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# ECN 135 Lecture 3 Money, Banks & Financial Institutions

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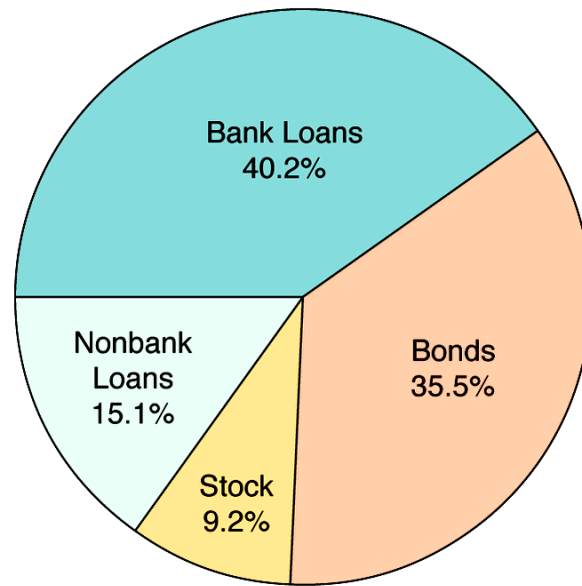
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# Who is the King?

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- Bush is the King
- Greenspan is the King
- Cash is the King
- Information is the King
- All of above
- None of above
- It depends

## Sources of External Finance in U.S

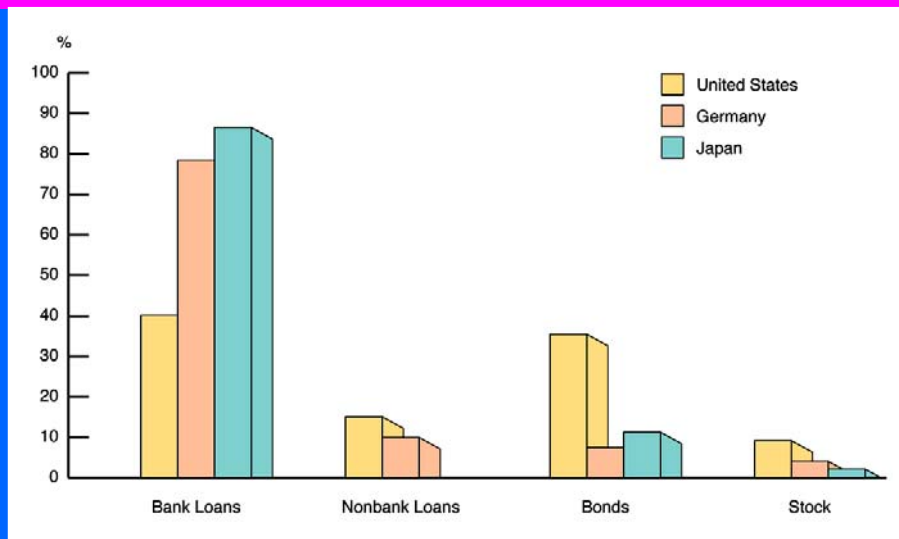


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# Sources of Foreign External Finance



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# Puzzles of Financial Structure

- 1. Stocks are not most important source of external finance for businesses (rather than bonds)
- 2. Issuing marketable securities not primary funding source for businesses (related to 1?)
- 3. Indirect finance (financial intermediation) is far more important than direct finance (stocks) (related to 1,2?)
- 4. Banks are most important source of external finance (follows from 1-3?)
- 5. Financial system is among most heavily regulated sectors of economy
- 6. Only large, well established firms have access to securities markets (why? Any thoughts?)
- 7. Collateral is prevalent feature of debt contracts
- 8. Debt contracts are typically extremely complicated legal documents with restrictive covenants (related to 7?)

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Are these statements puzzling? Or may be, they are just features?

It does not matter how we name them.

These are certain regularities (1-8) to which we will try to find explanations today.

