FINANCIAL MARKETS AND INSTITUTIONS

OVERVIEW OF THE FINANCIAL SYSTEM

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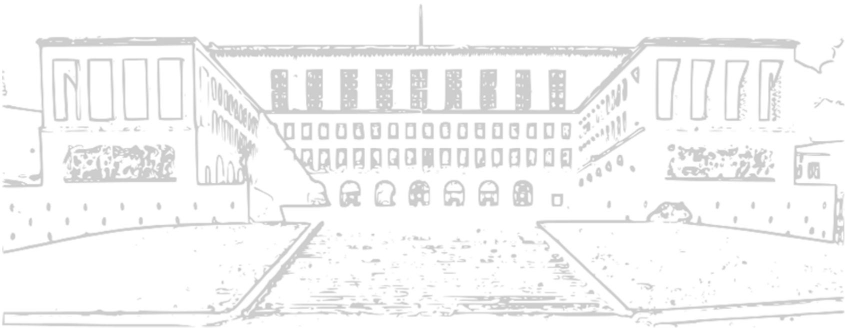
Prof. Alberto Dreassi – adreassi@units.it



DEAMS
University of Trieste

AGENDA

- Functions of financial markets
- Asymmetric information: adverse selection, moral hazard
- Structure of financial markets
- The international dimension
- Classification of financial intermediaries
- Regulation
- Examples

FUNCTIONS OF FINANCIAL MARKETS

Primary functions:

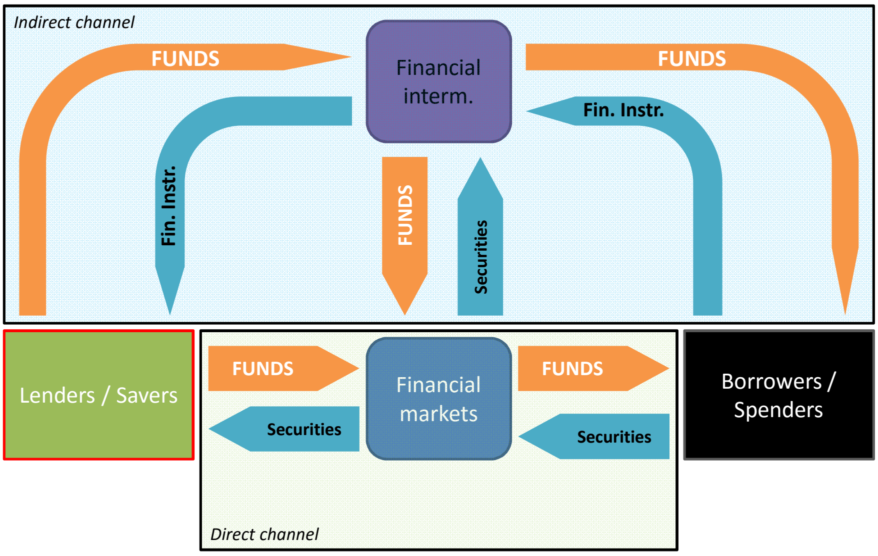
- Channeling funds from savers in surplus to spenders in deficit
  - Directly: by having borrowers issue and sell financial instruments (securities, claims on future income or assets) to lenders through financial markets
  - Indirectly: by having financial intermediaries assume liabilities towards lenders and issue assets towards borrowers or financial markets

FUNCTIONS OF FINANCIAL MARKETS

Why are savers/borrowers imbalanced?

