FINANCIAL MARKETS AND INSTITUTIONS
A.Y. 2024/25
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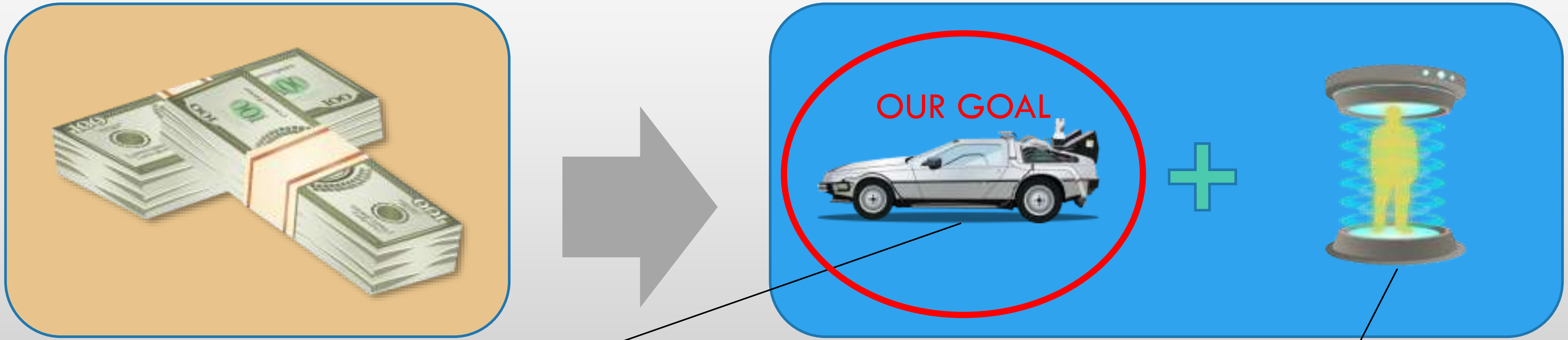
A1. THE FINANCIAL SYSTEM

- WHY DO FINANCIAL MARKETS EXIST?
- WHAT DO THEY DO AND HOW DO THEY WORK?
- WHAT ARE ASYMMETRIC INFORMATION ISSUES?
- WHAT MARKETS/INTERMEDIARIES ARE THERE?
- WHY REGULATION? HOW?

