EE432 Monetary Theory and Policy

Lecture 1 The Financial System

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Overview

- The major materials are **lecture note presentations** provided on BE-moodle
- The **recommended textbook** is:

  Cecchetti, Stephen and Schoenholtz, Kermit. (2020) **<u>Money, banking, and financial markets</u>**. (6^{th} Edition) McGraw-Hill

- Students should also study **related teaching materials**, *including articles, news clips and central banks' publications*, posted on moodle

Assessment

The course will be assessed by

- **Attendance and in-class participation 10%**
- **Individual exercise 10%**
- **Individual report assignment 10%**
- **Online mid-term examination 30%**

  2 Oct 2021 9.00 – 11.00 AM
- **Online final examination 40%**

  9 Dec 2021 1.30 – 4.00 PM

Class Schedule

Week	Topic	Date
1	**Financial instruments, financial markets, and financial institutions** (Cecchetti & Schoenholtz Textbook Chapter 3)	14 Aug 2021
2	**Understanding risk** (Cecchetti & Schoenholtz Textbook Chapter 5)	21 Aug 2021
3	**The risk and term structure of interest rates** (Cecchetti & Schoenholtz Textbook Chapter 7)	28 Aug 2021
4	**The economics of financial intermediation** (Cecchetti & Schoenholtz Textbook Chapter 11)	4 Sep 2021
5	**Depository institutions: banks and bank management** (Cecchetti & Schoenholtz Textbook Chapter 12)	11 Sep 2021
6	**Regulating the financial system** (Cecchetti & Schoenholtz Textbook Chapter 14)	18 Sep 2021
7	**Central banks in the world today** (Cecchetti & Schoenholtz Textbook Chapter 15) **& Mid-term exam revision**	25 Sep 2021

Class Schedule

Week	Topic	Date
8	**The central bank balance sheet and the money supply process** (Cecchetti & Schoenholtz Textbook Chapter 17)	9 Oct 2021
9	**Monetary policy: stabilizing the domestic economy** (Cecchetti & Schoenholtz Textbook Chapter 18)	16 Oct 2021
10	**Exchange rate policy** (Cecchetti & Schoenholtz Textbook Chapter 19)	28 Oct 2021 (TBC)
11	**Money growth and money demand** (Cecchetti & Schoenholtz Textbook Chapter 20)	30 Oct 2021
12	**Output, inflation, and monetary policy** (Cecchetti & Schoenholtz Textbook Chapter 21)	6 Nov 2021
13	**Understanding business cycle fluctuations** (Cecchetti & Schoenholtz Textbook Chapter 22)	13 Nov 2021
14	**Modern monetary policy and the challenges** (Cecchetti & Schoenholtz Textbook Chapter 23)	20 Nov 2021
15	**Special topic: New Keynesian monetary economics** **& Final exam revision**	27 Nov 2021

Outline

- The Financial System
- Financial Instruments
- Financial Markets
- Financial Institutions

