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What is so special about financial intermediaries?

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Aims of the lecture

- To understand the role of financial intermediaries in the economy;
- To understand lenders' and borrowers' different requirements and how financial intermediaries (e.g., banks) can help bridging such differences;
- To understand how financial intermediaries reduce transaction, information and search costs;
- To understand why banks are considered “special”.

Outline

- What is special about financial intermediaries?
 - *What is special about banks?*
- The role of financial intermediaries:
 - *Transaction costs;*
 - *Asymmetric information.*
- Are financial intermediaries special?
- Why do financial intermediaries exist?

What is so special about financial intermediaries (1)

Financial intermediary: is a financial institution which acts between those who want to lend and those who want to borrow.

Financial institutions: **banks**, credit unions, finance companies, insurance companies, brokerage companies, etc...

What is so special about financial intermediaries (2)

Financial intermediaries: they play an important role in the economy as they channel funds from savers (units in *surplus*) to borrowers (units in *deficit*).

They intermediate

What is so special about banks

A bank is a financial intermediary that offers loans and deposits.

A bank also offers payment services and a wide range of additional services

The intermediation function



Banks collect surplus funds from savers and allocate them to those (both people and companies) with a deficit of funds (borrowers).

In doing so, they channel funds from savers to investors thereby increasing economic efficiency by promoting a better allocation of resources.

Direct finance



Savers and borrowers do not need banks to intermediate their funds: in direct finance, borrowers obtain funds directly from lenders in financial markets.

However, two types of barriers can be identified to the direct financing process:

1. The difficulty and expense of matching the complex needs of individual borrowers and lenders;
2. The incompatibility of the financial needs of borrowers and lenders.

