Overview of Financial System

Economics 301: Money and Banking

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1.1 Goals

Goals and Learning Outcomes

- Goals:
  - Learn some details about the types financial markets.
  - Learn some details about the types financial instruments.
- Learning Outcomes:
  - Touching on, getting background knowledge for LO1: Understand and appreciate the importance of financial markets for the overall functioning of the economy.

1.2 Reading

Reading

- Read Mishkin, chapter 2.

2 Financial Market Structure

2.1 Primary vs. Secondary Markets

Primary and Secondary Markets

- **Primary Market:** market in which new issues of financial securities are sold directly from the selling corporation or government agency, directly to initial buyers.
  - One function of **investment banks** are to assist corporations in their initial sale of securities.
  - The investment bank **underwrites** the securities: they guarantee a price for the securities, then sell them to the public.

- **Secondary Market:** market in which securities that have been previously issued are resold.
- Benefits of secondary market:
  - Make financial instrument more liquid.
  - Helps primary market determine value of newly issued securities.

2.2 Secondary Markets

Types of Secondary Markets

- **Exchanges:** secondary markets where buyers and sellers (or their agents) physically meet in one central location to conduct trading.
  - Examples: New York Stock Exchange, Chicago Board of Trade (commodities).
- **Over-the-counter (OTC) markets:** dealers at different locations sell securities to anyone who contacts them.
  - Entire markets are in electronic communication with one another.
  - Price information is readily available, usually many buyers and sellers, highly competitive.
  - Examples: U.S government bonds,

2.3 Maturity

Maturity

- **Debt instrument**: contractual agreement by a borrower to pay holder of the instrument fixed regular payments until a specified time.
- **Maturity**: number of years until a debt instrument's expiration date.
  - **Short-term** instruments are less than one year.
  - **Intermediate-term** instruments are between one year and ten years.
  - **Long-term** instruments are ten years or longer.
- **Money market:** financial market in which only short-term debt instruments are traded.
- **Capital market:** financial market where longer term debt instruments and equity instruments are traded.

3 Financial Market Instruments

3.1 Money Market Instruments

Money Market Instruments: Treasure Bills

- Treasure Bills: short-term debt instruments issued by the U.S. government, issued in 30 day, three-month, and six-month maturities.
- Pay given amount at maturity, no other regular payments or interest payments.
- Sold at a discount: sold for a price smaller than the promised payment made at maturity date.
- Almost no possibility of default?
  - Jeffrey Rogers Hummel, 2009, "Why Default on U.S. Treasuries is Likely".

Other Money Market Instruments

- **Certificates of Deposit:** aka certificates of deposit or CD, is a debt instrument sold by a bank that pays specified interest payment and original purchase price amount at maturity.
  - **Negotiable Bank CDs:** CDs that are sold in secondary markets.
- **Commercial Paper:** short-term debt issued by banks and corporations.
  - Provides a means for corporations to borrow directly from the public, without having to go through a financial intermediary.
  - Tremendous growth since 1980: $122 billion outstanding in 1980, $2.180 trillion in August 2007.
  - Significant drop-off during current recession: $1.165 trillion January 2010.

Banker's Acceptances

- **Banker's Acceptances**: guarantees by banks that a corporation is good for a debt.
- Corporation issues a bank draft that promises to pay a stated amount at some point in the future.
- Bank stamps it "accepted", guaranteeing the corporation will have the required funds in its account at the specified payment date.
- If corporation fails to pay, the bank is obligated to pay the debt.
- How are these money market instruments? Like Treasury bills, they are often sold at discounts in secondary markets.

Repurchase Agreements

- **Repurchase Agreements:** Common way that corporations make very short-term (usually less than two weeks) loans to banks.
- Banks may need liquidity to meet depositors needs.
- Corporations at times have idle funds in their bank accounts.
- Corporation buys Treasury bills from the bank, holds it for specified period of time as collateral, then bank repurchases the Treasury bills for a slightly higher price than they sold it for.
- Large corporations are the most significant lenders in this market.

Federal Funds

- **Federal funds:** overnight between banks of their deposits held at the Federal Reserve.
  - Some makes have excess reserves, others need more reserves to meet depositors needs and reserve requirements.
  - Transferred using the Fed's wire transfer system.
  - Does not involve loans with the Federal Reserve or the federal government.
- **Federal funds rate:** interest rate charged for federal funds, usually expressed as an annual rate.

3.2 Capital Market Instruments

Capital Market Instruments

- Stocks: equity claims on earnings and assets of a corporation. Stock holders are paid only after holders of debt instruments are paid.
- Mortgages: loans to households or firms to purchase housing, land, and other buildings, which serve as collateral.
  - Largest debt market in the United States.
  - Residential mortgages outstanding are more than 4 times commercial mortgages.
- Corporate bonds: long-term bonds issued by corporations, typically makes regular interest payments and pays off face value at maturity.
- Convertible Corporate bonds: option of allowing holder to trade bond for some given amount of stock in the corporation.
- Consumer and Commercial loans.

