Financial Institutions and System

Week 10: Financial Crises in Advanced and Emerging Market Economies

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Agenda

1. Financial Crises in Advanced & Emerging Market Economies

2. Class Activity

1. Financial Crises in Advanced & Emerging Market Economies

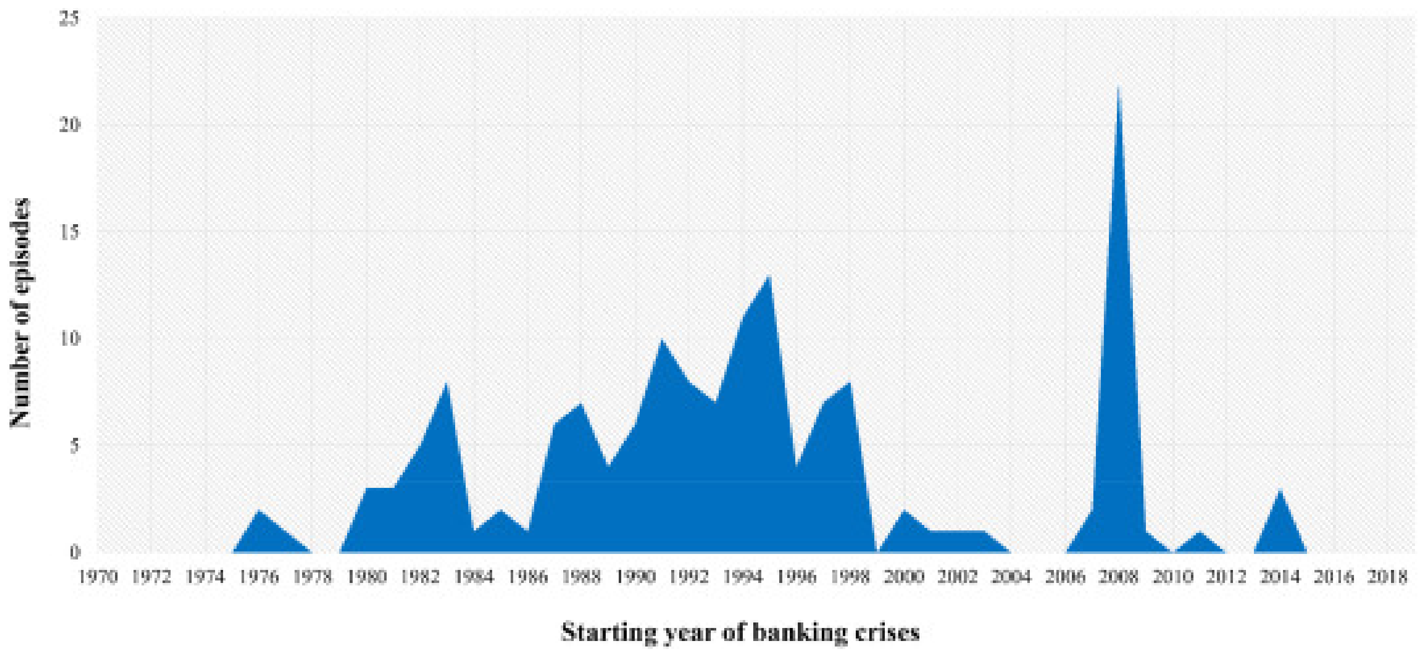
What Is a Financial Crisis?

- A **financial crisis** occurs when there is a large disruption to information flows in financial markets.
- As a result, financial frictions (asymmetric information problems) increase sharply, leading to a breakdown in the efficient allocation of capital.
- This can result in a **sharp decline in asset prices**, a **collapse of financial institutions**, and a **severe contraction in economic activity**.
- Financial crises can be triggered by various factors, including **macroeconomic shocks**, **financial innovations**, and **regulatory failures**.

Types of Financial Crises

- **Banking Crises**: Failures of financial institutions due to insolvency or liquidity issues.
  - Example: 2008 Global Financial Crisis
- **Currency Crises**: Sudden devaluation of a country's currency, often due to loss of confidence in its value.
  - Example: 1997 Asian Financial Crisis
- **Sovereign Debt Crises**: Governments defaulting on their debt obligations, leading to loss of access to international capital markets.
  - Example: 2010 European Sovereign Debt Crisis
- **Stock Market Crashes**: Sudden and severe declines in stock prices, often driven by panic selling or loss of investor confidence.
  - Example: 1929 Great Depression Crash

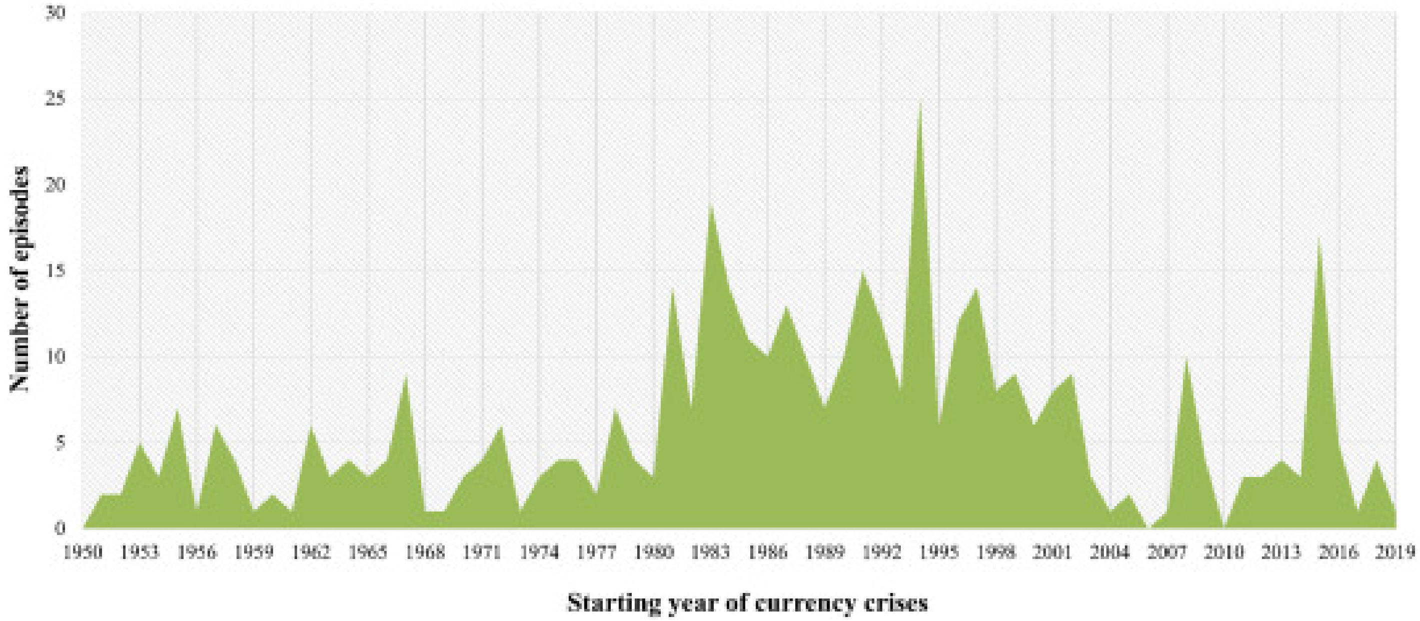
Timeline of Banking Crises



- Significant surge in banking crises during late 1980s–1990s and again in 2007–2009.
- Major cluster in 2008 reflects the Global Financial Crisis.

