ECON UN3265 ▪ MONEY AND BANKING ▪ SUMMER 2026 ▪ SESSION 5

CHAPTER 11

# Banking Industry: Structure and Competition


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# Outline

## Reading and objectives

- Mishkin, *The Economics of Money, Banking, and Financial Markets*, 13th ed.
- This deck: **Chapter 11** — Banking Industry: Structure and Competition.
- A historical and institutional chapter: *why* the U.S. has thousands of banks, how innovation reshaped the industry, and how it is consolidating.

### Learning objectives

**11.1** Recognize key features of the banking system and their historical context.

**11.2** Explain how financial innovation produced the *shadow banking system*.

**11.3–11.4** Identify the structural changes and the forces driving *consolidation*.

**11.5–11.6** Assess the separation of banking from other financial services; distinguish *thrifts* from commercial banks.

**11.7** Explain the rise of *international banking*.

PART 1

# History and Regulatory Structure

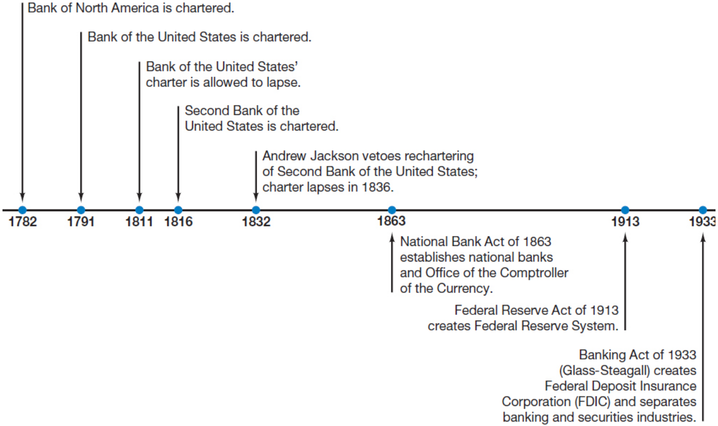
## Historical development of U.S. banking

The U.S. system is unusual — thousands of banks, not a handful. The reason is history and a deep distrust of centralized financial power.

- **1782:** Bank of North America chartered — the first.
- Recurring **controversy over who charters banks** — the federal government or the states.
- **National Bank Act of 1863:** created federally chartered "national" banks and the **Office of the Comptroller of the Currency (OCC)**.
- Result: a **dual banking system** — state and national banks coexisting, regulated in parallel. Still with us today.
- **1913:** the Federal Reserve System is created.

*Mishkin Ch. 11, Section 11.1.*

# Figure 1 — Early history of U.S. commercial banking




*Mishkin Ch. 11, Figure 1. Timeline 1782–1933.*

# Who regulates whom? A fragmented system

A single bank can answer to several regulators — a legacy of the dual system.

- **OCC** — charters and supervises *national* banks.
- **Federal Reserve** — state banks that are Fed *members*; also *all* bank holding companies.
- **FDIC** — insured state banks that are *not* Fed members.
- **State banking authorities** — state banks (and those without FDIC insurance).

### Why this matters

Overlapping jurisdictions create gaps and *regulatory arbitrage* — institutions shop for the most lenient supervisor. A theme of the whole chapter.

*Mishkin Ch. 11, Section 11.1.*

PART 2

# Innovation and the Shadow Banking System

# What drives financial innovation?

**The central idea**

Financial innovation is driven by the *search for profit*. When the environment changes, institutions hunt for new, profitable ways to do business — this is **financial engineering**.

Three triggers for innovation:

1. Changes in **demand** conditions — above all, interest-rate volatility.
2. Changes in **supply** conditions — above all, information technology.
3. The desire to **avoid regulations** — "loophole mining."

We take each in turn.

*Mishkin Ch. 11, Section 11.2.*

## Demand: responses to interest-rate volatility

From the 1970s on, interest rates became far more volatile — raising interest-rate risk (Ch. 9). Innovation responded.

- **Adjustable-rate mortgages (ARMs).** Rates float with market rates — protecting bank profits when rates rise. Lower initial "teaser" rates attract borrowers.
- **Financial derivatives.** Futures, options, and swaps let banks *hedge* interest-rate risk. Their payoffs are *derived from* previously issued securities.

Both are direct market responses to the new risk environment.

*Mishkin Ch. 11, Section 11.2.*

# Supply: responses to information technology

Falling computing and communication costs reshaped what banks could profitably offer.

- **Credit and debit cards.** Cheap data processing made mass payment cards viable.
- **Electronic banking.** ATMs, ABMs, home/online banking, virtual banks — lower transaction costs.
- **Junk bonds.** Cheap information made it possible to assess and trade below-investment-grade debt.
- **Commercial paper market.** Firms borrow directly in the market, bypassing banks.

