Deams
Dipartimento di
Scienze Economiche, Aziendali,
Matematiche e Statistiche "Bruno de Finetti"

A1. THE FINANCIAL SYSTEM

FINANCIAL MARKETS AND INSTITUTIONS

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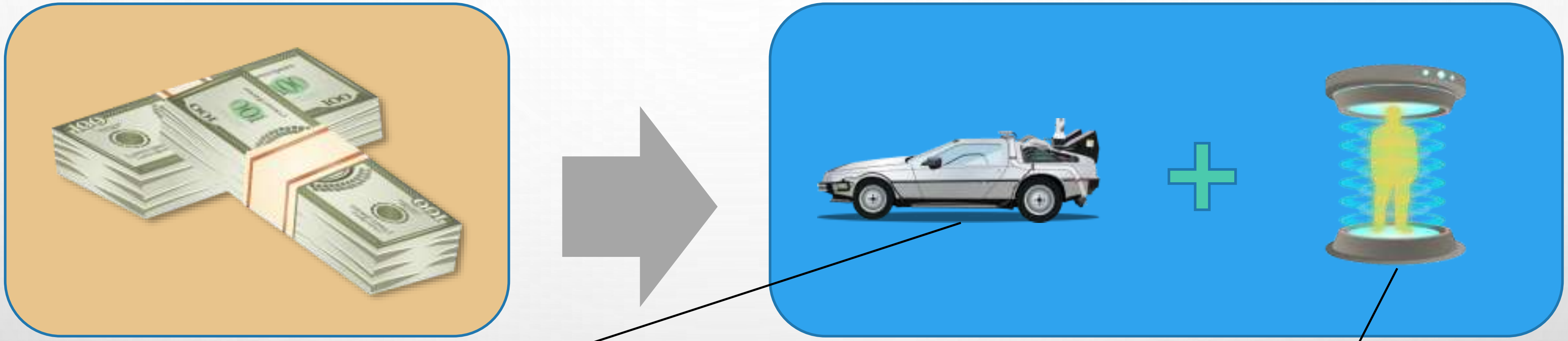
TOPICS

- WHY DO FINANCIAL MARKETS EXISTS?
- WHAT DO THEY DO AND HOW DO THEY WORK?
- WHAT ARE ASYMMETRIC INFORMATION ISSUES?
- HOW MANY TYPES OF MARKETS/INTERMEDIARIES ARE THERE?
- WHY ARE MARKETS/INSTITUTIONS REGULATED? HOW?

