

ECON UN3265 ▪ MONEY AND BANKING ▪ SUMMER 2026 ▪ SESSION 1

CHAPTER 2
**An Overview
of the Financial System**

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Outline

Function and Structure of Financial Markets

Instruments and Internationalization

Financial Intermediaries

Regulation of the Financial System

Wrap-up

Reading and companion materials

- ▶ Mishkin, *The Economics of Money, Banking, and Financial Markets*, 13th ed.
- ▶ This deck: **Chapter 2** — An Overview of the Financial System.
- ▶ Follows the Chapter 1 deck for this session.

Learning objectives

By the end of this chapter you should be able to:

- 2.1** Compare and contrast direct and indirect finance.
- 2.2** Identify the structure and components of financial markets.
- 2.3** List and describe the different types of financial market instruments.
- 2.4** Recognize the international dimensions of financial markets.
- 2.5** Summarize the roles of transaction costs, risk sharing, and information costs as they relate to financial intermediaries.
- 2.6** List and describe the different types of financial intermediaries.
- 2.7** Identify the reasons for, and types of, financial market regulation.

PART 1

Function and Structure of Financial Markets

Function of financial markets

Financial markets perform the essential function of channeling funds from savers (*surplus* units) to spenders (*deficit* units).

- ▶ **Lender-savers:** households (the principal savers), but also firms, government, and foreigners.
- ▶ **Borrower-spenders:** firms and government (the principal borrowers), and also households and foreigners.

Inez and Walter

Inez the Inventor has a profitable robot design but no funds; Walter the Widower has savings but no project. If a financial market lets Walter's funds reach Inez, both gain — and the economy gets cleaner houses and shinier cars.

Why channeling funds matters

- ▶ The people who save are frequently *not* the people with profitable investment opportunities.
- ▶ *Carl the Carpenter* can earn an extra \$200/year with a \$1,000 tool. If you lend him \$1,000 at \$100/year interest, you earn \$100 (vs. zero), and Carl nets \$100 — both better off.
- ▶ Financial markets promote economic efficiency by producing an efficient allocation of **capital**, which increases production.
- ▶ They directly improve the well-being of consumers by allowing them to *time their purchases* better — e.g. buy a house while young enough to enjoy it.

Direct vs. indirect finance

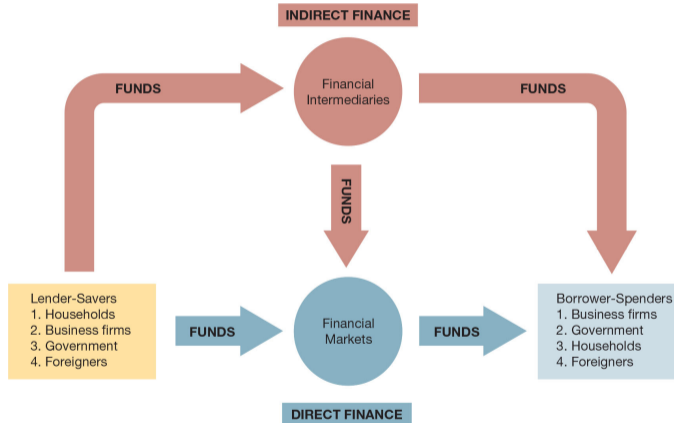
Funds flow from lender-savers to borrower-spenders by *two routes*:

- ▶ **Direct finance:** borrowers borrow directly from lenders in financial markets by selling them *securities*.
 - A security is an *asset* for the buyer but a **liability** (IOU, debt) for the issuer.
 - E.g. Ford sells a bond or a stock to savers to finance a new factory.
- ▶ **Indirect finance:** a *financial intermediary* stands between lender-savers and borrower-spenders — e.g. a bank takes deposits and makes loans.

Although the media focus on securities markets, indirect finance through intermediaries is the *primary* route for moving funds in the U.S. and other industrialized economies.

See Figure 1 (next slide).

Figure 1 Flows of Funds Through the Financial System



Mishkin Ch. 2, Figure 1.

Structure (1): debt and equity markets

A firm can raise funds in two ways.