Chapter 3

Financial Instruments, Financial Markets, and Financial Institutions

The Financial System

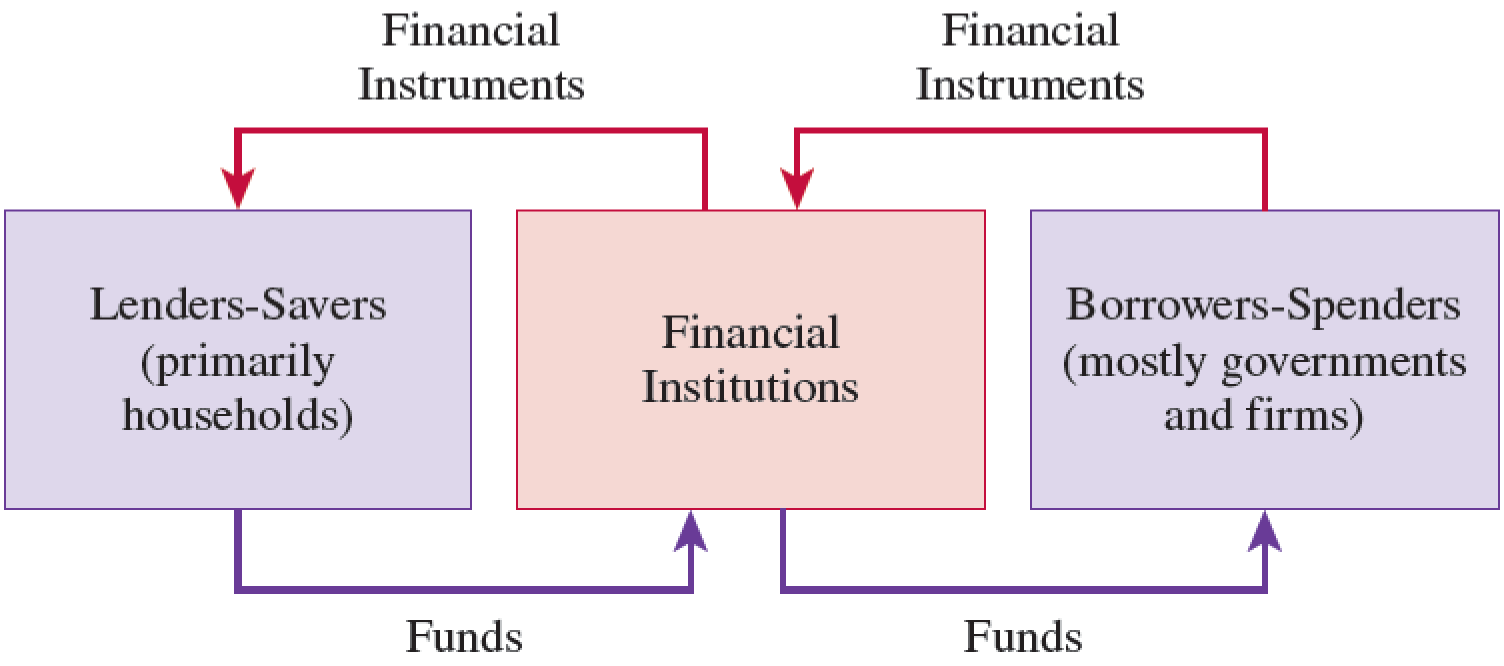
The Financial System

- **Direct Finance:** *Borrowers* ***sell securities (bonds) directly*** to *lenders* in the financial markets.
  - Direct finance *provides financing for* ***governments*** *and* ***corporations****.*
- **Indirect Finance:** An ***institution*** stands **between** ***lender*** and ***borrower***.
  - We get a **loan *from a bank or finance company* to buy a car.**
- **Asset:** Something of ***value that you own***.
- **Liability:** Something you ***owe***.

The Financial System

- **Financial development** is linked to ***economic growth.***
- The ***role of the financial system*** is to **<u>facilitate</u> production, employment, and consumption.**
- Resources are channeled through the system so that ***resources flow to their <u>most efficient uses.</u>***

Funds Flowing through Financial Market



Financial Instruments

Financial Instruments

Financial Instruments*:*

The **written legal obligation** of **one party *<u>to transfer something of value</u>***, *usually money*, **to another party** *at some **future date**, under **specified conditions***.

Financial Instruments

Financial Instruments*:*

- The ***enforceability*** of the **obligation (requirement)** is ***important***.
- Financial instruments ***specify payment*** *will be made* *at some* ***future date****.*
- Financial instruments ***specify conditions*** *under which a* ***payment*** *will be made*.

Uses of Financial Instruments

Financial instruments and *their three main functions*:

- **Means of payment *(like money)***
  - Employees take **stock options** *<u>as payment</u>* for working.
- **Stores of value *(like money)***.
  - Financial instruments can be ***used to <u>transfer</u> purchasing power*** *into the future*.
- Allowing for ***<u>transfer of risk</u> (<u>unlike</u> money).***
  - **Futures and insurance contracts** allows *one person to **transfer risk** to another*.

Characteristics of Financial Instruments

- These contracts are **very complex** thus make it ***costly***.
- **Standardization** of financial instruments ***overcomes potential costs*** of complexity.
- Financial instruments ***also communicate*** **information** about the issuer.

Characteristics of Financial Instruments

- It is a **mechanism** *to **reduce the cost of monitoring the behavior*** of **counterparties**.
  - A **counterparty** is the person or institution ***on the other side*** *of* ***the*** **contract**.
- *Financial instruments* are **designed to handle** the *problem* of ***asymmetric information***.
  - *Borrowers* have some information they ***<u>don't disclose</u>*** to **lenders**.

Underlying Versus Derivative Instruments

- **Underlying instruments** are used by ***savers/lenders*** to **transfer resources** directly to ***investors/borrowers***.
  - This *improves* the **efficient allocation** of resources.
    - Examples: **stocks** and **bonds**
- **Derivative instruments** are those where their ***value and payoffs*** are ***derived*** from the underlying instruments.
  - The primary use is to ***shift risk*** among investors.
    - Examples: **futures, options,** and **swaps**

A Primer for Valuing Financial Instruments

Four fundamental **characteristics *influence the*** ***value*** of a financial instrument:

1. **Size of the payment**:
   - **Larger** payment - *more valuable*.
2. **Timing of payment:**
   - Payment is **sooner** - *more valuable*.
3. **Likelihood payment is made:**
   - **More likely to be made** - *more valuable*.
4. **Conditions under with payment is made:**
   - Made **when we need** them - *more valuable*.

Financial Instruments Used Primarily as Stores of Value

1. **Bank loans**
   – Borrower *obtains resources* from a ***lender*** to be ***repaid in the future***.
2. **Bonds**
   – A form of a **loan** *issued by a* ***corporation*** or ***government***.
3. **Home mortgages**
   – *Home buyers* usually need to ***borrow*** *using the* ***home*** *as* ***<u>collateral</u>*** for the loan to *protect the* ***lender's*** *interests*.

