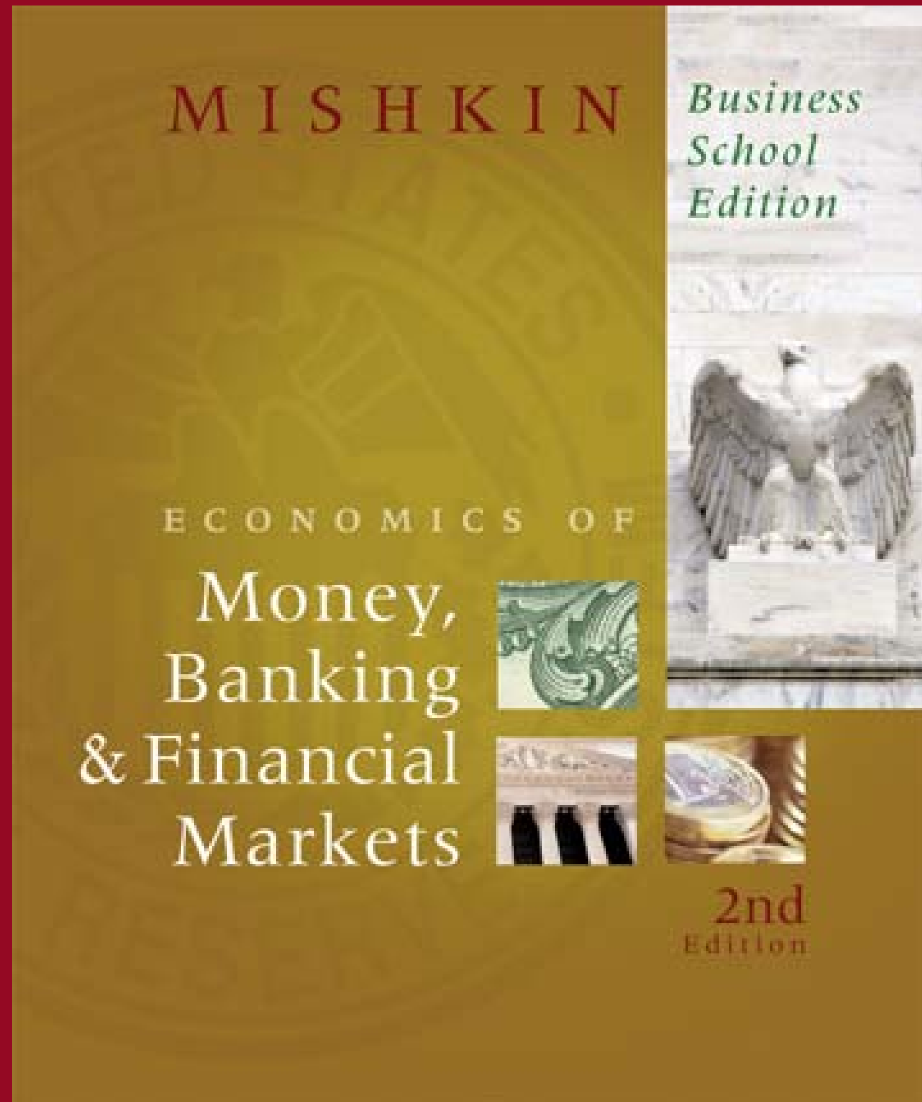
# Chapter 2: Part B

## An Overview of the Financial System…Continued

**Mishkin notes with edits by L. Tesfatsion (Iowa State University)**

**Last Revised: 23 January 2011**




Addison-Wesley is an imprint of

PEARSON

# Key Issues

- Forms of financial markets
- “Financial asset trades” versus “finance”
- Direct vs. indirect finance
- Common vs. preferred stock
- Globalization of financial markets
- Who regulates financial markets, and why?

# Forms of Financial Markets Based on *Organization*

- **Auctions, Exchanges & Over-the-Counter (OTC) Markets**
  - Auction: U.S. Treasury bill auctions
  - Exchanges: NYSE, Chicago Board of Trade
  - OTC: Gov’t bond market (secondary), Foreign exchange, Fed funds, Nasdaq.

