPS)
  - Example: P/E = 25.61
  - Meaning: Investors Pay $25.61 for Each $1.00 of the Company’s Earnings

What is the fundamental value of a stock?
- If you find out the average P/E ratio for all discount department stores is 25
- And Wal-Mart’s next year predicted earnings per share (EPS) is $2.04
- Then fundamental value for Wal-Mart
  - (P/E ratio) * (next-year EPS) = 25*2.04=$51.00
- So Wal-Mart Stock should be selling at about $51.00 a share. If way under, then it’s a good deal. If way higher, then it’s a bad deal.

What is the market-to-book ratio?
- A company’s book value is its net worth (assets minus liabilities) divided by the # of shares outstanding
- The market-to-book ratio divides the stock’s price by its book value.
- Example: Wal-Mart Data:
  - Book value per share: 8.9
  - Stock price: 52.25
  - Market to book ratio: 52.25/8.9 = 5.87
- All other things equal, analysts prefer low values for this ratio
- Historical S&P 500 market-to-book ratio range:

What is the PEG ratio?
- Shows the relationship between the PE ratio and the long-term growth rate
  - PEG = (P/E)/Growth
  - Example: Wal-Mart PEG = 1.39
- All things equal, low numbers are desirable--You’re buying growth at a low price

What does it mean if you own bond?
- When you own bond, it means you have loaned money to a company or government entity
- Bond Parties
  - The Issuer Who Borrows Money
  - The Investors Who Lend the Money
- The Loan
  - Has a Maturity, such as 20 Years
  - Specifies Interest Payments
What are your rights as a bondholder?

- Bondholders Are Creditors
- Bond Indenture: a contract between the issuer and the bond holders
- Protective Covenants – restrictions in the indenture that strengthen the bondholders’ position
  - Mortgage bonds: secured by collateral
  - Debentures: no collateral
  - Subordinated debenture: claims given to other bond issues

What are the payment characteristics for bonds?

- Face Value
  - Amount the Issuer Pays to Redeem a Bond
  - Usually $1,000 for Corporate Bonds
- Semiannual Interest Payments
  - Amount Paid Each 6-Month Period
  - Determined by Multiplying a Bond’s Coupon Rate by $1,000;
    - Eg. An 8% Bond Pays $80 Interest a Year (0.08 x $1,000) with Two Payments of $40 Each

- Zero Coupon Bonds
  - Pay No Periodic Interest
  - Interest is Earned By Paying Less than $1,000 to Buy the Bond.
    - Pay $500 today and Redeem at $1,000 Eight Years Later

What are the retirement methods for bonds?

- Redemption at Maturity – The Issuer Redeems The Bond at Face Value
- Earlier Redemption through a “Call” for Callable Bonds
- Sinking Funds
  - Involve a Plan to Retire A Portion of the Outstanding Bonds Each Year--Rather than Retiring All at the Maturity Date
- Conversion to Common Stock

What are the factors to consider when buy bonds?

- Trading Costs Can Be High
- Commissions
- The Bid-Asked Spread
- Must Be Alert to Possible Calls
  - No Interest is Paid after Call Date
- Mutual Funds May Be Best

What are government-issued bonds?

- U.S. Treasury Securities
- U.S. Agency Bonds
  - Conventional
  - Mortgage-Backed
- Municipal Bonds
  - General Obligation (GO) Bonds
  - Revenue Bonds
What are U.S. Treasury Securities?
- Treasury bills: mature in 1 year or less
- Treasury notes: mature in 2-10 years
- Treasury bonds: mature in 10-30 years
- Treasury notes and bonds are often called T-bonds

What are the characteristics of T-Bonds?
- Characteristics are the same as corporate bonds:
  - Coupon Rate
  - Face Value of $1,000
  - A Maturity Date
- Free of default risk
- May have price risk—degree depends on maturity
- For more information about Treasury Securities and how to purchase them, click [http://www.publicdebt.treas.gov/of/ofbasics.htm](http://www.publicdebt.treas.gov/of/ofbasics.htm)

What are some special types of Treasury Bonds?
- U.S. Treasury Strips
  - Created by Brokerage Firms
  - Issued in Zero Coupon Form
- Inflation-Indexed Bonds
  - Redemption value is adjusted periodically to reflect inflation. Example: if annual inflation is 3%, the redemption value is increased to $1,030
  - Coupon Rate is not Changed

