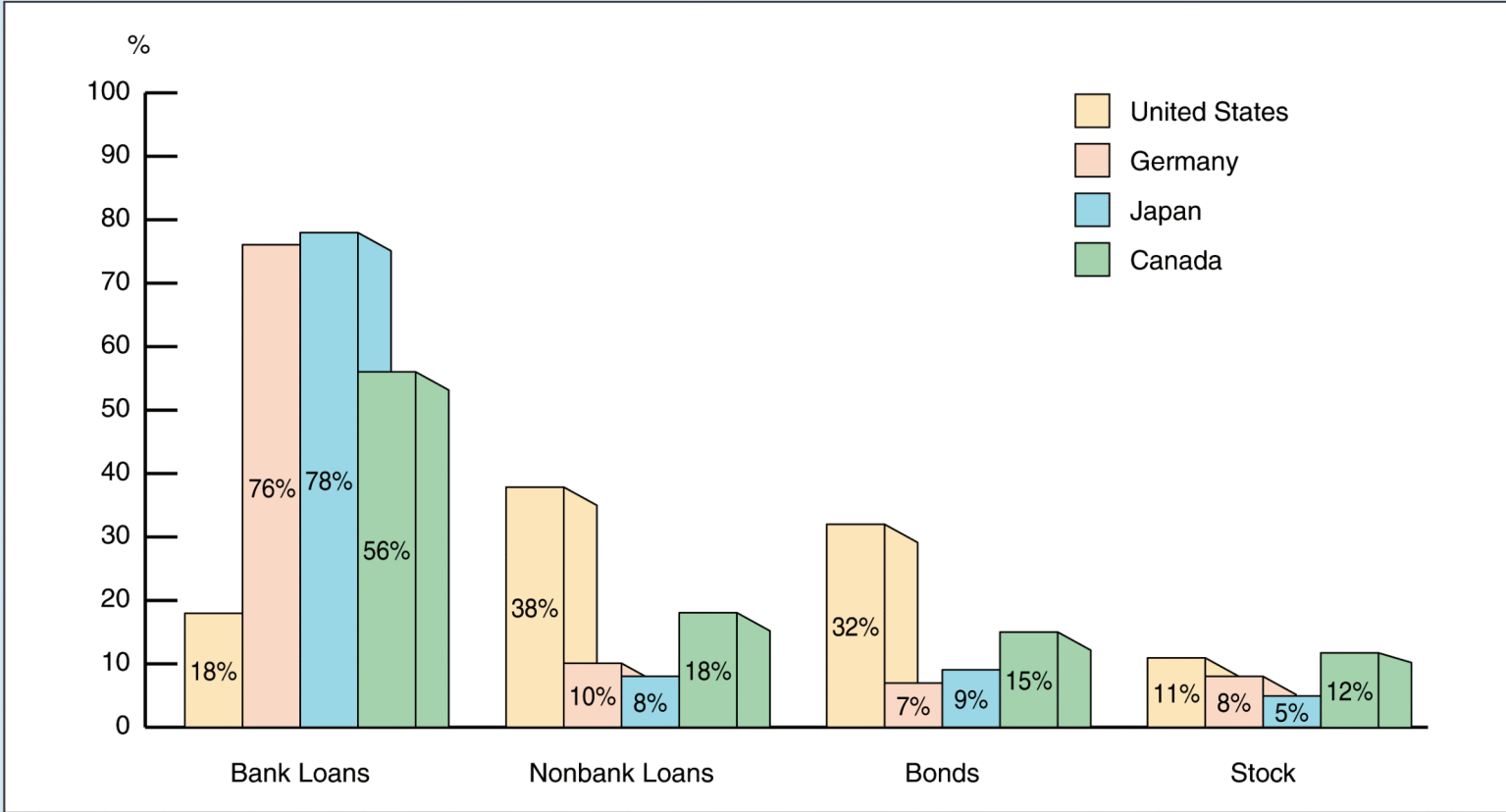


# Chapter 8

## An Economic Analysis of Financial Structure

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**FIGURE 1 Sources of External Funds for Nonfinancial Businesses:  
A Comparison of the United States with Germany, Japan, and Canada**

*Source:* Andreas Hackethal and Reinhard H. Schmidt, "Financing Patterns: Measurement Concepts and Empirical Results," Johann Wolfgang Goethe-Universität Working Paper No. 125, January 2004. The data are from 1970–2000 and are gross flows as percentage of the total, not including trade and other credit data, which are not available.