# Forms of Financial Markets Based on *Basic Type* of Financial Asset Traded

- **Debt:** Contractual agreement by a borrower to pay the holder of the debt instrument specified payments at regular intervals until a specified date.
  ***Examples:*** Residential mortgages, Treasury bills

- **Equity:** Security that confers on the holder an ownership interest in the issuer.
  ***Examples:*** Common stock, preferred stock

- **Money/Foreign Exchange** (Mishkin Chpt 3)
  ***Examples:*** Euros, U.S. dollars

# Two Basic Forms of Stock Shares

## ◆ Common Stock

– Claim to a share of the net income (after expenses and taxes) and of the assets of a corporation.

– Return comes in two forms: (1) capital gains (or losses) from stock price changes; (2) dividends (at discretion of corporation)

## ◆ Preferred Stock

– Typically issued at a par value (e.g., $100) and pay a fixed dividend as % of par value

– Claim against corp.'s cash flow ***prior*** to common stock claims but ***after*** bond holder claims

# Forms of Financial Markets Based on *Maturity* of Financial Assets

- **Money Markets**
  - Money markets deal in short-term debt instruments ( $\leq$ 1 Yr)
- **Capital Markets**
  - Capital markets deal in equity (no maturity) and longer-term debt instruments (> 1 Yr).

# Money Market Assets
## (Shorter-Term Securities ≤ 1 Year)

- Treasury bills
- Negotiable Certificates of Deposit
- Commercial paper
- Banker’s acceptances
- Repurchase agreements
- Federal funds
- Eurocurrencies

# **Mishkin Table 2-1:** Principal Money Market Instruments

| Type of Instrument | Amount Outstanding ($ billions, end of year) 1980 | 1990 | 2000 | 2008 |
|---|---|---|---|---|
| U.S. Treasury bills | 216 | 527 | 647 | 1060 |
| Negotiable bank certificates of deposit (large denominations) | 317 | 543 | 1053 | 2385 |
| Commercial paper | 122 | 557 | 1619 | 1732 |
| Federal funds and Security repurchase agreements | 64 | 387.9 | 768.2 | 2118.1 |

*Sources:* Federal Reserve Flow of Funds Accounts; Federal Reserve *Bulletin; Economic Report of the President.*

# Capital Market Assets
## (Longer-Term Securities > 1 Year)

- Corporate Stocks (No Maturity)
- Residential Mortgages
- Corporate Bonds
- U.S. Government Securities
- U.S. Government Agency Securities
- Municipal Bonds (state, city, or local gov't)
- Bank Commercial Loans
- Consumer Loans (e.g., car, appliances,...)
- Commercial and Farm Mortgages

# **Mishkin Table 2-2:** Principal Capital Market Instruments

| Type of Instrument | Amount Outstanding ($ billions, end of year) 1980 | 1990 | 2000 | 2008 |
|---|---|---|---|---|
| Corporate stocks (market value) | 1,601 | 4,146 | 17,627 | 19,648 |
| Residential mortgages | 1,106 | 2,886 | 5,463 | 12,033 |
| Corporate bonds | 366 | 1,008 | 2,230 | 3,703 |
| U.S. government securities (marketable long-term) | 407 | 1,653 | 2,184 | 3,621 |
| U.S. government agency securities | 193 | 435 | 1,616 | 8,073 |
| State and local government bonds | 310 | 870 | 1,192 | 2,225 |
| Bank commercial loans | 459 | 818 | 1,091 | 1,605 |
| Consumer loans | 355 | 813 | 536 | 871 |
| Commercial and farm mortgages | 352 | 829 | 1,214 | 2,526 |

*Sources:* Federal Reserve Flow of Funds Accounts; Federal Reserve *Bulletin*. 2008, 3rd Quarter.