PURPOSE

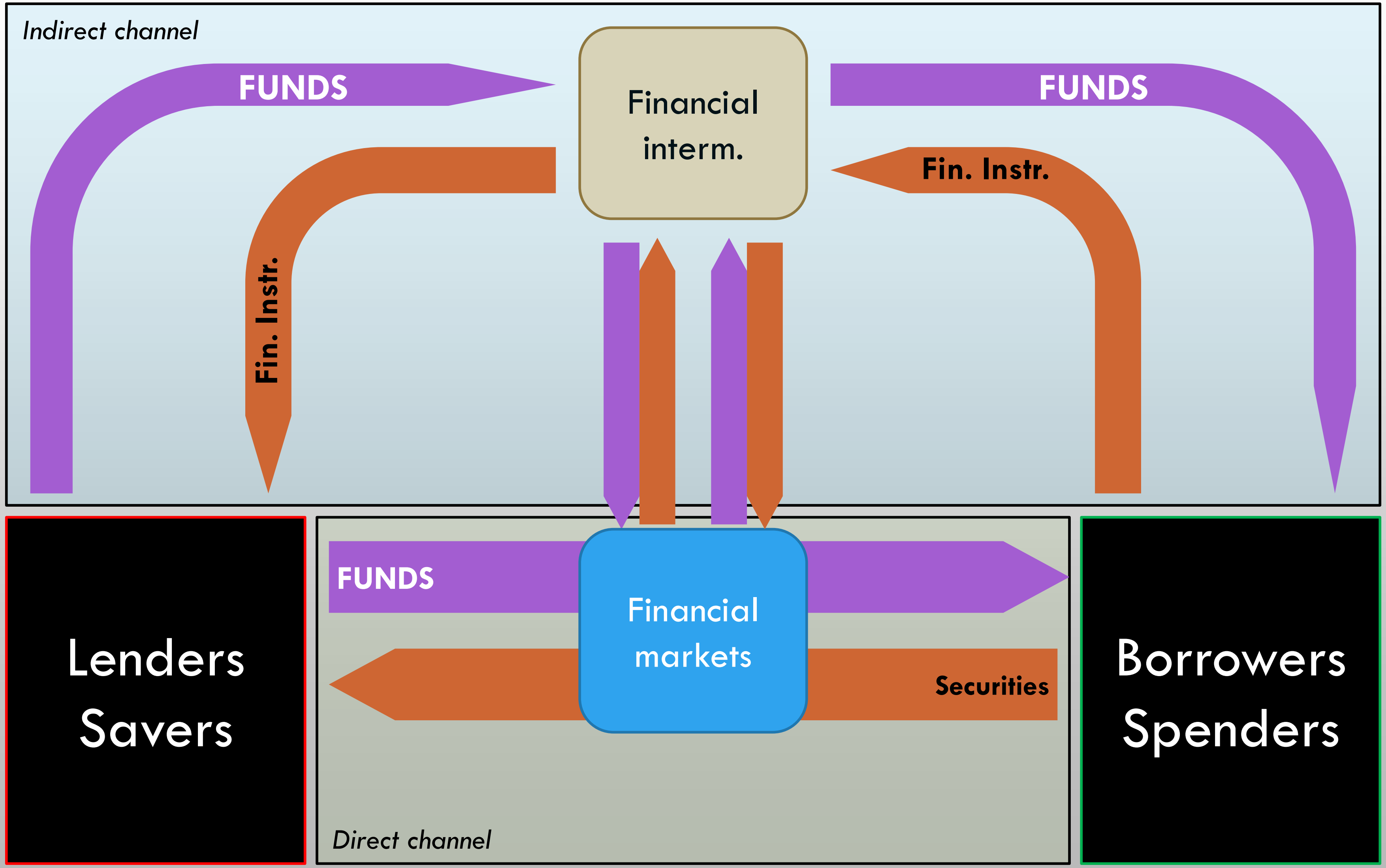


Help needed:

- Access to information varies
- 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 D/S 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
- **INDIRECT FINANCE** (ESPECIALLY BANKS) PREVAILS ON DIRECT FINANCE
- MARKETS, INTERMEDIARIES AND PRODUCTS ARE HEAVILY **REGULATED**
- MANY **DIFFERENT VARIATIONS OF BONDS, STOCKS AND OTHER PRODUCTS** EXIST
- **DEBT** REQUIRES **GUARANTEES AND COVENANTS**
- **NO CLEAR EVALUATION MODEL FOR STOCKS EXISTS**
- **UNDERDEVELOPED FINANCIAL SYSTEMS ARE ASSOCIATED WITH LOW ECONOMIC GROWTH**

WHY THE INDIRECT CHANNEL?

- **Lower transaction costs** (experience, time, money) due to **scale economies**
- **Additional services (scope economies)**
- **Access to large denominations**
- **Access to liquidity services**
- **Risk sharing, diversification, reduction of uncertainty**
- **Less asymmetric information**

ASYMMETRIC INFORMATION?

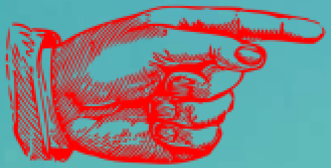
In every transaction, one knows better…

- *__Adverse selection__* __(ex-ante)__: worst borrowers are more active in seeking counterparties, sick people look for health insurance, …
- *__Moral hazard__* __(ex-post)__: borrowers may behave against the interests of lenders misusing loan's proceedings, insureds don't take enough care of their wealth, …

Solutions?

