

THE MARKET FOR LOANABLE FUNDS (THE CREDIT MARKET)

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Introduction

- We studied several indicators of the performance of the macroeconomy: GDP, the unemployment rate and the inflation rate.
- In all these discussions, it became obvious that the private sector and the Government are the backbones of the economy because of the economic activities they carry out and the jobs they create.
- The problem is that the Government and firms do not always have the financing for their activities.
- Where do they get the financing then?

The market for loanable funds

- By definition, a market is any organizational setting where buyers of a good/service can meet suppliers for economic transactions.
- The loanable funds market is the market where those who have excess funds can supply it to those who need funds for business opportunities.
- The loanable funds market includes: stock exchanges, investment banks, mutual funds firms, and commercial banks.

The market for loanable funds (2)

- Those who save are:
 - Households who choose to save in the economy (i.e. in the United States)
 - Foreign entities
- When private individuals deposit their money in the banks, the money doesn't just sit there until it is withdrawn. Most of it is actually loaned out.
- Other big sources of households' savings are: retirement accounts, stocks, bonds and mutual funds.

The market for loanable funds (3)

- Those who demand loanable funds (i.e. the borrowers) are:
 - Firms
 - Governments
- Firms borrow to invest. They need money to purchase capital goods or to increase their inventories.
- Governments need money to provide public goods and services (e.g. roads, national defense, schools, ...)

The market for loanable funds (4)



The market for loanable funds (5)

- Combining the previous diagram to what we have learnt so far in macroeconomics, we can see that:
 - National output (GDP) requires firms to make investments
 - Before firms can make investments, they need to borrow money
 - They can only borrow money if others have saved money
 - The structure that facilitates transactions between borrowers and lenders is the market for loanable funds.
- So, every dollar invested by a firm means that, prior to the investment, a dollar was saved.

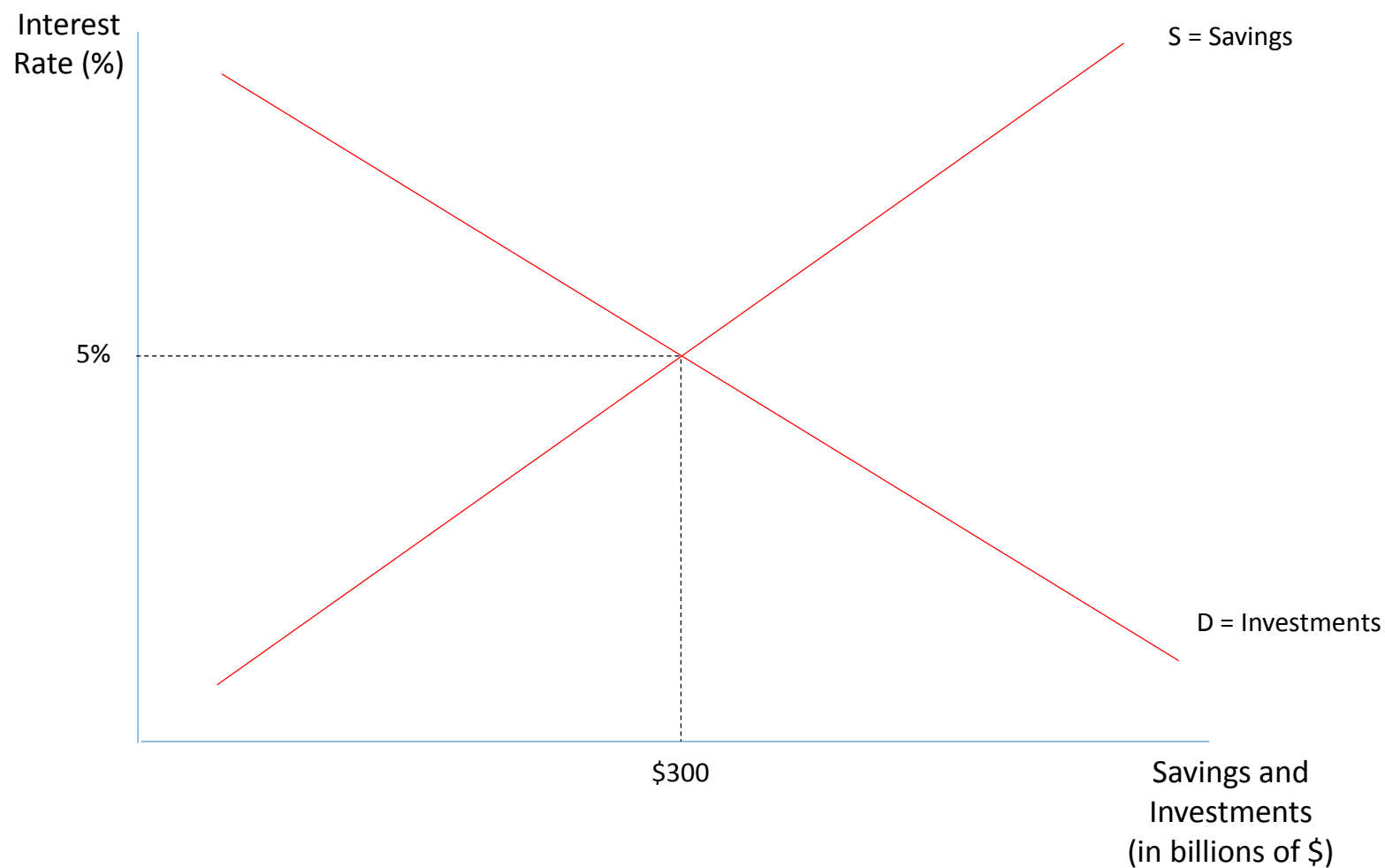
The market for loanable funds (6)