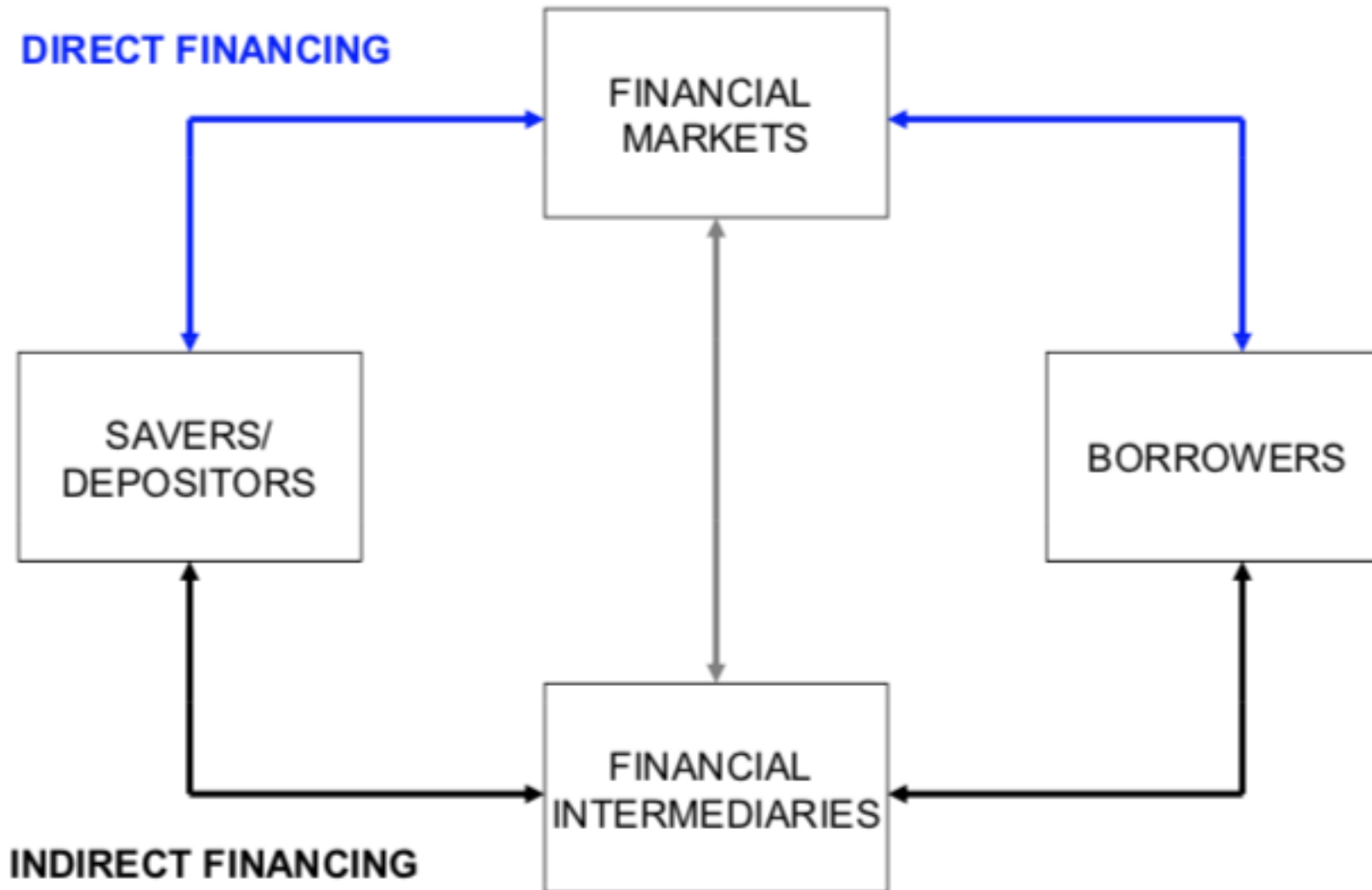
Lenders requirements

- The minimisation of risk: this includes the minimisation of the risk of default and the risk of the assets dropping in value;
- The minimisation of cost: lenders aim to minimise their costs;
- The maximisation of returns: lenders aim to maximise the return from their investments;
- Liquidity: lenders value the ease of converting a financial claim into cash without loss of capital value; therefore they prefer holding assets that are more easily converted into cash. One reason for this is the lack of knowledge of future events, which results in lenders preferring short term lending to long term.

Borrowers requirements

- Funds at a particular specified date;
- Funds for a specific period of time: preferably long term (think of the case of a company borrowing to purchase capital equipment which will only achieve positive returns in the longer term or of an individual borrowing to purchase a house);
- Funds at the lowest possible cost.

Direct and indirect finance



Direct *versus* indirect finance

- Financial intermediations has advantages over direct finance, but also additional costs for borrowers and lenders;
- To state that intermediated finance is more advantageous than direct finance, it is necessary that the benefits of such activity outweigh the costs associated with intermediation;
- The role of financial intermediation has now become more complex as intermediaries performs additional roles, creating additional layers of intermediation.

The role of banks



The role of banks (1)

Banks bridge the gap between the needs of lenders and borrowers by performing a **transformation function**:

- size transformation;
- maturity transformation;
- risk transformation.

Further, banks exploit information economies.

The role of banks (2)

Transaction costs

- Economies of scale and scope

Asymmetric information

- Adverse selection;
- Moral hazard;
- Agency problems (reminder);
- Free – rider problems (reminder).

Transaction costs

It refers to the costs associated with the buying and selling of a financial instrument (e.g., cost of searching a counterpart, cost of writing contracts, etc...)

How can financial intermediaries reduce transaction costs?

Economies of scale

Economies of scale= cost savings arising from decreasing unit cost of production as output increases. By increasing the value of transactions, the cost per unit of transaction decreases.

Remember:

- scale economies provide a reason as to why big firms are more efficient than small firms (hence one of the reasons for M&As);
- act as an entry barrier (along with product differentiation and so on).

Economies of scope

Economies of scope= cost savings arising from joint production.

Let us consider two outputs; Q_1 and Q_2 and their separate costs, $C(Q_1)$ and $C(Q_2)$. If the joint cost of producing the two outputs is expressed by $C(Q_1, Q_2)$, then economies of scope are said to exist if:

$$C(Q_1, Q_2) < C(Q_1) \text{ and } C(Q_2)$$

- Universal versus specialised banking.

Asymmetric information (1)

The problem of asymmetric information is at the heart of financial transactions. It arises because:

- not everyone has the same information;
- everyone has less than perfect information;
- some parties to a transaction have “inside” information which is not made available to both sides of the transaction.

Decisions are made beforehand (*ex ante*) on the basis of less than complete information and sometimes with counterparties who have superior information with the potential for exploitation.

Information asymmetries or the imperfect distribution of information among parties can generate **adverse selection** and **moral hazard**.

Asymmetric information (2)

Adverse Selection

1. before transaction occurs;
2. potential borrowers most likely to produce adverse outcomes are ones most likely to seek loans and be selected.

Moral Hazard

1. after transaction occurs;
2. hazard that borrower has incentives to engage in undesirable (immoral) activities making it more likely that won't pay loan back.

Financial Intermediaries reduce adverse selection and moral hazard problems, enabling them to make profits.

Other aspects of “specialness”

- transmission of monetary policy: banks are the conduit through which monetary policy actions impact the rest of the financial sector and the economy in general;
- credit allocation: banks are the major and sometimes the only source of finance for a particular sector of the economy;
- time intermediation: e.g., life insurance and pension funds= savers can transfer wealth between youth and old age and across generations;
- payment services: financial intermediaries are special in that the efficiency with which they provide payments services directly benefits the economy.