- Profitable investment opportunities are infrequently available to savers
- Savers and spenders do not know and/or trust each other
- Unassisted, these flows would be allocated inefficiently or less productively
- Being saver or borrower can change from time to time

FUNCTIONS OF FINANCIAL MARKETS



FUNCTIONS OF FINANCIAL MARKETS

The indirect channel is usually the largest:

- Financial transactions involve transaction costs (expertise, time and money), the smaller the lender/borrower the greater their impact (vs. intermediaries' economies of scale)
- Intermediaries provide additional services to lenders and borrowers (economies of scope)
- Intermediaries share transactions' risks and reduce uncertainty (asset transformation, risk pooling)
- Intermediaries allow portfolio diversification to reduce uncertainty
- Intermediaries reduce asymmetric information, adverse selection and moral hazard

Asymmetric Information

Asymmetric information:

- one party of a financial transaction or contract does not know enough about the other party to make accurate decisions
- leads to:
  - Adverse selection (ex-ante): potential "bad" borrowers are the ones that most actively seek loans and are most likely to be financed, up to the point where no lender would be ready to provide funds
  - Moral hazard (ex-post): the borrower might engage in undesirable activities that make the loan less likely to be paid back (plus, conflicts of interest), up to the point where no lender would provide funds

- Financial intermediaries can:
  - Require specific information to reduce asymmetries and use expertise
  - Better scrutiny borrowers and discriminate between "good" and "bad"
  - Monitor closely borrowers reducing incentives to misbehave

Structure of Financial Markets

Main groups of securities:

- Debt instruments (bonds, mortgages, …):
  - the borrower agrees to pay the holder a fixed (or similar) amount of money at specific points in time until a maturity date
  - short-term (<1y), medium-term (1y-5/10y), long-term (>5/10y)

- Equity instruments (common stock, preference shares, …):
  - the holder has a claim to share in the net income (through periodic payment of uncertain dividends) and the assets of a business (though, residually in case of liquidation/bankruptcy)
  - usually involve voting and rights additional to cash-flows
  - smaller volumes than debt instruments

Structure of Financial Markets

Main markets - origination:

- Primary market:
  - Hosts selling of new issues of a security to initial buyers
  - Proceedings flow directly to borrowers
  - Less common for the public than for investment banks and other institutional investors
- Secondary market:
  - Hosts selling of securities that have been already issued
  - Sees a number of different financial intermediaries (brokers, dealers, banks, insurers, …)
  - Proceeding flow to previous owners, not to borrowers
  - Provides artificial liquidity to securities and, by providing recurrent pricing, affect indirectly the primary market

Structure of Financial Markets

Main markets - organisation:

- Exchanges:
  - Buyers and sellers (or agents and brokers) meet (physically or virtually) in a centralised location to conduct standardised trades
- Over-the-Counter (OTC):
  - Dealers at various locations hold an inventory of securities and are ready to buy and sell at specific prices to anyone
  - IT developments and increased standardisation/competition reduced differences with organised exchanges

Structure of Financial Markets

Main markets - maturity:

- Money market:
  - Trading occurs on short-term debt instruments (<1y)
  - Greater volumes and higher liquidity
  - Large denominations
  - Address temporary excesses or deficits of funds

- Capital market:
  - Trading occurs on longer term debt instruments (>1y) and equities
  - Higher volatility in pricing and higher risk
  - Address long-term financing objectives

The International Dimension

Some confusing terminology:

- Foreign bonds: sold abroad and denominated in the target country's currency (f.i. Italian bonds sold in Singapore and priced in SGD)
- Eurobond: priced in a currency other than that of the target country (f.i. a bond denominated in TRY sold in Shanghai)
- Eurocurrencies: foreign currencies deposited in banks outside their home country (f.i. Eurodollars, that are USD deposited off the US)

"Globalisation", despite controversies, provides:

- greater efficiency (competition for funds)
- growth opportunities (more alternatives available)
- higher welfare (better use of resources)

INTERMEDIARIES

By looking at their intermediary role, we have:

- Depository institutions:
  - Commercial banks and cooperatives/mutuals (less differences in the European market compared with the US)
  - Collect (mainly) deposits and hold loans and securities
- Contractual savings institutions:
  - Life insurers: collect policy premiums and hold m/l securities
  - Non-life insurers: collect policy premiums and hold liquid securities
  - Pension funds and retirement programs: collect contributions and hold m/l securities
- Investment intermediaries:
  - Finance companies: issue commercial paper and securities, hold loans
  - Mutual funds: issue shares and hold securities

