

Chapter 18: The Financial System : Opportunities and Dangers



IN THIS CHAPTER, YOU WILL LEARN:

- the functions a healthy financial system performs
- the common features of financial crises
- government policies to alleviate or prevent crises

BRAINSTORM

What the financial system does

- What functions does the financial system perform?
- Take two minutes and try to think of two or three, and write them down.
- Then, we'll compare answers.



WHAT THE FINANCIAL SYSTEM DOES

1. Financing Investment

- The financial system helps channel funds from **savers**—households with income they do not need to spend immediately... to **investors**—firms that need funds to finance investment projects



WHAT THE FINANCIAL SYSTEM DOES

1. Financing Investment

- **Financial system**: the institutions in the economy that facilitate the flow of funds between savers and investors
- The financial system includes
 - **financial markets**, like the stock market, through which households *directly* provide funds for investment
 - **financial intermediaries**, like banks or mutual funds, through which households *indirectly* provide funds for investment



WHAT THE FINANCIAL SYSTEM DOES

1. Financing Investment

- **Debt finance:** selling bonds to raise funds for investment
 - A **bond** represents a loan from the bondholder to the firm.
- **Equity finance:** selling stock to raise funds for investment
 - A share of **stock** represents an ownership claim by the shareholder in the firm.



WHAT THE FINANCIAL SYSTEM DOES

1. Financing Investment

- Financial intermediaries accept funds from savers and direct them to investors.
 - For example, banks accept deposits from households and make loans to firms.
 - Other examples: mutual funds, pension funds, and insurance companies



WHAT THE FINANCIAL SYSTEM DOES

2. Sharing Risk

- Many people are **risk averse**: other things equal, they dislike uncertainty.
- The financial system allows people to *share risks*:
 - Investors can share the risk that their projects will fail with the savers who provide the funds.
 - Savers may be willing to accept these risks for the prospect of a higher return than they could earn otherwise.



WHAT THE FINANCIAL SYSTEM DOES

2. Sharing Risk

- Many people are **risk averse**: other things equal, they dislike uncertainty.
- The financial system allows people to *share risks*
 - Savers can reduce risk through **diversification**: providing funds to many different investors with uncorrelated assets.
- Diversification can reduce ***idiosyncratic risks***, risks that differ across individual businesses.
- Diversification *cannot* reduce ***systematic*** risks, which affect most/all businesses.



WHAT THE FINANCIAL SYSTEM DOES

3. Dealing with Asymmetric Information

Asymmetric information:

when one party to a transaction has more information about it than the other party

- **Adverse selection:**

when people with *hidden knowledge about attributes* sort themselves in a way that disadvantages people with less information

- Example: investors who know their projects are less likely to succeed are more eager to finance the projects with other people's funds



WHAT THE FINANCIAL SYSTEM DOES

3. Dealing with Asymmetric Information

Asymmetric information:

when one party to a transaction has more information about it than the other party

- **Moral hazard:** arises from *hidden knowledge about actions*, occurs when imperfectly monitored agents act in dishonest or inappropriate ways.
 - Example: entrepreneurs investing other people's money are not as careful as if they were investing their own funds



WHAT THE FINANCIAL SYSTEM DOES

3. Dealing with Asymmetric Information

- The financial system helps mitigate the effects of asymmetric information.
- Example: banks
 - Banks address adverse selection by screening borrowers for adverse hidden attributes that savers might not detect.
 - Banks address moral hazard by restricting how loan proceeds are spent or by monitoring the borrowers.



WHAT THE FINANCIAL SYSTEM DOES

4. Fostering Economic Growth

- In the Solow model, there is one type of capital; in the real world, there are many.
- Firms with lucrative investment projects are willing to pay higher interest rates to attract funds than firms with less desirable projects.
- The financial system helps channel funds to projects with the highest expected returns relative to their risk.