PURPOSE

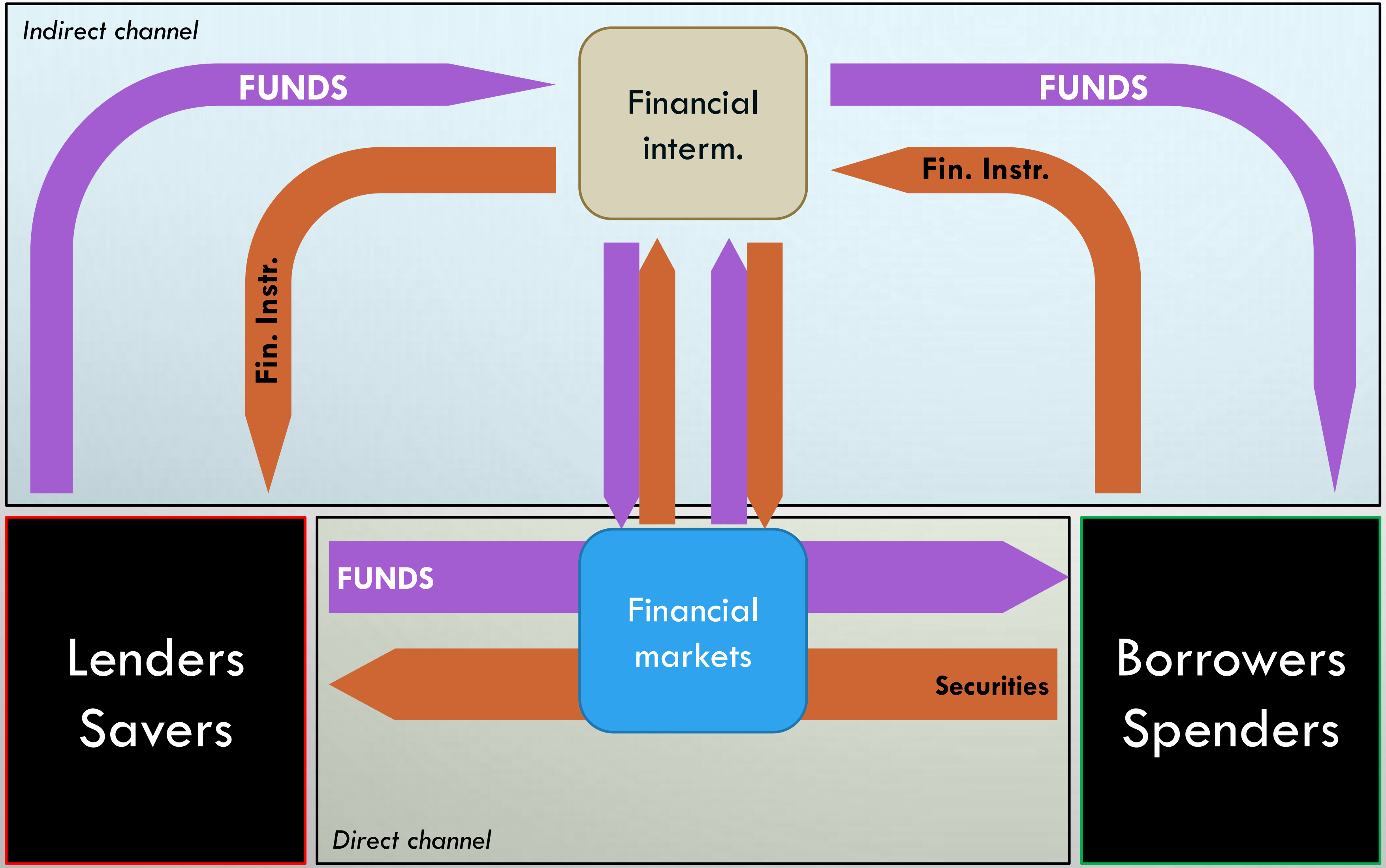


Help needed:

- Access to information
- Divergent knowledge, skills, trust, preferences, …
- Borrowers can become lenders and the other way around

Cash VS payment systems (bank transfers, cards, e/m payments, …): stability, safety, costs, flexibility, …

STRUCTURE



Financial system: organized combination of:

- **Markets:** where demand and supply meet
- **Intermediaries:** produce/trade instruments and related services
- **Instruments/services:** contracts that regulate the transfer of financial assets or liabilities and rights/obligations

Aim:

- **Settling transactions** (payments system)
- **Accumulate savings and fund investments** (transfering surpluses and deficits)
- **Manage risks** (insurance, derivatives)
- **Pricing of instruments**
- **Liquidity**

WHY?

- FIRMS ISSUE **MORE BONDS THAN STOCKS**
- BONDS AND STOCKS, TOGETHER, ARE **NOT THE MAIN SOURCE** OF FUNDING (ALMOST ALWAYS)
- **INDIRECT FINANCE** (ESPECIALLY BANKS) PREVAILS ON DIRECT FINANCE
- MARKETS, INTERMEDIARIES AND PRODUCTS ARE HEAVILY **REGULATED**
- MANY **DIFFERENT KINDS OF BONDS, STOCKS AND OTHER PRODUCTS** EXIST
- **DEBT INSTRUMENTS** USUALLY REQUIRE **GUARANTEES AND COVENANTS**
- **UNDERDEVELOPED FINANCIAL SYSTEMS ARE ASSOCIATED WITH LOW ECONOMIC GROWTH**

ADVANTAGES OF THE INDIRECT CHANNEL

- **Lower transaction costs** (experience, time, money) due to **scale economies**
- **Additional services** (**scope economies**)
- **Risk sharing and reduction of uncertainty**
- **Diversification**
- **Reduction of asymmetric information**

ASYMMETRIC INFORMATION

In every transaction, one party knows better…

- *Adverse selection* (ex-ante): worst borrowers are more active in seeking counterparties
- *Moral hazard* (ex-post): borrowers may behave against the interests of lenders

Solutions?