# Forms of Financial Markets Based on *Issue Date* of Traded Financial Assets

- **Primary Market**
  - ***Newly-issued*** securities (**asset creation**)
  - Popularly called “Initial Public Offerings” (IPOs)
  - ***Example:*** U.S. Treasury Bill Auctions
- **Secondary Market**
  - ***Previously sold*** securities (**no asset creation**)
  - Provides liquidity for financial asset owners
  - ***Example:*** New York Stock Exchange

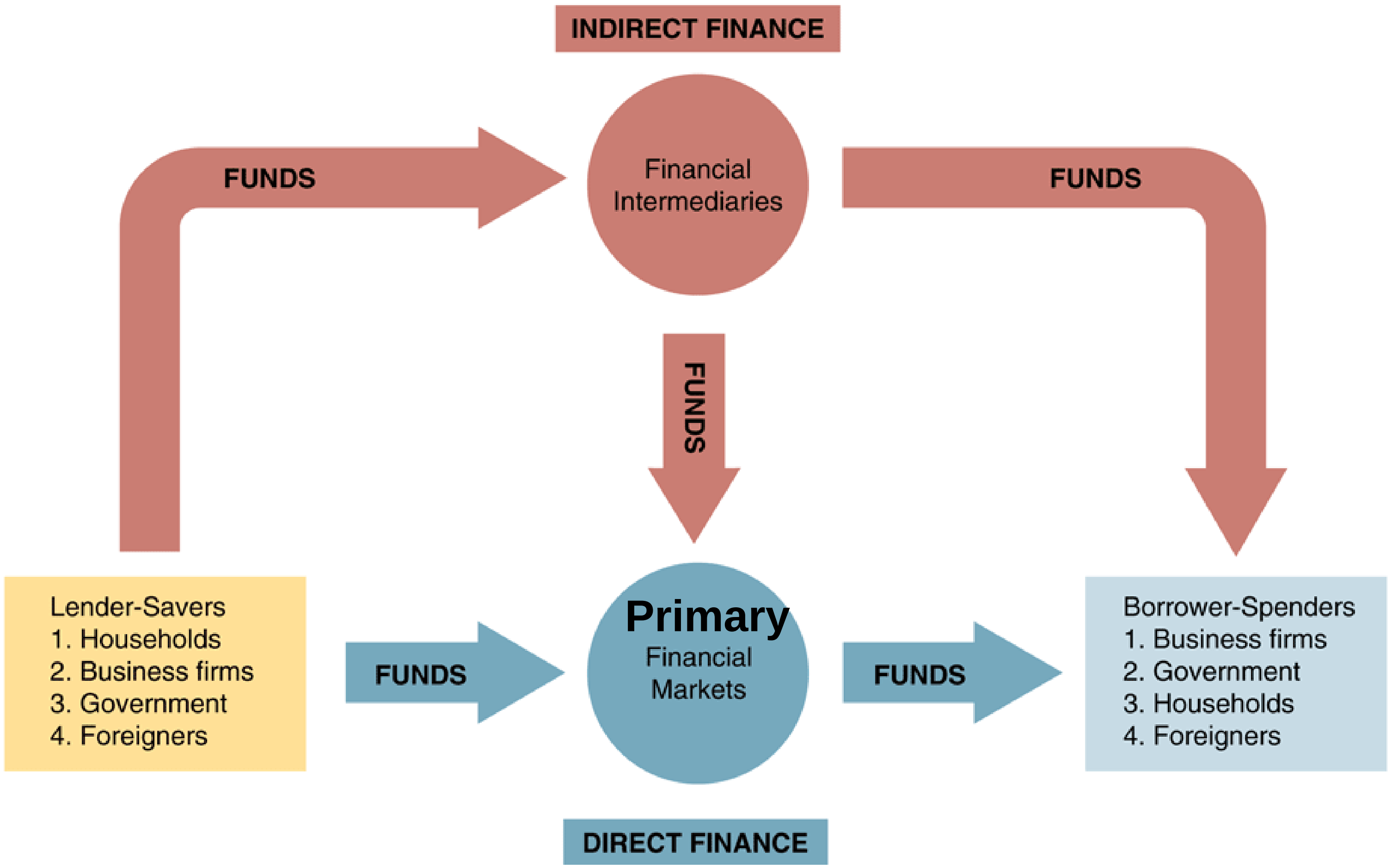
# "Financial Asset Trade" vs. "Finance"

- **Financial Asset Trade**
  - **ANY** purchase/sale of financial assets
  - In particular, the financial assets can be existing or newly issued
  - ***Example 1:*** I sell an IBM share to you for $126
  - ***Example 2:*** I borrow $126 from you. Specifically, I issue to you a contract ("IOU") with the following terms: if you pay me $126 now, in return I promise to pay you $126+$3 (principal plus interest) one month from now.