Government Securities

- Treasury bonds with maturities ranging from 1 year to 30 years.
  - Most widely traded bonds in the United States, highly liquid.
- U.S. Government Agency bonds: issued by government agencies like Ginnie Mae (Government National Mortgage Association) to finance loans they make.
- Municipal bonds: Bonds issued by state and local governments to finance public expenditures.
  - Interest payments are exempt from federal income taxes and often state income taxes.

3.3 International Financial Markets

International Financial Markets

- **Foreign bonds:** sold in a foreign country (i.e a different country that the home of the issuer), denominated in the currency of the foreign country.
  - Example: if Toyota sold bonds in the U.S. issued in dollars.
  - Exposes the issuer to foreign exchange risk.
- **Eurobond:** bond denominated in a different currency than the market in which it is sold.
  - Has nothing to do with Europe.
  - Example: a bond denominated in U.S. dollars that is sold in Japan.
- **Eurocurrencies:** currencies deposited in banks in a country outside the currency's home.
  - Example: Yen deposited in a bank in Spain.
  - **Eurodollars:** U.S. dollars deposited in banks outside of U.S.

4 Financial Intermediaries

Financial Intermediaries

Three categories of intermediaries

1. Depository institutions, often simply referred to as *banks*, are financial intermediaries that accept deposits and make loans.
2. Contractual savings institutions: acquire funds at periodic intervals on a contractual basis.

    - Examples: life insurance, casualty insurance, pension and retirement funds.

3. Investment Intermediaries: examples include mutual funds, money market mutual funds, finance companies.

4.1 Depository Institutions

Depository Institutions

- Commercial banks
  - Accept funds by accepting checkable, savings, and time deposits.
  - Make commercial, consumer, and mortgage loans, and invest in U.S government and municipal bonds.
  - Hold accounts at Federal Reserve, and are subject to regulations imposed by Federal Reserve.
- Savings and Loan Associations and Mutual Savings Banks
  - In the past, they were limited to types of services they could perform.
  - No longer the case, highly competitive with commercial banks.
- Credit unions: cooperative depository institutions, i.e. owned by its members.
  - Also used to be limited to types of services they could perform.

4.2 Contractual Savings Institutions

Contractual Savings Institutions

- Life insurance companies
  - Insurance function: insure against financial hazards caused by death.
  - Also sell retirement annuities.
  - Payouts are very predictable.
  - Collect premiums, and earn interest buying mortgages, corporate bonds, some stocks.
- Fire and casualty insurance companies.
  - Payouts not as predictable, could depend on natural disasters.
  - Hold more liquid assets: municipal bonds, U.S. government bonds, some corporate bonds and stocks.

Investment Intermediaries

- Investment banks: not a bank, do not accept deposits, etc.
  - Advice corporations on issuing stocks and bonds.
  - Underwrites initial security offerings.
  - Assist corporations in mergers and acquisitions.
- Mutual funds: acquire funds by selling shares, and purchase diversified portfolios of stocks and bonds.
  - Economize on transaction costs: shareholders to not need to research individual companies.
  - Allow individuals to hold more diversified portfolios.
- Money market mutual funds: mutual funds that invest in short-term debt securities.
  - Also act like a depository institution: can write checks against value of shareholdings.

5 Financial System Functions

5.1 Risks and Transaction Costs

Financial System Functions

- Reduce transaction costs.
  - **Transaction costs:** explicit and implicit costs carrying out financial transactions. Includes time and resources spent investigating risks and profitability of financial investments.
  - **Economies of scale:** as a financial institution gets larger, there is a reduction in the average transaction cost (transaction cost per dollar of financial investment).
- Risk Sharing
  - Depository institutions spread out risks of defaults across all its depositors.
  - Mutual funds allow for risk reduction through diversification.

5.2 Adverse Selection

Adverse Selection

- **Asymmetric information:** situation when there are two parties involved in some sort of transaction, and one party does not have sufficient information about the other party to make an appropriate decision.
- **Adverse selection:** occurs when asymmetric information exists *before* a financial transaction takes place.
  - Situation in which it is impossible for lenders to obtain *complete* information about the risk of potential borrowers.
  - Lender necessarily makes interest rates to high for borrowers who privately know they have very low risk.
  - Interest rates too low for borrowers who know they have relatively high risk.
  - Borrowers who choose (*select*) to make loans more highly represented by those with high risks.

5.3 Moral Hazard

Moral Hazard

- **Moral Hazard:** occurs when asymmetric information exists *after* a financial transaction takes place.
- Often occurs when payouts are asymmetric for borrowers facing risk.
  - Good outcome: borrower earns a large profit.
  - Bad outcome: borrower would make a loss if paid back full loan, but defaults instead.
- Moral hazard causes borrowers to make more risky decisions than if they were using their own funds.

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Next up...

- Understanding interest rates: chapter 4.
- Remember, MyEconLab homework is due this Wednesday.