Econ 4200 Money and Banking

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Chapter 2

An Overview of the Financial System

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[1] Chapter 2, Frederic S. Mishkin, *The Economics of Money, Banking and Financial Markets*, 2010, the second edition of the business school edition,Pearson

Outline for Chapter 2

1. Function of Financial Markets and Financial Intermediaries
2. Structure of Financial Markets
   - Debt and Equity Markets
   - Primary and Secondary Markets
   - Exchanges and Over-the-Counter Markets
   - Money and Capital Markets
3. Financial Instruments
   - Money Market Instruments
   - Capital Market Instruments
4. Types of Financial Intermediaries
   - Depository Institutions (Banks)
   - Contractual Savings Institutions
   - Investment Intermediaries

Function of Financial Markets and Financial Intermediaries

What are the functions of Financial Markets?

1. Perform the essential function of channeling funds from households, firms and governments that have saved surplus funds to those that have a shortage of funds
2. Direct finance: borrowers borrow funds directly from lenders in financial markets by selling them securities
3. Promotes economic efficiency by producing an efficient allocation of capital, which increases production
4. Directly improve the well-being of consumers by allowing them to time purchases better

Functions of Financial Markets

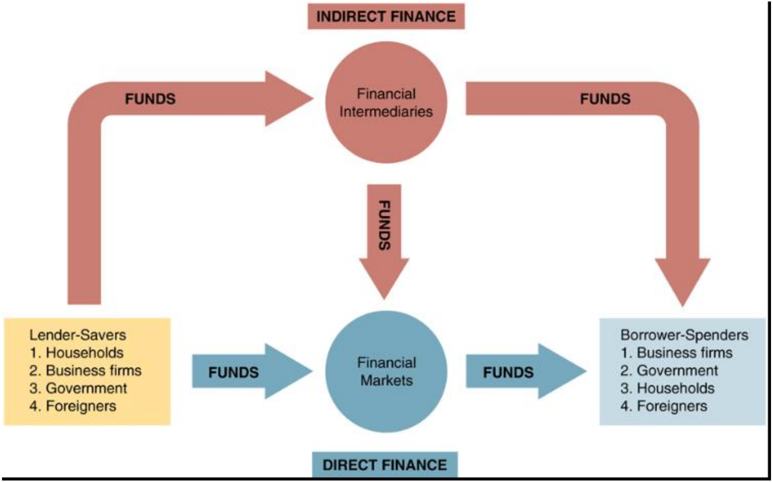

Figure 1 Flows of Funds Through the Financial System

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[2] *Source:* Federal Reserve Bulletin; www.federalreserve.gov/releases/H15/data.htm.

Structure of Financial Markets — Debt and Equity Markets

A firm or an individual can obtain funds in a financial market in two ways:

1. issuing a **debt instrument**, such as bond or a mortgage, which is a contractual agreement by the borrower to pay the holder of the instrument fixed dollar amounts at regular intervals until the maturity date, when a final payment is made.
    - the **maturity** of a debt instrument is the number of terms until that instrument's expiration date.
    - short-term vs long-term vs intermediate-term

Structure of Financial Markets — Debt and Equity Markets

1. The second method to obtain funds is by issuing **equities**, such as common stock, which are claims to share in the net income (income after expense and taxes) and the assets of a business.
   - Equities makes periodic payments (dividends) to holders
   - Equities are long-term securities without maturity.
2. The advantages and disadvantages to hold equities
   - Equity holders are residual claimants that get paid the last.
   - Equity holders will benefit from the increase in firm profitability, but debt holders cannot

Structure of Financial Markets —Primary and Secondary Markets

1. A **primary market** is a financial market in which new issues of a security, such as a bond or a stock, are sold to initial buyers by the corporation or government agency borrowing the funds
   - It is **investment banks** that assist in the initial sale of securities in the primary market
   - Investment banks accomplish this by **underwriting** securities: guarantees a price for a corporation's securities and then sells them to the public

Structure of Financial Markets —Primary and Secondary Markets

1. A **secondary market** is a financial market in which securites that have been previously issued can be resold
   - The New York Stock Exchange and NASDAQ, Foreign exchange markets, futures markets and options markets
   - Secruities **brokers** and **dealers** are important for a well-functioning secondary market
2. A corporation acquires new funds only when its securites are first sold in the primary market

Structure of Financial Markets —Primary and Secondary Markets

Secondary markets serve two important functions

1. they increase the **liquidity** of the financial instruments
2. they determine the price of the security that the issuing firm sells in the primary market

Conditions in the secondary market are therefore the most relevant to corporations issuing securites.