- Finding ways to distinguish «good» from «bad» risks: **experience, monitoring, guarantees, covenants** (but: more complexity and more costs)
- Specialising in gathering and managing information (but: **free-riding** and **conflicts of interest)**
- Increase **regulation and supervision** (but: imperfect and costly)

SIMULATION

GET TO THIS LINK OR USE THE QR CORE

AND FOLLOW THE INSTRUCTIONS

shorturl.at/ajowC

EXAMPLES

adverse selection:

- A borrower can be Good or Bad
- Good can pay 5% tops. Bad, instead, 10%
- A bank can't take less than 4% from Good, 8% from Bad
- If we can find our who is Good or Bad, it's just fine
- But if we can't:
    - Banks would offer an average rate (6%)
    - But only Bad will apply (and happily!)
    - But banks would lose, and not offer loans…

moral hazard:

- Your house value: 100.000
- You insure it at 100% against fire
- 0,01% probability of a total loss from fire
- Insurers ask 0,01% x 100.000 = 10
- Every 10.000 houses, 1 will burn, costing 10.000x10
- But what if there is no control, and somebody in need for cash burn his/her own house down?

TRANSACTION COSTS

- **Getting to markets bears costs,** especially if your funds are limited
- **Some products have huge denominations**
- With little money, hard to diversify

Solutions?

- **Scale economies**: financial intermediaries are BIG
- **Scope economies**: financial intermediaries offer a wide range of products
- **Liquidity services and Information**

CONFLICTS OF INTEREST


"Try this—I just bought a hundred shares."

Multiple incentives induce opportunistic behaviour, such as hiding information, damaging others' interests, …

Examples:

- Underwriting and placing of financial instruments in banks: three diverging interests at play (issuer, buyer, bank)
- Auditing and advising: the advisor profits more by having more clients, clients want easy checks, investors want strict scrutiny
- Rating agencies: issuers want good scores, markets trust information, agencies look for more clients (and clients pay for solicited ratings…)

Solutions?

- **Regulation and supervision**: they cost, separation reduces economies of scope, sanctions are enforced afterwards, compliance reduces efficiency, …
- **Teaching ethics…?**

CATEGORIZING MARKETS AND INTERMEDIARIES

Rights

- DEBT:

  - Borrowers pay a predetermined amount at given points in time until maturity
  - Short (<1y), medium (1-5/10y) and long term (>5/10y)

- EQUITY:

  - Right to distributed earnings and residual interest in net worth
  - Voting rights

Transferability

- CREDIT (and also INSURANCE):

  - Difficult or impossible to transfer
  - Customized
  - Complex (clauses, …)

- SECURITIES:

  - Quickly and easily transferable
  - Standardizd
  - Uniform contractual features

CATEGORIZING MARKETS AND INTERMEDIARIES

Source

- Primary:

- New issues
- Natural liquidity
- Mainly for institutional investors

- Secondary:

- Old issues
- Many intermediaries but also retail players
- *Artificial liquidity*
- Prices influence primary markets

Organization

- Exchange:

- Centralised management of standardized trades
- Many segments
- Liquid, low counterparty risks, transparent, influential

- Over-the-Counter (OTC):

- Intermediaries offer to buy/sell with their own portfolio
- May have weak transparency/controls
- Technology and competition lower distance from exchanges (es. NASDAQ)

CATEGORIZING MARKETS AND INTERMEDIARIES

Maturity

- Money:

  - Short term debt
  - Huge volumes, high liquidity
  - Huge denominations
  - Treasury management

- Capital:

  - Longer debt, equity
  - More volatile/risky
  - Managing savings and investments

Role

- Credit institutions:

  - Banks: collect deposits, bonds and stocks, invest in loans, bonds, stocks
  - Non-banks: no deposits

