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CHAPTER 10

Economic Analysis of Financial Regulation

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Outline

Reading and objectives

- Mishkin, *The Economics of Money, Banking, and Financial Markets*, 13th ed.
- This deck: **Chapter 10** — Economic Analysis of Financial Regulation.
- Sequel to Chapters 8–9: the same asymmetric-information ideas now explain *why* the financial system is so heavily regulated — and why regulation keeps failing in predictable ways.

Learning objectives

10.1 Identify the reasons for, and the forms of, a government *safety net* in financial markets.

10.2 List and summarize the types of financial regulation, and explain how each reduces an asymmetric-information problem.

PART 1

The Government Safety Net

Why regulate finance at all?

Recall Fact 5 from Chapter 8: *finance is among the most heavily regulated sectors of the economy.*

- The root cause is the **asymmetric information** we studied in Ch. 8: adverse selection and moral hazard.
- Depositors cannot easily tell a sound bank from a shaky one, and cannot monitor what banks do with their money.
- Regulation exists to reduce these information problems — but, as we'll see, it creates new ones.

Eight categories of regulation (the roadmap)

Government safety net; restrictions on asset holdings; capital requirements; prompt corrective action; chartering, examination & risk assessment; disclosure; consumer protection; restrictions on competition.

Mishkin Ch. 10, Introduction.

Bank panics and the safety net

A **bank panic** is the simultaneous failure of many banks — a contagion that can spread from one shaky bank to healthy ones.

- Source: asymmetric information. Depositors can't tell good banks from bad, so bad news about *one* bank triggers withdrawals from *all*.
- A *first-come, first-served* (sequential service) constraint makes running rational: get your money out before the bank runs dry.
- Healthy banks fail too — fire-sales of assets, a falling money supply, and a contraction of credit to the whole economy.

A **government safety net** short-circuits this contagion.

Mishkin Ch. 10, Section 10.1.

Form 1: Deposit insurance (the FDIC)

Created in 1934 after the wave of Depression-era bank failures. Insures deposits up to $250,000 per account.

Two ways the FDIC resolves a failed bank

1. **Payoff method.** The FDIC pays off insured depositors (up to the limit) and lets the bank close. Uninsured depositors bear losses.
2. **Purchase and assumption.** The FDIC finds a healthy bank to buy the failed one, assuming *all* deposits. *No* depositor loses — even uninsured ones. Typically more costly to the FDIC.

By guaranteeing deposits, insurance removes the depositor's incentive to run — panics are short-circuited.

Mishkin Ch. 10, Section 10.1.

Form 2: Lender of last resort, and other supports

- **Lender of last resort.** The central bank lends to solvent-but-illiquid institutions through the discount window, supplying reserves so a temporary liquidity crunch doesn't become a solvency crisis.
- **Other channels:** direct government lending or capital injections (e.g. the Treasury's actions in 2008), and government-arranged mergers.

Is more insurance better? — a global caution

World Bank research finds that, across countries, adopting *explicit* deposit insurance is on average associated with *less* banking-sector stability and *more* frequent crises — and it can retard financial development. The safety net is not a free lunch.

Mishkin Ch. 10, Section 10.1; Demirgüç-Kunt & Detragiache.

PART 2

Drawbacks of the Safety Net

The safety net's two costs

The very feature that stops panics — protecting depositors — weakens the discipline that would otherwise restrain banks.

- **Moral hazard.** Insured depositors have no reason to monitor or punish risk-taking, so banks have an incentive to "gamble for resurrection" — take big risks, keep the upside, pass losses to the FDIC/taxpayer.
- **Adverse selection.** Precisely the risk-loving entrepreneurs and outright crooks find banking most attractive, because the safety net subsidizes their downside.

This is the Ch. 8 framework again — now the *government guarantee itself* is the source of the information problem.

Mishkin Ch. 10, Section 10.1.

"Too big to fail"

When a very large institution fails, regulators fear systemic contagion — so they use **purchase and assumption**, protecting *even uninsured* creditors.

- Large banks' uninsured depositors and creditors come to expect a bailout.
- So they exert *even less* market discipline than at small banks — amplifying moral hazard exactly where the bets are biggest.
- Perverse result: TBTF makes the largest, most systemically dangerous banks the *least* disciplined by the market.

Continental Illinois, 1984

The original "too big to fail": regulators guaranteed all depositors of the seventh-largest U.S. bank, coining the phrase.

Mishkin Ch. 10, Section 10.1.

Financial consolidation magnifies the problem

As banks merge into larger, more complex organizations:

- The set of institutions deemed “too big to fail” *grows*.
- The safety net is stretched over *new activities* (securities, insurance, derivatives) once banks combine with other financial firms — increasing risk-taking incentives in those areas.
- Larger, more complex firms are harder for regulators to monitor.

