

Banking

LECTURE 1

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Do finance promote, follow or hamper economic growth?

- *"that financial markets contribute to economic growth is a proposition too obvious for serious discussion" (Robert Merton)*
- *"where enterprise leads finance follow" (Joan Robinson)*
- *"we are throwing more and more of our resources, including the cream of our youth, into financial activities remote from production of goods and services, into activities that generate high private rewards disproportionate to their social productivity" (James Tobin)*

How finance affect growth? A simple framework

Assume that the economy produces a single good that can be consumed or invested to accumulate capital which depreciate at an exogenous rate δ

The aggregate output in the economy depends linearly on the aggregate capital stock

$$Y_t = AK_t$$

and the capital stock is

$$K_{t+1} = K_t(1 - \delta) + I_t$$

In equilibrium

$$S_t = sY_t$$

$$I_t = \phi S_t$$

The growth rate in $t + 1$ is

$$g_{t+1} = \frac{Y_{t+1} - Y_t}{Y_t} = \frac{K_{t+1}}{K_t} - 1$$

hence

$$g_{t+1} = (1 - \delta) + \frac{I_t}{K_t} - 1 = \frac{\phi s Y_t}{\frac{Y_t}{A}} - \delta = A\phi s - \delta$$

Two channels

Financial systems affect growth by promoting or hampering

1 Physical/human capital accumulation

- mobilization and pooling of savings; risk diversification $\Rightarrow \phi \uparrow$ and $S \uparrow$
- financial fragility; propensity to consume $\Rightarrow \phi \downarrow$ and $S \downarrow$

2 Physical/human resource allocation and innovation

- information production; screening and monitoring of firms/projects; corporate governance $\Rightarrow A \uparrow$
- misallocation of talent $\Rightarrow A \downarrow$

Evidence

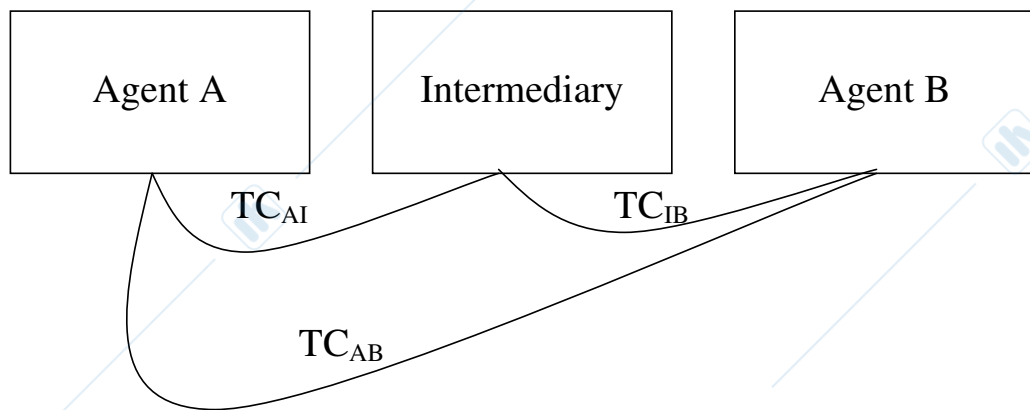
After surveying the huge empirical literature on the finance-growth nexus, Ross Levine (2005) concludes that

- 1 countries with better functioning banks and markets grow faster
- 2 the causality goes from finance to growth
- 3 better functioning financial systems ease the external financing constraints that impede firms to invest and innovate

The relationship between finance and growth becomes negative when the financial sector becomes too large or grows faster than the real economy (Cecchetti and Kharroubi, 2012; Law and Singh, 2014; Arcands et al., 2015)

Why do intermediaries exist?

- Intermediaries allow agents to make transactions at lower costs and allocate resources efficiently



