Economic Crises, Consequences and Recovery (part 1)

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Outline

- How Depository banks and shadow banks differ
- Why, despite their differences, both types of banks are subject to bank runs
- What happens during financial panics and banking crises
- How regulatory loopholes and the rise of shadow banking led to financial crisis of 2008.
- How the new regulatory framework seeks to avoid another crises
- What happens during the COVID-19 crises
- The Great-Lookdown and the recovery phase

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Banking: Benefits and Dangers

- Banks perform the important functions of providing liquidity to savers and directly influencing the level of the money supply.

- Commercial banks such as Bank of America or Citibank (in Italy, Unicredit, etc.), as well as savings and loan institutions and credit unions satisfy our definition of banks because they accept deposits.

- Lehman Brothers, however, was not a bank according to our definition because it did not accept deposits. Instead, it was in the business of speculative trading for its own profit and for the profit of its own investors.

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Banking: Benefits and Dangers

- Yet Lehman got into trouble in much the same way that a bank does: it experienced a loss of confidence and something very much like a bank run – a phenomenon in which many of a bank's depositors try to withdraw their funds because of fears of a bank failure.

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Shadow Banking

Lehman was part of a larger category of institutions called shadow banks.

- Example: Investment banks like Lehman, hedge funds like Long-Term Capital Management, and money market funds.

Like ordinary banks, shadow banks are vulnerable to bank runs because they perform the same economic task: allowing their customers to make a better trade-off between rate of return, or yield, and liquidity.

The Trade-off Between Rate of Return and Liquidity

- Without banks, savers face a trade-off when deciding how much of their funds to lend out and how much to keep on hand in cash: a trade-off between liquidity, the ability to turn one's assets into cash on short notice, and the rate of return, in the form of interest or other payments received on one's assets.

- Without banks, people would make this trade-off by keeping a large fraction of their wealth idle, sitting in safes rather than helping pay for productive investment spending.

- Banking, however, changes that, by allowing people ready access to their funds even while those funds are being used to make loans for productive purposes.

Depository Banks and Shadow Banks

- What depository banks do is borrow on a short-term basis from depositors (who can demand to be repaid at any time) and lend on a long-term basis to others (who cannot be forced to repay until the end date of their loan).

- This is what economists call **maturity transformation**: converting short-term liabilities (deposits in this case) into long-term assets (bank loans that earn interest).

Depository Banks and Shadow Banks

- Shadow banks, such as Lehman Brothers, also engage in maturity transformation, but they do it in a way that doesn't involve taking deposits. Instead of taking deposits, Lehman borrowed funds in the short-term credit markets and then invested those funds in longer-term speculative projects.
- Indeed, *a shadow bank is any financial institution that does not accept deposits but that, like a bank, engages in maturity transformation*—borrowing over the short term and lending or investing over the longer term.

Bank Runs

- Although a bank may be in fine financial shape, if enough depositors believe it is in trouble and try to withdraw their money, their beliefs end up dooming the bank.
- Shadow banks, though, don’t take deposits. So how can they be vulnerable to a bank run?
- The reason is that a shadow bank, like a depository bank, engages in maturity transformation: it borrows short term and lends or invests longer term.
- If a shadow bank’s lenders suddenly decide one day that it’s no longer safe to lend it money, the shadow bank can no longer fund its operations.
- Unless it can sell its assets immediately to raise cash, it will quickly fail.
- This is exactly what happened to Lehman.

ECONOMICS IN ACTION

Bad Day at Northern Rock

- In 2007, British depositors were only protected against all losses for the first £2,000 of their account— around $3,000—with 90% protection up to £35,000, and none thereafter.

- Depositors at the British bank Northern Rock decided that this wasn't enough protection once they became worried about the bank's solvency; that is, whether it had enough assets to cover its liabilities. The result was a bank run right out of the history books.

ECONOMICS IN ACTION

Bad Day at Northern Rock

- The bank got into trouble by overextending itself: to expand its home mortgage lending, it began borrowing from the money markets. This source of funding dried up when world housing markets began to slump.

- The Bank of England, Britain's equivalent of the Federal Reserve, announced that it would lend money to Northern Rock to make up the shortfall—but this announcement had the effect of highlighting the bank's problems, and nervous depositors started lining up outside its doors.

ECONOMICS IN ACTION

The run began on September 14, 2007, and continued for four days, ending only when the British government announced that it would guarantee all deposits at the bank. In 2008, the bank was nationalized, becoming a government-owned institution.

Banking Crises and Financial Panics

Banking crises—episodes in which a large part of the depository banking sector or the shadow banking sector fails or threatens to fail—are relatively rare. Yet they do happen, often with severe negative effects on the broader economy.

Banking Crises and Financial Panics

The Logic of Banking Crises

- **Asset bubble:** the price of some kind of asset, such as housing, is pushed to an unreasonably high level by investors' expectations of further price gains.
- **Financial contagion:** one institution's problems spread and create trouble for others.

  It is a vicious downward spiral among depository banks, as well as shadow banks; each institution's failure increases the likelihood that another will fail.

Panic

- **Financial Panic—**a sudden and widespread disruption of financial markets that happens when people lose faith in the liquidity of financial institutions and markets—can arise.
- A financial panic almost always involves a banking crisis, either in the depository banking sector, or the shadow banking sector, or both.
- Between the Civil War and the Great Depression, the United States had a famously crisis-prone banking system.
  - Even then, banks were regulated.

Financial Panic: US Historical

TABLE 32-1 Number of Bank Failures: National Banking Era and Great Depression

National Banking era (1863–1912)		Great Depression (1929–1941)	
Panic dates	**Number of failures**	**Panic dates**	**Number of failures**
September 1873	101	November–December 1930	806
May 1884	42	April–August 1931	573
November 1890	18	September–October 1931	827
May–August 1893	503	June–July 1932	283
October–December 1907	73*	February–March 1933	Bank holiday

*This understates the scale of the 1907 crisis because it doesn't take into account the role of trusts.