Banks as firms... as special firms



Banks as firms (1)

Objective of a company:

- maximisation of shareholders' wealth

Role of financial management:

- investment decisions (allocating finance);
- financing decisions (acquiring finance);
- controlling resources (conserving finance).



Investment & Financing decisions are vital elements of planning to achieve the objectives of any organisation.....including **banks!**

Banks as firms (2)

How to quantify these objectives?

- Sales: for a bank will be the level of intermediation activity and profit goals over a planned period supported by financial targets (e.g., reserves).

Role of financial management

- Monitor actual performance against planned goals and targets.



Financial management will rely on the information revealed by periodic financial reports produced by accounting system.

Aims of Bank Management

- Profitability;
- Prudence (or safety).

To ensure that banks are safe and profitable, they must have adequate:

- LIQUIDITY: the ability of a bank to pay its obligations when they fall due;
- SOLVENCY: the ability of a bank to repay its obligations ultimately

Liquidity and Solvency

Liquidity is a **cash flow** concept:

- banks must be able to meet all their short-term liquidity requirements. It is important because banks need to;
- meet unpredictable withdrawals of deposits or unexpected operating expenditures;
- cover predictable withdrawals of depositor or predictable operating expenditures.

Solvency is a **stock** concept:

- banks should be able to repay all their depositors and debtors, ultimately, at any point in time;
- theoretically, a bank should be able to cash in all its assets and repay its liability holders.

Bank Financial Statements



Bank Financial Statements

Balance sheet

- Financial statement of the wealth of a firm on a given date. This is usually at the end of the financial year.

Income statement

- Financial statement that reports a firm's profitability over sometime period by subtracting all costs from all income.

Bank simplified balance sheet: the liability – side (1)

Where do bank funds come from?

- general public – retail deposits;
- companies – (small, medium, large) corporate deposits;
- other banks – interbank deposits;
- debt issues – share issues (conferring ownership rights on holders);
- retained earnings.

A bank's liabilities comprise:

- deposits – retail and wholesale;
- debt, equity and reserves – often referred to as capital

Bank simplified balance sheet: the liability - side (2)

Banks get the bulk of their funds from:

- issuing shares;
- issuing bonds (long term debt paying fixed dividend);
- saving past profits (retained earnings) which they put in reserves but mainly from deposits

But mainly from: DEPOSITS

Why is this so important?

Bank simplified balance sheet: the asset - side

Liabilities are used to fund banks activities (assets):

- cash;
- liquid assets – short-term money market instruments such as T-bills, which they can sell (liquidate quickly) if they have a cash shortage;
- loans;
- other investments;
- fixed assets (e.g., branch network; computers, etc...).

Asset become less liquid as we move down balance sheet

Bank Balance Sheet (simplified)

ASSETS	LIABILITIES
<ul style="list-style-type: none">● Cash● Liquid Assets● Loans● Other Investments● Fixed Assets	<ul style="list-style-type: none">● Deposits:<ul style="list-style-type: none">● Retail● Wholesale● Equity● Other Capital Items
<ul style="list-style-type: none">● TOTAL	<ul style="list-style-type: none">● TOTAL

Bank Balance Sheet (simplified)

- Note that the liabilities side **tends to be more liquid** than the assets side of the balance sheet;
- Liabilities tend to have short maturities;
- Assets (loans) tend to have longer maturities;
- Recall: asset transformation of banks;
- Capital is particularly important in banking.

Bank Balance Sheet (simplified)

ASSETS		LIABILITIES	
Loans	100%	Deposits	80%
		Capital	20%
Total	100%	Total	100%

Bank simplified Income Statement

Liabilities – incur a cost, e.g., banks have to pay interest on deposits, dividends to shareholders, interest on debt (interest cost), provisions for loan losses, taxes, etc...;

Assets – generate revenues, e.g., interest earned on loans and investments; fees and commission (interest & non-interest revenue);

Banks also incur staffing and other operating costs

BANK PROFITS=INCOME-COSTS

Where:

- Income= Interest and Non-Interest Income;
- Costs= Interest Costs + Staffing Costs + Other Operating Costs

Bank Income Statement

<i>a</i>	Interest income
<i>b</i>	Interest expense
<i>c (=a-b)</i>	Net interest income (or “spread” or “interest margin”)
<i>d</i>	Provision for loan losses (PLL)
<i>e (=c-d)</i>	Net interest income after PLL
<i>f</i>	Non-interest income
<i>g</i>	Non-interest expense
<i>h (=f-g)</i>	Net non-interest income
<i>i (=e+h)</i>	Pre-tax net operating income
<i>l</i>	Securities gains (losses)
<i>m (=i±l)</i>	Income before taxes
<i>n</i>	Taxes
<i>o</i>	Extraordinary items
<i>p (=m-n-o)</i>	Net income
<i>q</i>	Cash dividends
<i>r (=p-q)</i>	Retained profit