Source: Nguyen, T. C., Castro, V., & Wood, J. (2022). *Economic Modelling*, 108.

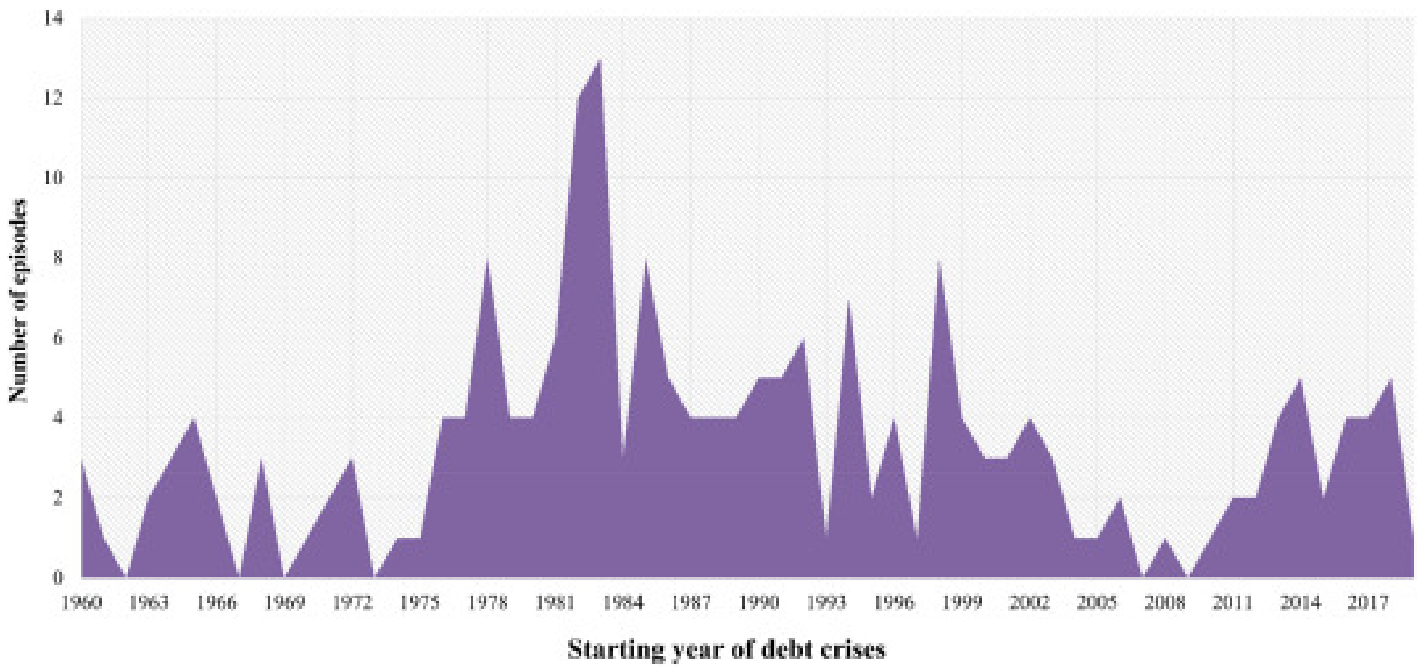
Timeline of Currency Crises



- Currency crises were frequent in the 1980s–1990s.
- Peaks coincide with emerging market volatility and global shifts.

Source: Nguyen, T. C., Castro, V., & Wood, J. (2022). *Economic Modelling*, 108.

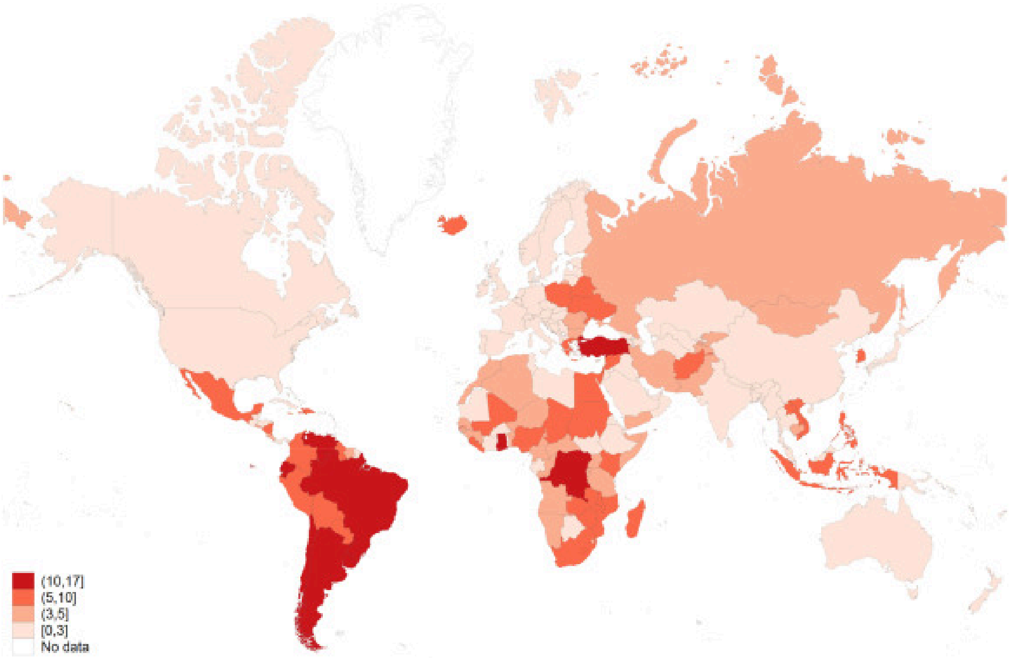
Timeline of Debt Crises



- Most pronounced during early 1980s Latin American debt crisis.
- Post-2010 uptick linked to sovereign debt risks in Europe and others.