# “Finance” is the creation of borrowed funds, hence a *financial obligation*

- ***Direct Finance:***
  - Borrowers obtain borrowed funds directly from lenders in ***primary*** financial markets by selling them ***newly-issued*** securities
- ***Indirect Finance:***
  - Borrowers obtain borrowed funds from FIs by signing ***newly-created*** loan contracts (“IOUs”)

# Mishkin Fig. 2-1: Two Types of Finance --- Indirect vs. Direct



# Direct Finance Assets

- **Newly Issued Debt**
  - Short-term < 1 year
  - Intermediate-term (Between 1 and 10 years)
  - Long-term > 10 years
- **Newly Issued Equity**
  - No maturity (“long”)
  - Residual claimant (the claims of bond holders come before equity holders in case of bankruptcy)
  - Benefits come from dividends and/or capital gains

# Advantages of Indirect Finance (Financing through FIs)

- Lower transaction costs (time and money spent in carrying out financial transactions).
  - Economies of scale
  - Liquidity services
- Reduce the exposure of lenders to risk
  - Risk sharing (asset transformation)
  - Diversification

# **Table 3** Primary Assets and Liabilities of Financial Intermediaries

| Type of Intermediary | Primary Liabilities (Sources of Funds) | Primary Assets (Uses of Funds) |
|---|---|---|
| **Depository institutions (banks)** | | |
| Commercial banks | Deposits | Business and consumer loans, mortgages, U.S. government securities and municipal bonds |
| Savings and loan associations | Deposits | Mortgages |
| Mutual savings banks | Deposits | Mortgages |
| Credit unions | Deposits | Consumer loans |
| **Contractual savings institutions** | | |
| Life insurance companies | Premiums from policies | Corporate bonds and mortgages |
| Fire and casualty insurance companies | Premiums from policies | Municipal bonds, corporate bonds and stock, U.S. government securities |
| Pension funds, government retirement funds | Employer and employee contributions | Corporate bonds and stock |
| **Investment intermediaries** | | |
| Finance companies | Commercial paper, stocks, bonds | Consumer and business loans |
| Mutual funds | Shares | Stocks, bonds |
| Money market mutual funds | Shares | Money market instruments |

# Financial Assets Exchanged in International Financial Markets

- **Foreign Bonds:** Sold in a foreign country and denominated in that country's currency
- **Eurobond:** Bond denominated in a currency other than that of the country in which it is sold
- **Eurocurrencies:** Currencies deposited in banks outside the currency-issuing country
  - **Example: Eurodollars** U.S. dollars deposited in foreign banks outside U.S. or in foreign branches of U.S. banks
- **Equity (World Stock Markets)**

# Information Problems in Financial Markets

- **Asymmetric Information:**

Buyers & sellers have different information

- Before Transaction (“Adverse Selection”)

  ***Example:*** Whom should I lend to?

- After Transaction (“Moral Hazard”)

  ***Example:*** Have I lent to honest people?

# Adverse Selection in Markets

- A problem that arises **BEFORE** a transaction occurs
- ***Example:*** Used-car dealer has difficulty assessing the quality of the cars it wishes to purchase
  - Dealer offers to purchase used cars at a price equal to **AVERAGE** (expected) quality based on NADA Guide appraisals
  - **HIGH**-quality sellers **EXIT** the market
  - **LOW**-quality sellers **ENTER** the market

    ➡ Average quality of used cars brought to the dealer's car lot by sellers **DECREASES**