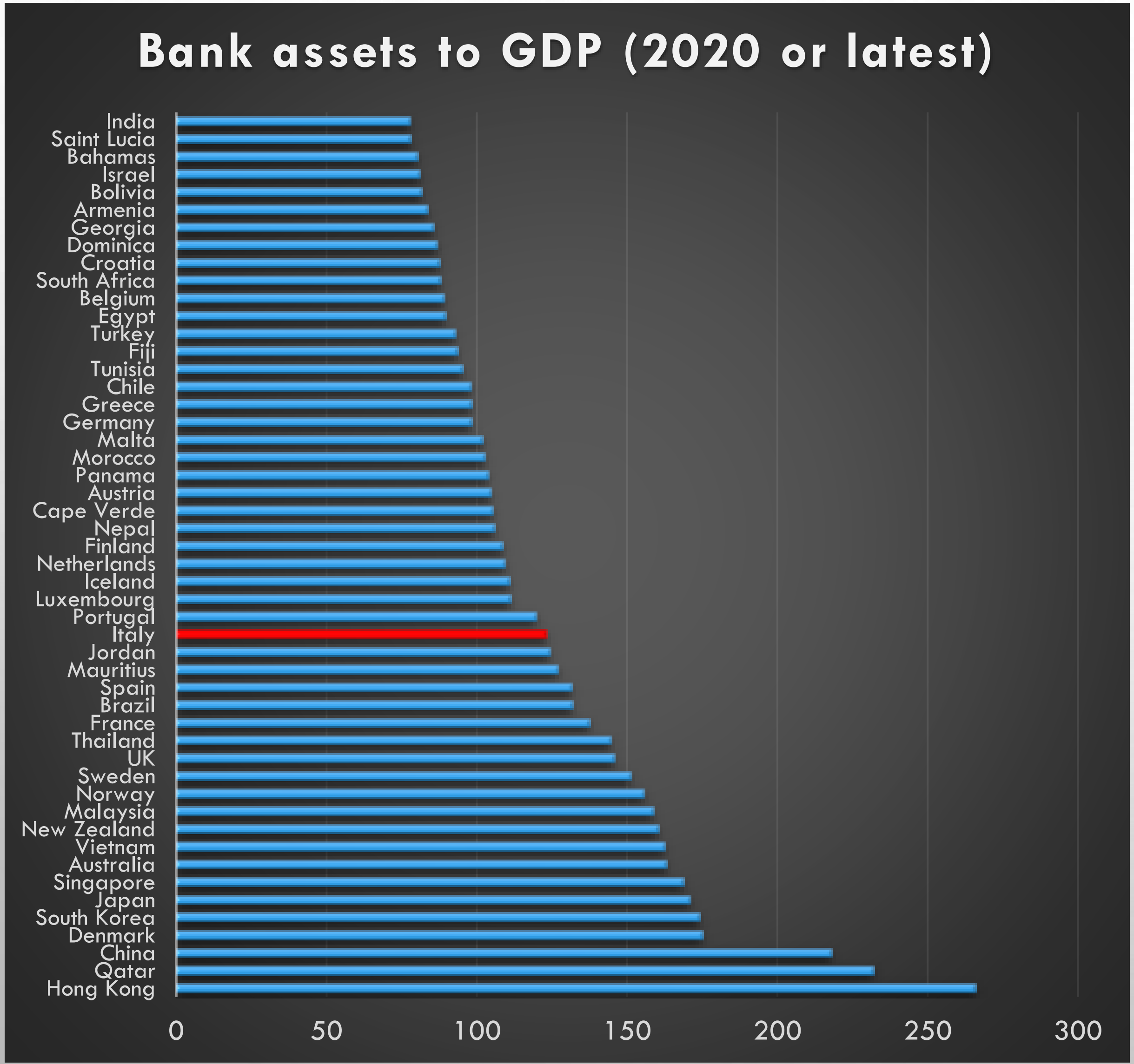
- Insurance intermediaries:

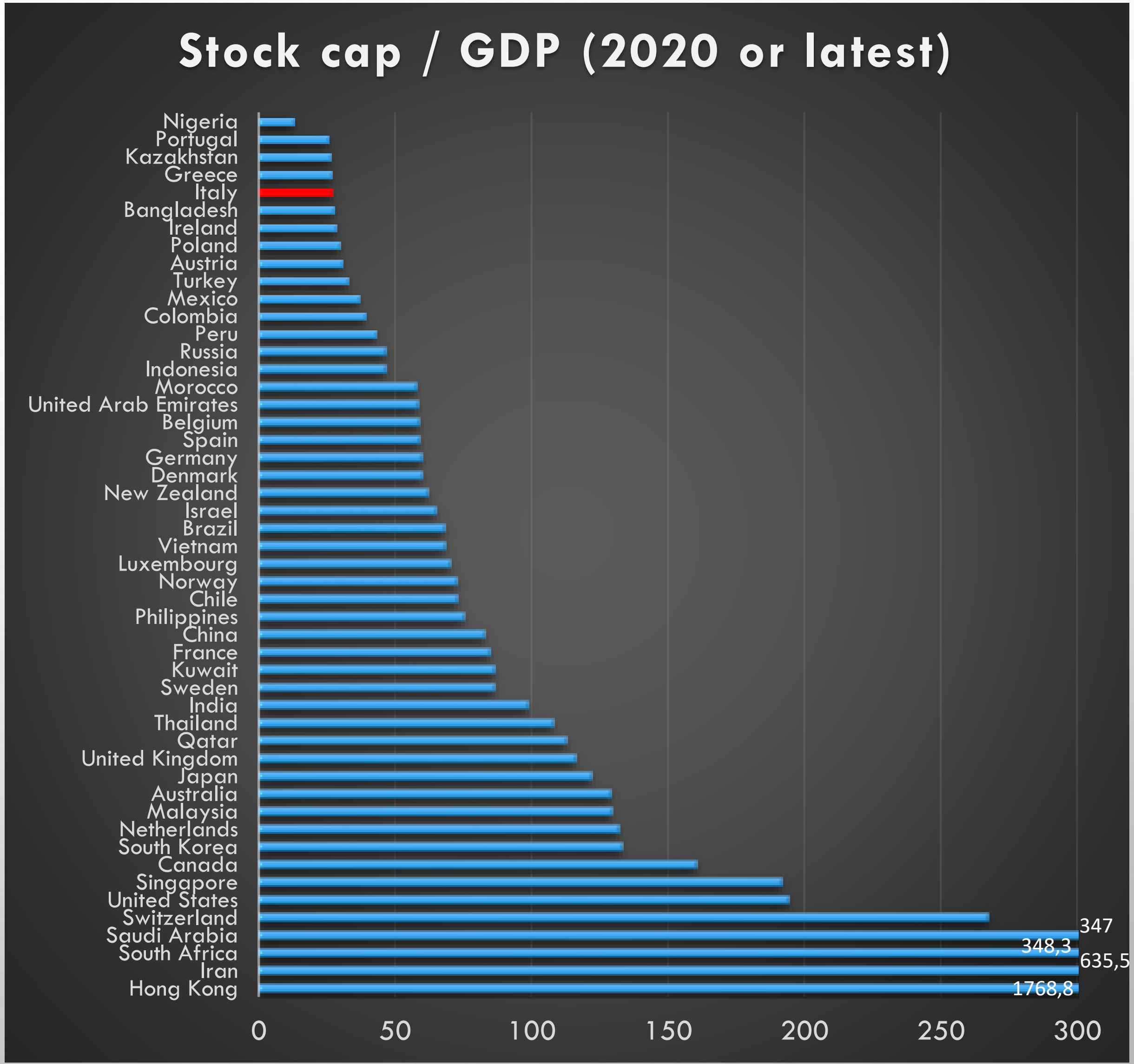
  - Life/P&C/pension funds: raise premiums or contributions, invest in debt, stocks

- Securities' industry:

  - Investment banks, asset managers, mutual funds, and many more: raise through bonds/equity, invest in bonds/equity
  - Many «servicers»: broker, …

COUNTRY DIFFERENCES





REGULATION AND SUPERVISION

Scope:

- protection of “customers” (depositors and other creditors)
- financial stability

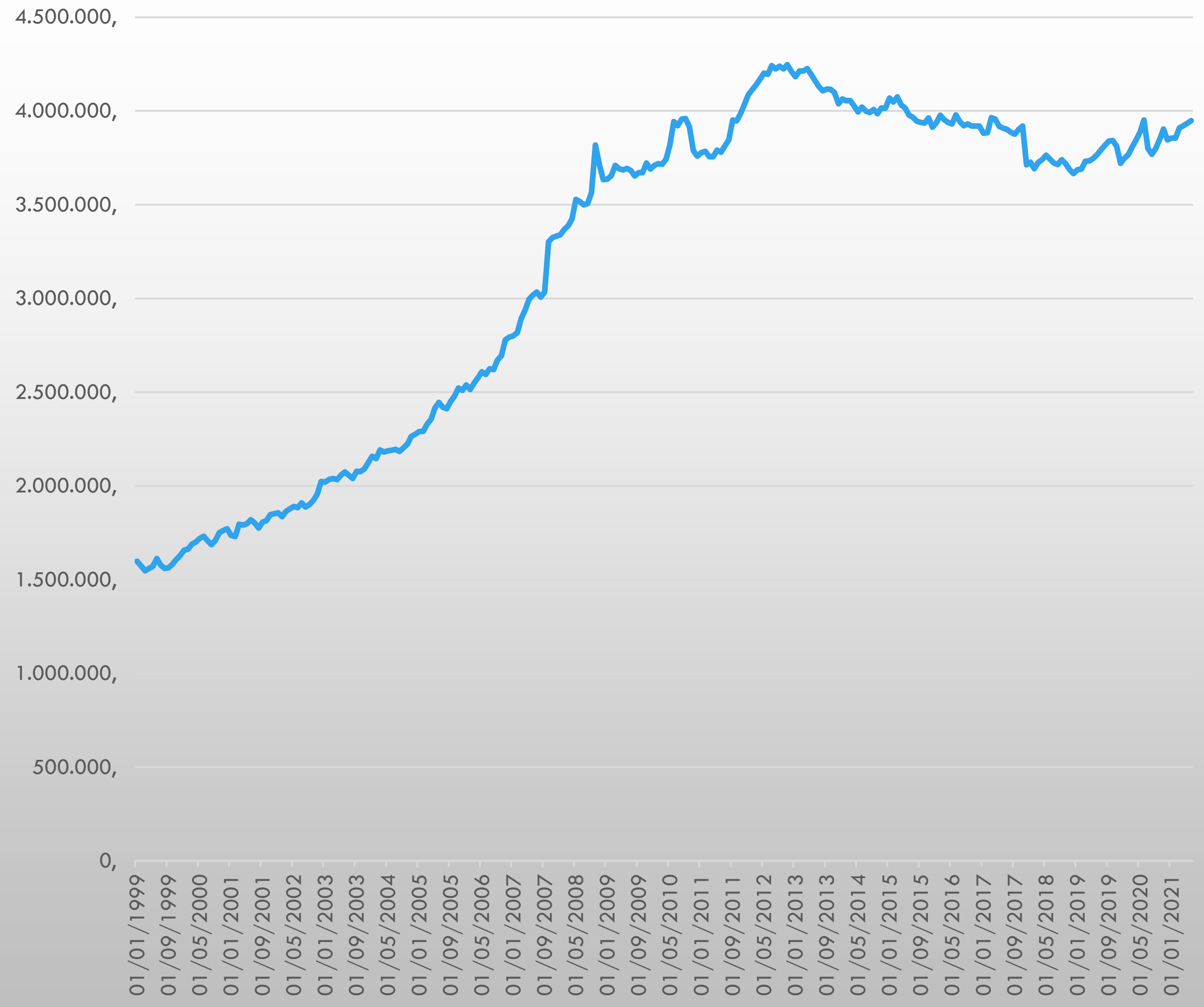
How?