- ▶ **Debt instrument** (bond or mortgage): a contractual agreement by the borrower to pay the holder fixed dollar amounts at regular intervals until the **maturity** date.
 - **Short-term**: maturity < 1 year; **long-term**: ≥ 10 years; **intermediate-term**: in between.
- ▶ **Equities** (e.g. common stock): claims on the *net income* and assets of a firm; usually pay periodic **dividends**; long-term securities with no maturity date.
 - Drawback: an equity holder is a *residual claimant* — paid only after all debt holders.
 - Advantage: equity holders benefit directly from rising profits or asset values; debt payments are fixed.

Structure (2): primary and secondary markets

- ▶ **Primary market:** new issues of a security are sold to initial buyers — often behind closed doors.
 - An **investment bank** assists by **underwriting**: it guarantees a price for the securities and then sells them to the public.
- ▶ **Secondary market:** previously issued securities are resold (NYSE, NASDAQ, bond markets, FX, futures, options).
 - **Brokers** are agents who match buyers with sellers; **dealers** link them by buying and selling at stated prices.

Two functions of secondary markets:

1. They make securities more **liquid** — easier and quicker to sell — which makes them easier to issue in the primary market.
2. They *determine the price* the issuing firm receives in the primary market.

Structure (3): exchanges, OTC, money vs. capital

How secondary markets are organized

- ▶ **Exchanges:** buyers and sellers (or their agents/brokers) meet in one central location — e.g. NYSE, Chicago Board of Trade.
- ▶ **Over-the-counter (OTC) market:** dealers in different locations stand ready to trade by computer — e.g. foreign exchange, federal funds.

Maturity: money vs. capital markets

- ▶ **Money market:** only short-term debt (original maturity < 1 year). More liquid, smaller price swings, safer.
- ▶ **Capital market:** longer-term debt and equity (maturity ≥ 1 year). Wider price swings, riskier.
- ▶ Firms/banks park temporary surpluses in the money market; insurers and pension funds hold capital market securities.

PART 2

Instruments and Internationalization

Money market instruments

Short-term debt — least price fluctuation, least risky.

- ▶ **U.S. Treasury bills:** 1-, 3-, 6-month maturities; sold at a discount; most liquid and safest — low **default** risk (the government can tax or issue **currency**).
- ▶ **Negotiable CDs:** certificates of deposit sold by banks, resaleable in secondary markets.
- ▶ **Commercial paper:** short-term debt of large banks and well-known corporations.
- ▶ **Repurchase agreements (repos):** very short-term loans with Treasury bills as collateral.
- ▶ **Federal (Fed) funds:** overnight interbank loans of deposits at the Fed; the **federal funds rate** is a closely watched barometer of monetary policy.

See Table 1 (next slide).

Table 1 Principal Money Market Instruments

Type of instrument	Amount (\$ billions, end of year)			
	1990	2000	2010	2019
U.S. Treasury bills	527	647	1,767	2,416
Negotiable bank certificates of deposit (large denominations)	547	1,053	1,923	1,859
Commercial paper	558	1,602	1,058	1,045
Federal funds and security repurchase agreements	372	1,197	3,598	4,356

Mishkin Ch. 2, Table 1. Source: Federal Reserve Financial Accounts of the United States.

Capital market instruments

Longer-term debt and equity — wider price fluctuations, riskier.

- ▶ **Stocks:** equity claims on net income and assets.
- ▶ **Mortgages and mortgage-backed securities (MBS):** loans for real estate; the mortgage market is the largest U.S. debt market. MBS bundle individual mortgages (notorious in the 2007–09 crisis, via CDOs).
- ▶ **Corporate bonds:** long-term bonds of firms with strong credit ratings; some *convertible* into stock.
- ▶ **U.S. government securities** and **agency securities:** long-term Treasury and agency debt.
- ▶ **State and local (municipal) bonds:** interest often exempt from federal income tax.
- ▶ **Consumer and bank commercial loans:** made mainly by banks and finance companies.

See Table 2 (next slide).