Structure of Financial Markets —Exchanges and Over-the-Counter Markets

Secondary markets can be organized in two ways:

1. **Organized exchanges**
   - The New York Stock Exchange (NYSE) for stocks and the Chicago Board of Trade for commodities
2. **Over-the-Counter (OTC) Market**
   - the U.S. government bond market
   - the NASDAQ

Structure of Financial Markets —Money and Capital Markets

Structure of financial markets on the basis of maturity of securities:

1. The **Money Market** is a financial market in which only short-term debt instruments are traded
2. Money market securities
   - undergo less price fluctuations and so are less risky
   - more widely traded than longer-term securities $\Rightarrow$ more liquid
   - often used by corporations and banks, etc
3. The **Capital Market** is the market in which longer-term debt and equity instruments are traded
4. Capital market securities
   - stocks and long-term bonds
   - often held by pension funds and insurance companies, etc.

There are five principal money market instruments

1. **United State Treasury Bills**
   - short-term debt instruments of the U.S. government
   - the most liquid and the safest money market instruments
2. **Negotiable Bank Certificates of Deposit**
   - Certificate of Deposit (CD): debt instrument sold by a bank to depositors that pays annual interests and pays back the original purchase price at maturity.
   - Negotiable CDs

Financial Market Instruments–Money Market Instruments

1. **Commercial Paper** is a short-term debt instrument issued by large banks and well-known corporations
2. **Repurchase Agreements** *(repos)* are effectively short-term loans for which Treasury bills serve as *collateral*
3. **Federal (Fed) Funds** are overnight loans between banks of their deposits at the federal reserve
   - *The federal funds rate (FFR)* is a closely watched barometer of the tightness of credit market conditions in the banking system

Money Market Instruments

Table 1 Principal Money Market Instuments

	Amount Outstanding ($ billions, end of year)			
Type of Instrument	**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 Instruments

Capital market instruments are debt and equity instruments with maturities of greater than one year

1. Stocks
   - total value was $20 trillion at the end of 2008
   - held by individuals, pension funds, mutual funds and insurance companies
2. Mortgages
   - Mortgages are loans to households or firms to purchase housing, land, or other real structures, where the structure or land itself serves as collateral for the loans
   - The mortgage market is the largest debt market in the U.S.

Capital Market Instruments

- three government agancies provide funds to the mortgage market by selling bonds and using the proceeds to buy mortgages
  - the Federal National Mortgage Association (FNMA, "Fannie Mae"),
  - the Government National Mortgage Association (GNMA, "Ginnie Mae"),
  - the Federal Home Loan Mortgage Corporation (FHLMC, "Freddie Mac")

1. Corporate Bonds
   - long-term bonds issued by corporations with very strong credit ratings
     - typical corporate bond are in the form of coupon bond
     - *convertible bonds*
   - volume of new corporate bond issues is substantially larger than the volume of new stock issues
   - held by life insurance companies, pension funds and households, etc

Capital Market Instruments

1. U.S. Government Securities
   - long-term debt instruments issued by the U.S. Treasury to finance the deficits of the federal government
   - the most widely traded bonds in U.S. and the most liquid security in the capital market
   - held by the Federal Reserve, banks, households and foreigners, etc
2. U.S. Government Agency Securities
   - issued by various government agencies such as Ginie Mae, the Fedral Farm Credit Bank, and the Tenessee Valley Authority
3. State and Local Government Bonds (or **municipal bonds**)
   - their interest payments are exempted from federal income tax and generally from state taxes in the issuing state.
4. Consumer and Bank Commercial Loans

Table 2 Principal Capital Market Instuments

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.

Internationalization of Financial Market (Glossory)

1. Foreign Bonds – sold in a foreign country and denominated in that country's currency
2. Eurobond – a bond denominated in a currency other than that of the country in which it is sold
3. Eurocurrencies – foreign currencies deposited in banks outside the home country
    - **Eurodollars** are U.S. dollars deposited in foreign banks outside the U.S. or in foreign branches of U.S. banks

Types of Financial Intermediaries

Principal financial intermediaries fall into three categories

1. Depository institutions (banks)
    - accept deposits from individuals and institutions, and make loans
    - include commercial banks and **thrift institutions (thrifts)**: savings and loan associations, mutual savings banks, and credit unions
2. Contractual savings institutions
    - Life insurance companies, Fire and casualty insurance companies, Pension funds and government retirement funds
3. Investment intermediaries
    - Finance companies, mutual funds, money market mutual funds (MMMF), investment banks