Adverse selection See [M] p. 187

===== Tools:

Financial Intermediation 3,4,6

Government regulation to increase information 5

Collateral and Net Worth 7

Private Production and Sale of Information 1, 2

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Moral hazard (Equity = Principal-Agent)

=====Tools

Production of Information: Monitoring 1

Government regulation to increase information 5

Financial Intermediation 1,2

Debt Contracts 1

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Moral hazard (Debt)

=====Tools

Net Worth

Monitoring and enforcement of restrictive covenants 8

Financial Intermediation 3,4

## Information & Financial Structure

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- Low information → high transaction costs
- Transaction costs hinder flow of funds to people with productive investment opportunities. Financial intermediaries make profits by reducing transaction costs
  - 1. Take advantage of economies of scale
    - Example: Mutual Funds
  - 2. Develop expertise lowering transaction costs
- Explains Puzzle 3 (and 1,2 as well)

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Free rider problem occurs when people use information for which they did not pay, but others have paid.

## Adverse Selection & Moral Hazard: Definitions repeated

- **Adverse Selection:**
  - 1. Before transaction occurs
  - 2. Potential borrowers most likely to produce adverse outcomes are ones most likely to seek loans and be selected
- **Moral Hazard:**
  - 1. After transaction occurs
  - 2. Hazard that borrower has incentives to engage in undesirable (immoral) activities making it more likely that won't pay loan back

# Lemons Problem in Securities

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- **Lemons Problem in Securities Markets**

(or Adverse Selection and Financial Structure)

- 1. If can't distinguish between good and bad securities, willing to pay only average of good and bad securities' values.
- 2. Result: Good securities undervalued and firms won't issue them; bad securities overvalued, so too many issued.
- 3. Investors won't want to buy bad securities, so market won't function well.
- *Explains Puzzle 2 and Puzzle 1.*
- *Also explains Puzzle 6: Less asymmetric information for well known firms, so smaller lemons problem*

# Tools Helping to Solve Adverse Selection (Lemons) Problem

- **1. Private Production and Sale of Information**
  - Free-rider problem interferes with this solution
- **2. Government Regulation to Increase Information**
  - *Explains Puzzle 5 [Why not self-regulation?]*
- **3. Financial Intermediation**
  - A. Analogy to solution to lemons problem provided by used-car dealers
  - B. Avoid free-rider problem by making private loans
  - *Explains Puzzles 3 and 4*
- **4. Collateral and Net Worth**
  - *Explains Puzzle 7*

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What is free-riding?

# Moral Hazard: Debt versus Equity

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- **Principal-Agent Problem** is a special case of Moral Hazard, when ownership (investors) and control rights (CEO & management) are separated
- **Moral Hazard in Equity: Principal-Agent Problem**
  - 1. Result of separation of ownership by stockholders (*principals*) from control by managers (*agents*)
  - 2. Managers act in own rather than stockholders' interest
- **Tools to Help Solve the Principal-Agent Problem**
  - 1. Monitoring: production of information
  - 2. Government regulation to increase information
  - 3. Financial intermediation
  - 4. Debt contracts
- *Explains Puzzle 1: Why debt used more than equity*

# Moral Hazard & Debt Markets

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- **Moral hazard: borrower wants to take on too much risk** Tools to Help Solve Moral Hazard
  - 1. Net worth
  - 2. Monitoring and enforcement of restrictive covenants
  - 3. Financial intermediation: Banks and other intermediaries have special advantages in monitoring
- *Explains Puzzles 1-4. (all relate to info)*

# Summary: Asymmetric Information Problems and Tools

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

Asymmetric Information Problem	Tools to Solve It	Explains Puzzle No.
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	Net Worth	
	Monitoring and Enforcement of Restrictive Covenants	8
	Financial Intermediation	3, 4

Note: List of puzzles:

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.