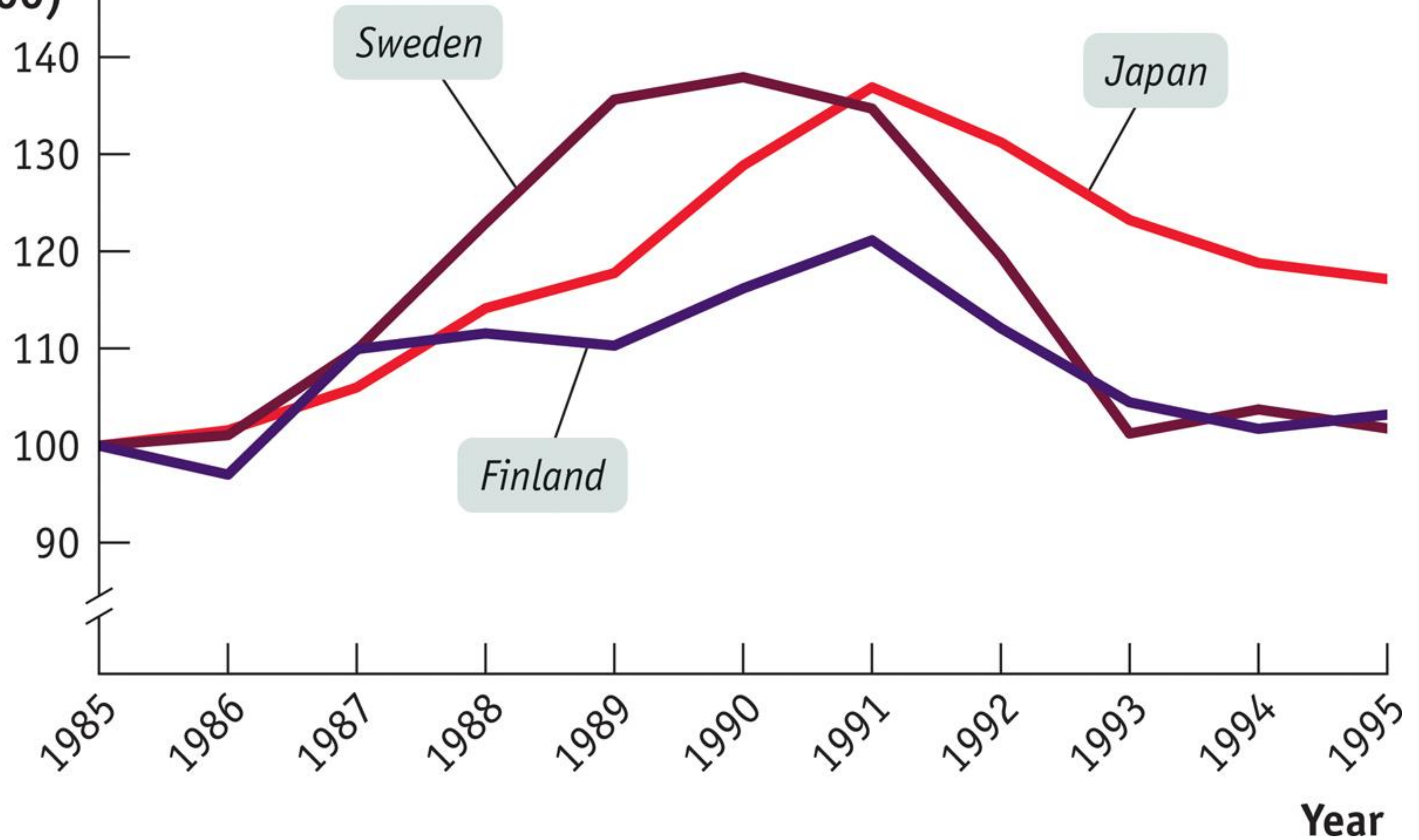
Modern Banking Crises

- Around the world, banking crises are relatively frequent events.
- According to a 2008 analysis by the International Monetary Fund, 127 banking crises occurred around the world between 1970 and 2007.
- Most of them were in small, poor countries that lack the regulatory safeguards found in advanced countries.
- In poor countries, banks generally get in trouble in much the same way: insufficient capital, poor accounting, too many loans, and often corruption.
- In more advanced countries, banking crises almost always occur as a consequence of an asset bubble – typically in real estate.

Modern Banking Crises

- Between 1985 and 1995, three advanced countries - Finland, Sweden and Japan – experienced banking crises due to the bursting of a real state bubble.
- Banks in the three countries lent heavily into a real estate bubble that their lending helped to inflate.
- The following figure shows real estate prices, adjusted for inflation, in Finland, Sweden and Japan from 1985 to 1995.

Modern Banking Crises



ECONOMICS IN ACTION

Ireland found itself facing a huge banking crisis in 2008.

Like the earlier banking crises in Finland, Sweden, and Japan, Ireland's crisis grew out of excessive optimism about real estate.

Irish housing prices began rising in the 1990s, in part a result of the economy's strong growth.

ECONOMICS IN ACTION

Real estate developers began betting on ever-rising prices, and Irish banks were all too willing to lend these developers large amounts of money to back their speculations.

Housing prices tripled between 1997 and 2007, home construction quadrupled over the same period, and total credit offered by banks rose far faster than in any other European nation.

ECONOMICS IN ACTION

To raise the cash for their lending spree, Irish banks supplemented the funds of depositors with large amounts of "wholesale" funding—short-term borrowing from other banks and private investors.

In 2007, the real estate boom collapsed.

In 2008, the troubles of the Irish banks threatened to turn into a sort of bank run—not by depositors, but by lenders who had been providing the banks with short-term funding through the wholesale interbank lending market.

ECONOMICS IN ACTION

To stabilize the situation, the Irish government stepped in, guaranteeing all bank debt. This created a new problem, because it put Irish taxpayers on the hook for potentially huge bank losses.

Until the crisis struck, Ireland had seemed to be in good fiscal shape, with relatively low government debt and a budget surplus.

ECONOMICS IN ACTION

The banking crisis, however, led to serious questions about the solvency of the Irish government—whether it had the resources to meet its obligations—and forced the government to pay high interest rates on funds it raised in international markets.