WHAT THE FINANCIAL SYSTEM DOES

4. Fostering Economic Growth

- Govt helps facilitate this function by providing quality legal institutions, *e.g.*
 - prosecuting fraud to reduce moral hazard
 - enforcing disclosure requirements to reduce adverse selection

Financial system failure

- Suppose the financial system becomes unable to perform the function of channeling funds from savers to borrowers.
- Take two minutes, think of two or three specific consequences, and write them down.
- Then, we'll compare answers.



COMMON FEATURES OF FINANCIAL CRISES

1. Asset-Price Booms and Busts

- Financial crises often follow a period of optimism and a **speculative asset-price bubble**.
- Eventually, optimism turns to pessimism and the bubble bursts, causing asset prices to drop.

In the 2008–2009 crisis, the crucial asset was housing: house prices soared until 2006, then dropped 30% by 2009.



COMMON FEATURES OF FINANCIAL CRISES

2. Insolvencies at financial institutions

- Falling asset prices cause defaults on bank loans.
- Since banks are highly leveraged, defaults greatly reduce their capital, increasing the risk of insolvencies.

In 2008–2009, many banks held mortgages and assets backed by mortgages. Falling house prices sharply increased mortgage defaults, pushing many financial institutions toward bankruptcy.



COMMON FEATURES OF FINANCIAL CRISES

3. Falling confidence

- Insolvencies at some banks reduce confidence in others, and individuals with uninsured deposits withdraw their funds.
- To replace their shrinking reserves,

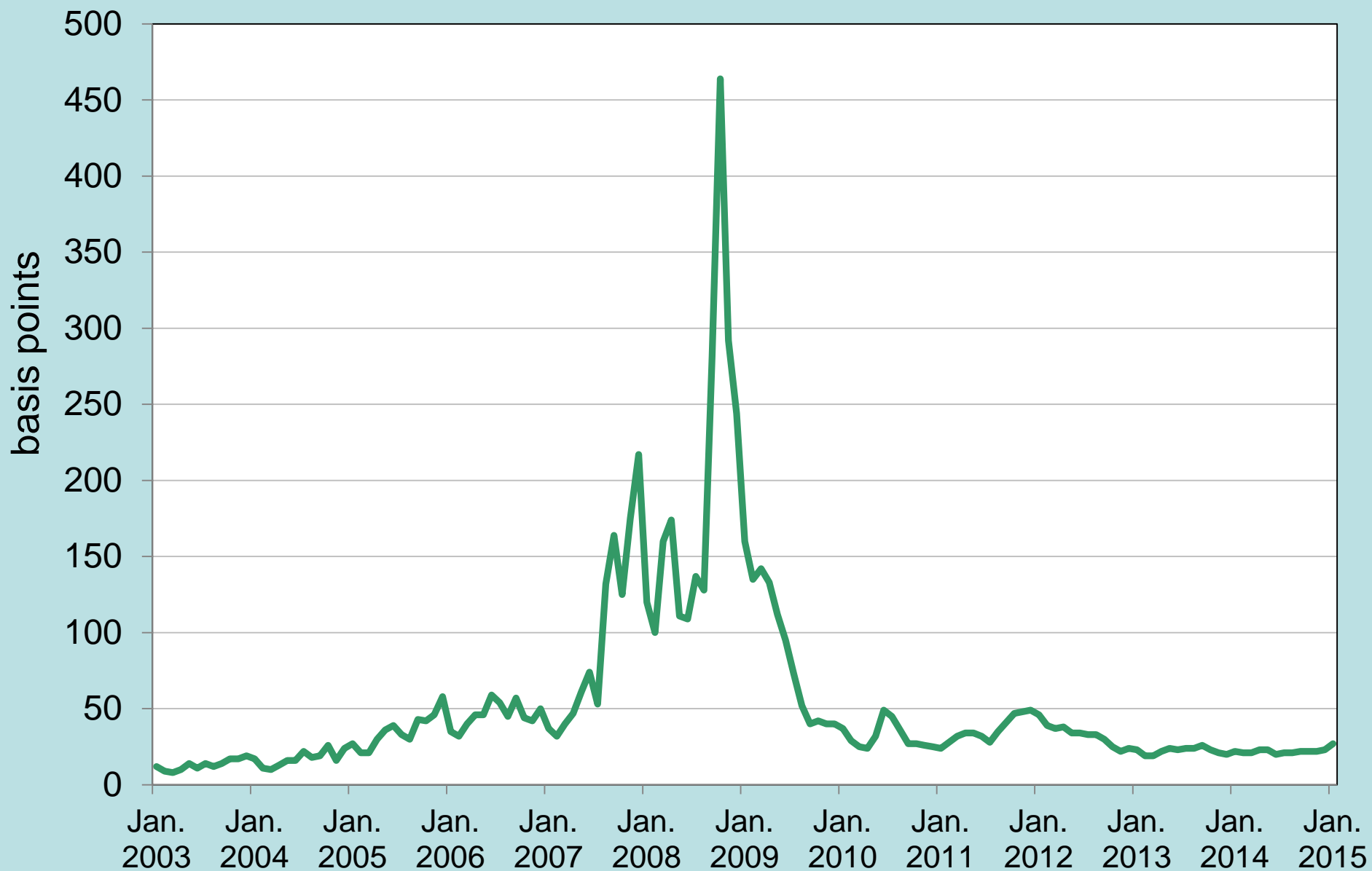
In 2008–2009, the collapse of Bear Stearns and Lehman Brothers reduced confidence in other large institutions, many of which were interdependent.