Source: Nguyen, T. C., Castro, V., & Wood, J. (2022). *Economic Modelling*, 108.

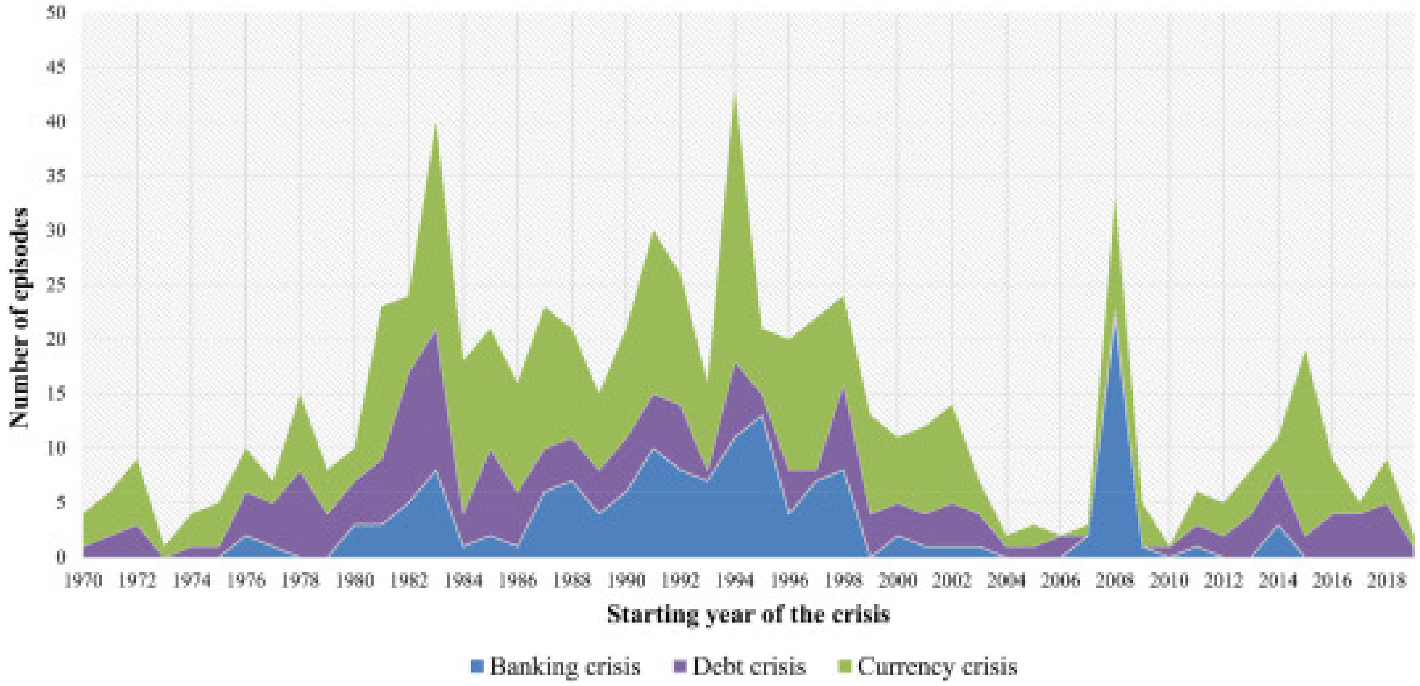
Geographic Distribution of Crisis Episodes



- Most affected regions: Latin America, Sub-Saharan Africa, parts of Asia.
- Developed economies experience fewer but often more globally impactful crises.

Source: Nguyen, T. C., Castro, V., & Wood, J. (2022). *Economic Modelling*, 108.

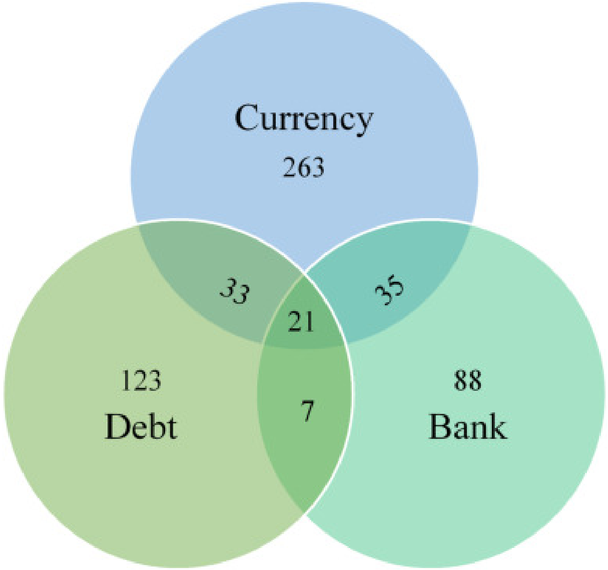
Combined Crisis Timeline



- Shows overlapping banking, debt, and currency crises.
- Clusters around early 1980s, late 1990s, and 2008.

Source: Nguyen, T. C., Castro, V., & Wood, J. (2022). *Economic Modelling*, 108.

Crisis Type Intersections



- Currency crises are most common and overlap significantly with banking and debt crises.
- 7 cases involved all three types simultaneously.

Source: Nguyen, T. C., Castro, V., & Wood, J. (2022). *Economic Modelling*, 108.

Dynamics of Financial Crises

Stage One: Initiation of a Financial Crisis

- **Credit Boom and Bust**:
  - Financial innovation or liberalization often precedes crises.
  - Initially promotes development but leads to **credit booms**.
  - Excessive risk-taking due to lack of proper screening/monitoring.
  - When loans fail → **capital falls** → **deleveraging** → credit freeze.
  - Investment declines → economic activity contracts.

Credit Boom and Deleveraging (continued)

- Losses on loans reduce FI capital → cut lending.
- Lender-savers pull funds out.
- Asymmetric information problems worsen.
- Productive investment dries up → downturn begins.

Dynamics of Financial Crises (continued)

Asset-Price Boom and Bust

- Prices driven by sentiment above fundamentals → **bubble**.
- Often fueled by credit booms.
- Bursting of bubble:
  - Net worth & collateral ↓
  - Moral hazard ↑
  - Lending tightens → deleveraging → recession deepens

Increase in Uncertainty

- Triggered by: recessions, stock crashes, major bank failures.

- Uncertainty limits flow of credit → weakens economic activity.