Table 2 Principal Capital Market Instruments

Type of instrument	Amount (\$ billions, end of year)			
	1990	2000	2010	2019
Corporate stocks (market value)	3,530	17,628	23,567	54,624
Residential mortgages	2,676	5,205	10,446	11,159
Corporate bonds	1,703	4,991	10,337	14,033
U.S. government securities (marketable long-term)	2,340	3,171	7,405	14,204
U.S. government agency securities	1,446	4,345	7,598	9,431
State and local government bonds	957	1,139	2,961	3,068
Bank commercial loans	818	1,497	2,001	3,818
Consumer loans	811	1,728	2,647	4,181
Commercial and farm mortgages	838	1,276	2,450	3,230

Mishkin Ch. 2, Table 2. Source: Federal Reserve Financial Accounts of the United States.

Internationalization of financial markets

U.S. markets are no longer dominant — foreign markets have grown rapidly.

- ▶ **Foreign bonds:** sold in a foreign country, denominated in *that* country's currency.
- ▶ **Eurobond:** a bond denominated in a currency *other* than that of the country where it is sold. Most new international bond issues are Eurobonds.
- ▶ **Eurocurrencies:** foreign currencies deposited in banks outside the home country. **Eurodollars** = U.S. dollars deposited in foreign banks (or foreign branches of U.S. banks).
- ▶ **World stock markets:** now help finance U.S. corporations and the U.S. federal government; investors follow indexes such as the Nikkei (Tokyo) and FTSE (London) alongside the Dow.

PART 3

Financial Intermediaries

Why intermediaries? (1) Transaction costs

Transaction costs

The time and money spent carrying out financial transactions.

- ▶ To lend Carl \$1,000 safely you would hire a lawyer to write the contract — say \$500. The cost swamps the \$100 you would earn, so the loan never happens. Small savers and borrowers get *frozen out*.
- ▶ Intermediaries exploit **economies of scale** — transaction cost per dollar falls as the size of transactions rises.
 - A bank pays \$5,000 for an airtight loan contract reused for 2,000 loans \Rightarrow \$2.50 per loan. Now lending Carl \$1,000 is profitable.
- ▶ Low transaction costs also let intermediaries provide **liquidity services** — e.g. checking accounts that make transactions easy while still paying interest.

Why intermediaries? (2) Risk sharing

- ▶ **Risk**: uncertainty about the returns investors will earn on assets.
- ▶ **Risk sharing**: intermediaries create and sell assets with risk characteristics people are comfortable with, then use the funds to buy other, riskier assets.
 - Also called **asset transformation** — risky assets are turned into safer assets for investors.
 - Low transaction costs let them profit on the spread between the return on risky assets and the payments on the safer assets they sold.
- ▶ **Diversification**: investing in a *portfolio* of assets whose returns do not always move together
⇒ overall risk is lower than for individual assets.
 - “Don’t put all your eggs in one basket.”

Why intermediaries? (3) Asymmetric information

Asymmetric information

One party in a transaction often does not know enough about the other to make accurate decisions.

Adverse selection — a problem *before* the transaction.

- ▶ The borrowers most likely to produce a bad (adverse) outcome are the ones most actively seeking loans — so they are most likely to be selected.
- ▶ *Aunt Louise* borrows only for sure-thing investments; *Aunt Sheila* chases a get-rich-quick scheme. Sheila will hound you for the loan — yet she is the bad risk. Fearing this, lenders may not lend at all.
- ▶ Intermediaries reduce adverse selection by gathering information to *screen* good borrowers from bad.

Asymmetric information: moral hazard

Moral hazard — a problem *after* the transaction.

- ▶ Once the loan is made, the borrower has an incentive to engage in activities that are undesirable (immoral) from the lender's point of view — lowering the chance of repayment.
- ▶ *Uncle Melvin* borrows \$1,000 to buy a computer for a business — but is tempted to take the money to the racetrack instead.
- ▶ Lenders address moral hazard by *monitoring* the borrower and by writing contracts with **restrictive covenants** that limit the borrower's risky activities.

How intermediaries help

Intermediaries are better than individuals at *screening* good credit risks from bad (adverse selection) and at *monitoring* borrowers and enforcing covenants (moral hazard). So they can lend profitably — and pay savers interest — where individuals cannot.