FYI: The TED spread

- The TED spread measures the perceived credit risk of banks.
- Definition: TED spread =
rate on three-month interbank loans
– rate on three-month T-bills
(*expressed in basis points*)
- The TED spread is usually between 10 and 50 basis points.
- In a financial crisis, falling confidence in banks causes the TED spread to rise...

The TED spread, 2003–2015





COMMON FEATURES OF FINANCIAL CRISES

4. Credit crunch

- Frequent defaults and insolvencies make it hard for investors to get loans—even those with good credit and lucrative projects.

In 2008–2009, banks sharply reduced lending to consumers for buying homes and to businesses for expanding operations or buying inventories.



COMMON FEATURES OF FINANCIAL CRISES

5. Recession

- With less credit available, consumer and business spending declines, reducing aggregate demand.
- Result: output falls, unemployment rises.

In 2008–2009, unemployment rose above 10% and remained very high for many months after the financial crisis.



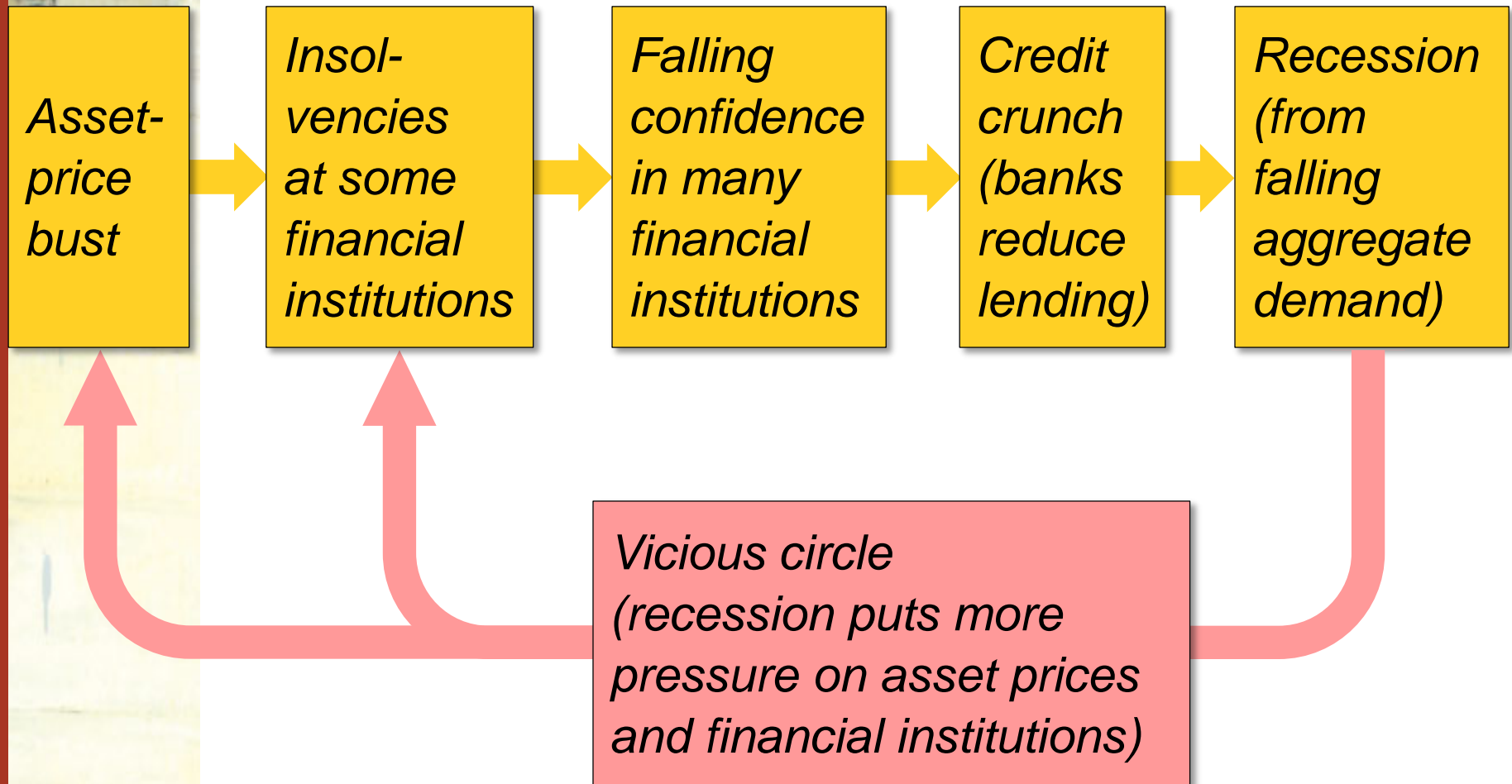
COMMON FEATURES OF FINANCIAL CRISES

6. A vicious circle

- The recession reduces profits, asset values, and household incomes, which increases defaults, bankruptcies, and stress on financial institutions.
- The financial system's problems and the economy's downturn reinforce each other.

In 2008–2009, the vicious circle was apparent, creating fears the economy would spiral out of control.