- Intermediation is an efficient solution if

$$TC_{AI} + TC_{IB} < TC_{AB}$$

$$\sum_i U_i^I > \sum_i U_i^M$$

Market frictions and financial intermediary functions

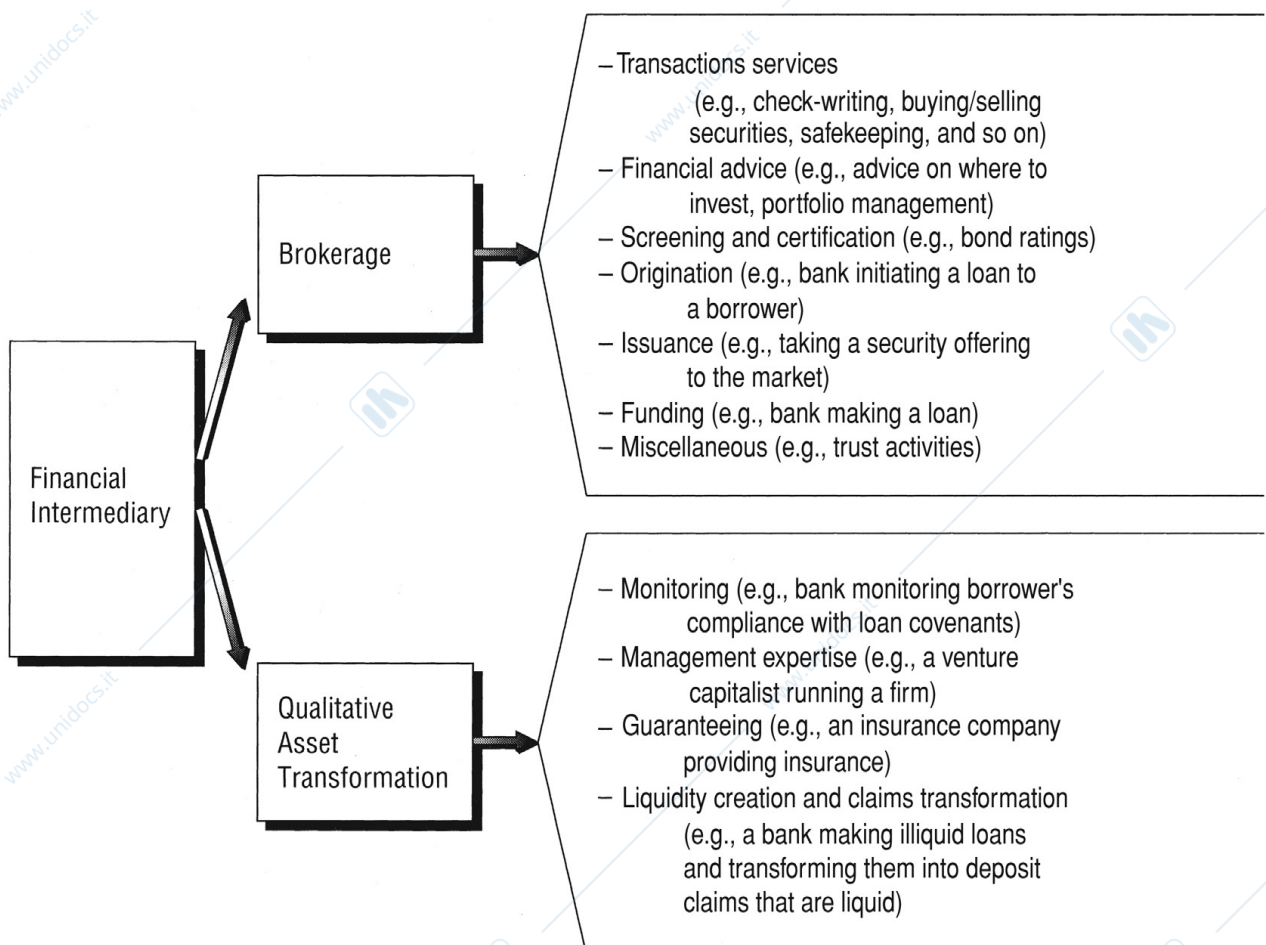
Ex ante and ex post information asymmetries

- producing information
- identifying best entrepreneurs and best investment projects
- boosting technological innovation
- exerting corporate governance
- improving resource allocation

Transaction costs and market incompleteness

- pooling saving
- diversifying risks
- producing liquidity

Types of financial intermediaries



Types of financial intermediaries

Brokers

Match transactors, buying and selling securities on behalf of investors for a fee, and/or sell information (financial brokers; financial analysts/consultants; rating agencies ...)

Reduce *search costs* and *information costs*

Dealers

Trade securities for its own account

Reduce *search and waiting costs*

Types of financial intermediaries

Mutual-fund intermediaries

Pool money from many investors by issuing their own liabilities which are representative of a bundle of marketable securities that they buy with collected money

MFI's liabilities are similar to equities, a claim to the MFI's residual income

Reduce *risk diversification costs*

- There are n investors endowed with a sum of money (saving) and m enterprises endowed with a project whose returns are not perfectly correlated
- In each financial transaction both investors and firms bear transaction costs equal to b : the cost of full diversification without intermediation is: $TC_{NI} = 2bnm$
- A MFI collects savings from n investors by selling liabilities that are representative of securities issued by m firms in which the MFI invests collected resources
- The cost of full diversification with MFI is:
 $TC_I = TC_{SI} + TC_{IE} = 2bn + 2bm < TC_{NI} = 2bnm$ if $n > 2$ and $m > 2$