Economies of scope and conflicts of interest

- ▶ **Economies of scope:** by providing multiple services, an intermediary can lower the cost of information production for each service — applying one information resource to many services.
- ▶ But multiple lines of business create **conflicts of interest:** when an institution has multiple objectives, some may collide, giving it an incentive to conceal or disseminate misleading information.
- ▶ Conflicts of interest matter because a drop in information quality *worsens* asymmetric-information problems — funds are channeled less efficiently, and the financial system and economy become less efficient.

Overall conclusion

Financial intermediaries allow “small” savers and borrowers to benefit from the existence of financial markets.

Types of intermediaries (1): depository institutions

Depository institutions (banks) — accept deposits and make loans; involved in creating deposits, a component of the money supply.

- ▶ **Commercial banks:** raise funds via checkable, savings, and time deposits; make commercial, consumer, and mortgage loans and buy government/municipal securities. The largest intermediary group.
- ▶ **Savings and loan associations (S&Ls) and mutual savings banks:** historically mortgage-focused; restrictions have loosened, blurring the line with commercial banks.
- ▶ **Credit unions:** small cooperative lenders organized around a group; fund consumer loans.

S&Ls, mutual savings banks, and credit unions are the **thrift institutions (thrifts)**.

Types of intermediaries (2): contractual savings institutions

Contractual savings institutions — acquire funds at periodic intervals on a contractual basis. Because payouts are predictable, liquidity is less of a concern, so they hold long-term securities.

- ▶ **Life insurance companies:** insure against financial hazards following death and sell annuities; funded by premiums; invest mainly in corporate bonds and mortgages.
- ▶ **Fire and casualty insurance companies:** insure against theft, fire, accidents; need more liquid assets (municipal bonds, corporate bonds, stocks, government securities).
- ▶ **Pension funds and government retirement funds:** provide retirement income; funded by employer/employee contributions; hold mostly corporate bonds and stock.

Types of intermediaries (3): investment intermediaries

- ▶ **Finance companies:** raise funds via commercial paper, stocks, and bonds; lend to consumers and small businesses.
- ▶ **Mutual funds:** sell shares and pool the proceeds into diversified portfolios of stocks and bonds; let small savers diversify and cut transaction costs.
- ▶ **Money market mutual funds:** hold safe, liquid money market instruments; shareholders can write checks against their holdings.
- ▶ **Hedge funds:** very large minimum investments, exotic strategies, and much weaker regulation.

Note

An *investment bank* is **not** a bank in this sense. It does not take deposits and make loans — it advises corporations on issuing securities and **underwrites** them, and acts as a deal maker in mergers and acquisitions.

Table 3 Primary Assets and Liabilities of Financial Intermediaries

Type of intermediary	Primary liabilities (sources of funds)	Primary assets (uses of funds)
<i>Depository institutions (banks)</i>		
Commercial banks	Deposits	Business & consumer loans, mortgages, U.S. govt securities, municipal bonds
Savings & loan associations	Deposits	Mortgages
Mutual savings banks	Deposits	Mortgages
Credit unions	Deposits	Consumer loans
<i>Contractual savings institutions</i>		
Life insurance companies	Premiums from policies	Corporate bonds and mortgages
Fire & casualty insurance companies	Premiums from policies	Municipal bonds, corporate bonds and stock, U.S. govt securities
Pension & govt retirement funds	Employer & employee contributions	Corporate bonds and stock
<i>Investment intermediaries</i>		
Finance companies	Commercial paper, stocks, bonds	Consumer and business loans
Mutual funds	Shares	Stocks, bonds
Money market mutual funds	Shares	Money market instruments
Hedge funds	Partnership participation	Stocks, bonds, loans, foreign currencies, and many other assets

Mishkin Ch. 2, Table 3.