- Finding ways to distinguish «good» from «bad» risks: **experience, monitoring, guarantees, covenants** (but: contracts get complex, and costs increase)
- Specialising in gathering and managing information (but: **free-riding** and **conflicts of interest)**
- Increase **regulation and supervision** (but: usually catching up, and costly to enforce)

SIMULATION



GET TO THIS LINK OR USE THE QR CORE
AND FOLLOW THE INSTRUCTIONS

https://tinyurl.com/y5ucdvyj

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 know 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!)
  - 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?

EXAMPLES

CONFLICTS OF INTEREST?

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…?**

Are you honest?

WHAT MARKETS AND INTERMEDIARIES?

Rights

- <u>DEBT:</u>

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

- <u>EQUITY</u>:

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

Transferability

- <u>CREDIT (and also INSURANCE)</u>:

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

- <u>SECURITIES</u>:

  - Quickly and easily transferable
  - Standardizd
  - Uniform contractual features

WHAT 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)

WHAT 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:

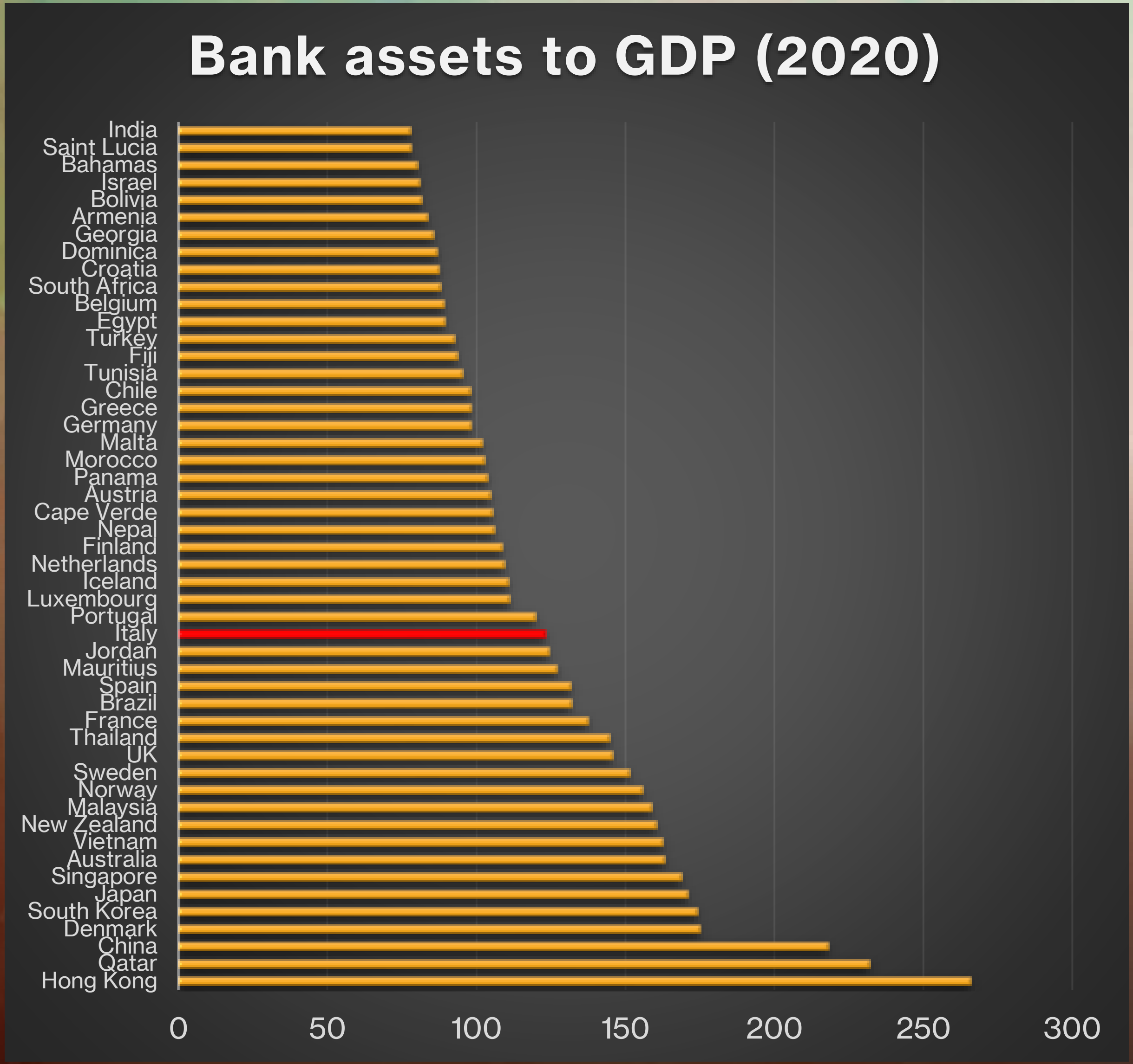
  - Banks: collect deposits, bonds and stocks, invest in loans, bonds, stocks
  - Non-banks: no deposits