A number of additional "instrumental" institutions (f.i. brokers, arrangers, …)

REGULATION

Scope: protection of "customers" (depositors and other creditors)

Main instruments:

- 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 (quality of participants and orderly liquidation)
  - Restrictions 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

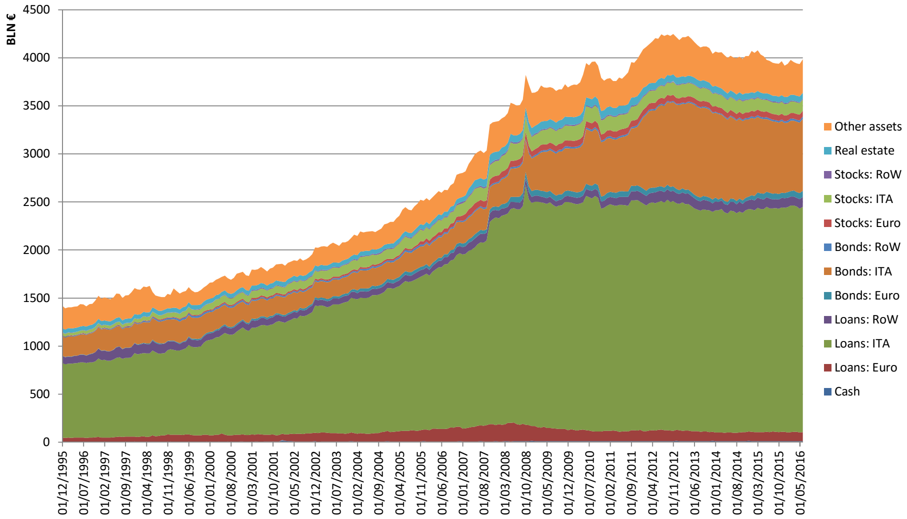
EXAMPLES

1. Imagine that you saved 1.000 € and you want to invest them. You have three main alternatives:
   - One of your peers takes a loan from you for 1 year and is paying a 20% interest rate
   - A bank provides a demand deposit and offers a 2% interest rate
   - A manufacturing company issues securities that will provide in 1 year a 10% interest rate

Questions:
- what is the best choice?
- which one would you choose and why?
- what should be considered in examining these three alternatives?

EXAMPLES

2. In May 2016 Italian banks provide the following assets (in bln €):



Are these numbers in line with our expectations?

EXAMPLES

3. As of end 2013, Italian families had the following assets and liabilities (in bln €):

Assets		Liabilities	
Cash	122	Loans: consumer credit	115
Deposits (banks/post off.)	1,051	Loans: mortages	378
Bonds: Italian sovereign	181	Loans: others	170
Bonds: Italian corporate	323	Insurance liabilities	37
Bonds: foreign	113	Payables and others	187
Shares: Italian	666		
Shares: foreign	43		
Shares: family businesses	201		
Mutual funds	305		
Insurance assets	727		
Receivables and others	117		
Real estate/tangibles	5,766.7		
Total assets	9.615	Total liabilities Net wealth	886 8,729

Are these numbers in line with our expectations?

EXAMPLES

4. As of end 2013, non-financial Italian firms had the following assets and liabilities (in bln €):

Assets		Liabilities	
Cash and demand deposits	252	Other deposits	32
Other deposits	27	Short term securities	5
Short term securities	1	Long term securities	140
Long term securities	60	Derivatives	7
Derivatives	5	Short term loans	371
Short term loans	30	Long term loans	752
Long term loans	28	Stocks and shares	1,591
Stocks and shares	509	Insurance liabilities	100
Mutual funds	9	Payables and other liabilities	563
Insurance assets	17		
Receivables and other assets	632		
	1,571		3,562

Are these numbers in line with our expectations?