

Part B

Valuation

I. Overview of Financial Markets:

1. *Money Markets* — short-term, liquid, low-risk debt securities

- (a) Treasury bills
- (b) Bank instruments: CD, CP, BA ...
- (c) Fed funds and repos
- (d) LIBOR market ...

2. *Capital Markets* — long-term, riskier securities

- (a) Fixed-income securities
 - Treasury notes and bonds
 - Corporate bonds
 - Municipal bonds
 - Federal agency debt
 - Mortgages and mortgage-backed securities ...
- (b) *Equities*
 - Common shares
 - Preferred stocks ...

3. *Derivatives Markets* — derivative securities

- (a) Forward and futures
- (b) Options ...

II. Transactions of Financial Securities

1. *Primary Market* — issuance of primary securities

(a) Securities:

- Treasury bills, notes and bonds
- corporate bonds
- common stocks
- ...

(b) Issuance procedures:

- Auction – Treasury debt
- Underwriting
 - Public offering – stocks, bonds
 - Private placement – bonds

Observation: Primary securities are in positive net supply, often representing claims on real assets.

2. *Secondary Market* — trading of primary securities

(a) Market organization:

- Exchanges — NYSE, AMEX
- OTC — Bond market, FX market, NASDAQ
- Direct Trading

(b) Trading process:

- Trading costs — commission, bid-ask spread, etc.
- Buying on margin
- Short sales

(c) Long and short positions:

- For a long position in a financial security, its value *increases* as the value of the security increases.
- For a short position in a financial security, its value *decreases* as the value of the security increases.

Example. You own a BMW: you are long one BMW.

Example. In one week, you have to deliver to your spouse a BMW that you don't have yet: you are short one BMW.

3. *Derivatives Market*

(a) Securities:

- Forward and futures
- Options
- Swaps . . .

(b) Trading: Exchanges and OTC

Observation: Derivative securities have zero net supply and their payoffs depend on the prices of other securities.

III. Pricing of Financial Securities

First Pricing Principle: No arbitrage opportunities.

Absence of arbitrage establishes relations *among* security prices.

Definition: Pricing relations by arbitrage are called *arbitrage pricing*.

- ▶ Arbitrage pricing only prices one security off other securities.
- ▶ Arbitrage pricing does not determine all security prices.
- ▶ Arbitrage pricing is key for most corporate finance decisions.

Key Assumptions of Arbitrage Pricing:

1. More is better than less (a weak assumption).
2. No frictions, such as
 - trading costs
 - short sales constraints.

Second Pricing Principle: Supply equals demand — market in equilibrium.

Market equilibrium determines security prices in terms of “fundamentals”

- Expectation of future cash flows
- Risk in future cash flows
- Investors’ preferences toward risk . . .

Definition: Pricing relations by equilibrium are called *equilibrium pricing*.

Example. CAPM.

Note:

- ▶ Equilibrium pricing allows us to price securities based on fundamentals.
- ▶ Equilibrium pricing determines all security prices.
- ▶ Equilibrium pricing is key to understanding economic forces behind security prices (e.g. expectations, risk, preferences).

Readings:

- BKM Chapter 2, 3.
- Readings package: “Stocks in trade” (Economists).