Many of these incentives played out in the run-up to the 2007–09 global financial crisis.

Mishkin Ch. 10, Section 10.1.

PART 3

Restrictions on Assets and Capital

Restrictions on asset holdings

Goal: limit the moral hazard of risk-taking by constraining what banks may own.

- **Promote diversification.** Rules cap how much a bank can lend to a single borrower, limiting concentration risk.
- **Prohibit risky holdings.** Banks are generally barred from holding common *stock*, however "safe" it may seem — equity is too volatile for an insured institution.
- Encourage holdings of safer, more liquid assets (Treasuries, high-grade bonds).

These rules push against the bank's private incentive to chase yield with the safety net behind it.

Mishkin Ch. 10, Section 10.2.

Capital requirements: the leverage ratio

Capital is the cushion that absorbs losses (Ch. 9). Regulators mandate a minimum.

Leverage ratio

$$\text{Leverage ratio} = \frac{\text{Bank capital}}{\text{Total assets}}.$$

- To be classified **well capitalized**, a bank's leverage ratio must exceed **5%**.
- A ratio *below 3%* triggers escalating regulatory restrictions.
- More capital ⇒ owners have more "skin in the game" ⇒ less incentive to gamble. It directly counters moral hazard.

Mishkin Ch. 10, Section 10.2.

Risk-based capital and the Basel Accord

A flat leverage ratio ignores *how risky* the assets are. The **Basel Accord** (1988, Basel Committee on Banking Supervision) ties required capital to *risk-weighted* assets.

- Each asset class gets a risk weight (cash $\approx 0\%$; Treasuries low; commercial loans high).
- Banks must hold capital as a percentage of *risk-weighted* assets, not just total assets.

Regulatory arbitrage — the loophole

Banks game the risk weights: keep assets whose true risk *exceeds* their regulatory weight, or move them off-balance-sheet. Capital can look adequate while real risk balloons — a key failure exposed in 2007–09.

Mishkin Ch. 10, Section 10.2.

Where Basel went after the crisis

The Committee replaced the 1988 accord with **Basel 2**, built on *three pillars*:

1. **Minimum capital requirements.** Tie capital more closely to actual risk — market, credit, and operational risk.
2. **Supervisory review.** Strengthen the oversight process; assess the quality of each bank's risk management and whether it holds enough capital for its risk.
3. **Market discipline.** Mandate disclosure of credit exposures, reserves, capital, and the bank's internal rating system, so the market can police banks.

After the crisis, **Basel 3** went further — higher and better-quality capital, a leverage backstop, and new liquidity requirements.

Mishkin Ch. 10, Section 10.2.

PART 4

Supervision and Disclosure

Prompt corrective action

If a bank's capital is allowed to dwindle, its incentive to gamble explodes (almost nothing left to lose).

- The **FDIC Improvement Act of 1991 (FDICIA)** requires regulators to intervene *early and progressively* as capital falls through defined trip-wires.
- Restrictions tighten as the bank moves from "well capitalized" toward "critically undercapitalized," ending in mandatory closure.

The point is to act *before* capital hits zero — not after the losses are socialized.

Mishkin Ch. 10, Section 10.2.

Chartering and examination

- **Chartering** — screening applications to open a bank. Keeps out crooks and over-eager risk-takers *before* they get a charter. This combats **adverse selection**.
- **Examination** — scheduled and surprise on-site exams plus periodic “call reports” monitor compliance once open. This combats **moral hazard**.

The CAMELS rating

Examiners rate six dimensions: **C**apital adequacy, **A**sset quality, **M**anagement, **E**arnings, **L**iquidity, and **S**ensitivity to market risk.

Mishkin Ch. 10, Section 10.2.

Assessment of risk management

Modern supervision looks beyond static ratios to the *processes* a bank uses to control risk.

- Examiners rate the quality of board/senior-management oversight, policies and limits, measurement and monitoring systems, and internal controls.
- Emphasis on **interest-rate-risk** limits and internal procedures.
- Heavy use of **stress testing** and **value-at-risk (VaR)** — estimating the loss that would be exceeded only with small probability over a horizon.

The shift: from checking *what* a bank holds to checking *how well it manages* what it holds.

Mishkin Ch. 10, Section 10.2.

Disclosure requirements

Markets can only discipline what they can *see*. Disclosure reduces asymmetric information directly.

- Banks must follow standard accounting principles and disclose a wide range of information; Basel 2 and the SEC stress this.
- The **Sarbanes-Oxley Act of 2002** created the Public Company Accounting Oversight Board (PCAOB) and tightened audit independence and CEO/CFO certification, after Enron and WorldCom.
- **Mark-to-market (fair-value) accounting** forces assets to reflect current prices — informative, but it can amplify downturns when prices fall.