Dynamics of Financial Crises (continued)

Stage Two: Banking Crisis

- Poor loan performance & tougher conditions → insolvency.
- Bank panic: contagion from asymmetric info.
- Depositors can’t assess bank quality → mass withdrawals.
- Fire sales → asset values collapse → more insolvencies.
- Creditworthiness info vanishes → severe adverse selection.
- Lending halts → productive firms fail.
- Authorities liquidate insolvent banks.
- Frictions ease → recovery possible.

Dynamics of Financial Crises (continued)

Stage Three: Debt Deflation

- If prices fall sharply → **debt deflation** begins:
  - Real value of liabilities ↑ but assets do not.
  - Net worth ↓ → adverse selection/moral hazard ↑
  - Lending declines → deep, prolonged recession

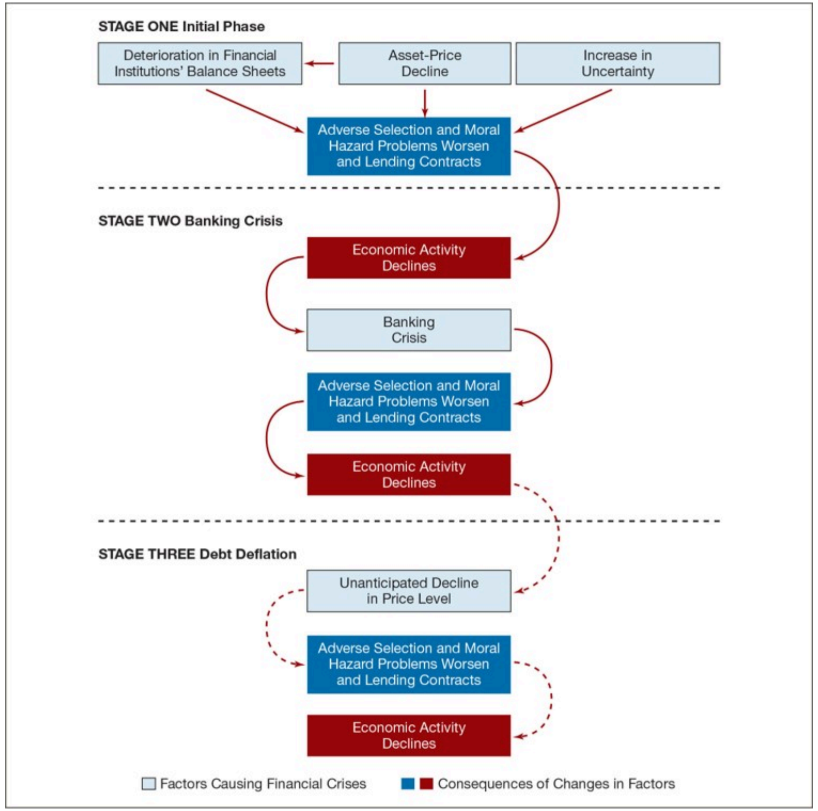


Figure: Sequence of events in financial crises
Source: Mishkin (2022)

The Great Depression: A Historical Example

- **Stock market crash**:
  - Speculation led Fed to tighten policy in 1928–29.
  - Crash followed in Oct 1929 (↓40%).
- **Global contagion** → global asset price declines.
- **Bank failures**:
  - Currency depreciation and market crashes hit bank B/S.
  - Major panics: US (1930–33), Germany, Austria, Italy.
- **Debt deflation**:
  - Collapse in lending & spending.
  - Germany: 25% unemployment in 1932.