Types of financial intermediaries

Commercial banks

Hold non-marketable, illiquid assets (loans) that are funded largely by issuing very liquid liabilities (deposits) which are withdrawable on demand

Reduce *liquidity and information costs*

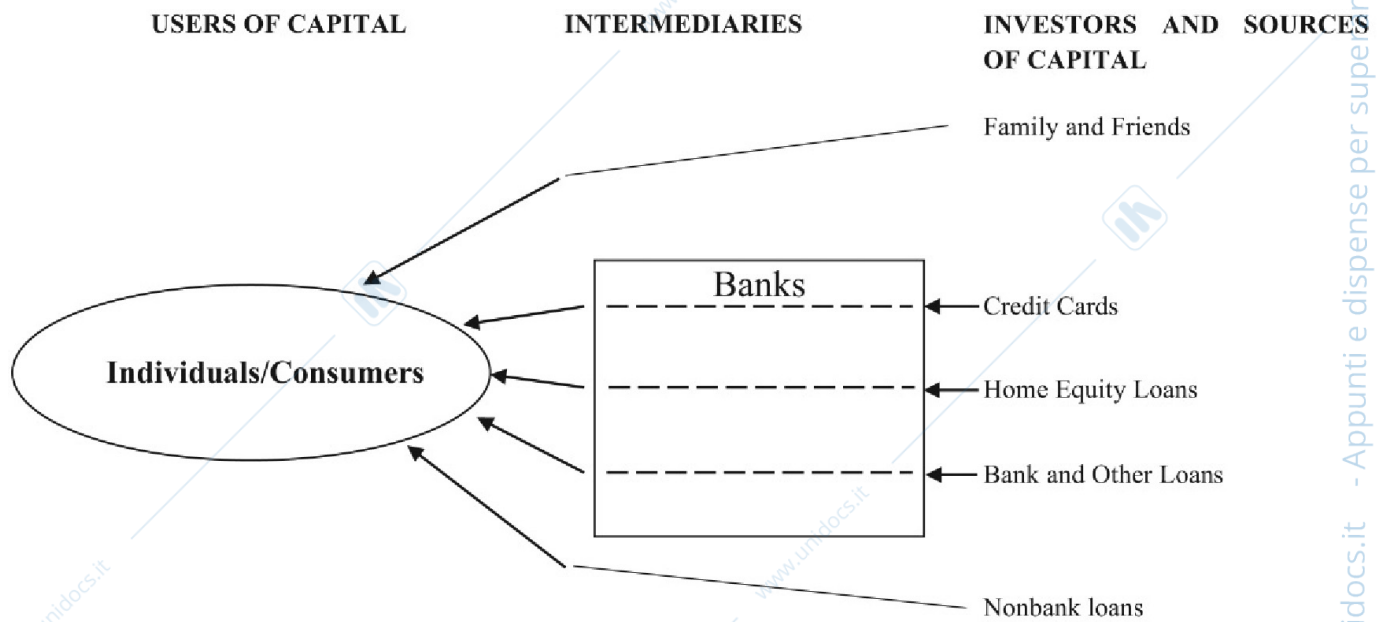
- Liability side
 - Bank deposits are repayable on demand at their face value and are used as immediate substitute for money
 - By collecting deposits from a large number of investors, banks diversify risk of deposit withdrawal and may invest in illiquid assets
- Asset side
 - Loans are non-marketable assets with a great content of private information
 - By financing their activity with demand deposits, banks have incentives (and exclusive information) to act as information producer and delegated monitor