# Eight Basic Facts

1. Stocks are not the most important sources of external financing for businesses
2. Issuing marketable debt and equity securities is not the primary way in which businesses finance their operations
3. Indirect finance is many times more important than direct finance
4. Financial intermediaries are the most important source of external funds



## Eight Basic Facts (cont'd)

5. The financial system is among the most heavily regulated sectors of the economy
6. Only large, well-established corporations have easy access to securities markets to finance their activities
7. Collateral is a prevalent feature of debt contracts
8. Debt contracts are extremely complicated legal documents that place substantial restrictive covenants on borrowers



# Transaction Costs

- Financial intermediaries have evolved to reduce transaction costs
  - ◆ Economies of scale
  - ◆ Expertise



# Asymmetric Information

- Adverse selection occurs before the transaction
- Moral hazard arises after the transaction
- Agency theory analyses how asymmetric information problems affect economic behavior



# Adverse Selection: The Lemons Problem

- If quality cannot be assessed, the buyer is willing to pay at most a price that reflects the average quality
- Sellers of good quality items will not want to sell at the price for average quality
- The buyer will decide not to buy at all because all that is left in the market is poor quality items
- This problem explains fact 2 and partially explains fact 1



# Adverse Selection: Solutions

- Private production and sale of information
  - ◆ Free-rider problem
- Government regulation to increase information
  - ◆ Fact 5
- Financial intermediation
  - ◆ Facts 3, 4, & 6
- Collateral and net worth
  - ◆ Fact 7





# Moral Hazard in Equity Contracts

- Called the Principal-Agent Problem
- Separation of ownership and control of the firm
  - ◆ Managers pursue personal benefits and power rather than the profitability of the firm



# Principal-Agent Problem: Solutions

- Monitoring (Costly State Verification)
  - ◆ Free-rider problem
  - ◆ Fact 1
- Government regulation to increase information
  - ◆ Fact 5
- Financial Intermediation
  - ◆ Fact 3
- Debt Contracts
  - ◆ Fact 1



# Moral Hazard in Debt Markets

- Borrowers have incentives to take on projects that are riskier than the lenders would like



# Moral Hazard: Solutions

- Net worth and collateral
  - ◆ Incentive compatible
- Monitoring and Enforcement of Restrictive Covenants
  - ◆ Discourage undesirable behavior
  - ◆ Encourage desirable behavior
  - ◆ Keep collateral valuable
  - ◆ Provide information
- Financial Intermediation
  - ◆ Facts 3 & 4



**SUMMARY**      **TABLE 1 Asymmetric Information Problems and Tools to Solve Them**

Asymmetric Information Problem	Tools to Solve It	Explains Fact Number
Adverse selection	Private production and sale of information	1, 2
	Government regulation to increase information	5
	Financial intermediation	3, 4, 6
	Collateral and net worth	7
Moral hazard in equity contracts (principal–agent problem)	Production of information: monitoring	1
	Government regulation to increase information	5
	Financial intermediation	3
	Debt contracts	1
Moral hazard in debt contracts	Collateral and net worth	
	Monitoring and enforcement of restrictive covenants	8
	Financial intermediation	3, 4

- Note:* List of facts:
1. Stocks are not the most important source of external financing.
  2. Marketable securities are not the primary source of finance.
  3. Indirect finance is more important than direct finance.
  4. Banks are the most important source of external funds.
  5. The financial system is heavily regulated.
  6. Only large, well-established firms have access to securities markets.
  7. Collateral is prevalent in debt contracts.
  8. Debt contracts have numerous restrictive covenants.



# Conflicts of Interest

- Type of moral hazard problem caused by economies of scope
- Arise when an institution has multiple objectives and, as a result, has conflicts between those objectives
- A reduction in the quality of information in financial markets increases asymmetric information problems
- Financial markets do not channel funds into productive investment opportunities
- The economy is not as efficient as it could be



# Why Do Conflicts of Interest Arise?

- Underwriting and Research in Investment Banking
  - ◆ Information produced by researching companies is used to underwrite the securities. The bank is attempting to simultaneously serve two client groups whose information needs differ.
  - ◆ Spinning occurs when an investment bank allocates hot, but underpriced, IPOs to executives of other companies in return for their companies' future business



# Why Do Conflicts of Interest Arise? (cont'd)

- Auditing and Consulting in Accounting Firms
  - ◆ Auditors may be willing to skew their judgments and opinions to win consulting business
  - ◆ Auditors may be auditing information systems or tax and financial plans put in place by their nonaudit counterparts
  - ◆ Auditors may provide an overly favorable audit to solicit or retain audit business





# Conflicts of Interest: Remedies

- Sarbanes-Oxley Act of 2002 (Public Accounting Return and Investor Protection Act)
  - ◆ Increases supervisory oversight to monitor and prevent conflicts of interest
  - ◆ Establishes a Public Company Accounting Oversight Board
  - ◆ Increases the SEC's budget
  - ◆ Makes it illegal for a registered public accounting firm to provide any nonaudit service to a client contemporaneously with an impermissible audit



