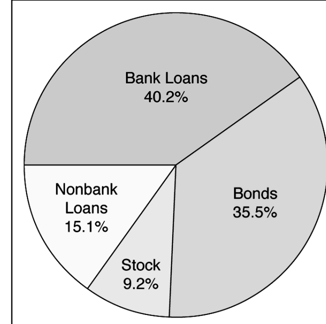
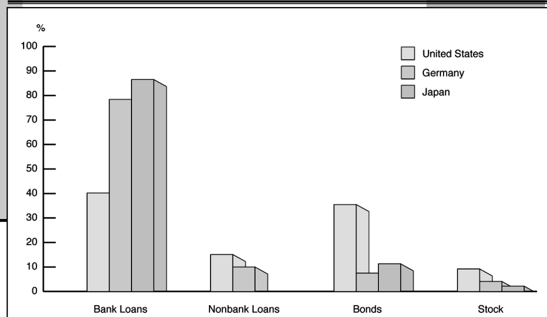
Chapter 8

An Economic Analysis of Financial Structure

Sources of External Finance



Sources of External Finance (cont.)



Puzzles of Financial Structure

1. stocks are not the most important source of external finance for businesses
2. issuing marketable securities is not the primary funding source for businesses
3. indirect finance (financial intermediation) is far more important than direct finance
4. banks are the most important source of external finance
5. the financial system is among the most heavily regulated sectors of the economy

Puzzles of Financial Structure (cont.)

6. only large, well established firms have access to securities markets
7. collateral is the prevalent feature of debt contracts

   collateral = property pledged to lender to guarantee payment if the borrower is unable to repay (e.g., house in the case of mortgages)

   Debt with collateral is called *secured debt* – there is also unsecured debt, like credit card debt
8. debt contracts are typically extremely complicated legal documents with *restrictive covenants*, i.e. legal provisions

Transaction Costs and Financial Structure

- transaction costs hinder the flow of funds to people with productive investment opportunities
- financial intermediaries make profits by reducing transaction costs:
  - take advantage of economies of scale (e.g., mutual funds)
  - develop expertise to lower transaction costs
- this explains Puzzle 3 (relative importance of indirect finance)

Agency Theory: Adverse Selection and Moral Hazard

- Adverse selection
  - *before* transaction occurs
  - potential borrowers most likely to produce adverse outcomes are the ones most likely to seek loans and be selected
- Moral hazard
  - *after* transaction occurs
  - hazard that borrower has incentives to engage in undesirable (immoral) activities making it more likely that won't pay loan back

Adverse Selection and Financial Structure – Lemons Problem

- if you can't distinguish between good and bad securities, you are willing to pay only the average value of good and bad securities
- hence, good securities are undervalued and firms won't issue them
- bad securities overvalued, so too many are issued
- investors don't want to buy bad securities, so market won't function well

Adverse Selection and Financial Structure – Lemons Problem (cont.)

- this explains Puzzle 2 (stocks not being the most important source of external finance) and Puzzle 1 (issuing securities not being the primary funding source)
- it also explains Puzzle 6: less asymmetric information for well known firms, so less of a lemons problem

Solutions to Adverse Selection Problem

- Private production and sale of information
  - *free-rider problem* interferes with this solution: people not buying information follow what people who bought it do, thus reducing the value of information and pushing buyers of information into not buying it
  - hence firms gathering the information stop providing (good quality) info anymore
- Government regulation to better information
  - explains Puzzle 5 (heavy regulation of financial system)

Solutions to Adverse Selection Problem (cont.)

- Financial intermediation
  - analogy to solution to lemons problem provided by used-car dealers
  - avoid free-rider problem by making private loans
  - explains Puzzle 3 (importance of indirect finance) and Puzzle 4 (importance of banks)
- Collateral and net worth
  - collateral reduces losses in case of default
  - *net worth* = assets – liabilities
  - high net worth can act as collateral
  - explains Puzzle 7 (collateral in debt contracts)

Moral Hazard: Debt vs. Equity

- Moral hazard in equity markets – the principal-agent problem
  - results from the separation of ownership by stockholders (*principals*) from control by managers (*agents*)
  - managers act in their own interest rather than in stockholders' interest
- Moral hazard in debt markets
  - borrowers want to take on too much risk

Solutions to Moral Hazard Problem in Equity Markets

1. monitoring: production of information (e.g., auditing) – costly state verification, hence equity not that desirable
2. government regulation to increase information
3. financial intermediation – venture capital firms
4. debt contracts

- this explains Puzzle 1 (debt used more than equity)

Solutions to Moral Hazard Problem in Debt Markets

1. net worth (*incentive-compatible contracts*) – higher net worth means better incentives to behave the way the lender wants
2. monitoring and enforcement of *restrictive covenants*: discourage undesirable behavior, encourage desirable behavior, keep collateral valuable, provide information
3. financial intermediation: banks and other intermediaries have special advantages in monitoring

- this explains Puzzles 1–4 (stocks/securities not important, indirect finance/banks important)

Summary: Asymmetric Information Problems and Solutions

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

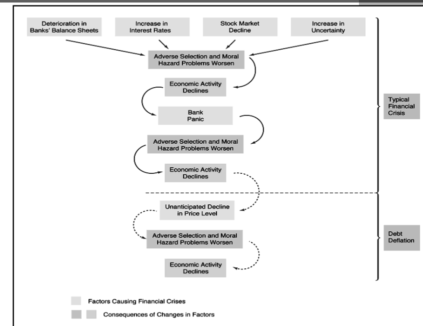
Financial Development and Economic Growth

- Why Financial Repression Leads to Low Growth:
  - poor legal system
  - weak accounting standards
  - government directs credit
  - financial institutions nationalized
  - inadequate government regulation

Factors Causing Financial Crises

- rise in interest rates – only bad credits ask for credit
- higher uncertainty – harder to screen good credit from bad credit
- asset market effects on balance sheets
  - stock market effects on net worth
  - unanticipated deflation (liabilities ↑, assets ↓ ⇒ net worth ↓)
  - cash flow effects (interest payments ↑ ⇒ cash flows ↓)
- bank panics – fear spreading from failing banks to others
- government fiscal imbalances – fear of default

Events in U.S. Financial Crises



Events in Mexican, East Asian, and Argentine Financial Crises