- Insurance intermediaries:

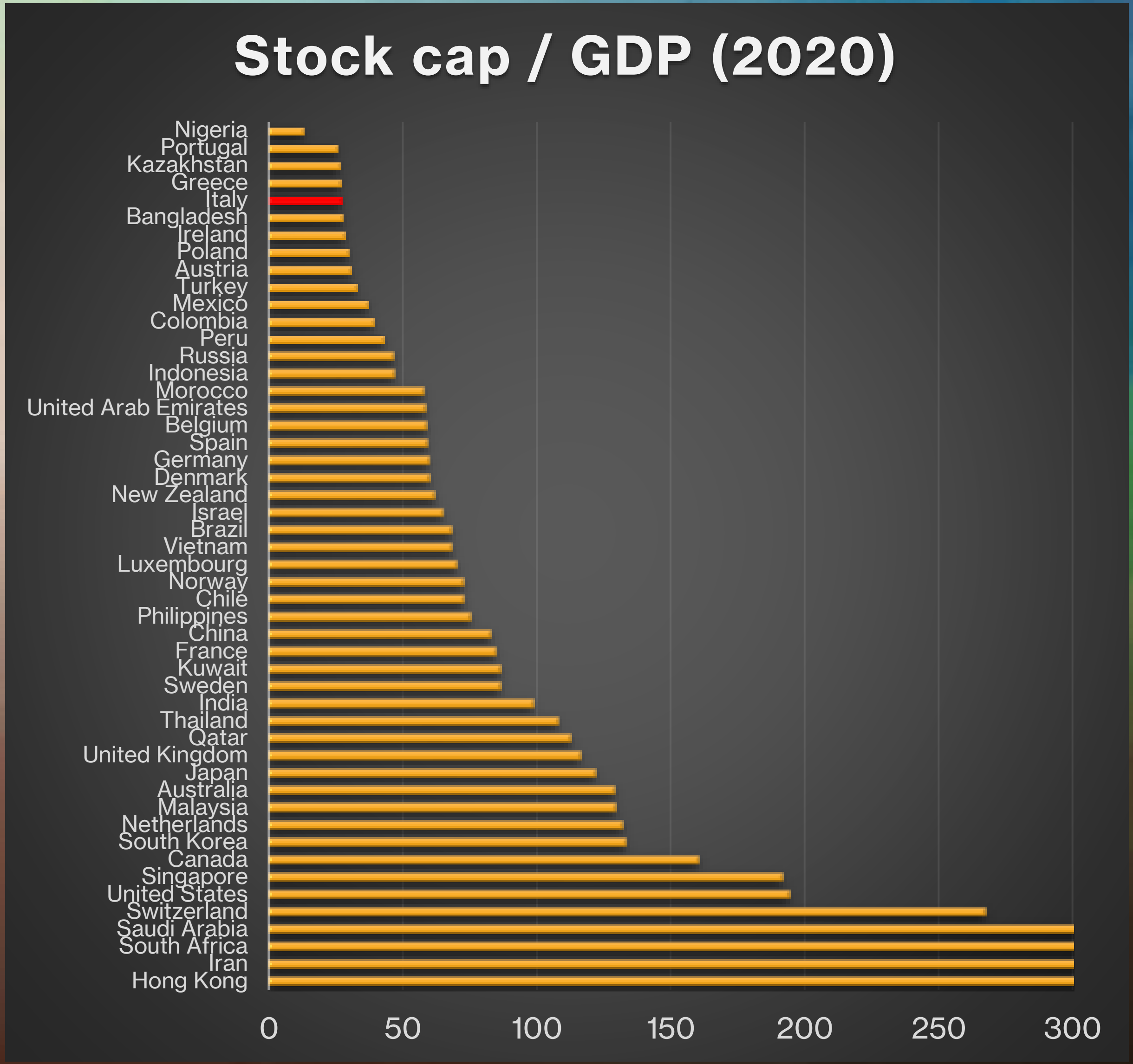
  - Life/P&C/pension funds: raise premiums or contributions, invest in debt, stocks