## Conflicts of Interest: Remedies (cont'd)

- Sarbanes-Oxley Act of 2002 (cont'd)
  - ◆ Beefs up criminal charges for white-collar crime and obstruction of official investigations
  - ◆ Requires the CEO and CFO to certify that financial statements and disclosures are accurate
  - ◆ Requires members of the audit committee to be independent



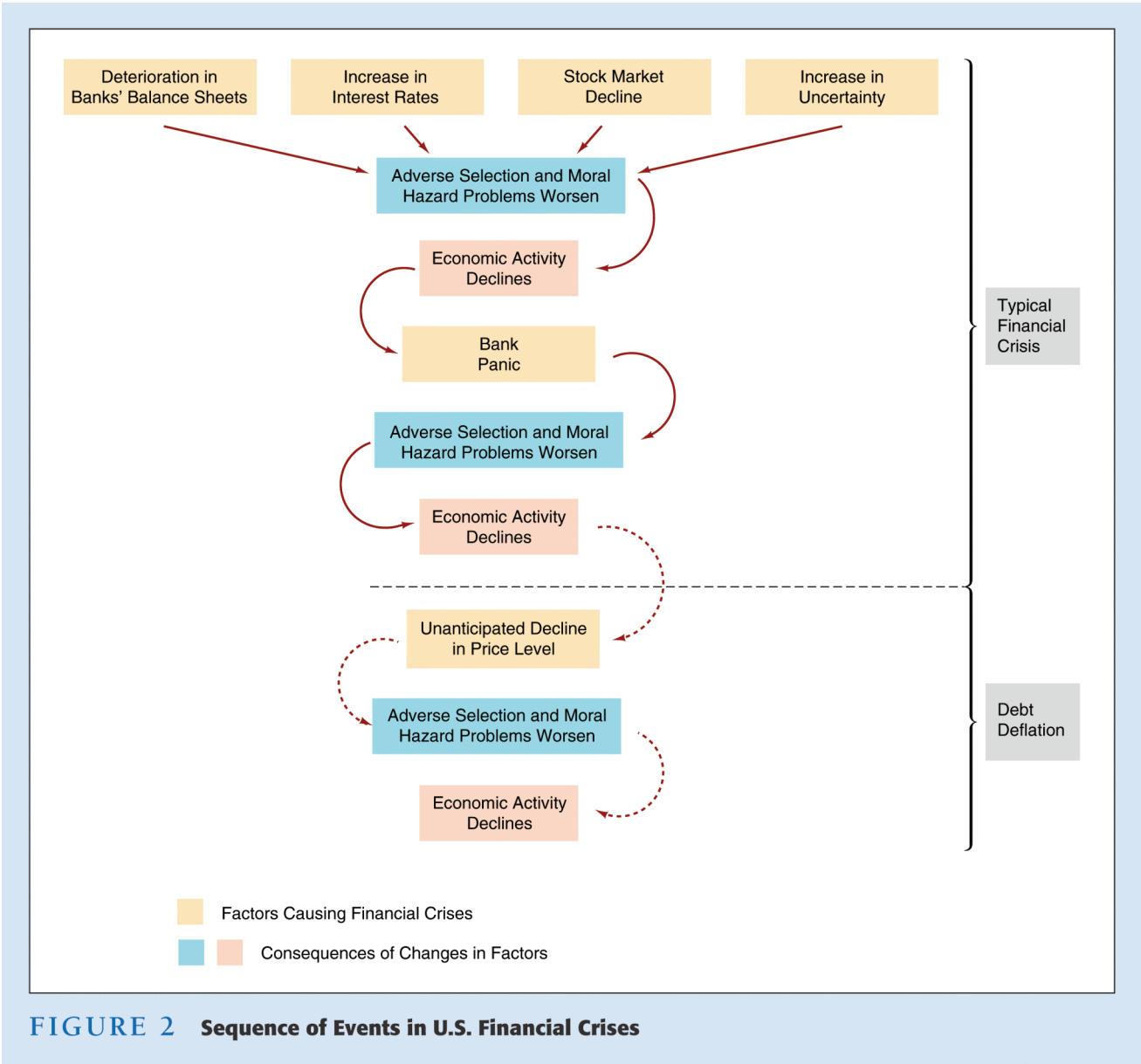
# Conflicts of Interest: Remedies (cont'd)