- Transparency requirements: reduce asymmetric information and lower adverse selection and moral hazard (f.i. contracts, annual reports, …)
- Soundness and financial stability:
  - Restrictions on entry to and exit from market, on assets and operations (risk taking)
  - Deposit insurance and safety nets
  - Restrictions on competition (f.i. opening new branches) or pricing (f.i. min/max interest rates)
  - Prudential supervision: capital requirements, governance, market discipline

A patchwork of authorities: BCBS/EBA/ECB/NCB/anti-trust/…

EXAMPLE

1. ASSETS OF ITALIAN BANKS



BREAKDOWN AND OTHER PLAYERS
https://www.bancaditalia.it/pubblicazioni/conti-finanziari/2023-conti-finanziari/en_statistiche_CFI_20230116.pdf?language_id=1

EXAMPLE

2. THE LIBOR SCANDAL

LIBOR (London InterBank Offered Rate): reference interest rates, from 1 day to 1 year, for the main currencies (GBP, USD, CHF, EUR, JPY, …) and basis for calculating the cost of borrowing and derivatives for as high as 800-1000 trn USD globally

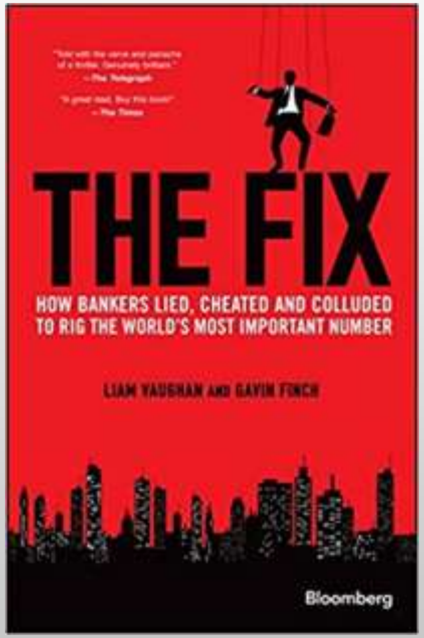
HOW? Survey to major banks asking «what would be an acceptable current interbanking market rate for fund your operations?». F.i.: 18 players for USD, truncation of low/high answers, average → fixing

What can go wrong?

Sorry to be a pain but just to remind you the importance of a low fixing for us today

Morning skipper . . . will be submitting an obscenely high 1m again today

its just amazing how libor fixing can make you that much money



Aftermath:

- BLN$ sanctions to many banks, a few people got jailtime
- Similar issues with currency markets (evidence of intense transactions around the fixing) and the Euribor