The Anatomy of a Financial Crisis





Who should be blamed for the financial crisis of 2008–2009?

Possible culprits include:

- The Federal Reserve
- Home buyers
- Mortgage brokers
- Investment banks
- Rating agencies
- Regulators
- Government policymakers

All of them likely deserve a share of the blame.

Government policies

- What should the government do if a financial crisis occurs?
- Can the government prevent financial crises?
- Take two minutes. Try to think of a specific policy to alleviate a financial crisis and another policy to prevent future crises.



POLICY RESPONSES TO A CRISIS

1. Conventional monetary policy

- The central bank can expand the money supply to lower interest rates and encourage spending.

The Fed reduced the federal funds rate to nearly zero by 12/2008, yet this was insufficient.

(Recall the liquidity trap from Chap. 12.)



POLICY RESPONSES TO A CRISIS

2. Conventional fiscal policy

- The government can increase spending and cut taxes.

Fiscal policymakers enacted stimulus of \$168 billion in 2008 and \$787 billion in 2009.

But the large and growing government debt sharply limited further stimulus measures.



POLICY RESPONSES TO A CRISIS

3. Lender of last resort

- Runs on banks can create a **liquidity crisis**, in which solvent banks have insufficient funds to satisfy depositors' withdrawals.
- The central bank can make direct loans to these banks, acting as a **lender of last resort**.