Financial Instruments Used Primarily as Stores of Value

4. **Stocks**
   - The holder **owns** a small *piece of the* **firm** and *entitled to part of its* ***profits***.
   - Firms *sell stocks* to **raise fund**.
5. **Asset-backed securities: ABS**
   - ***Shares in the returns*** arising from specific assets, such as ***home mortgages***.
     - **Mortgage backed securities (MBS)** *bundle a large number of* ***mortgages*** *together* into a pool *in which shares are sold*.

Financial Instruments Used Primarily to Transfer Risk

1. **Insurance contracts.**
   - Primary purpose is ***to assure*** that **payments will be made *under*** particular, and ***often rare***, ***circumstances***.
2. **Futures contracts.**
   - An agreement between two parties to <u>***exchange***</u> ***a fixed quantity of a commodity*** or an ***asset*** <u>**at a fixed price**</u> on a set **future date**.
   - A ***price*** is always s<u>pecified</u>.

Financial Instruments Used Primarily to Transfer Risk

3. **Options**
   - *Give the* **holder** the ***right***, <u>not obligation</u>, to ***buy or sell*** a *fixed quantity of the asset* **at a pre-determined price** on either a **specific date** or **at any time during a specified period**.
   - ***Derivative instruments*** whose **<u>prices</u>** are based on the ***value of an underlying asset***.
4. **Swaps**
   - ***Agreements*** to **<u>exchange</u>** *two specific* ***cash flows at certain times*** *in the future*.

Financial Markets

Financial Markets

- **Financial markets** are places where ***financial instruments*** are **bought and sold**.
- These markets ***enable*** *both firms and individuals* to **find financing** for their activities.
- These markets ***promote*** **economic efficiency**

The Role of Financial Markets

1. **Market liquidity**:
   - Ensure owners can ***buy and sell*** **financial instruments** cheaply.
   - Keeps ***transactions costs low***.
2. **Information:**
   - ***Pool and communicate information*** about **issuers** of financial instruments.
3. **Risk sharing:**
   - ***Provide individuals*** a place to ***buy and sell risk***.

Primary versus Secondary Markets

- A **primary market** is one in which ***a borrower obtains funds from a lender*** by selling **newly issued** securities.
- **Secondary financial markets** are those where people can ***buy and sell*** **existing securities**.

Debt and Equity versus Derivative Markets

- **Debt markets** are ***markets for loans, mortgages, and bonds***.
  - **Debt instruments** categorized by the ***loan's maturity***
    - ***Repaid in less than a year*** - traded in **money markets.**
    - ***Maturity of more than a year*** - traded in **bond markets.**
- **Equity markets** are the ***markets for stocks***.
- **Derivative markets** are the ***markets where investors trade derivative instruments*** *like futures, options, and swaps*.

Financial Institutions

Financial Institutions

- Firms that **provide access** to the ***financial markets***, both
  - to **savers** who wish to purchase *financial instruments* directly and
  - to ***borrowers*** who *want to issue* them.
- *Also known as* **financial intermediaries**.

The Role of Financial Institutions

- To **reduce transaction costs** by specializing in the ***issuance*** of **standardized securities**.
- To **reduce the information costs** of ***screening*** *and* ***monitoring*** <u>*borrowers*</u>.
  - They curb **asymmetries**, helping resources ***flow to most productive uses***.
- To **give** savers **access to their funds**.

The Structure of the Financial Industry

- We can *divide* **intermediaries** into *2 broad* ***categories***:
  - **Depository institutions**,
    - *Take* **deposits** and *make* **loans**
    - What *most people think of as* ***banks***
  - **Non-depository institutions**.
    - Include **insurance companies**, **securities firms**, **mutual fund companies**, **hedge funds**, **private equity** or **venture capital firms** and **pension funds**

The Structure of the Financial Industry

1. **Depository institutions** take *deposits* and make *loans*.
2. **Insurance companies** *accept **premiums***, which they invest, in *return for* **promising compensation** to *policy holders* under *certain **events***.
3. **Pension funds** *invest* individual and company ***contributions*** in *stocks, bonds, and real estate* in order to ***provide payments*** *to **retired workers***.

The Structure of the Financial Industry

4. **Securities firms** include *brokers, investment banks, underwriters, mutual fund companies private equity firms,* and *venture capital firms*.
   - **Brokers and investment banks *issue*** *stocks and bonds* for <u>*corporate customers*</u>, ***trade*** them, and ***advise*** customers.
   - **Mutual-fund companies *pool the resources*** of <u>*individuals and companies*</u> and ***invest*** them *in **portfolios***.

The Structure of the Financial Industry

4. **Securities firms** (Cont.)
   - **Hedge funds** do the same for *small groups of wealthy investors*.
   - **Private equity and venture capital firms** also *serve wealthy investors* by ***acquiring controlling stakes*** in a few firms and ***manage them*** *actively*.

The Structure of the Financial Industry

5. **Finance companies *raise funds*** directly ***in the financial markets*** in order ***to make loans*** to individuals and firms.
6. **Government-sponsored enterprises** (GSEs) – *in Thai, we call **Special Financial Institutions (SFIs)**,* are public credit agencies that ***provide loans*** *directly for **farmers, home mortgagors*** and ***SMEs***

End of lecture