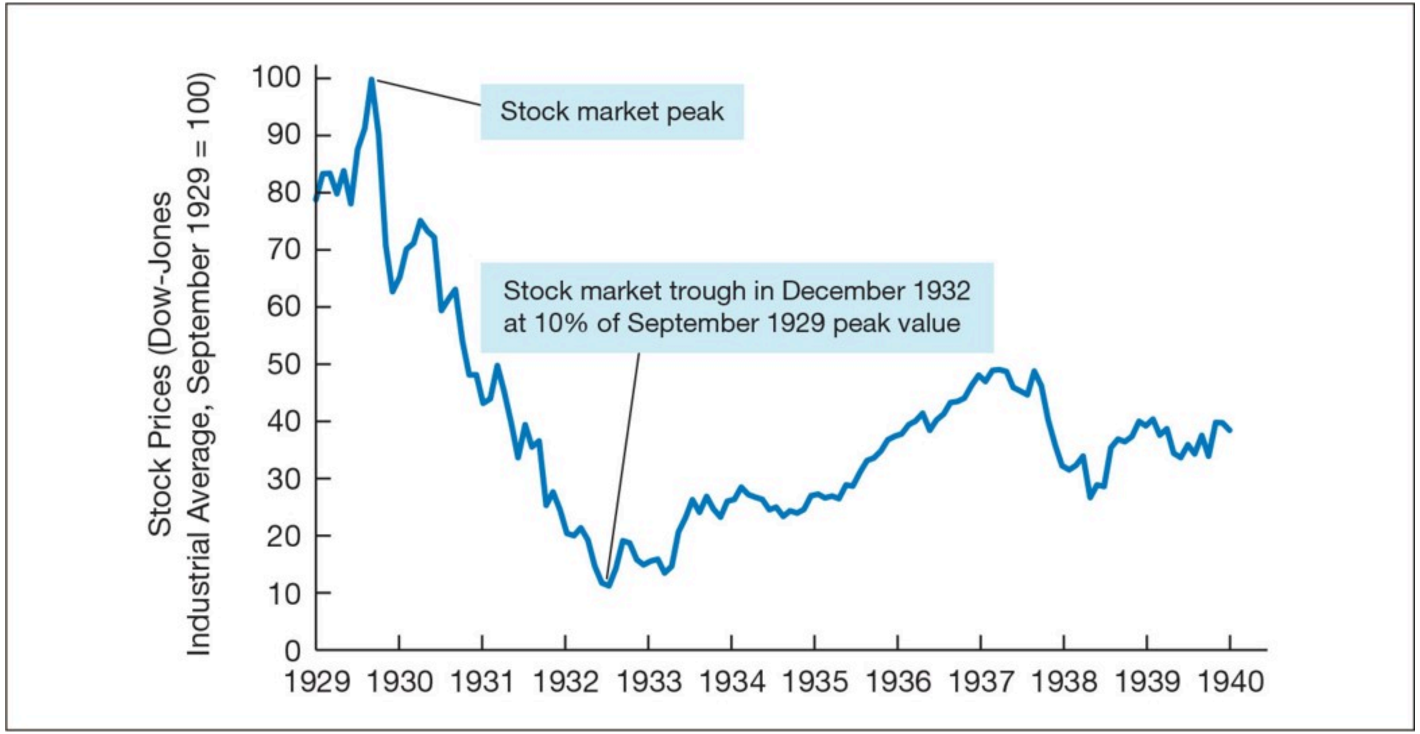


Figure: Stock Prices During the Great Depression

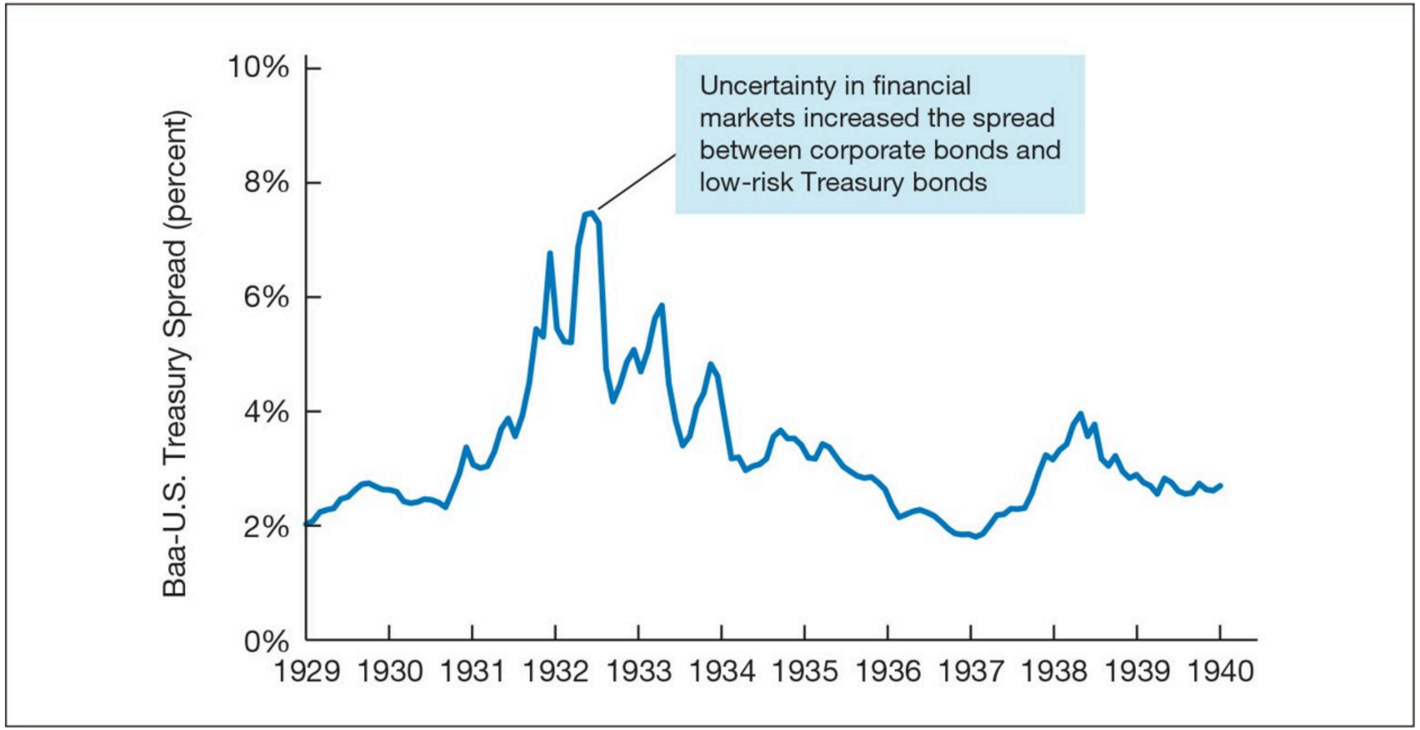


Figure: Credit Spreads During the Great Depression

The Global Financial Crisis (2007-2009)

Causes:

- **Subprime mortgage securitization** via SPVs, MBS, CDOs.
- Tranches created structured risk.
- Investors poorly understood actual risk exposure.

CDO Tranches:

- Super Senior: Paid first, lowest risk
- Senior: Moderate risk
- Mezzanine: Higher yield/risk
- Equity: First to lose when defaults occur

Problem: As complexity $\uparrow$, transparency $\downarrow$ $\rightarrow$ asymmetric info $\uparrow$

The Global Financial Crisis (2007-2009) (continued)

Agency Problems:

- Mortgage brokers & banks passed off risk quickly.
- Misaligned incentives: principal-agent issue.
- Adverse selection: risk-lovers seek loans

Credit-Rating Agencies:

- Rated and advised on same products.
- Inflated ratings enabled risky securities to proliferate.

The Global Financial Crisis (2007–2009)

Housing Bubble and Collapse

- Easy credit + low rates → housing demand ↑
- Prices soared → standards dropped
- Bubble burst → defaults ↑
- Subprime MBS collapsed in value

Balance Sheet Deterioration

- FI net worth ↓ → deleveraging
- Credit supply shrinks → activity contracts

Shadow Banking Crisis

- Fire sales and rising haircuts
- Asset values ↓ → liquidity scramble → more deleveraging

Failures of Major Institutions

- Bear Stearns, Lehman Brothers, Merrill Lynch
- Fannie Mae & Freddie Mac rescued
- AIG bailed out by Fed