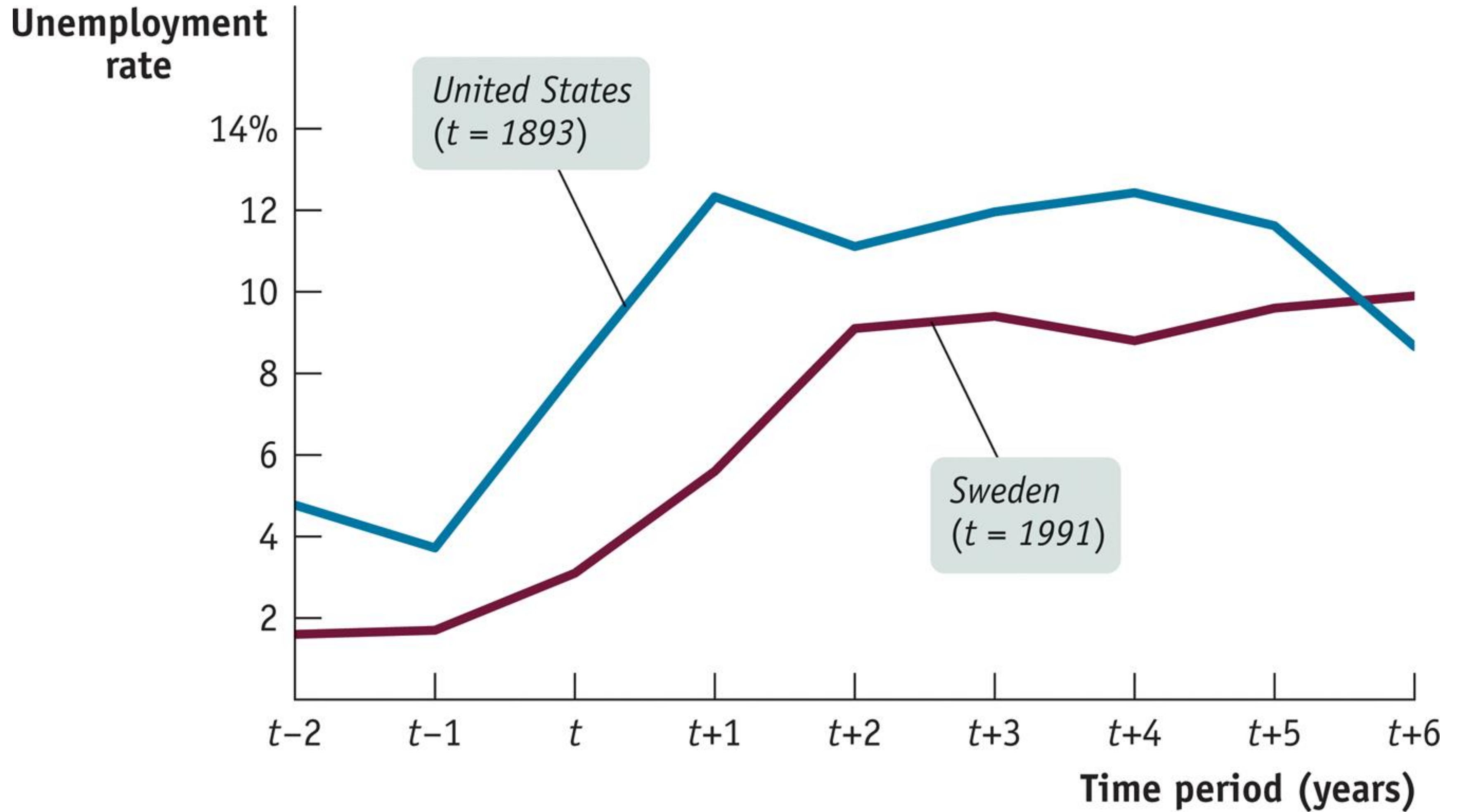
Banking Crises, Recessions, and Recovery

- A severe banking crisis almost invariably leads to deep recessions, which are usually followed by slow recoveries.

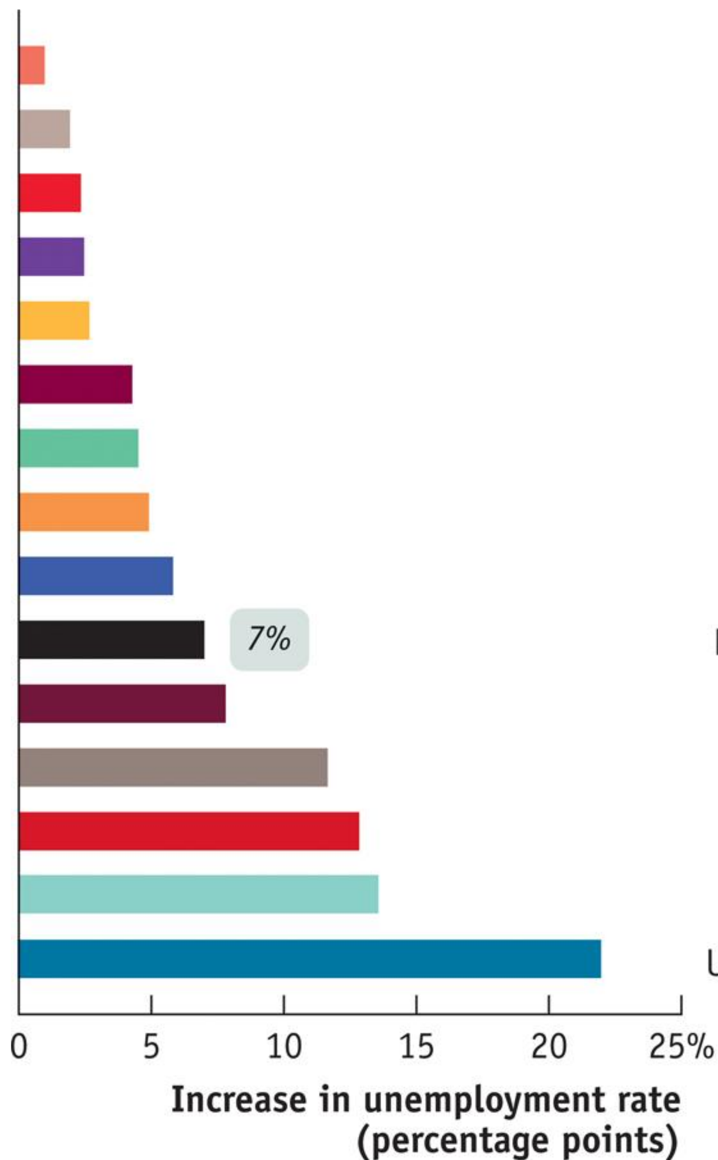
- As the figure in the next slide shows, these crises (on different continents), almost a century apart, produced similarly bad results: unemployment shot up and came down only slowly and erratically so that, even five years after the crisis, the number of jobless remained high by pre-crisis standards.