*In 2008–2009, the Fed acted as lender of last resort to many banks and to **shadow banks**, which perform many of the same functions as banks and were experiencing similar problems.*



POLICY RESPONSES TO A CRISIS

4. Injections of govt funds

- The govt can use public funds to prop up the financial system:
 - Give funds to those who have experienced losses (*e.g.*, Federal Deposit Insurance)
 - Make risky loans (*e.g.*, loans to AIG in 2008)
 - Inject capital into ailing institutions, taking an ownership stake (*e.g.*, TARP)
- Using public funds to prop up ailing institutions is controversial and may increase moral hazard.



POLICIES TO PREVENT CRISES

1. Focusing on shadow banks

- Shadow banks engage in financial intermediation and include investment banks, hedge funds, private equity firms, and insurance companies.
- Their deposits are not federally insured, so they are not heavily regulated like traditional banks and can take on much more risk.
- Their failures can hurt the broader economy, so many policymakers suggest limiting the risk they can take, increasing capital requirements for them, allowing more govt oversight.



POLICIES TO PREVENT CRISES

2. Restricting size

- Institutions deemed “too big to fail” have a moral hazard problem.
- Some proposals would limit the size of financial institutions to reduce the harm their failures would cause to the rest of the financial system.
- Proposals include limiting mergers and increasing capital requirements for larger banks.



POLICIES TO PREVENT CRISES

3. Reducing excessive risk taking

- To prevent financial firms from failing, some propose limits on excessive risk taking.
- Problem: defining “excessive”
- The Dodd-Frank Act of 2010 includes the *Volcker rule*, which prohibits commercial banks from making certain types of speculative investments.



POLICIES TO PREVENT CRISES

4. Making regulation work better

- The regulatory apparatus overseeing the financial system is highly fragmented.
- Dodd-Frank and other measures seek to coordinate the various regulatory agencies and improve the effectiveness of financial industry oversight.

5. Taking a macro view of regulation

- Traditionally, financial regulation has been *microprudential*, aiming to reduce the risk of distress in individual financial institutions.
- Today, financial regulation is also *macroprudential*, aiming to reduce system-wide distress to protect against declines in production and employment.



