

**Financial Instruments**

Professor Lasse H. Pedersen

Prof. Lasse H. Pedersen 1

---

---

---

---

---

---

---

---

**Overview**

- Real and financial assets
- Use of financial assets
- Important examples of financial assets

Prof. Lasse H. Pedersen 2

---

---

---

---

---

---

---

---

**Real Versus Financial Assets**

- Real Assets
  - Assets used to produce goods and services
  - Examples: factories, land, human capital, etc.
- Financial Assets
  - Claims on real assets such as
    - stocks
    - bonds
  - Derivatives

Prof. Lasse H. Pedersen

---

---

---

---

---

---

---

---

## Use of Financial Instruments

- Allocation of Capital
  - Financing of projects
- Consumption Smoothing:
  - saving and borrowing
- Allocation of Risk
  - Diversification
  - Hedging
  - Insurance
- Meeting place for investors with different (not necessary opposite) investment needs

Prof. Lasse H. Pedersen

---

---

---

---

---

---

---

---

## Important Financial Assets

- Fixed Income Securities
  - 'Borrowing instruments'
  - Treasury bonds
  - Municipal bonds
  - Corporate bonds
- Equity
  - 'Ownership in a firm'
  - A stock is a 'claim to funds after all debts have been paid'

Prof. Lasse H. Pedersen

---

---

---

---

---

---

---

---

## Important Financial Assets

- Derivatives
  - Definition: 'securities whose payoff depends on values of other assets'
  - Examples
    - Options
    - Futures
    - Swaps
- Investment Companies
  - Mutual Funds

Prof. Lasse H. Pedersen

---

---

---

---

---

---

---

---

## Treasury Bonds

- Types of Treasury bonds
  - Treasury Bills (less than 1 year maturity)
  - Treasury Notes (1-10 year maturity)
  - Treasury Bonds (10-30 year maturity)
- Semi-annual coupon payments

---

---

---

---

---

---

---

---

## Municipal Bonds

- Issued by state and local governments
  - Exempt from federal income tax
  - Exempt from (issuing) state local tax
- Types of 'munis'
  - General obligation bonds: backed by the 'full faith of credit' of the issuer (taxing power)
  - Revenue bonds (riskier): issued to finance specific projects (airports, hospital, etc.)

---

---

---

---

---

---

---

---

## Corporate Bonds

- Default Risk
- Commercial paper
  - Short term
- Corporate bond
  - Longer term
  - Typically pays semi-annual coupons
  - Different "seniority" classes
    - senior
    - junior or subordinated

---

---

---

---

---

---

---

---

## Equity

- Equity
  - Future cash-flows are uncertain.
  - Maturity is indefinite.
  - Involves risk, variable liquidity.
- Two main classes of equities
  - Common Stock
  - Preferred Stock

---

---

---

---

---

---

---

---

## Equity, Continued

- Common Stock
  - Voting rights ("ownership")
  - Right to dividends
  - Limited liability
  - In case of default, last in line
- Preferred Stock
  - Non-voting
  - Usually receive fixed stream of dividends
  - Receive dividends before common
  - More like debt than equity

---

---

---

---

---

---

---

---

## Derivatives

- Examples: options and futures
- Motivation: Hedging
  - Farmer (price risk associated with selling)
  - Gas company (price risk from buying)
  - Multinational firm (exchange rate risk)
- Motivation: Speculation
  - High leverage and high risk

---

---

---

---

---

---

---

---

## Futures

- A contract to purchase/ sell an asset (commodities or financial)
  - At a specified price
  - On a specified date

---

---

---

---

---

---

---

---

## Options

- Call option
  - The right to buy an asset at a specified price (the “strike price”) before a specified date
- Put option
  - The right to sell an asset at a specified price before a specified date

---

---

---

---

---

---

---

---

## Mutual Funds Markets

- Financial intermediaries that pool funds from investors and buy assets
- Advantages:
  - Record keeping and administration
  - Diversification and divisibility
  - Professional management and analysis
  - Lower transactions costs

---

---

---

---

---

---

---

---

## Asset-Backed Securities

- Bundling of existing securities such as
  - mortgages
  - auto loans
  - corporate bonds
  - credit card receivables
- An example of financial engineering

---

---

---

---

---

---

---

---