- These historical examples are typical.

Before and After Crises



Historical Episodes of Banking Crises and Resulting Unemployment



Why Are Banking-Crisis Recessions So Bad?

- Banking crises normally led to recessions.

- Three main reasons:

1) **credit crunch** arising from reduced availability of credit;
2) **financial distress** caused by a debt overhang;

3) **Loss of monetary policy effectiveness.**

Why Are Banking-Crisis Recessions So Bad?

- **Credit crunch**:

- The disruption of the banking system typically leads to a reduction in the availability of credit called a credit crunch, in which borrowers either can't get credit at all or must pay very high interest rates.

- Unable to borrow or unwilling to pay higher interest rates, businesses and consumers cut back spending, pushing the economy into a recession.

$$Y=C+I+G$$

Why Are Banking-Crisis Recessions So Bad?

Debt overhang:

- A banking crises typically pushes down prices of many assets through a vicious cycle of deleveraging, as distressed borrowers try to sell assets to raise cash, pushing down asset prices and causing further financial distress.
- Deleveraging is a factor in the spread of the crisis, lowering the value of the assets banks hold on their balance sheets and so undermining their solvency.

Why Are Banking-Crisis Recessions So Bad?

- **Monetary policy:**
- One of the main tool of policy makers for fighting negative demand shocks caused by a fall in consumer and investment spending—tends to lose much of its effectiveness.

- Under normal conditions, the central banks engages in open-markets operations, purchasing short-term government debt from banks. This leaves banks with excess reserves, which they lend out, leading to a fall in interest rates and causing an economic expansion through increased consumer and investment spending.

- In the aftermath of a banking crisis, the whole process tends to break down. Banks fearing runs by depositors or a loss of confidence by their creditors, tend to hold on to excess reserves rather than lend them out.

Governments Step In

- Before the Great Depression, policy makers adopted a laissez-faire attitude toward banking crises, allowing banks to fail in the belief that market forces should be allowed to work.

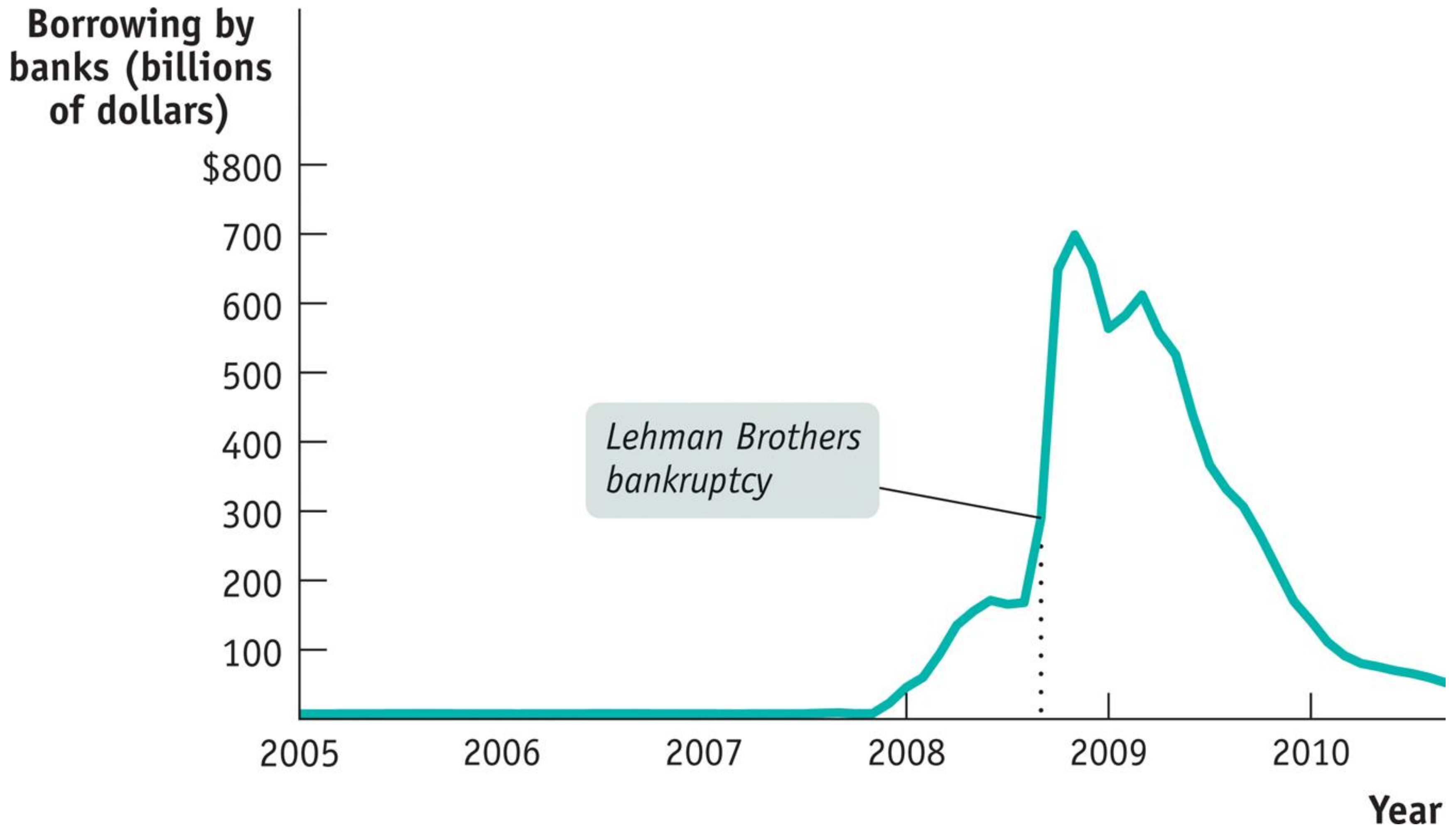
- Since the catastrophe of the 1930s, though, almost all policy makers have believed that it's necessary to take steps to contain the damage from bank failures.