The European sovereign debt crisis

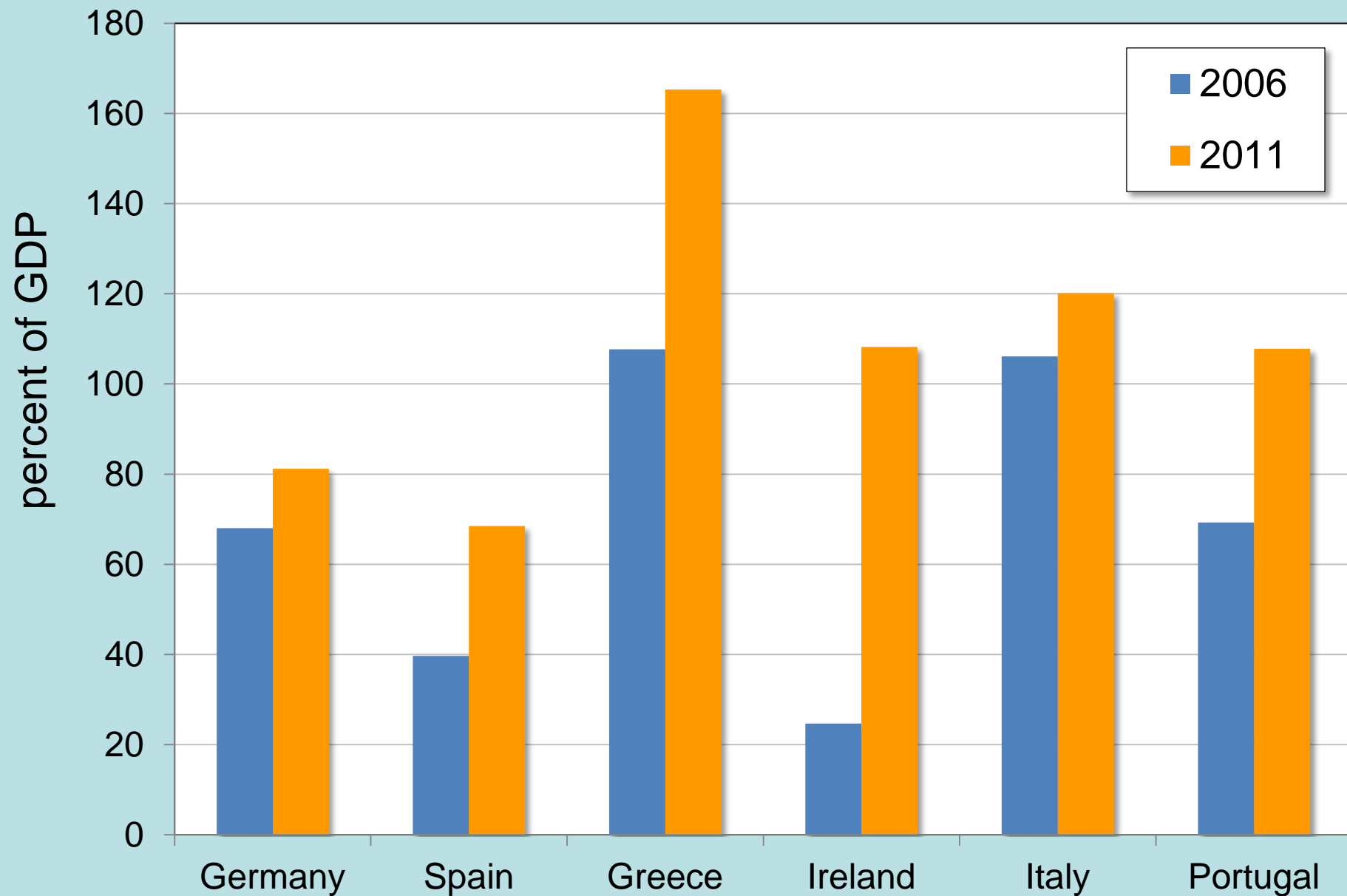
- Debt problems in Greece:
 - Rising govt debt, revelations that Greece may have misreported its finances in earlier years
 - Greek bonds downgraded, prices fell, interest rates shot up as markets worried that Greece might default
- Repercussions throughout Europe:
 - Many European banks held Greek bonds, whose falling values pushed them toward bankruptcy.
 - Policymakers worried that banks would fail, causing a credit crunch and economic downturn.



