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Saving, Investment, and the Financial System

The Financial System

- The financial system consists of the group of institutions in the economy that help to match one person's saving with another person's investment.
- It moves the economy's scarce resources from savers to borrowers.

FINANCIAL INSTITUTIONS IN THE U.S. ECONOMY

- The *financial system* is made up of financial institutions that coordinate the actions of savers and borrowers.
- Financial institutions can be grouped into two different categories: financial markets and financial intermediaries.

FINANCIAL INSTITUTIONS IN THE U.S. ECONOMY

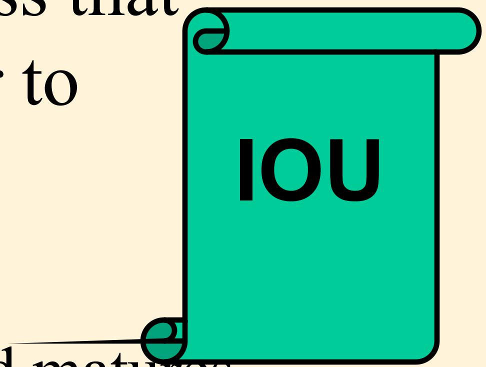
- Financial Markets
  - Stock Market
  - Bond Market
- Financial Intermediaries
  - Banks
  - Mutual Funds

FINANCIAL INSTITUTIONS IN THE U.S. ECONOMY

- *Financial markets* are the institutions through which savers can directly provide funds to borrowers.
- *Financial intermediaries* are financial institutions through which savers can indirectly provide funds to borrowers.

Financial Markets

- The Bond Market
  - A *bond* is a certificate of indebtedness that specifies obligations of the borrower to the holder of the bond.



  - Characteristics of a Bond
    - *Term*: The length of time until the bond matures.
    - *Credit Risk*: The probability that the borrower will fail to pay some of the interest or principal.
    - *Tax Treatment*: The way in which the tax laws treat the interest on the bond.
      - Municipal bonds are federal tax exempt.

Financial Markets

- The Stock Market
  - *Stock* represents a claim to partial ownership in a firm and is therefore, a claim to the profits that the firm makes.
  - The sale of stock to raise money is called *equity financing*.
    - Compared to bonds, stocks offer both higher risk and potentially higher returns.
  - The most important stock exchanges in the United States are the New York Stock Exchange, the American Stock Exchange, and NASDAQ.

Financial Markets

- The Stock Market
  - Most newspaper stock tables provide the following information:
    - Price (of a share)
    - Volume (number of shares sold)
    - Dividend (profits paid to stockholders)
    - Price-earnings ratio

Financial Intermediaries

- *Financial intermediaries* are financial institutions through which savers can indirectly provide funds to borrowers.

Financial Intermediaries

- Banks
  - take deposits from people who want to save and use the deposits to make loans to people who want to borrow.
  - pay depositors interest on their deposits and charge borrowers slightly higher interest on their loans.

Financial Intermediaries

- Banks
  - Banks help create a *medium of exchange* by allowing people to write checks against their deposits.
    - A medium of exchanges is an item that people can easily use to engage in transactions.
  - This facilitates the purchases of goods and services.

Financial Intermediaries

- Mutual Funds
  - A *mutual fund* is an institution that sells shares to the public and uses the proceeds to buy a portfolio, of various types of stocks, bonds, or both.
    - They allow people with small amounts of money to easily diversify.

Financial Intermediaries

- Other Financial Institutions
  - Credit unions
  - Pension funds
  - Insurance companies
  - Loan sharks

SAVING AND INVESTMENT IN THE NATIONAL INCOME ACCOUNTS

- Recall that GDP is both total income in an economy and total expenditure on the economy's output of goods and services:

$$Y = C + I + G + NX$$

Some Important Identities

- Assume a closed economy – one that does not engage in international trade:

$$Y = C + I + G$$

Some Important Identities

- Now, subtract C and G from both sides of the equation:

$$Y - C - G = I$$

- The left side of the equation is the total income in the economy after paying for consumption and government purchases and is called *national saving,* or just *saving (S).*

Some Important Identities

- Substituting S for Y - C - G, the equation can be written as:

$$S = I$$

Some Important Identities

- National saving, or saving, is equal to:

$$S = I$$

$$S = Y - C - G$$

$$S = (Y - T - C) + (T - G)$$

The Meaning of Saving and Investment

- National Saving
  - *National saving* is the total income in the economy that remains after paying for consumption and government purchases.
- Private Saving
  - *Private saving* is the amount of income that households have left after paying their taxes and paying for their consumption.

$$\textit{Private saving} = (Y - T - C)$$

The Meaning of Saving and Investment

- Public Saving
  - *Public saving* is the amount of tax revenue that the government has left after paying for its spending.

$$\textit{Public saving} = (T - G)$$

The Meaning of Saving and Investment

- Surplus and Deficit
  - If $T > G$, the government runs a *budget surplus* because it receives more money than it spends.
  - The surplus of $T - G$ represents public saving.
  - If $G > T$, the government runs a *budget deficit* because it spends more money than it receives in tax revenue.