- Central banks and governments can take three main kinds of action in an effort to limit the fallout from banking crises: 1) they act as the lender of last resort; 2) they offer guarantees to depositors; 3) in extreme crisis, a central bank will step in and provide financing to private credit markets.

Governments Step In

- Lender of Last Resort
- A lender of last resort is an institution, usually a country's central bank, that provides funds to financial institutions when they are unable to borrow from the private credit markets.
- In particular, the central bank can provide cash to a bank that is facing a run by depositors but is fundamentally solvent, making it unnecessary for the bank to engage in fire sales of its assets to raise cash.
- This acts as a lifeline, working to prevent a loss of confidence in the bank's solvency from turning into a self-fulfilling prophecy.
- Did the FED act as a lender of last resort in the 2008 financial crisis? Very much so.

Lender of Last Resort: The Fed in 2008



Governments Step In

Government Guarantees

- There are limits to how much a lender of last resort can accomplish: it can't restore confidence in a bank if there is good reason to believe the bank is fundamental insolvent.
- In such cases, governments often step in to guarantee bank's liabilities.
- In the case of Northern Rock in 2007, the British government eventually stepped in to guarantee all of the bank's deposits.
- Ireland's government eventually stepped in to guarantee not just deposits at all of the nation's banks, but all bank debts.
- Sweden did the same thing after its 1991 banking crisis.

Governments Step In

Provider of direct financing.

- During the depths of the 2008 financial crisis the FED expanded its operations beyond the usual measures of open-market operations and lending to depository banks.

- It also began lending to shadow banks and buying commercial paper – short-term bonds issued by private companies – as well as buying the debt of Fannie Mae and Freddie Mac, the government-sponsored home mortgage agencies.

- In this way, the FED provided credit to keep the economy afloat when private credit markets had dried up.

The Crisis of 2007–2009

- Real home prices fluctuated in a fairly narrow range until 2000, then shot up more than 60% before plunging back to Earth.
- In the aftermath of the asset price crash, many homeowners found themselves “underwater”—owing more on their mortgage than their homes were worth.
- Inevitably, this led to many defaults and foreclosures, in some cases because homeowners chose to walk away, but mainly because financially distressed homeowners—many of them newly unemployed—couldn’t keep up their mortgage payments and couldn’t sell their house for enough money to pay off their mortgage.

The Crisis of 2007–2009

- Many, though by no means all, of the defaulters had taken out subprime loans, home loans made to people who would not normally have qualified for traditional, or “prime,” mortgages. Why were lenders willing to make so many subprime loans?

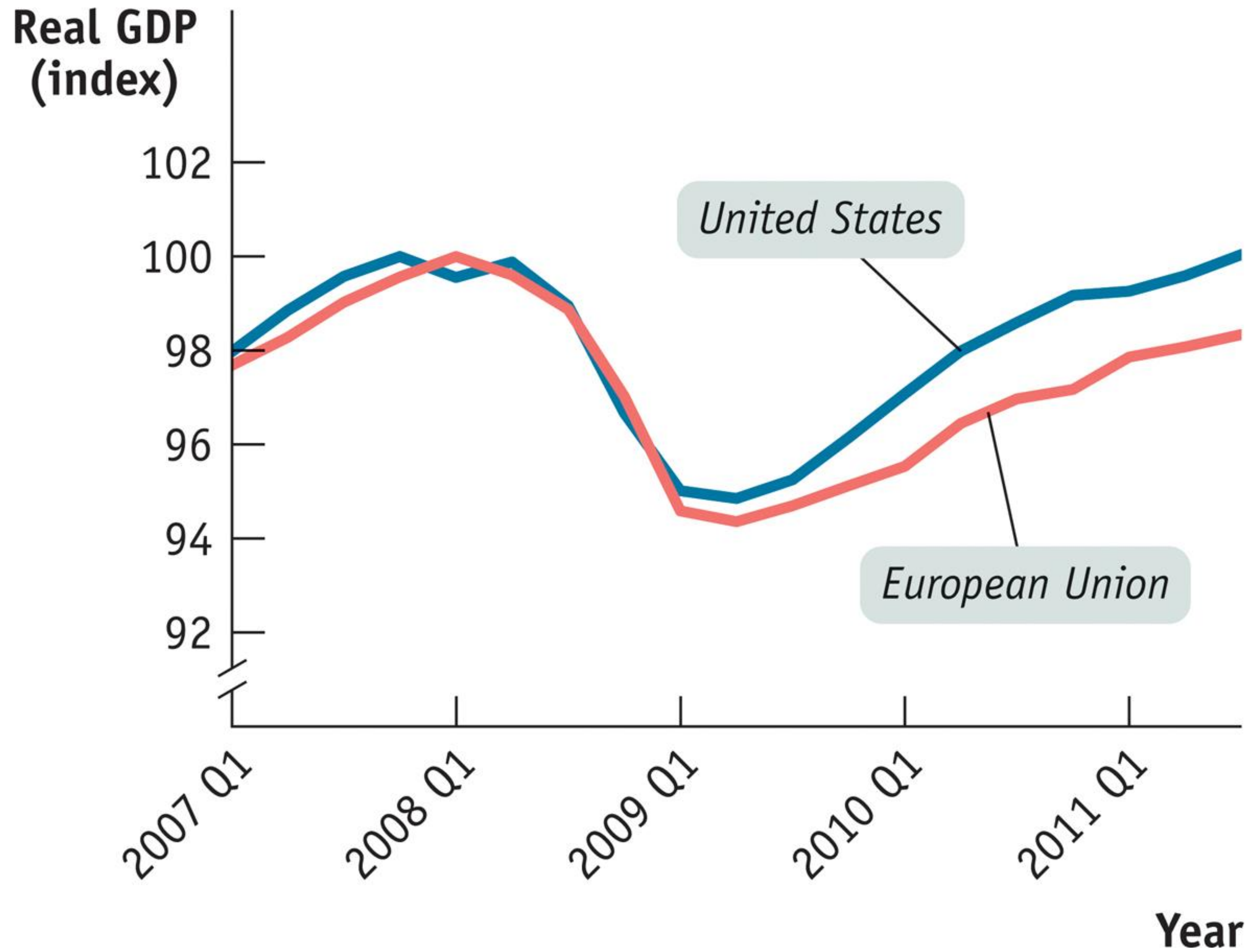
- In part because the loan originators sold the loans to other financial institutions, who then securitized the mortgage loans, assembling pools of loans and selling shares in these pools to other investors.