- In traditional markets for goods and services, the demand and the supply determine the markets' equilibrium values:
 - the equilibrium price
 - the equilibrium quantity
- The market for loanable funds is no different.
- In this market, we have the demand and the supply of loanable funds.
- And they also determine the market's equilibrium values.

The market for loanable funds (7)

- In the market for loanable funds:
 - The demand for loanable funds is made by firms for their investments.
 - The supply of loanable funds is made by savers because they have excess money.
- Loanable funds have a price. When borrowers take loans from banks, they usually do not pay back the exact same amount they borrowed.
- They pay a certain level of interest.
- *The interest rate is the price of loanable funds.*

The market for loanable funds (8)



Interest rates

- Interest rates can be seen from two perspectives: the lenders' and the borrowers'
- Interest rates as a reward for saving
 - Banks are willing to pay you (even if it's really small) for your savings.
 - The interest rates on deposits is usually lower than 2% a year.
- Interest rates as a cost of borrowing
 - When an investor gets a loan from a bank, he/she needs to pay back more than the original loan's amount (as we said before).
 - *Therefore, the rational investor will only acquire a loan if and only if his expected return is higher than the interest rate of the loan.*

Nominal vs real interest rate

- Assuming you save \$1000 in a bank with an interest rate of 25% per year.
- It means that after a year, the bank will owe you:
$$\$1000 + (\$1000 * 0.25) = \$1250$$
- However, another very important factor needs to be taken into consideration – the prevailing inflation rate in the economy.
- Assuming the inflation rate is 20%, it means that the purchasing power of the dollar will fall by 20%.

Nominal vs real interest rate (2)

- To summarize, the interest rate in the market for loanable funds is 25% (gain), but the inflation rate is 20% (loss).
- Therefore, the 'real' gain on the savings is $25 - 20 = 5\%$.
- *25% is the nominal interest rate. This is the interest rate as quoted by commercial banks or other financial institutions.*
- *5% is called the real interest rate. It is the interest rate adjusted for inflation.*

Nominal vs real interest rate (3)

- Fisher's equation:

$$\text{real interest rate (r)} = \text{nominal interest rate (n)} - \text{inflation rate (i)}$$

- It would not be rational to save money in a bank while the nominal interest rate is lower than the inflation rate.
- This would be equivalent to losing money over time because the real interest rate would be negative.

Factors that shift the supply of loanable funds

- Recall that the supply of loanable funds comes from savings.
- A few factors can change the supply of funds in the loanable funds market.
- The three factors we will discuss here are:
 - Income and wealth
 - Time preferences
 - Consumption smoothing

Income and wealth

- Savings generally grow with income and wealth.
- When people have more income/wealth, they tend to spend more on normal goods; however, their savings rate also increases.
- An increase in savings shifts the supply curve to the right.
- A decrease in savings shifts the supply curve to the left.