Mishkin Ch. 10, Section 10.2.

PART 5

Consumer Protection and Competition

Consumer protection

Asymmetric information hurts borrowers too — they may not understand the terms of complex credit.

- **Truth-in-Lending Act (1969)** — standardized disclosure of finance charges and APR.
- **Fair Credit Billing Act (1974)** — rules for disputing billing errors.
- **Equal Credit Opportunity Act (1974)** — bans discrimination in lending.
- **Community Reinvestment Act (CRA)** — discourages redlining; banks must serve their whole community.

The **subprime crisis** exposed gaps here, leading to the **Consumer Financial Protection Bureau (CFPB)** under Dodd-Frank.

Mishkin Ch. 10, Section 10.2.

Restrictions on competition

Historically, regulators limited competition, arguing that thin profits push banks toward risk.

- **Branching restrictions** — the McFadden Act (1927) barred interstate branching; largely *eliminated* by Riegle-Neal in 1994.
- **Glass-Steagall (1933)** — separated commercial from investment banking; *repealed* by Gramm-Leach-Bliley in 1999.

The trade-off

Less competition *may* reduce risk-taking — but at a real cost: **higher charges** to consumers and **lower efficiency**. Most of these restrictions have since been dismantled.

Mishkin Ch. 10, Section 10.2.

International financial regulation

Regulation is national; banking is global.

- Institutions operating in many countries can *shift activity* to the most lightly regulated jurisdiction — regulatory arbitrage on a global scale.
- Home regulators watch domestic operations closely but often lack the knowledge or reach to monitor foreign operations.
- Failures spill across borders (e.g. BCCI, 1991; cross-border contagion in 2007–09).

This is why bodies like the **Basel Committee** try to coordinate standards across countries.

Mishkin Ch. 10, Section 10.2.

PART 6

Major U.S. Financial Legislation

A century of U.S. financial legislation (1/2)

Act (year)	What it did
Federal Reserve Act (1913)	Created the Federal Reserve System
McFadden Act (1927)	Prohibited interstate branching
Glass-Steagall / Banking Act (1933)	Created the FDIC; split commercial & investment banking
Securities Acts (1933–34)	Mandated disclosure; created the SEC
Bank Holding Company Act (1956)	Gave the Fed authority over BHCs
DIDMCA (1980)	Phased out deposit-rate ceilings; uniform reserves
Garn–St. Germain (1982)	Widened thrift powers; created MMDAs

Mishkin Ch. 10, Table 1 (abridged).

A century of U.S. financial legislation (2/2)

Act (year)	What it did
FIRREA (1989)	Resolved the S&L crisis; created the RTC
FDICIA (1991)	Prompt corrective action; limited too-big-to-fail
Riegle-Neal (1994)	Allowed interstate banking and branching
Gramm-Leach-Bliley (1999)	Repealed Glass-Steagall
Sarbanes-Oxley (2002)	Created the PCAOB; tightened audit & disclosure
Deposit Insurance Reform (2005)	Raised IRA insurance to $250,000
Dodd-Frank (2010)	CFPB; FSOC; stress tests; Volcker Rule

Mishkin Ch. 10, Table 1 (abridged).

The regulatory cycle

A recurring pattern runs through that table:

1. A crisis exposes risk-taking enabled by the safety net.
2. Congress responds with new regulation (Glass-Steagall after 1933; FIRREA/FDICIA after the S&L debacle; Dodd-Frank after 2008).
3. Financial innovation and regulatory arbitrage erode the rules.
4. Deregulation (Riegle-Neal, Gramm-Leach-Bliley) and a new crisis restart the cycle.

The deep lesson

Regulation is a perpetual cat-and-mouse game against the moral hazard the safety net creates. There is no permanent fix — only better and worse responses.

Mishkin Ch. 10, Section 10.2.

PART 7

Wrap-up

Key terms from Chapter 10

- government safety net
- deposit insurance; FDIC
- payoff vs. purchase-and-assumption
- lender of last resort
- moral hazard / adverse selection
- too big to fail
- regulatory arbitrage
- leverage ratio; risk-based capital
- Basel Accord (Basel 2/3)
- prompt corrective action
- chartering and examination; CAMELS
- value-at-risk; stress testing
- Glass-Steagall; Gramm-Leach-Bliley
- Dodd-Frank; CFPB

The one idea to take away

Regulation is a response to asymmetric information — and a source of it

The safety net stops panics by protecting depositors. But protection removes market discipline, breeding *moral hazard* and *adverse selection*. Every tool in this chapter — capital rules, supervision, disclosure, restrictions — is an attempt to restore the discipline the safety net removed.

- Next session: **Chapter 11** — Banking Industry: Structure and Competition.
- Then **Chapter 12** — Financial Crises, where this whole toolkit is applied to 2007–09.