The Crisis of 2007–2009

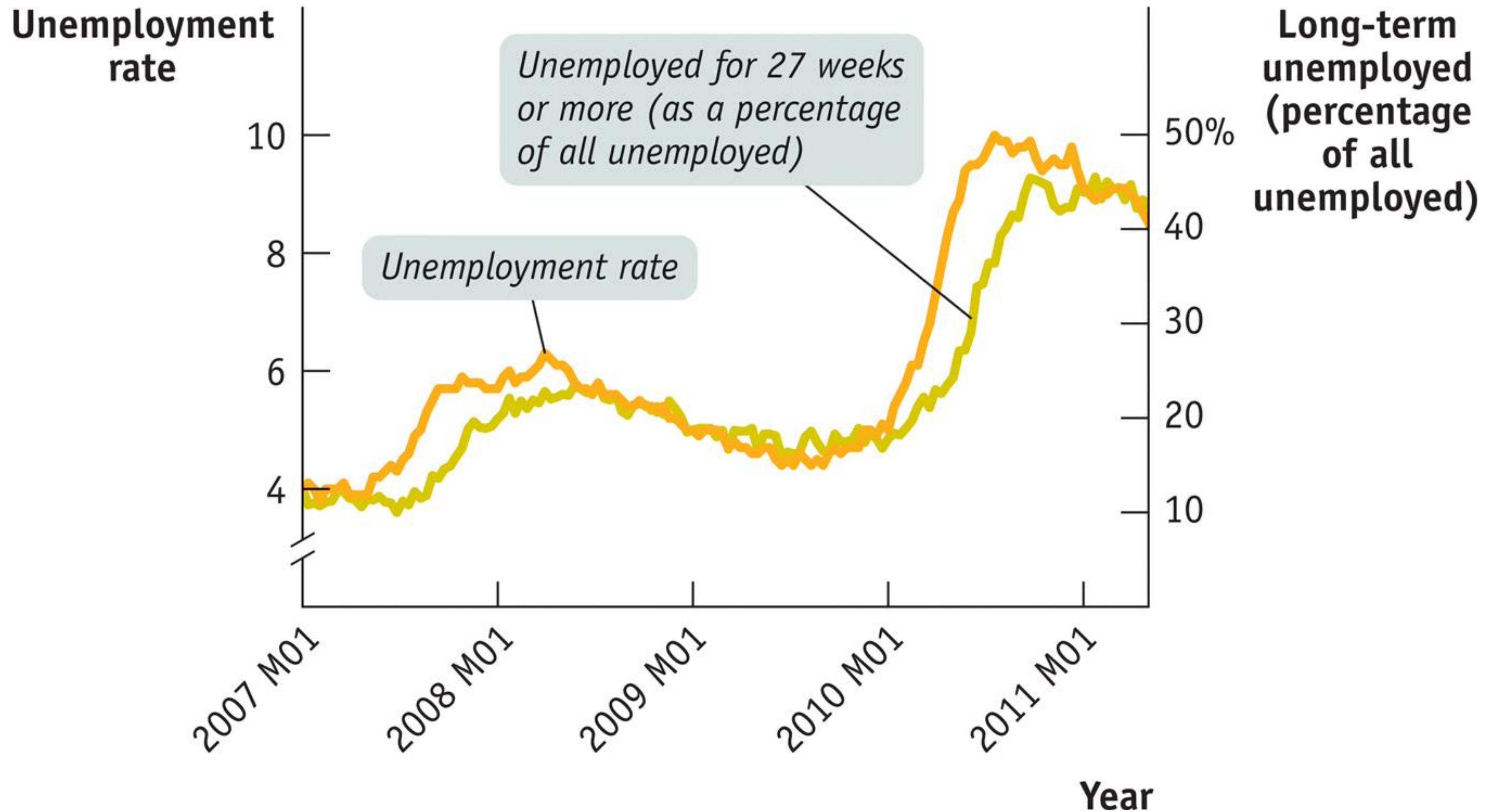
- The mortgage-backed securities produced were marketed as low-risk investments. In fact, however, the risks were greater than most investors realized.

- And, crucially, a large part of the risk stayed in the financial sector, leaving shadow banking in particular highly exposed to losses from the bursting of the housing bubble.