- Securities' industry:

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



Bank assets to GDP (2020)
India
Saint Lucia
Bahamas
Israel
Bolivia
Armenia
Georgia
Dominica
Croatia
South Africa
Belgium
Egypt
Turkey
Fiji
Tunisia
Chile
Greece
Germany
Malta
Morocco
Panama
Austria
Cape Verde
Nepal
Finland
Netherlands
Iceland
Luxembourg
Portugal
Italy
Jordan
Mauritius
Spain
Brazil
France
Thailand
UK
Sweden
Norway
Malaysia
New Zealand
Vietnam
Australia
Singapore
Japan
South Korea
Denmark
China
Qatar
Hong Kong
0
50
100
150
200
250
300



Stock cap / GDP (2020)
Nigeria
Portugal
Kazakhstan
Greece
Italy
Bangladesh
Ireland
Poland
Austria
Turkey
Mexico
Colombia
Peru
Russia
Indonesia
Morocco
United Arab Emirates
Belgium
Spain
Germany
Denmark
New Zealand
Israel
Brazil
Vietnam
Luxembourg
Norway
Chile
Philippines
China
France
Kuwait
Sweden
India
Thailand
Qatar
United Kingdom
Japan
Australia
Malaysia
Netherlands
South Korea
Canada
Singapore
United States
Switzerland
Saudi Arabia
South Africa
Iran
Hong Kong
0
50
100
150
200
250
300

EXAMPLES

REGULATION AND SUPERVISION

Scope:

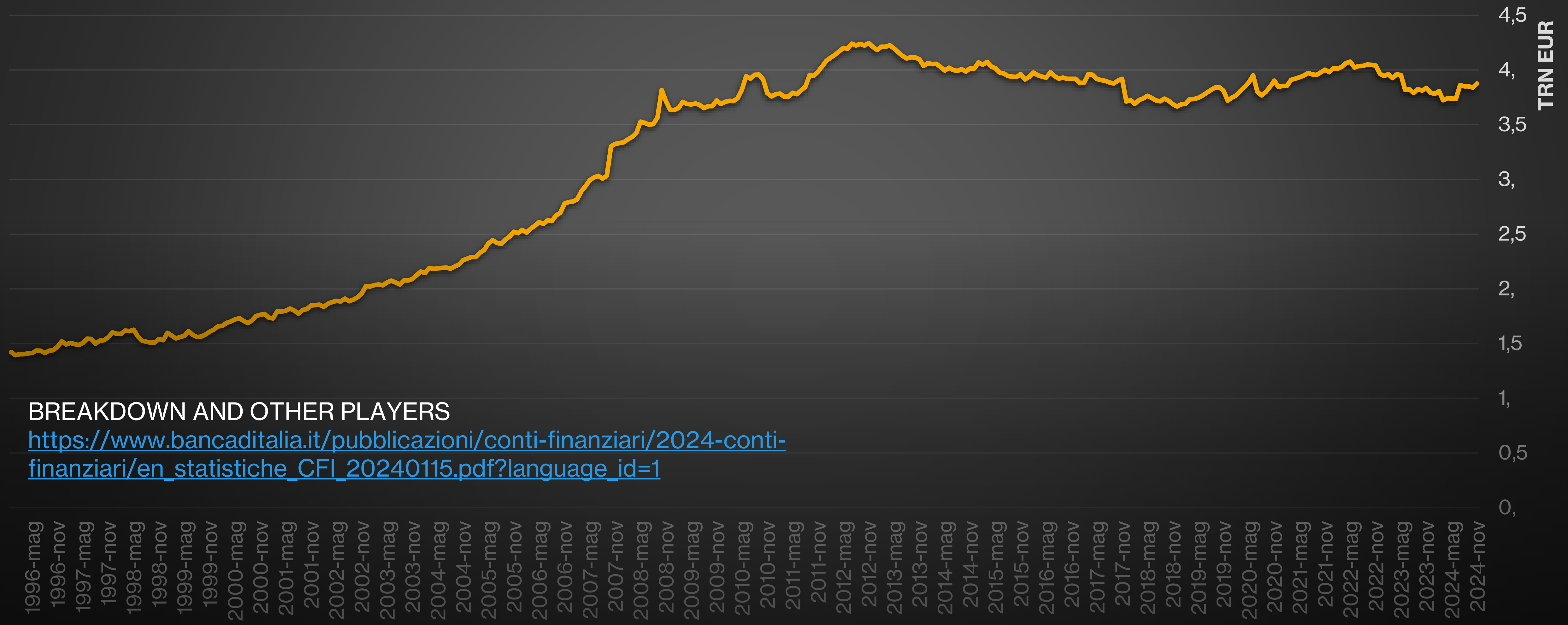
- protection of “customers” (depositors and other creditors)
- financial stability

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

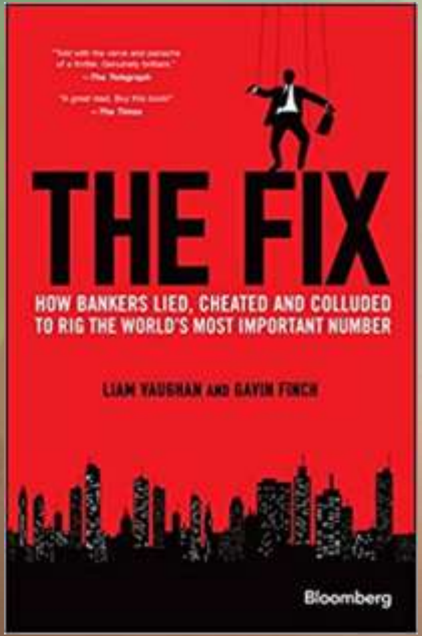
A patchwork of authorities: BCBS/EBA/ECB/NCB/anti-trust/…

IT BANKS: Total assets



BREAKDOWN AND OTHER PLAYERS
https://www.bancaditalia.it/pubblicazioni/conti-finanziari/2024-conti-finanziari/en_statistiche_CFI_20240115.pdf?language_id=1

EXAMPLES: How much money in IT banks? Trends?



LIBOR (London InterBank Offered Rate): reference IR (1d-1y), main currencies (GBP, USD, CHF, EUR, JPY, …) and basis for 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, very few people got jailtime
- Similar issues with forex (evidence of intense transactions around the fixing) and the Euribor

EXAMPLES: The LIBOR scandal

Build the balance sheet, income statement and cashflow statement for the sales agent of the previous Wooclap, using this data:

Income:	40.000 per year
Cost of car:	50.000 (can be sold as junk for 2.000 after 5 years)
Loan:	monthly instalments
	3 years duration
	50% interest rate

TO DO BY NEXT LECTURE