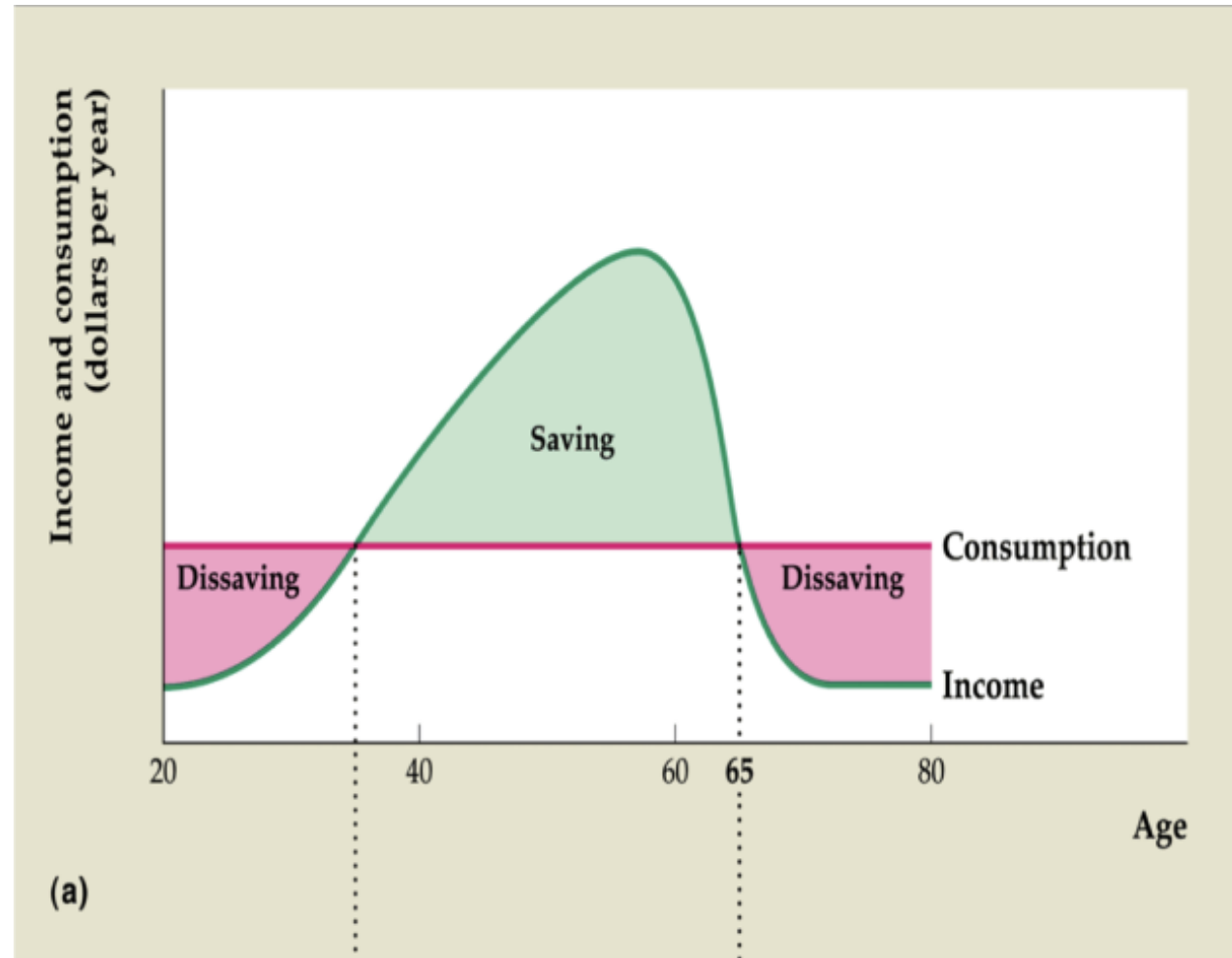
Time preferences

- In economics, time preference refers to the fact people generally prefer to consume sooner rather than later.
- People with a stronger time preference save less; because saving money is equivalent to postponing consumption.
- Therefore, when the time preference of consumers gets stronger, they save less and cause the supply curve to shift to the left.
- If their time preference becomes weaker, they save more and cause the supply curve to shift to the right.

Consumption smoothing

- The level of savings varies significantly over the course of a typical lifetime.
- In the earlier stage of life, the level of income is typically low and so is the level of savings.
- In the midlife period, the income level is higher and a more significant portion of it is saved (e.g. retirement accounts, personal savings, ...)
- In the later part of life, income falls drastically and what we consume is usually the savings accumulated over the course of our lives.

Consumption smoothing (2)



Source: <https://uchumist.wordpress.com/category/misc/>

Consumption smoothing (3)

- At the earlier stages of life, people usually consume more than they earn. So they need to borrow money (e.g. college education, buy first home, ...)
- In the midlife, when they earn a significant level of income they pay back their loans and save for retirement.
- Later in life, when people retire and their incomes fall, they tend to live on their savings. They dissave.
- *Dissaving occurs when people withdraw funds from their previously accumulated savings.*

Consumption smoothing (4)

- The consumption pattern (consumption line) is more smooth than the income pattern (income line).
- Consumption smoothing is possible thanks to the market for loanable funds.
- If more people in the economy enter the midlife, this will increase the supply of loanable funds.
- On the other hand, if more people become old and enter the later stage of life, the supply of savings will decrease.
- Therefore, demographics has an impact on the loanable funds market.

Factors that shift the demand for loanable funds

- The main reason why the demand for loanable funds exists is: investments.
- Among the numerous reasons that could cause the demand for loanable funds to shift, we will talk about two of them:
 - Productivity of capital
 - Investor confidence

Productivity of capital

- Remember that the rational firm will only acquire a loan to invest if the expected rate of return on investment is higher than the interest rate.
- The returns on investment are higher when capital is more productive.
- For example, farmers in economies where farming equipment is rudimentary are likely to invest less than farmers in economies where the equipment is more productive.

Investor confidence

- When the economy is going well, it increases the confidence of investors and they become more inclined to make major investments.
- When investors become more confident about the future of the economy, they demand more loans to invest in business projects and thus cause the demand for loanable funds to shift to the right.
- On the other hand, when investors lose confidence in the economy, they are scared of investing and therefore refrain from trying to obtain loans, which they may default.
- In this case, the demand for loanable funds shifts to the left.

You should now be able to...

- Explain what the market for loanable funds is and list a few markets that compose it.
- Explain who the suppliers and the demanders of loanable funds are.
- Explain what the interest rate is from the perspectives of both suppliers and demanders of loanable funds.
- Differentiate nominal interest rate from real interest rate and state the Fisher equation
- State a few factors that cause the supply curve to shift
- State a few factors that cause the demand curve to shift