The Crisis of 2007–2009



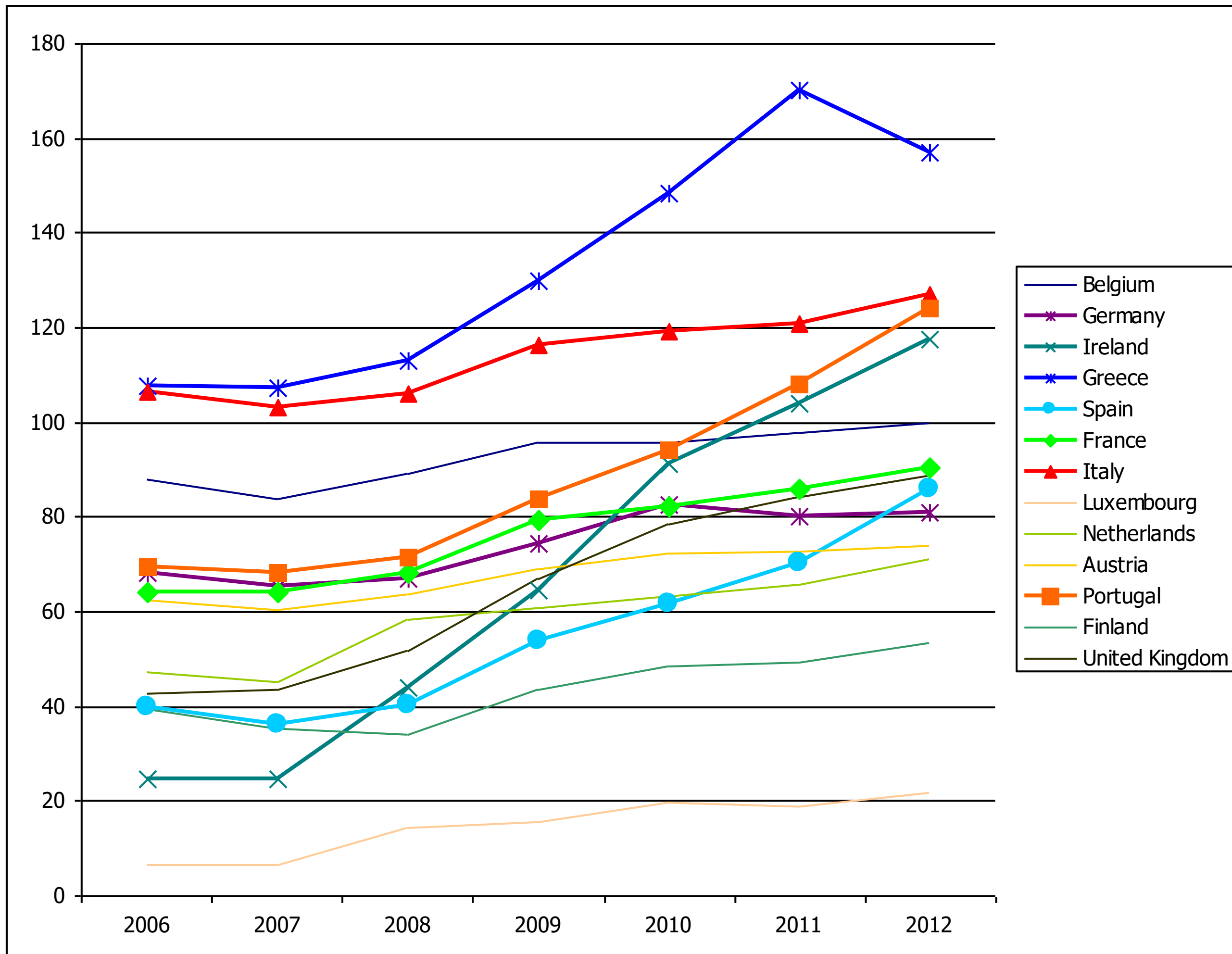
Unemployment in the Aftermath of the 2008 Crisis