Types of financial intermediaries

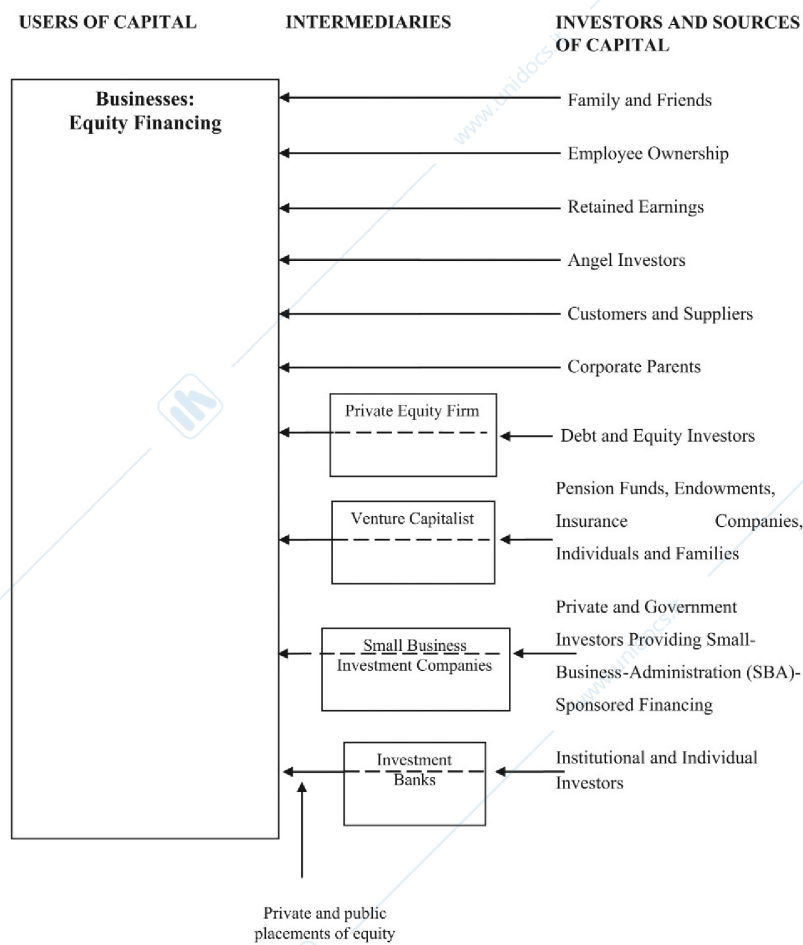
Nondepository intermediaries

- Investment banks
- Venture capital
- Insurance companies

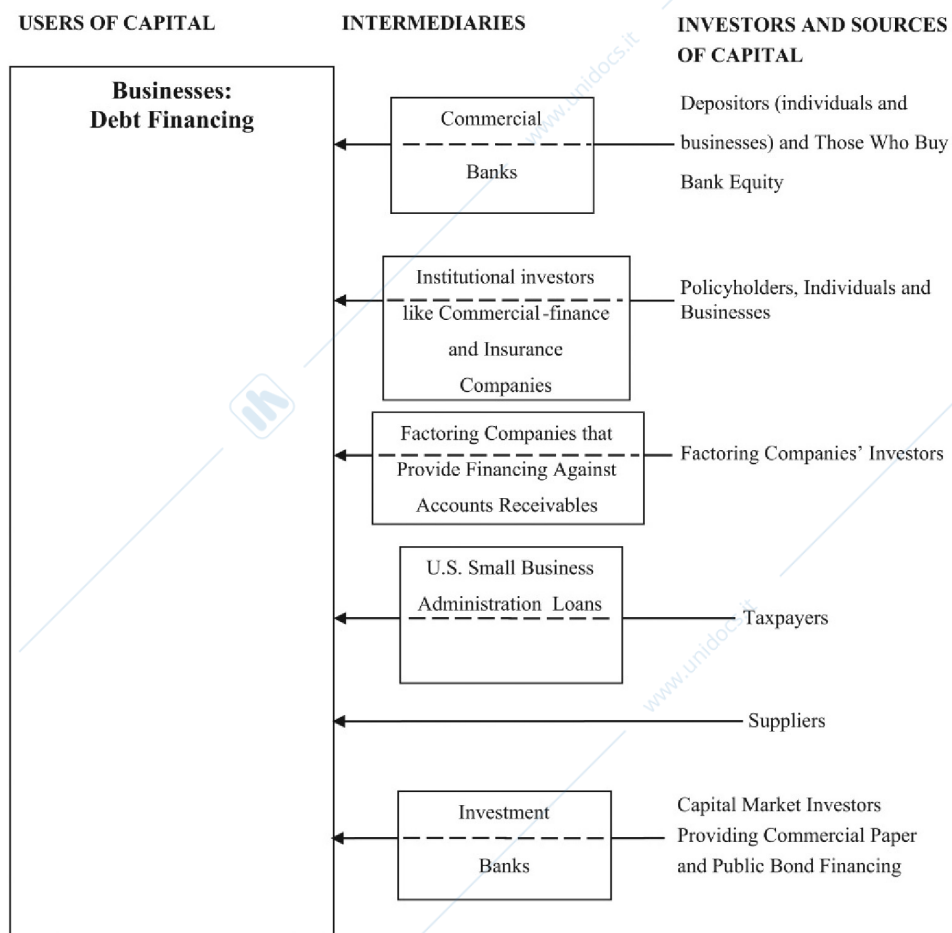
Sources of finance for consumers



Sources of equity finance for businesses



Sources of debt finance for businesses



References

Stuart I. Greenbaum, S. I., Thakor A.V., Boot A. W. A. (2016),
Contemporary Financial Intermediation, Amsterdam: Elsevier, 3rd edition,
chapters 1 and 2