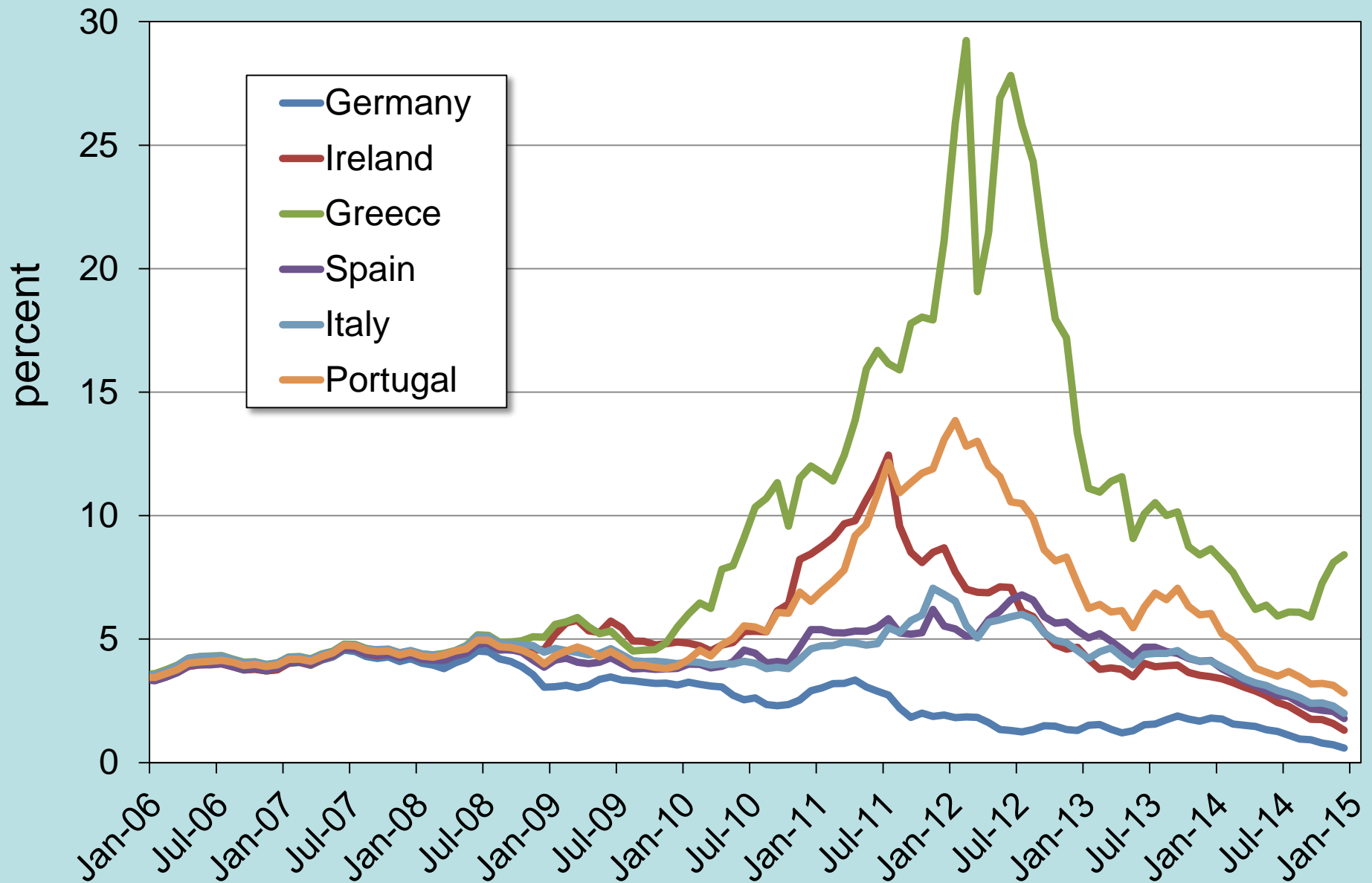
The European sovereign debt crisis

- Bailing out Greece:
 - The ECB and healthier countries in Europe made loans to Greece to prevent an immediate default. The loans came with conditions that Greece enact austerity measures to improve its finances.
 - Taxpayers in countries providing the funds resented the bailouts. Greek citizens resented the austerity measures and rioting ensued.
- Other countries with problems:
 - Many feared a Greek default would lead to a run on bonds from Spain, Portugal, Ireland, and Italy.

Government debt in 2006 and 2011



Interest rates on ten-year bonds





CHAPTER SUMMARY

- A healthy financial system serves several purposes, including:
 - channeling funds from saving to investment
 - allocating risk
 - mitigating problems arising from asymmetric information
 - fostering economic growth



CHAPTER SUMMARY

- Financial crises begin with a sharp decline in asset prices, often after a speculative bubble.
- The fall in asset prices leads to insolvencies, which reduce confidence in the financial system and spur depositors to withdraw their funds.
- As a result, banks reduce lending, causing a credit crunch. Business and consumer spending fall, causing an economic downturn.
- In a vicious circle, the downturn puts further pressure on asset prices and financial institutions.



CHAPTER SUMMARY

- Policymakers can respond to a crisis in several ways: by using conventional monetary and fiscal policy to expand aggregate demand, the central bank can provide liquidity by acting as a lender of last resort and the government can use public funds to prop up the financial system.
- Policies that aim to prevent future crises include focusing more on regulating shadow banks, restricting the size of financial firms, limiting excessive risk taking, and reforming the regulatory agencies that oversee the financial system.