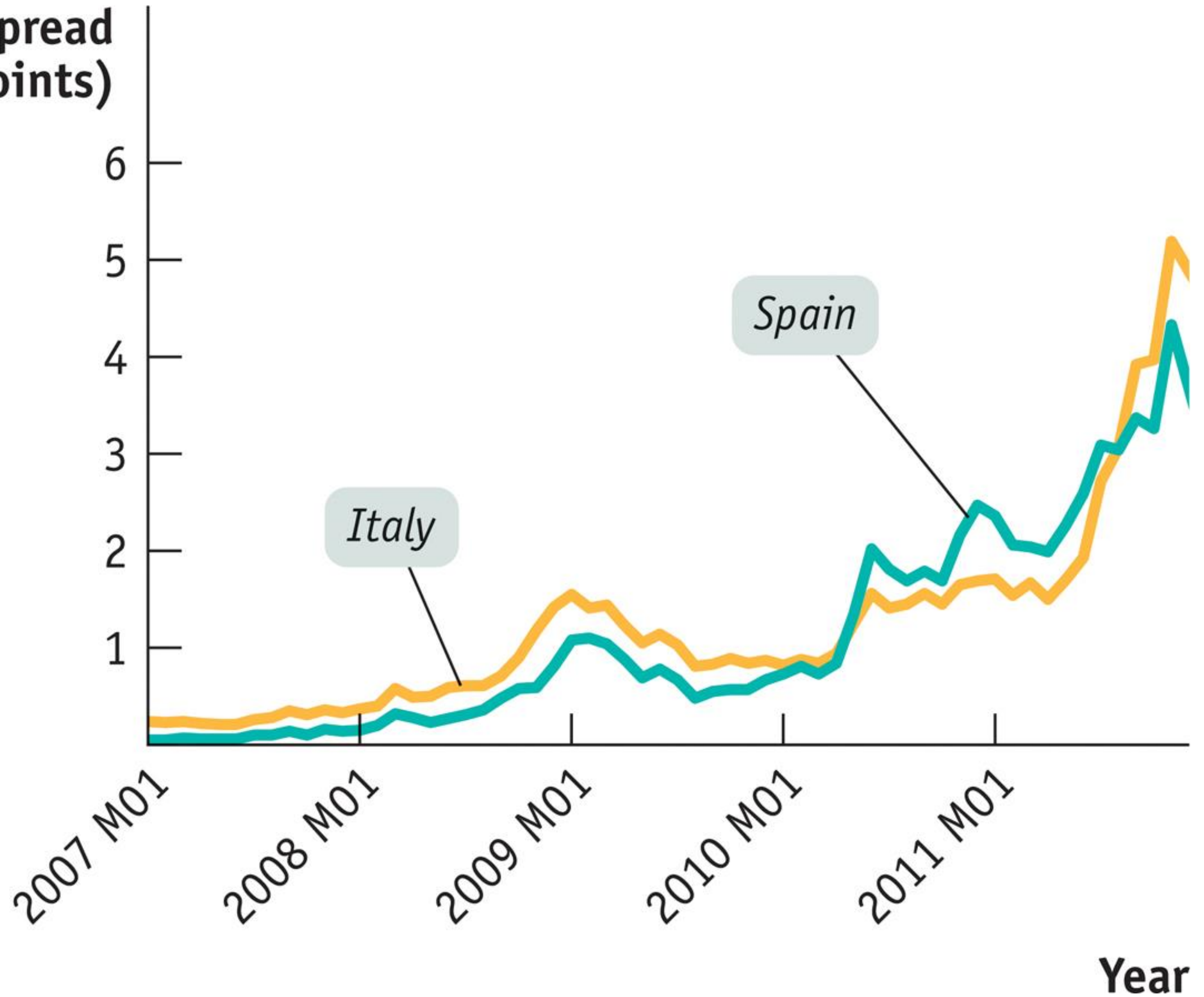
Aftershocks in Europe

- The 2008 crisis was caused by problems with private debt, mainly home loans, which then triggered a crisis of confidence in banks.
- In 2011 and 2012, fears of a second crisis were focused on public debt, specifically the public debts of Southern European countries plus Ireland.
- Europe’s trouble first surfaced in Greece, a country with a long history of fiscal irresponsibility. In late 2009 it was revealed that a previous Greek government had understated the size of the budget deficits and the amount of government debt, prompting lenders to refuse further loans to Greece.
- Eventually Greece found itself unable to borrow from private investors.

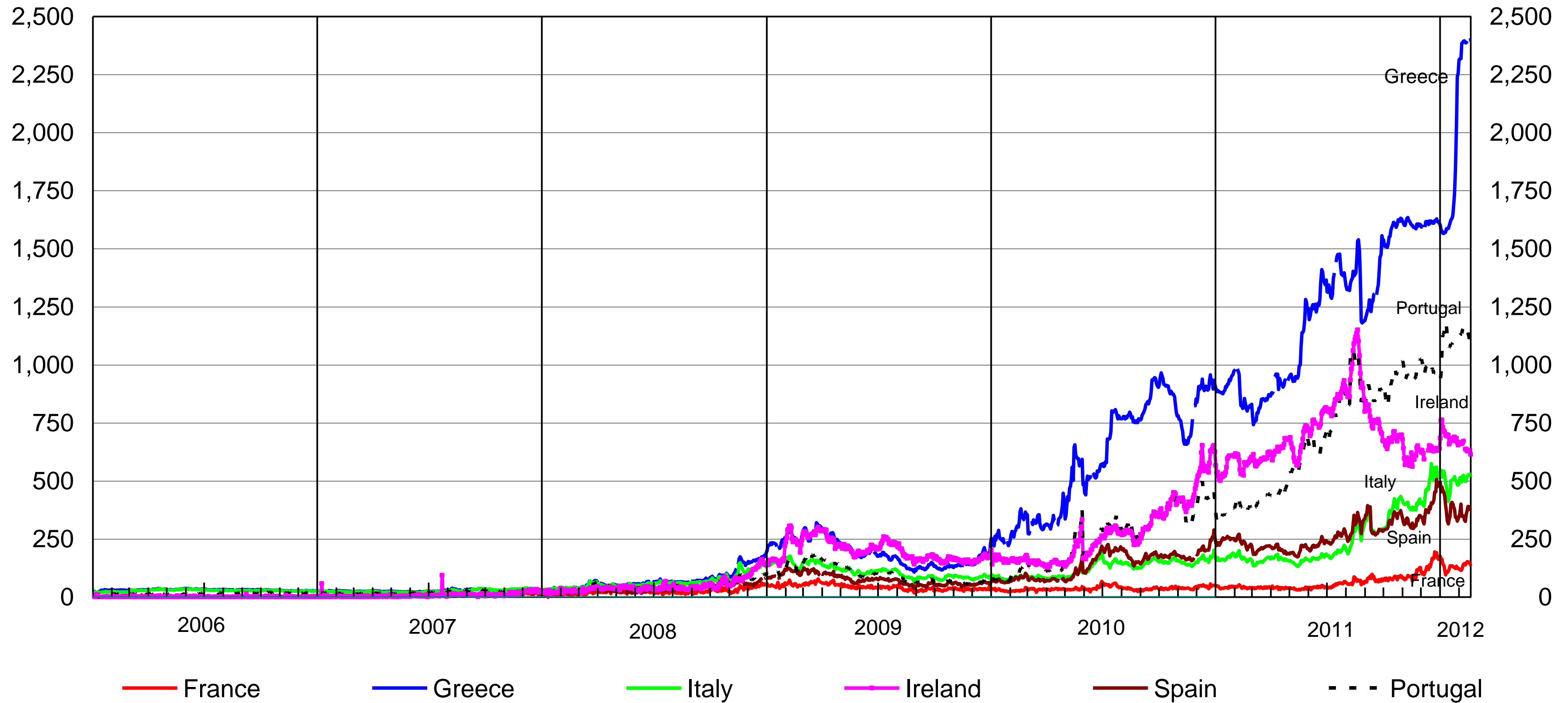
Public Debt



Interest Spread Against German 10-Year Bonds



Unemployment in the Aftermath of the 2008 Crisis



Aftershocks in Europe

- Other EU member countries and the International Monetary Fund provided her with emergency funding, on the condition that the Greek government implemented a rigorous policy of containment of expenditure (austerity). This has precipitated the economic conditions of the population and unleashed social discontent.

- By mid-2014, Greece could already borrow at much lower interest rates. This reflected growing confidence that Greece would deliver on its promises in terms of public spending.

Regulation in the Wake of the Crises

Consumer Protection

- Creation of the Consumer Financial Protection Bureau, dedicated to policing financial industry practices and protecting borrowers.

Derivatives Regulation

- Under the new law, most derivatives have to be bought and sold in open, transparent markets, hopefully limiting the extent to which financial players can take on invisible risk.

Regulation in the Wake of the Crises

Regulation of Shadow Banks

- Dodd-Frank: gives a special panel the ability to designate financial institutions as "systemically important," meaning that their activities have the potential to create a banking crisis; subject to bank-like regulation of their capital, their investments, and so on.

Resolution Authority

- Empowers the government to seize control of financial institutions that require a bailout, the way it already does with failing commercial banks.

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