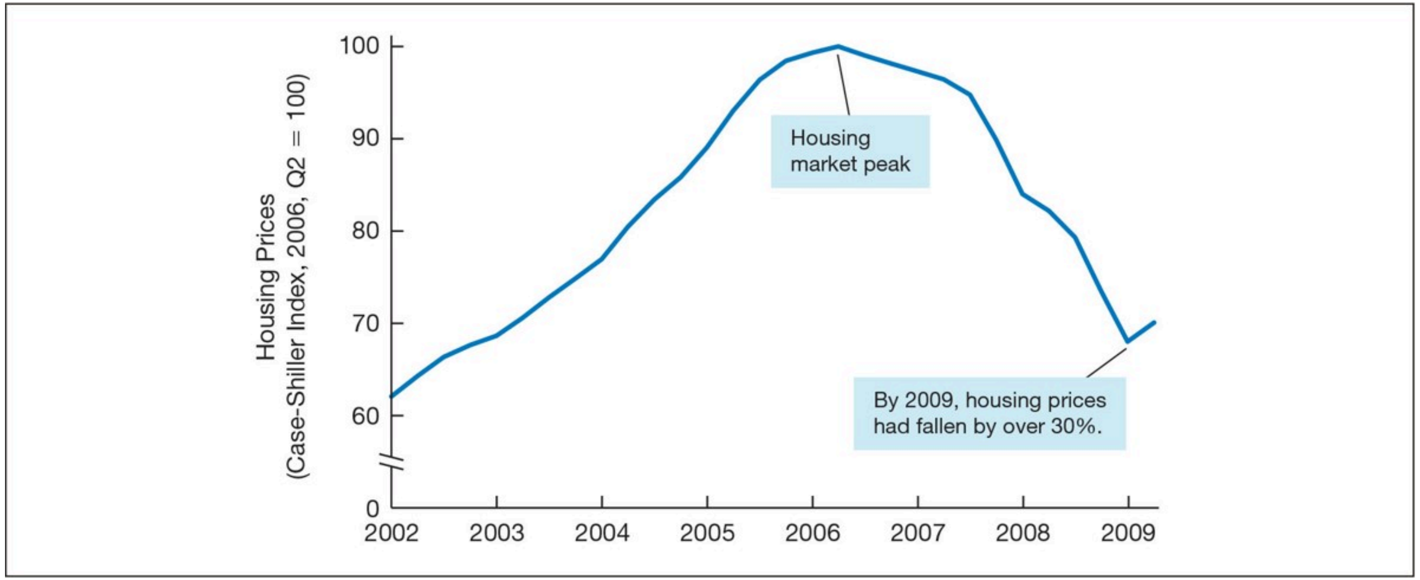


Figure: Housing Prices and the Crisis

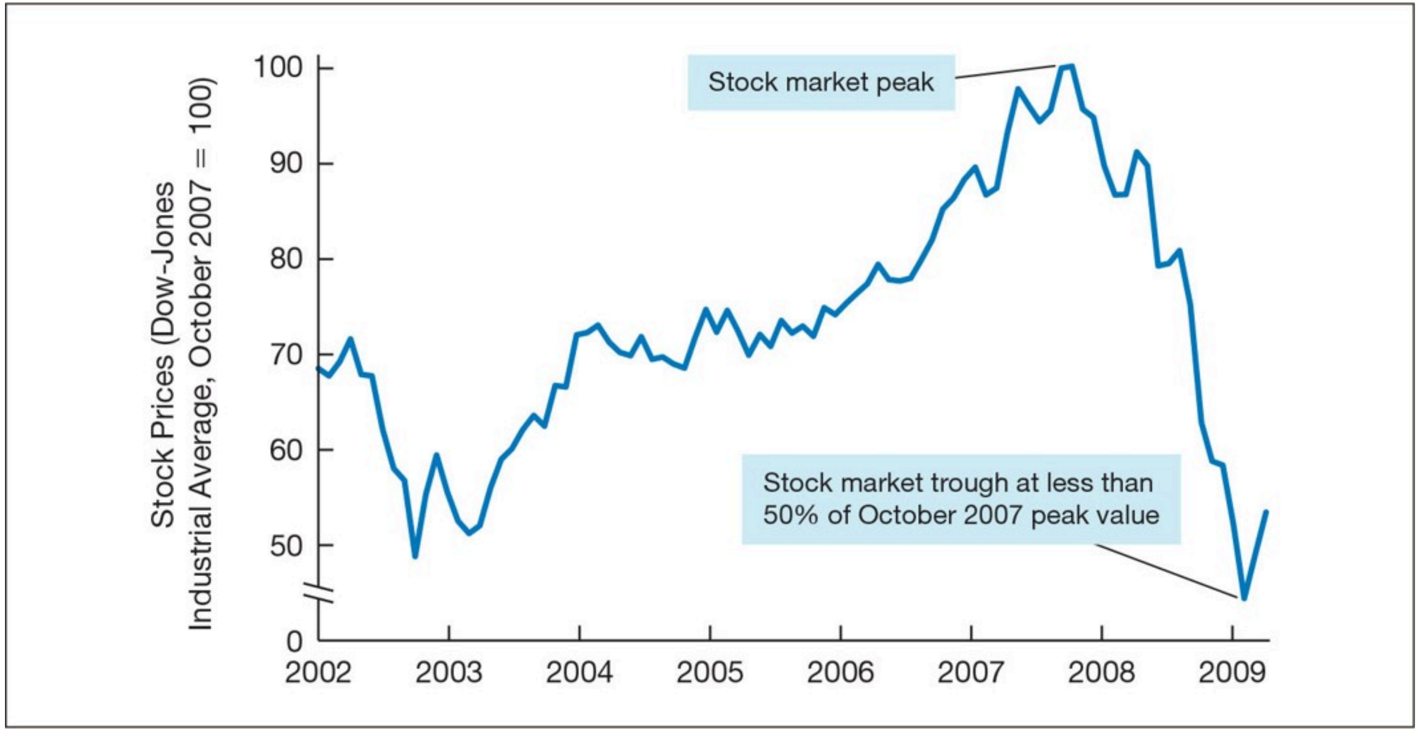


Figure: Stock Prices Collapse

The Global Financial Crisis (2007–2009)