What are U.S. agency bonds?
- Conventional Bonds Have Characteristics Identical to Treasuries
- Mortgage-Backed Bonds:
  - Issued by agencies such as Fannie Mae
  - Agency buys mortgages from local lenders
  - Creates a pool of similar mortgages and issues bonds backed by the pools
  - Mortgage payments are “passed through” to the bond buyers

What are municipal bonds?
- General Obligation (GO) Bonds
  - Backed by Full Taxing Authority of the Issuer
- Revenue Bonds
  - Backed only by the Revenues of the Project the Bonds Financed
  - Considered Weaker than GO Bonds
  - Most Municipal Bonds Are Free of Federal Income Tax

How much is the tax advantage of Municipal bonds?
- Depends on your marginal tax rate: the higher your marginal tax rate, the more beneficial
- If a municipal bond offers 3% interest rate, and your marginal tax rate is 27%, then this investment is equivalent to a taxable interest rate of 4.11% \([3\%/(1-27\%)]\)
How to measure return on bonds? - The current yield (CY)

- **Data:**
  - Bond’s Current Price (P) = $900
  - Annual Coupon Interest (I) = $120
  - Years to Maturity (N) = 5
- **The Current Yield (CY) Calculation**
  \[ CY = \frac{I}{P} = \frac{120}{900} = 0.1333 = 13.33\% \]
  - Advantage: A Quick Calculation
  - Disadvantage: Does Not Consider Maturity

How to measure return on bonds? – The yield to maturity (YTM)

- **Formula**
  \[ YTM = \frac{I + (1,000 - P)/N}{(P + 1,000)/2} \]
  Note 1,000 is the typical face value
- **Use the previous example**
  - I = 120, P = 900, N = 5
  \[ YTM = \frac{120 + (1,000 - 900)/5}{(900 + 1,000)/2} \]
  \[ = \frac{120 + 20}{950} = \frac{140}{950} = 0.1474 = 14.74\% \]

What are the default risks with bonds?

- Default Risk is the Possibility that the Issuer Will Not Make Interest Payments or Redeem the Bonds at Maturity
- Not a Problem with Treasury or Agency Issues
- A Very Serious Problem with Corporate and Municipal Issues
- Investors Use Credit-Rating Services, Such as Moody’s and Standard & Poor’s, to Assess Default Risks
  - Moody’s rating: Aaa, Aa, A, Baa, Ba, B, Caa, Ca, C
  - For a good article on Moody’s bond ratings, click here
  - Standard & Poor’s rating: AAA, AA, A, BBB, BB, B, CCC, CC, D
  - For a good article on S&P’s bond ratings, click here

What is the interest rate risk with bonds?

- As Market Interest Rates Increase, the YTM’s for Previously-Issued Bonds Also Increase
- As a Bond’s YTM Increases, its Price Falls
- If You Own Such a Bond, You Take a Loss on Your Investment

What are preferred stocks?

- Hybrid Security: Part Stock/Part Bonds
  - Form of Equity Ownership--Similar to Common Stock
  - Pays a Fixed Return--Similar to Bonds
- Stockholder Rights
  - Are Provided in the Offering Agreement
  - This Agreement is Similar to a Bond Indenture, but Is Weaker
  - Preferred Stockholders Usually Do Not Vote

What are the features of preferred stocks?

- Payment Usually Expressed as a Percentage of Par Value, which is usually $100
  - Example, 8% preferred stock means $8 a year dividend paid on each share of stock (usually $100 per share purchase value)
- Cumulative Dividend (Frequently Used)
  - If a Dividend Is Not Paid, It is Carried Forward and Must Be Paid Before Any Dividend Can Be Paid on Common Stock
- Participating Dividend (Rarely Used)
  - Extra Dividends Due to Income Sharing
How to measure return on preferred stocks?

- Like Common Stocks, Most Preferred Stocks Do Not Have a Maturity
- The Current Return (CR):
  \[ CR = \frac{\text{Dividend}}{\text{Stock Price}} \]
- Example: If Dividend = $2 and Price = $18, then CR = $2/$18 = 0.1111 (11.11%)

Assignments for Chapter 11

- Read Vanguard’s Realistic Expectations for Share Market Returns to get a sense of what to expect when you invest.
- Check the performance of well-known indexes: Dow Jones, S&P 500, and NASDAQ. What are they? Also take a look at 10-year bond yield. What does the performance history look like? How does that link to the iron law of risk and return?