Note the double edge: the same technology that helps banks also lets *competitors and markets* bypass them.

*Mishkin Ch. 11, Section 11.2.*

# Securitization and the shadow banking system

## Securitization

The process of bundling otherwise *illiquid* loans (mortgages, auto loans, card receivables) into *marketable* securities sold to investors.

- Loans no longer have to sit on a bank's balance sheet — they are originated, pooled, and sold.
- This is the engine of the **shadow banking system**: credit intermediation by non-banks (securitizers, money funds, broker-dealers) outside traditional bank regulation.
- Securitization was central to the **subprime mortgage market** of the mid-2000s — and to the 2007–09 crisis (Ch. 12).

*Mishkin Ch. 11, Section 11.2.*

# Avoiding regulation: loophole mining

Two regulations acted as a *tax* on banks, and innovation grew up to dodge them.

- **Reserve requirements** — a tax on deposits (reserves earn little/no interest).
- **Deposit-rate ceilings** (Regulation Q) — when market rates rose above the ceiling, depositors pulled funds out: **disintermediation**.

Innovations that escaped both:

- **Money market mutual funds (MMMFs)** — pay market rates, offer check-writing, hold no reserves.
- **Sweep accounts** — balances "swept" overnight out of reservable deposits.

**The MMMF panic of 2008**

When the Reserve Primary Fund "broke the buck" in September 2008, a run on money funds nearly froze short-term credit — prompting an emergency federal guarantee, and later calls for tighter regulation.

*Mishkin Ch. 11, Section 11.2.*

PART 3

# The Decline of Traditional Banking

# The decline of traditional banking

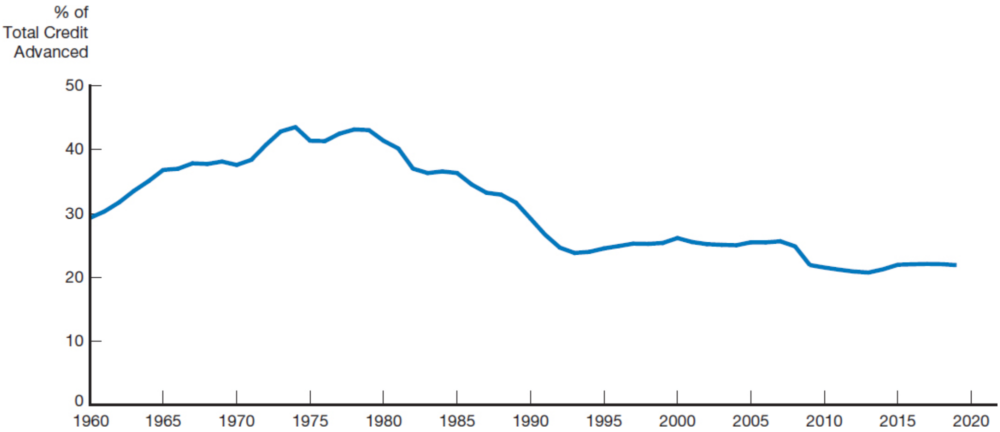
Innovation and competition eroded banks' traditional role as the dominant intermediary.

- Commercial banks' share of total financial-intermediary assets has *fallen*.
- Their share of nonfinancial borrowing has *fallen* (next slide).
- But **profitability has not collapsed** — banks replaced lost interest income with *off-balance-sheet* fee income.

"Decline" means a shrinking *traditional* business, not a dying industry.

*Mishkin Ch. 11, Section 11.2.*

# Figure 2 — Bank share of total nonfinancial borrowing, 1960–2020




*Mishkin Ch. 11, Figure 2. Banks' share peaked ≈1974 and fell from ≈40% to ≈22%. Source: Federal Reserve, FRED.*

# Why traditional banking declined

**Loss of cost advantage on the liability (funding) side:**

- Rising inflation $\Rightarrow$ higher rates $\Rightarrow$ disintermediation out of low-rate deposits.
- Cheap checkable deposits shrank as a share of funding.

**Loss of income advantage on the asset (lending) side:**

- Information technology let borrowers tap markets directly (commercial paper, junk bonds).
- The same technology lowered costs for *competitors* — finance companies, securitizers — intensifying competition for loans.

*Mishkin Ch. 11, Section 11.2.*

# How banks responded — and the risk

- **Expand into riskier lending:** commercial real estate, corporate takeovers, leveraged buyouts.
- **Pursue off-balance-sheet activities:** fee and trading income (Ch. 9).