- Global Legal Settlement of 2002
  - ◆ Requires investment banks to sever the link between research and securities underwriting
  - ◆ Bans spinning
  - ◆ Imposes \$1.4 billion in fines on accused investment banks
  - ◆ Requires investment banks to make their analysts' recommendations public
  - ◆ Over a 5-year period, investment banks are required to contract with at least 3 independent research firms that would provide research to their brokerage customers

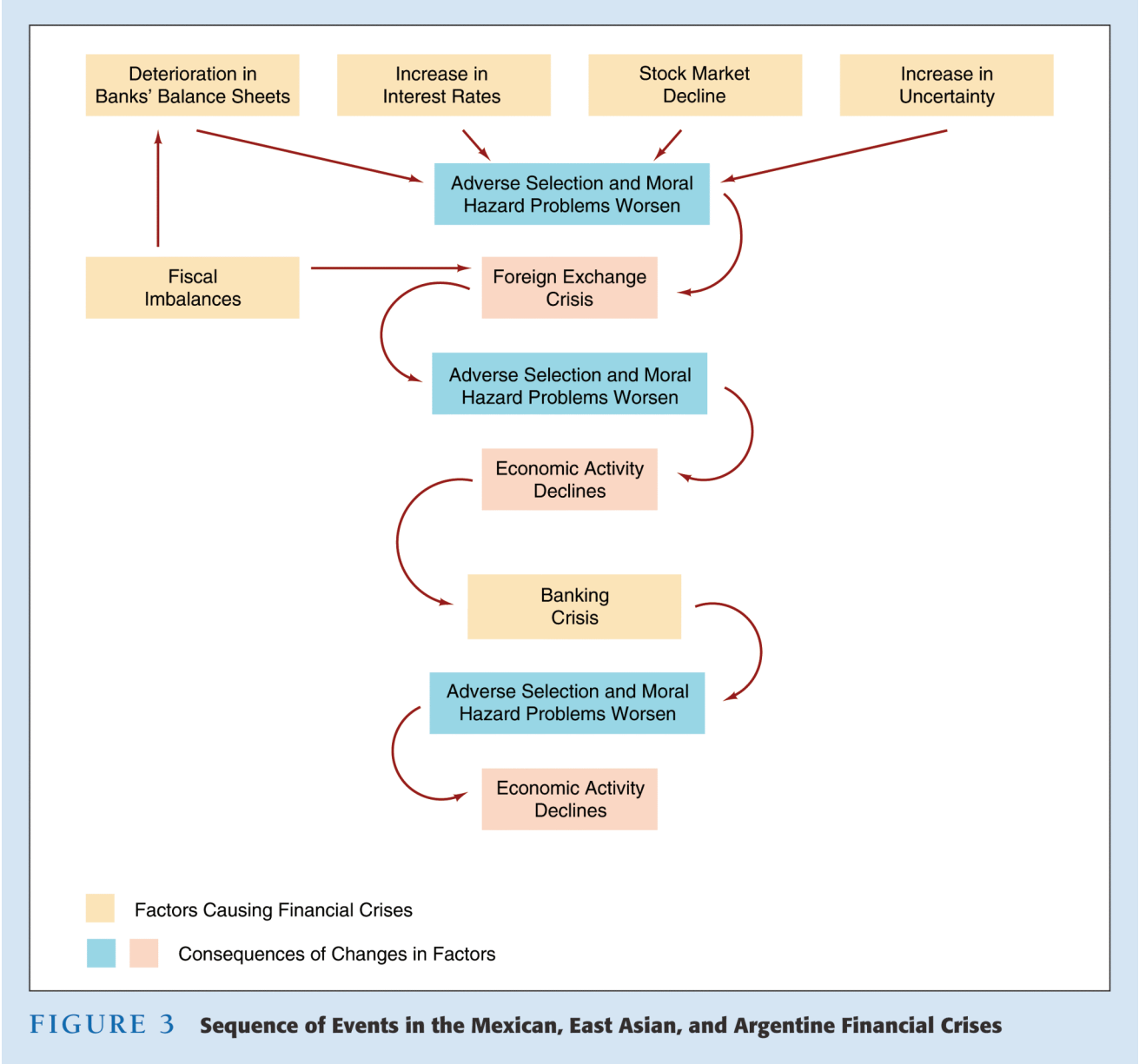


# Financial Crises and Aggregate Economic Activity

- Crises can be caused by:
  - ◆ Increases in interest rates
  - ◆ Increases in uncertainty
  - ◆ Asset market effects on balance sheets
  - ◆ Problems in the banking sector
  - ◆ Government fiscal imbalances



**FIGURE 2** Sequence of Events in U.S. Financial Crises



**FIGURE 3** Sequence of Events in the Mexican, East Asian, and Argentine Financial Crises