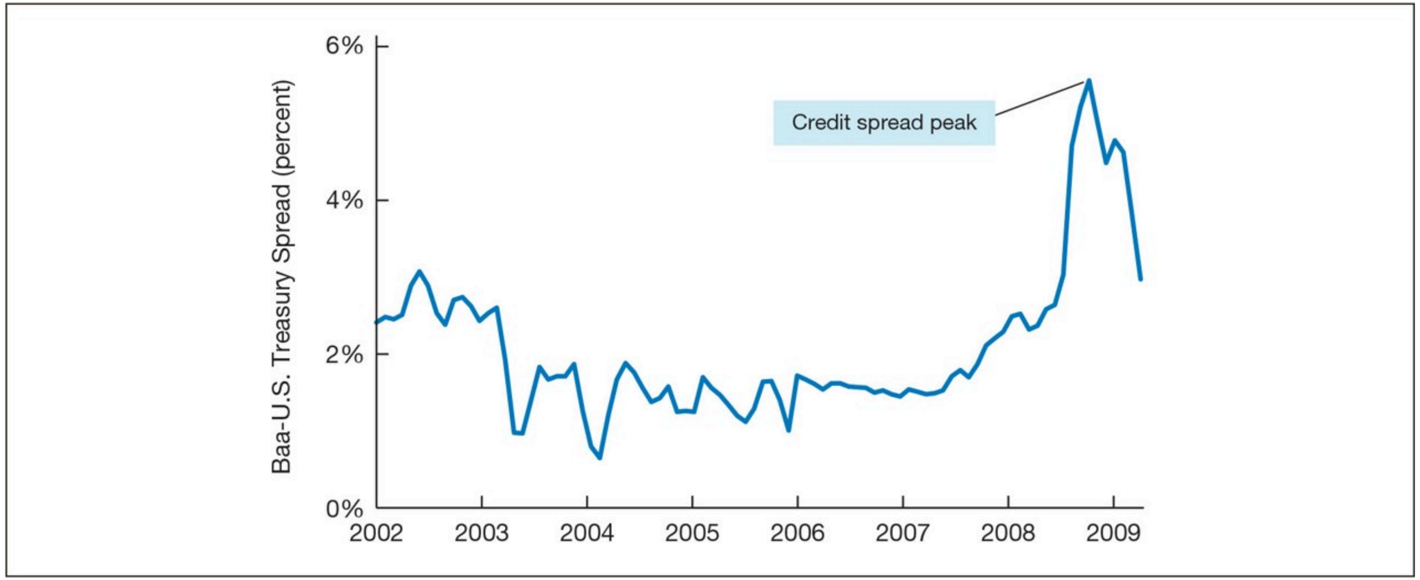
Peak of the Crisis

- 2008: Bailout rejected then passed
- Stock market saw worst weekly loss in history
- Baa–Treasury spreads ↑ to >5.5%

The Global Financial Crisis (2007–2009)

Economic Impact

- Borrowing cost ↑ → investment & consumption ↓
- Unemployment rose above 10% in 2009 → **Great Recession**



The Global Financial Crisis (2007–2009)

Government Response

- **Short-term**: emergency stimulus, bailouts, liquidity
- **Result**: less severe than the Great Depression

Long-term Global Reforms

- Global coordination essential
- Macroprudential oversight added
- National & international reforms promoted:
  - Legal frameworks
  - Risk-based supervision
  - Financial consumer protection

Macro- vs Microprudential Regulation

- Micro: focus on individual FI risk
- Macro: focus on systemic risk
- Before 2007 $\rightarrow$ emphasis on micro only
- Post-crisis $\rightarrow$ macro became essential

The Global Financial Crisis (2007–2009)

International Coordination

- Voluntary cooperation often insufficient
- Creation of **Financial Stability Board (FSB)**:
  - Info sharing, enforcement, cross-border regulation

Debate: Was the Fed to Blame?

- Taylor: Low Fed funds rate → low mortgages → bubble
- Bernanke: Blamed lax standards, new products, global inflows
- **Debate remains unresolved.**

European Sovereign Debt Crisis

- Post-2009 deficits → rising yields
- Crisis spread from Greece → Portugal, Italy, Spain
- Eurozone sustainability questioned

Could COVID Have Triggered a Crisis?

- In 2020, all typical crisis triggers appeared:
  - Crash, uncertainty, unemployment spike
- Fed & U.S. gov't acted fast → spreads narrowed

Dynamics of Financial Crisis in Emerging Market Economies

- The dynamics of financial crises in emerging market economies (EMEs) resemble those in advanced economies, with key differences.
- **Stage One: Initial Phase**
  - **Path A**: Mismanagement of financial liberalization and globalization → credit boom and bust
  - Seen in Mexico (1994) and many East Asian countries (1997)
  - Financial globalization makes EMEs more vulnerable to shocks due to less developed systems

Dynamics of Financial Crisis in Emerging Market Economies (continued)

Path A (cont'd): Credit Boom and Bust

- EMEs may begin with solid fiscal policy (e.g., Mexico, East Asia)
- Weak screening/monitoring of borrowers and loose supervision of banks
- Risky lending practices create massive future losses
- Financial globalization allows domestic banks to borrow abroad
  - High interest rates → capital inflows
  - Often fixed exchange rates attract even more capital
- End of the Lending Boom
  - Risky lending → major losses → weak bank balance sheets
  - In EMEs, the absence of developed securities markets exacerbates crises
  - Fewer alternatives exist to resolve information problems compared to advanced economies
- Principal-Agent Problem
  - Regulation is weak due to powerful domestic business interests
  - Supervisors may act in business interests, not public interest
  - Political ties → weakened oversight

Dynamics of Financial Crisis in Emerging Market Economies (continued)

Path B: Severe Fiscal Imbalances

- Inappropriate financing of government spending (e.g., Argentina, Russia)
- Governments pressure banks to hold public debt
- Loss of confidence → fall in bond prices → banking losses
- May trigger bank panic and worsen asymmetric info problems

Additional Triggers

- Rising global interest rates
- Falling asset prices
- Political instability or recession
- Collapse of large firms

Dynamics of Financial Crisis in Emerging Market Economies (continued)