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# Financial Development & Economic Growth

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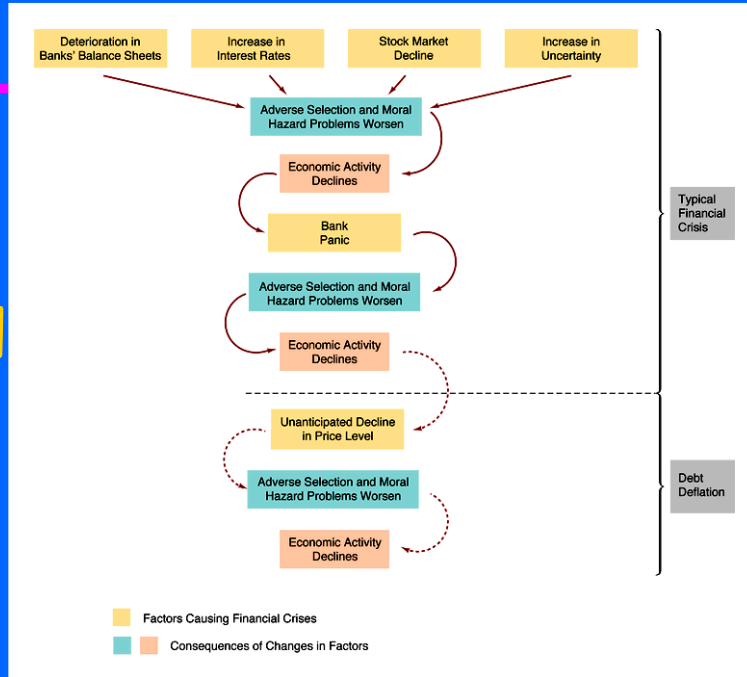
- **Financial Repression Leads to Low Growth: Why?**
  - 1. Poor legal system
  - 2. Weak accounting standards
  - 3. Government directs credit
  - 4. Financial institutions nationalized
  - 5. Inadequate government regulation

# Financial Crisis

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- **Factors Causing Financial Crises**
  - 1. Increase in interest rates
  - 2. Increases in uncertainty
  - 3. Asset market effects on balance sheets
    - *Stock market effects on net worth*
    - *Unanticipated deflation*
    - *Cash flow effects*
  - 4. Bank panics
  - 5. Government fiscal imbalances

# Events in U.S. Financial Crises

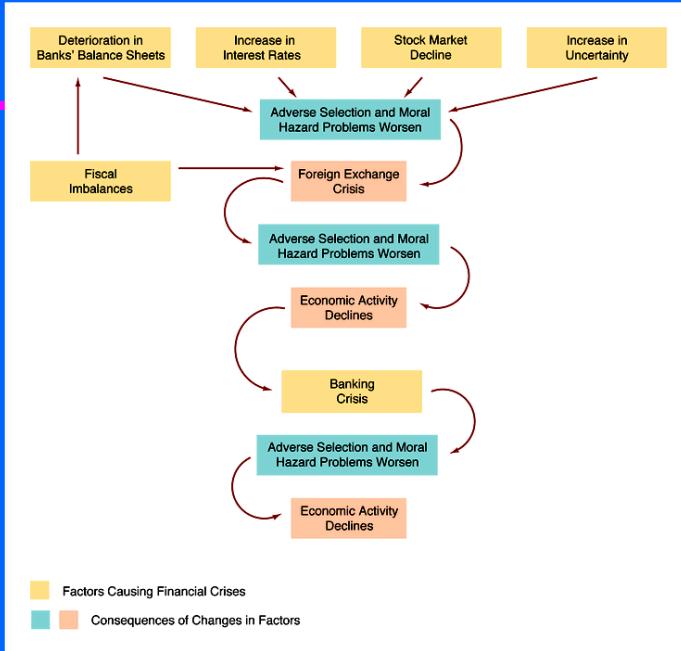


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# Events in Mexican, East Asian, and Argentine Financial Crises



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# Next Lecture

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- Your preparation: read [M] Ch. 3
- All about Money
  - some models of money demand ?
  - or more on institutions ?

# Summary of Today

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- Chapter 8
  - Principal-Agent problem / model
  - Playing with 8 financial "puzzles"
- Have a Nice Night