### The concern

Reaching for yield to defend profits pushed banks toward *more* risk — a recurring prelude to crises. The same decline of traditional banking appears in other industrialized countries.

*Mishkin Ch. 11, Section 11.2.*

PART 4

# Structure and Consolidation

# Why so many banks? Branching restrictions

The defining feature of U.S. banking: an unusually *large number* of banks. The cause is legal, not economic.

- **McFadden Act (1927)** and state laws *prohibited branching across state lines* and often within states.
- This protected small local banks from competition — so thousands survived.
- **Workarounds: bank holding companies** (own multiple banks) and **ATMs** (not legally "branches") let banks expand despite the rules.

When the restrictions fell, consolidation accelerated.

*Mishkin Ch. 11, Section 11.3.*

# Size distribution of FDIC-insured banks (2020)

| Assets | # banks | % banks | % assets |
|---|---:|---:|---:|
| Less than $100 million | 1,124 | 22.0 | 0.5 |
| $100 million–$1 billion | 3,168 | 61.9 | 6.7 |
| $1 billion–$10 billion | 680 | 13.3 | 10.0 |
| $10 billion–$250 billion | 131 | 2.6 | 32.3 |
| More than $250 billion | 13 | 0.3 | 50.4 |
| **Total** | **5,116** | **100.0** | **100.0** |

The smallest 84% of banks hold ≈7% of assets; **13 banks** hold *half*.

*Mishkin Ch. 11, Table 1. Source: FDIC Quarterly Banking Profile, Mar. 31, 2020.*

# The ten largest U.S. banks (2020)

| Bank | Assets ($tn) | % of all bank assets |
|---|---|---|
| 1. J.P. Morgan Chase | 2.74 | 15.4 |
| 2. Bank of America | 2.38 | 13.4 |
| 3. Citigroup | 1.96 | 11.0 |
| 4. Wells Fargo | 1.89 | 10.6 |
| 5. Goldman Sachs | 0.93 | 5.2 |
| 6. Morgan Stanley | 0.88 | 4.9 |
| 7. U.S. Bancorp | 0.48 | 2.7 |
| 8. PNC Financial Services | 0.39 | 2.2 |
| 9. TD Group US | 0.38 | 2.1 |
| 10. Capital One | 0.37 | 2.1 |
| **Top 10 total** | **12.40** | **69.6** |

*Mishkin Ch. 11, Table 2. Source: Bankrate.com, 2020.*

# Consolidation and nationwide banking

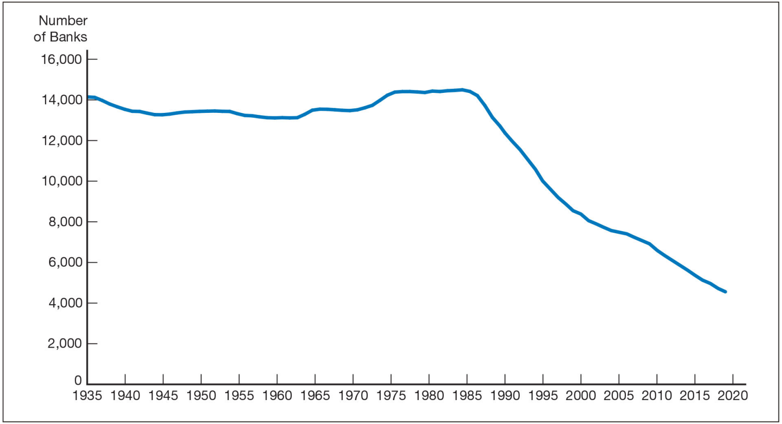
The number of banks has fallen *dramatically* over the past 30+ years.

- **Bank failures** (1980s–90s) plus mergers thinned the ranks.
- **Deregulation:** the **Riegle-Neal Act (1994)** overturned the ban on interstate banking and branching.
- **Economies of scale and scope** from information technology favor larger banks.

Result: not just *fewer* banks, but a *shift of assets toward very large* banks (see Table 1).

*Mishkin Ch. 11, Section 11.3.*

# Figure 3 — Number of commercial banks, 1934–2019




*Mishkin Ch. 11, Figure 3. From ≈14,000 (≈1985) to ≈4,500. Source: Federal Reserve, FRED.*

# Is consolidation a good thing?

**Benefits**

- More competition — drives out inefficient banks.
- Economies of scale and scope $\Rightarrow$ greater efficiency.
- More *diversified* portfolios $\Rightarrow$ lower failure probability.

**Costs**

- Fewer community banks $\Rightarrow$ possibly less small-business lending (relationship lending, Ch. 8).
- Banks entering new areas may take *more* risk and fail.
- Larger banks $\Rightarrow$ more "too big to fail" (Ch. 10).