Table 4 Financial Intermediaries and the Value of Their Assets

Type of intermediary	Value of assets (\$ billions, end of year)			
	1990	2000	2010	2019
<i>Depository institutions (banks)</i>				
Commercial banks, S&Ls, and mutual savings banks	4,744	7,687	12,821	18,518
Credit unions	217	441	876	1,534
<i>Contractual savings institutions</i>				
Life insurance companies	1,367	3,136	5,168	8,508
Fire and casualty insurance companies	533	866	1,361	2,650
Pension funds (private)	1,619	4,423	6,614	10,919
State and local government retirement funds	820	2,290	4,779	9,335
<i>Investment intermediaries</i>				
Finance companies	612	1,140	1,589	1,528
Mutual funds	608	4,435	7,873	17,660
Money market mutual funds	493	1,812	2,755	3,634

Mishkin Ch. 2, Table 4. Source: Federal Reserve Financial Accounts of the United States.

PART 4

Regulation of the Financial System

Two reasons to regulate

The financial system is among the most heavily regulated parts of the economy, for two main reasons. **1. Increase information available to investors.**

- ▶ Asymmetric information \Rightarrow adverse selection and moral hazard; risky firms and outright crooks are the most eager to sell securities.
- ▶ After the 1929 crash, the *Securities Act of 1933* and the **Securities and Exchange Commission (SEC, 1934)** required disclosure and restricted insider trading.

2. Ensure the soundness of financial intermediaries.

- ▶ Asymmetric information can cause a **financial panic** — a widespread collapse of intermediaries as depositors, unable to judge soundness, pull funds from good and bad institutions alike.

Six tools for ensuring soundness

1. **Restrictions on entry:** chartering requirements — only suitable applicants with adequate capital.
2. **Disclosure:** stringent reporting requirements and periodic inspection.
3. **Restrictions on assets and activities:** limits on the holding of risky assets.
4. **Deposit insurance:** the **FDIC** insures each account up to \$250,000 — limiting the public's loss and helping avoid bank runs.
5. **Limits on competition** (mostly in the past): restrictions on branching.
6. **Restrictions on interest rates:** e.g. the former *Regulation Q* ceilings (now largely abolished).

Regulation abroad is broadly similar; the main differences relate to bank regulation.

See Table 5 (next slide).

Table 5 Principal Regulatory Agencies of the U.S. Financial System

Regulatory agency	Subject of regulation	Nature of regulations
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 and thrifts	Charters and examines the books; imposes restrictions on assets they can hold
National Credit Union Administration (NCUA)	Federally chartered credit unions	Charters and examines the books; imposes restrictions on assets they can hold
State banking and insurance commissions	State-chartered depository institutions and insurers	Charter and examine books; restrict assets and branching
Federal Deposit Insurance Corporation (FDIC)	Commercial banks, mutual savings banks, S&Ls	Insures deposits up to \$250,000 per depositor; examines books; restricts assets
Federal Reserve System	All depository institutions	Examines books of commercial banks and systemically important institutions; sets reserve requirements

Mishkin Ch. 2, Table 5.

PART 5

Wrap-up

Key terms from Chapter 2

- ▶ direct vs. indirect finance
- ▶ liabilities, financial intermediation
- ▶ debt & equity, maturity, dividends
- ▶ short-/intermediate-/long-term
- ▶ primary / secondary markets, liquid
- ▶ exchanges, OTC market
- ▶ brokers, dealers, underwrite / underwriting
- ▶ money market, capital market
- ▶ currency, default
- ▶ federal funds rate, mortgages, MBS
- ▶ foreign bonds, Eurobond
- ▶ Eurocurrencies, Eurodollars
- ▶ transaction costs, economies of scale
- ▶ economies of scope, conflicts of interest
- ▶ risk, risk sharing, asset transformation
- ▶ diversification, portfolio, restrictive covenants
- ▶ asymmetric information, adverse selection, moral hazard
- ▶ financial panic, thrift institutions

Looking ahead

- ▶ **Session 2:** What Is Money; Understanding Interest Rates (Mishkin Ch. 3–4).
- ▶ *Quiz 1* is in Session 3 (Tue, Jun 2) — it covers Week 1, Sessions 1–2.
- ▶ Recall the framework: most of what follows is supply-and-demand analysis applied to assets, plus the transaction-cost / asymmetric-information view of why intermediaries exist.