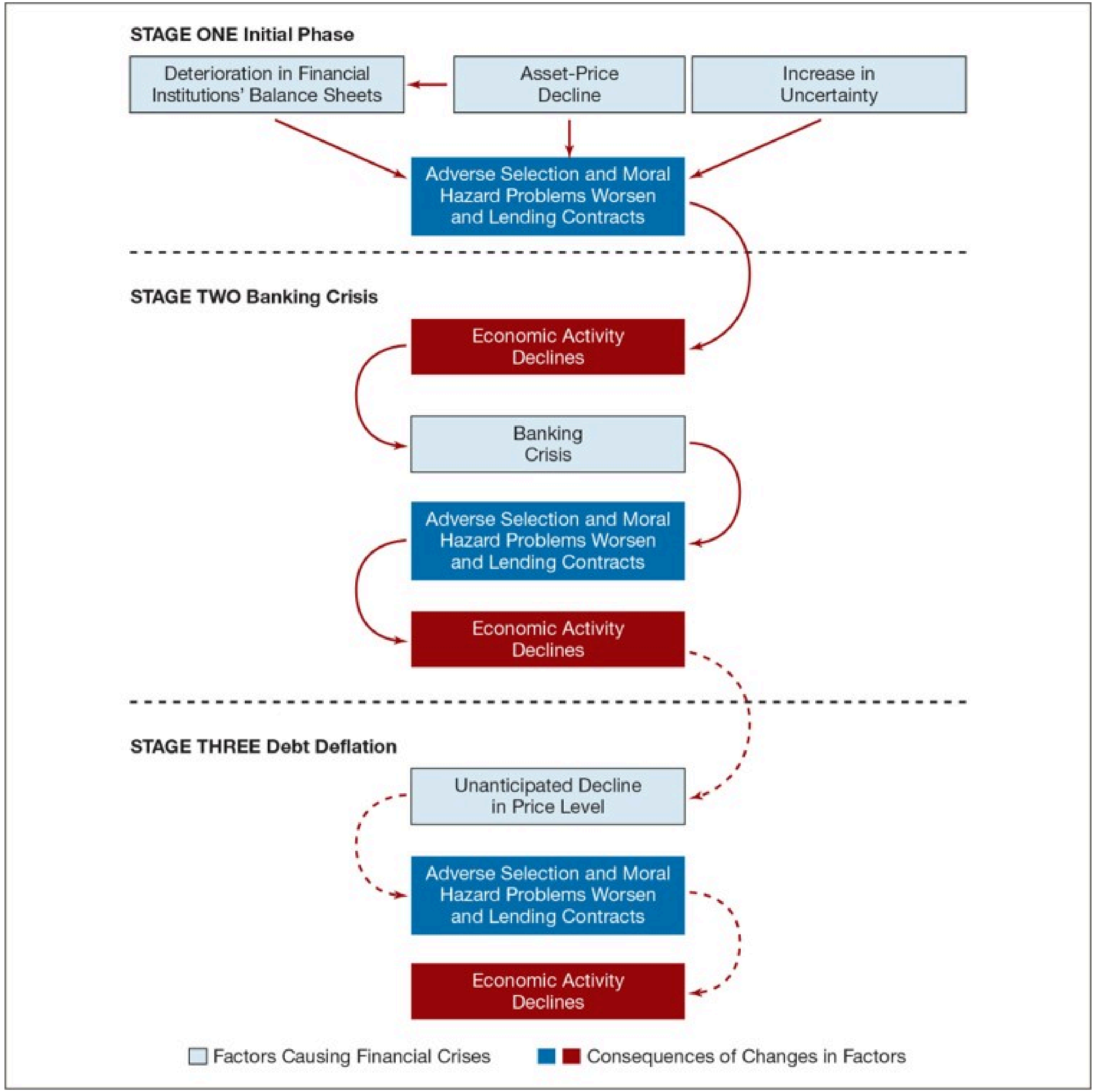
Stage Two: Currency Crisis

- Fixed exchange rate regimes face speculative attacks
- Deteriorating bank BS prevents interest rate hikes $\rightarrow$ loss of confidence
- Governments abandon pegs under pressure
- Fiscal Imbalances: Investors sell domestic currency fearing sovereign default
- Speculation: Safe bet against fixed currency leads to collapse

Dynamics of Financial Crisis in Emerging Market Economies (continued)

Stage Three: Full-Fledged Financial Crisis

- EMEs often have debt in foreign currencies (currency mismatch)
- Depreciation increases debt burden, reduces firm net worth
- Inflation rises from import prices
- High interest rates $\rightarrow$ worsened info frictions and investment collapse
- Banks face:
  - Declining asset values
  - Increasing liabilities (foreign debt)
- Defaults surge, liquidity worsens


STAGE ONE Initial Phase
Deterioration in Financial Institutions' Balance Sheets
Asset-Price Decline
Increase in Uncertainty
Adverse Selection and Moral Hazard Problems Worsen and Lending Contracts
STAGE TWO Banking Crisis
Economic Activity Declines
Banking Crisis
Adverse Selection and Moral Hazard Problems Worsen and Lending Contracts
Economic Activity Declines
STAGE THREE Debt Deflation
Unanticipated Decline in Price Level
Adverse Selection and Moral Hazard Problems Worsen and Lending Contracts
Economic Activity Declines
Factors Causing Financial Crises
Consequences of Changes in Factors

Application: South Korea 1997–98

- Prior to crisis: strong fundamentals, rapid growth
- Financial liberalization → lending boom
- Banks borrowed short-term foreign capital → invested in chaebols
- Weak regulation → mounting losses

Role of Chaebols

- Dominant, politically protected conglomerates
- High leverage, low returns
- Accessed capital via merchant banks
- Merchant banks funneled funds into unproductive projects

Application: South Korea 1997–98 (continued)

Stock Decline and Failures

- Major chaebol bankruptcies (e.g., Hanbo) created panic
- Uncertainty surged → stock market fell >50%

Crisis Escalates

- Speculators attacked the won
- Sharp depreciation → foreign currency debt doubled
- Investment froze → output fell >6%
- Interest rates >20%, inflation nearly 10%

Government Response

- Guaranteed deposits, began reforms
- Confidence slowly returned
- Recovery followed

Application: Argentina 2001-02

- Chronic fiscal deficits from provincial overspending
- Recession → declining tax revenues
- Banks forced to hold sovereign debt

Collapse Triggers

- Public lost confidence in debt repayment
- Corralito imposed: weekly cash withdrawal limits
- Currency board abandoned in Jan 2002

Application: Argentina 2001–02 (continued)

Full-Blown Crisis

- Peso collapsed: \$1 → \$0.30
- High % of debt in USD → massive balance sheet destruction
- Inflation reached 40%
- Output fell >15%, unemployment >20%

Recovery

- Commodity boom helped GDP rebound
- Debt restructuring began (2005)
- Argentina returned to bond markets in 2016

Iceland: AE Behaves Like an EME

- 2003: banks privatized, borrowed short-term in foreign currency
- Used funds for risky investments → stock market 250% of GDP
- Lehman collapse shut down funding
- Krona collapsed → debt burden surged → crisis

Preventing Future EM Crises

Strengthen Supervision

- Capital requirements
- Risk management
- Ban commercial ownership
- Supervisor independence

Encourage Market Discipline

- More transparency
- Incentivize prudent lending

Limit Currency Mismatch

- Discourage foreign-denominated debt
- Move to flexible FX regimes

Sequence Liberalization

- Liberalize after institutional capacity built

Summary

- Financial crises can be triggered by various factors, including macroeconomic shocks, financial innovations, and regulatory failures.
- The dynamics of financial crises in advanced economies and emerging market economies share similarities but also have key differences.
- The 2007–2009 Global Financial Crisis was driven by subprime mortgage securitization, agency problems, and credit-rating agency failures.
- The European Sovereign Debt Crisis highlighted the vulnerabilities of the Eurozone and the need for coordinated responses.
- Emerging market economies face unique challenges, including currency mismatches and reliance on foreign capital, which can exacerbate crises.
- Historical examples, such as the 1997–98 South Korean crisis and the 2001–02 Argentine crisis, illustrate the dynamics of financial crises in different contexts.
- Preventing future crises requires strengthening supervision, encouraging market discipline, limiting currency mismatches, and sequencing financial liberalization.

2. Class Activity

Any QUESTIONS?

Thank You!

Next Class

- (May 09)
  - **Chap 18.** The Foreign Exchange Market
  - **Chap 19.** The International Financial System