# Adverse Selection … Another Example

- A U.S. banker has difficulty assessing the quality (default risk) of applicants for residential mortgages
  - Banker offers mortgages at an interest rate tailored for **AVERAGE** default risk in U.S.
  - **HIGH**-quality borrowers **EXIT** applicant pool
  - **LOW**-quality borrowers **ENTER** applicant pool

➡ Average default risk of the banker's pool of mortgage applicants **INCREASES**

# Moral Hazard in Markets

- A problem that arises **AFTER** a transaction
- ***Example:***
  - A new Ames fire insurance company offers 100% coverage to households against fire loss.
  - The company sets its insurance premiums to cover its expected losses based on the past frequency of household fires in Ames.
  - Anticipated result?

# Moral Hazard…Another Example

- A problem can arise for a lender **AFTER** a lending agreement takes place
  - The borrower changes his behavior in ways that increase the risk to the lender that the borrower will default
  - The lender is not able to fully observe the borrower’s behavioral change
  - The original loan interest rate no longer compensates the lender for his risk

# Illustrations...Continued

- An investment advisory firm advertises job openings under the following terms:
  - A salary will be paid that is **HIGHER** than the industry average;
  - All correspondence of employees will be subject to **RANDOM AUDIT**;
  - any employee caught giving incorrect advice will be **FIRED**.
  - Possible results of this job policy?

# Illustrations…Continued

- Fed announces it will act as “lender of last resort” to any bank running into problems due to rapid deposit withdrawals.
  - Fed charges each bank a flat annual rate of 2% for covered deposits
  - Program participation by banks is voluntary
  - Possible effects of this policy?
  - Would making program mandatory help?

# FIs Can Reduce Information Problems

- *Adverse Selection:* Avoid servicing of risky borrowers
  - Gather information about potential borrowers
- *Moral Hazard:* Ensure borrower will not engage in activities that will prevent him/her from repaying the loan.
  - Sign a contract with restrictive covenants.

# Why Regulate the Financial Financial System?
### (Main Topic of Mishkin Chapter 11)

- Increase information to investors
  – SEC disclosure/reporting requirements
  – Reduce adverse selection and moral hazard
- Ensure soundness of financial system
  – Avoid panics
  – Entry restrictions, info reporting, risk reduction, insurance provision, branching restrictions,…
- Improve the control of monetary policy

# Examples of Regulations on FIs

- Restrictions on entry (chartering process)
- Required disclosure of information (SEC)
- Restrictions on assets and activities (controls on risky asset holdings – Basel II)
- Deposit insurance (avoid bank runs)
- Limits on competition (mostly in the past)
  - Limits on branching
  - Restrictions on interest rates

# **Table 5** Principal Regulatory Agencies of the U.S. Financial System – Lots of Them!

| | | |
|---|---|---|
| Securities and Exchange Commission (SEC) | Organized exchanges and financial markets | Requires disclosure of information, restricts insider trading |
| Commodities Futures Trading Commission (CFTC) | Futures market exchanges | Regulates procedures for trading in futures markets |
| Office of the Comptroller of the Currency | Federally chartered commercial banks | Charters and examines the books of federally chartered commercial banks and imposes restrictions on assets they can hold |
| National Credit Union Administration (NCUA) | Federally chartered credit unions | Charters and examines the books of federally chartered credit unions and imposes restrictions on assets they can hold |
| State banking and insurance commissions | State-chartered depository institutions | Charter and examine the books of state-chartered banks and insurance companies, impose restrictions on assets they can hold, and impose restrictions on branching |
| Federal Deposit Insurance Corporation (FDIC) | Commercial banks, mutual savings banks, savings and loan associations | Provides insurance of up to \$100,000 (temporarily \$250,000) for each depositor at a bank, examines the books of insured banks, and imposes restrictions on assets they can hold |
| Federal Reserve System | All depository institutions | Examines the books of commercial banks that are members of the system, sets reserve requirements for all banks |
| Office of Thrift Supervision | Savings and loan associations | Examines the books of savings and loan associations, imposes restrictions on assets they can hold |