FINANCIAL MARKETS AND INSTITUTIONS

THE ECONOMIC ROLE OF FINANCIAL INSTITUTIONS

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DEAMS
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AGENDA

- General description of global financial structure
- Rationale of financial institutions and main effects/remedies:
  - transaction costs
  - asymmetric information: adverse selection and moral hazard
  - conflicts of interest

The Structure of Global Financial Markets

- Stocks are not the main funding source, bonds are more important
- Marketable securities (stocks/bonds) altogether, too (except for few large and financially strong corporations)
- Indirect finance is more important than direct finance, especially through banks
- Financial markets, institutions and products are heavily regulated
- Debt financing often involves collateral and extensive covenants
- Underdeveloped financial systems lead to lower economic development and growth

WHY?

Rationale of Financial Institutions

Transaction costs

- Fees and commissions to enter markets can be substantial, especially for small volumes of funds
- Small amounts exclude markets with higher minimum denominations or prevent diversification
- Solutions:
    - **Economies of scale**: pool resources of many to reduce costs' incidence on individual investors, allowing diversification
    - **Expertise/economies of scope**: multiple services can rely on the same information, as well as focus leads to know-how
    - **Liquidity services**: allow easy/cheap/quick entry/exit from investments

RATIONALE OF FINANCIAL INSTITUTIONS

Asymmetric information (agency theory)

- One party know less about the other party involved in the same transaction; this leads to:
  - **Adverse selection**: before new transactions occur, one could note that worse parties more actively seek to make deals (f.i. lemons issue)
  - **Moral hazard**: after a transaction, borrowers have incentives to engage in activities that harm lenders' interests (increasing defaults)
  - Resulting in less marketable securities issued
- Solutions:
  - **Specialised firms** produce/sell information to reduce asymmetries, but leads to **free-rider** problem (non-payers profit from copying) and **conflicts of interest:** not always working (f.i. Lehman)
  - Governments **regulate** financial markets encouraging disclosures, but not always effective (Enron, Parmalat, …)
  - **Collateral**: reduces losses for lenders in case of default, also implicit in companies' equity when taking loans

RATIONALE OF FINANCIAL INSTITUTIONS

Financial intermediaries provide a better solution:

- Building and selling private information outside markets (indirect finance), hence reducing free-riders
- Providing a costly "guarantee" by risking own default after intermediating between borrowers and lenders
- Where asymmetric information is less a problem, banking sectors are less important (and vice-versa)
- Larger, well-known corporations are better off in obtaining direct external funds through markets (i.e. **pecking order hypothesis**)
- However, at the cost of additional issues:
  - conflicts of interest,
  - market failures,
  - frauds, …

MORAL HAZARD

In equity/ownership of companies:

- **Principal-agent problem**: stockholders are principals, managers their agents, with diverging incentives (not necessarily dishonesty) including personal benefits/power, as long as principals have less information
- Solutions:
  - **Monitoring**: through (costly) audits and inspections, that lower returns and appetite for securities and allow for free-riding
  - **Regulation**: accounting, sanctions to misbehaviour, etc. exist but are difficult to be enforced fully
  - **Debt** contracts: receiving fixed payments, reduce the need for monitoring (since profitability of firms becomes irrelevant) unless there is a default
- Financial intermediaries help:
  - Avoiding markets can reduce free-riding and by taking equity shares and partly becoming managers, requiring and producing information that reduce asymmetries (f.i. venture capital)

MORAL HAZARD

In debt contracts:

- **Principal-agent problem**: borrowers could be incentivated in undertaking risky projects that increase the likelihood of default by having a greater expected return
- Solutions:
  - **Collateral**: also implicit in equity, have borrowers risk more from undertaking risky projects
  - Monitoring through **covenants**: discouraging undesired (f.i. M&A) or encouraging desired behaviour (f.i. borrower's life insurance), safekeeping collateral (f.i. fire insurance on mortgages), requiring disclosures
  - Free-riding is not avoided and enforcement is costly and difficult
- Financial intermediaries help:
  - Issuing private non-marketable loans avoids free-riding, allowing for monitoring and enforcing covenants

CONFLICTS OF INTEREST

- Economies of scope are helpful but allow for multiple-service providers to experience diverging interests that lead to **misbehaviour** (conceal/mislead information, acting on other customers' best interest or their own)
- Frequent cases:
  - **underwriting** and reselling in investment banking: three interests at stake (issuer: higher prices; buyer: lower prices; bank: higher profits)
  - **auditing** and consulting in accounting firms: two interests conflict (higher profits from consulting incentive less strict auditing of firms, as well as better audits increase the likelihood of retaining the client)
  - credit assessment in **rating** agencies: two conflicts are present (issuer needs favourable ratings and pays for them, market need reliable information with free-riding opportunities), if consulting is provided also as in auditing firms
- Solutions:
  - Costly **regulation** and **supervision** of conflict-prone firms, **separation** of conflicting services, sanctions, … but at the cost of less efficiency of markets

EXAMPLES

1. Consider the following example:

Your house is worth 200,000 € and is subject to river floods. A moderate event would destroy it completely and is a 1-in-50-years event. By building a protection (seawall, worth 10,000), destruction will occur only for exceptional floods (1-in-200-years event).

What would be a fair insurance premium under full insurance in both cases?

What if coverage occurs only for 75% of the house's value?

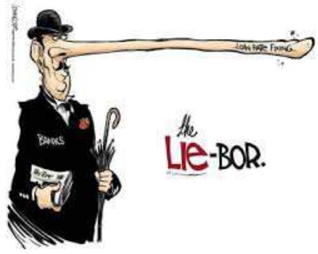
	Without seawall (p=2%)	With seawall (p=0.5%)
Full insurance	Exposure: 200,000 Premium: 4,000 Retained loss: 0	Exposure: 210,000 Premium: 1,050 Retained loss: 0
Coinsurance 75%	Exposure: 150,000 Premium: 3,000 Retained loss: 50,000	Exposure: 157,500 Premium: 787.50 Retained loss: 52,500

EXAMPLES

2. A brief overview of the "Libor scandal".

The Libor (London InterBank Offered Rate) is a benchmark money market IR (1d, 1w, 1m, 2m, 3m, 6m, 1y) across major currencies (GBP, USD, CHF, EUR, JPY): frequently used as a reference for loans and derivatives globally.

Calculation: survey over (few) major banks, asking: "what would be an acceptable and effective interbanking rate for your own operations now?". F.i. 18 banks for USD, high and low 4 replies excluded, average of middle 10 becomes its "fixing".



Can you think of a few asymmetric information issue?

[cont.]

EXAMPLES

Issues:

- Collusion between very few banks: expressing an opinion with no responsibility/accountability
- Profits/losses on own trading and lending are heavily dependent on Libor
- Low levels of Libor make banks show lower liabilities, banks' own debt often referred to Libor
- Huge leverage on derivatives can produce billions in earnings by small IR changes
- Several large banks already fined: Barclays for 0.4bln$, UBS for 1.5bln$, DB for 2.5bln$, …
- Courts are starting to sentence individuals: the first is a UBS trader for 14y

- Something similar in the Forex: online chats between traders disclosing volumes and prices of trades before daily fixing and cartels over the 60s window around it
- And the Euribor, where the survey asks "a rate suitable for a transaction between prime banks"?
- Institutions involved are the same… fines and jail time are raining.