The U.S. structure is slowly *converging* toward the European/Japanese pattern of a few large banks — though it still has far more banks than any peer.

*Mishkin Ch. 11, Section 11.3.*

PART 5

# Separation of Banking and Other Services

# The rise and fall of Glass-Steagall

- **Glass-Steagall (1933)** *separated* commercial banking from investment banking — banks could not underwrite corporate securities or run brokerages.
- **Erosion:** the Fed permitted "**Section 20** affiliates" to underwrite securities up to a revenue cap; the Supreme Court upheld this in 1988.
- **Repeal:** the **Gramm-Leach-Bliley Act (1999)** abolished the separation, allowing banking, securities, and insurance under one roof.

**Post-repeal regulatory split**

States regulate insurance; the SEC oversees securities; the OCC oversees bank securities subsidiaries; the Fed oversees the holding company. GLB *stimulated* further consolidation.

*Mishkin Ch. 11, Section 11.4.*

# Separation around the world, and the 2008 endgame

- **Germany, Netherlands, Switzerland:** *no* separation — full **universal banking**.
- **Great Britain:** universal banking via separate legal subsidiaries; banks rarely hold equity in commercial firms.
- **Japan:** a middle ground, historically closer to separation.

**The demise of the free-standing investment bank, 2008**

In just six months (March–September 2008), all five major independent U.S. investment banks vanished in their old form — Bear Stearns and Merrill Lynch were absorbed, Lehman failed, and Goldman Sachs and Morgan Stanley became bank holding companies. The universal-bank model won, faster than anyone expected.

*Mishkin Ch. 11, Section 11.4.*

PART 6

# Thrifts and International Banking

# The thrift industry

"Thrifts" are depository institutions distinct from commercial banks, with their own charters and regulators.

- **Savings & loan associations (S&Ls).** Federal or state charter; most belong to the Federal Home Loan Bank System; historically focused on mortgages.
- **Mutual savings banks.** Owned by depositors; mostly state-chartered and state-regulated.
- **Credit unions.** Tax-exempt, member-owned cooperatives; regulated by the **NCUA**; deposits insured by the NCUSIF.

Deposit insurance and the lessons of the 1980s S&L crisis (Ch. 8) shaped today's thrift regulation.

*Mishkin Ch. 11, Section 11.5.*

# International banking and the Eurodollar market

Why banks went global: growth in international trade and multinational firms, lucrative global investment banking, and access to the **Eurodollar market**.

## Eurodollars

*Dollar-denominated deposits held in banks outside the United States.* Born partly from Cold-War politics; the dollar is the dominant trade currency. These offshore deposits escape U.S. reserve requirements — a key, cheap funding source for U.S. banks.

**U.S. banks abroad:** shell branches, Edge Act corporations, and International Banking Facilities (IBFs) — lightly regulated, but barred from lending to U.S. residents.

*Mishkin Ch. 11, Section 11.6.*

# Foreign banks in the U.S., and the world's largest banks

**How foreign banks operate here:**

- **Agency office** — can lend, cannot take domestic deposits.
- **Subsidiary U.S. bank** — fully subject to U.S. regulation.
- **Branch** — governed by the International Banking Act of 1978.

| **Largest banks in the world, 2020** | **Assets ($tn)** |
|---|---|
| 1. ICBC (China) | 4.32 |
| 2. China Construction Bank | 3.82 |
| 3. Agricultural Bank of China | 3.70 |
| 4. Bank of China | 3.39 |
| 5. JPMorgan Chase (US) | 3.14 |

Four of the five largest banks on earth are Chinese; the largest U.S. bank ranks fifth.

*Mishkin Ch. 11, Table 3 (top 5). Source: FXSSI, 2020.*

PART 7

# Wrap-up

# Key terms from Chapter 11

- dual banking system; OCC
- financial innovation / engineering
- adjustable-rate mortgage
- disintermediation
- money market mutual fund; sweep account
- securitization; shadow banking system
- decline of traditional banking
- off-balance-sheet activities
- McFadden Act; bank holding company
- Riegle-Neal Act; consolidation
- Glass-Steagall; Gramm-Leach-Bliley
- thrifts; credit unions; Eurodollar market

## The one idea to take away

**Structure is the residue of regulation and innovation**

The U.S. has thousands of banks because old laws *blocked branching*; it is now consolidating because those laws fell and technology rewards scale. Every innovation — ARMs, MMMFs, securitization — was a profit-seeking response to a change in the environment or a way around a rule.

- Next: **Chapter 12** — Financial Crises, where securitization, the shadow banking system, and too-big-to-fail come together in 2007–09.