The Meaning of Saving and Investment

- For the economy as a whole, saving must be equal to investment.

$$S = I$$

THE MARKET FOR LOANABLE FUNDS

- Financial markets coordinate the economy's saving and investment in the market for loanable funds.

THE MARKET FOR LOANABLE FUNDS

- The *market for loanable funds* is the market in which those who want to save supply funds and those who want to borrow to invest demand funds.

THE MARKET FOR LOANABLE FUNDS

- Loanable funds refers to all income that people have chosen to save and lend out, rather than use for their own consumption.

Supply and Demand for Loanable Funds

- The supply of loanable funds comes from people who have extra income they want to save and lend out.
- The demand for loanable funds comes from households and firms that wish to borrow to make investments.

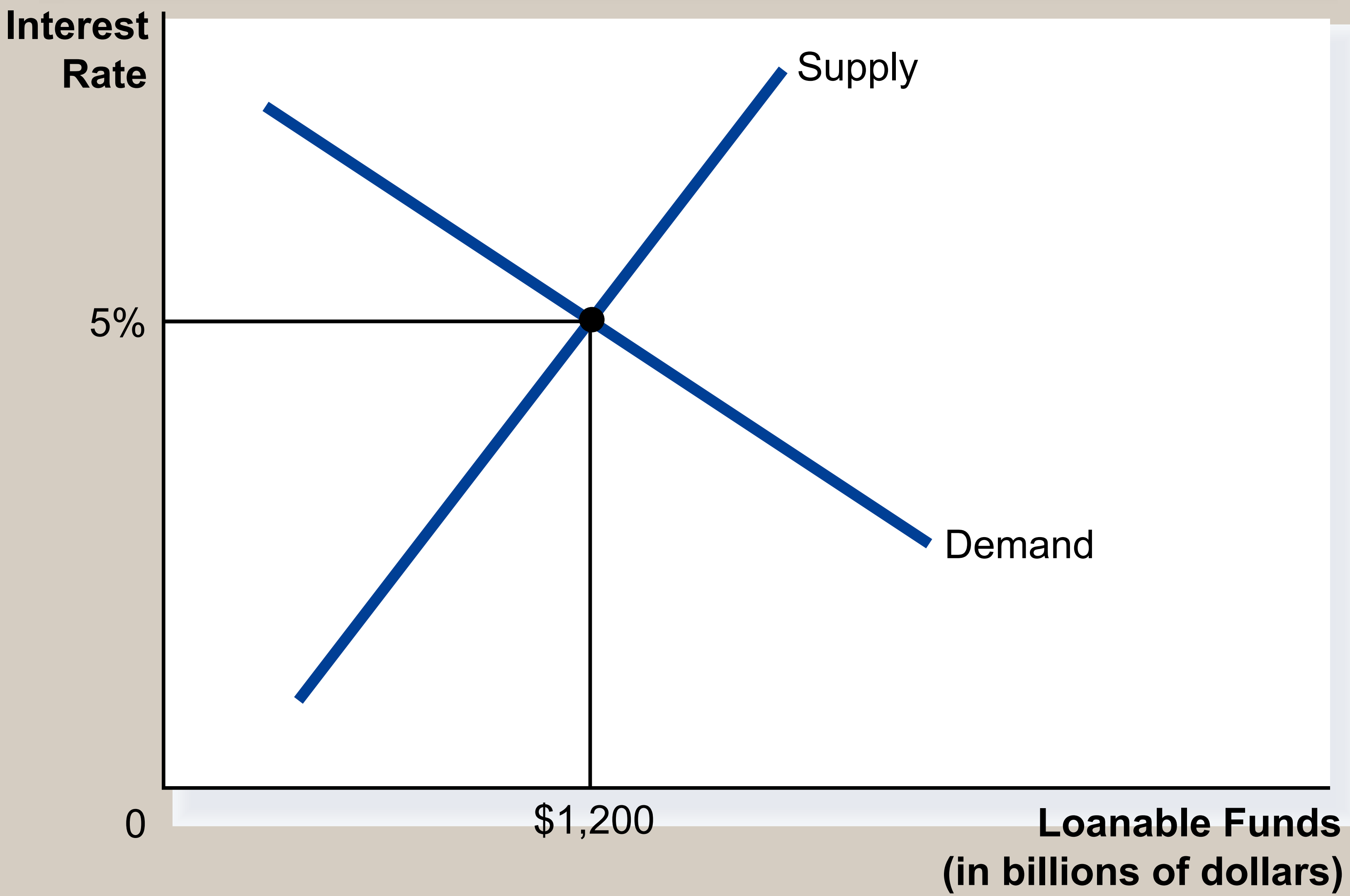
Supply and Demand for Loanable Funds

- The interest rate is the price of the loan.
- It represents the amount that borrowers pay for loans and the amount that lenders receive on their saving.
- The interest rate in the market for loanable funds is the real interest rate.

Supply and Demand for Loanable Funds

- Financial markets work much like other markets in the economy.
  - The equilibrium of the supply and demand for loanable funds determines the *real interest rate*.

Figure 1 The Market for Loanable Funds



Supply and Demand for Loanable Funds

- Government Policies That Affect Saving and Investment
  - Taxes and saving
  - Taxes and investment
  - Government budget deficits

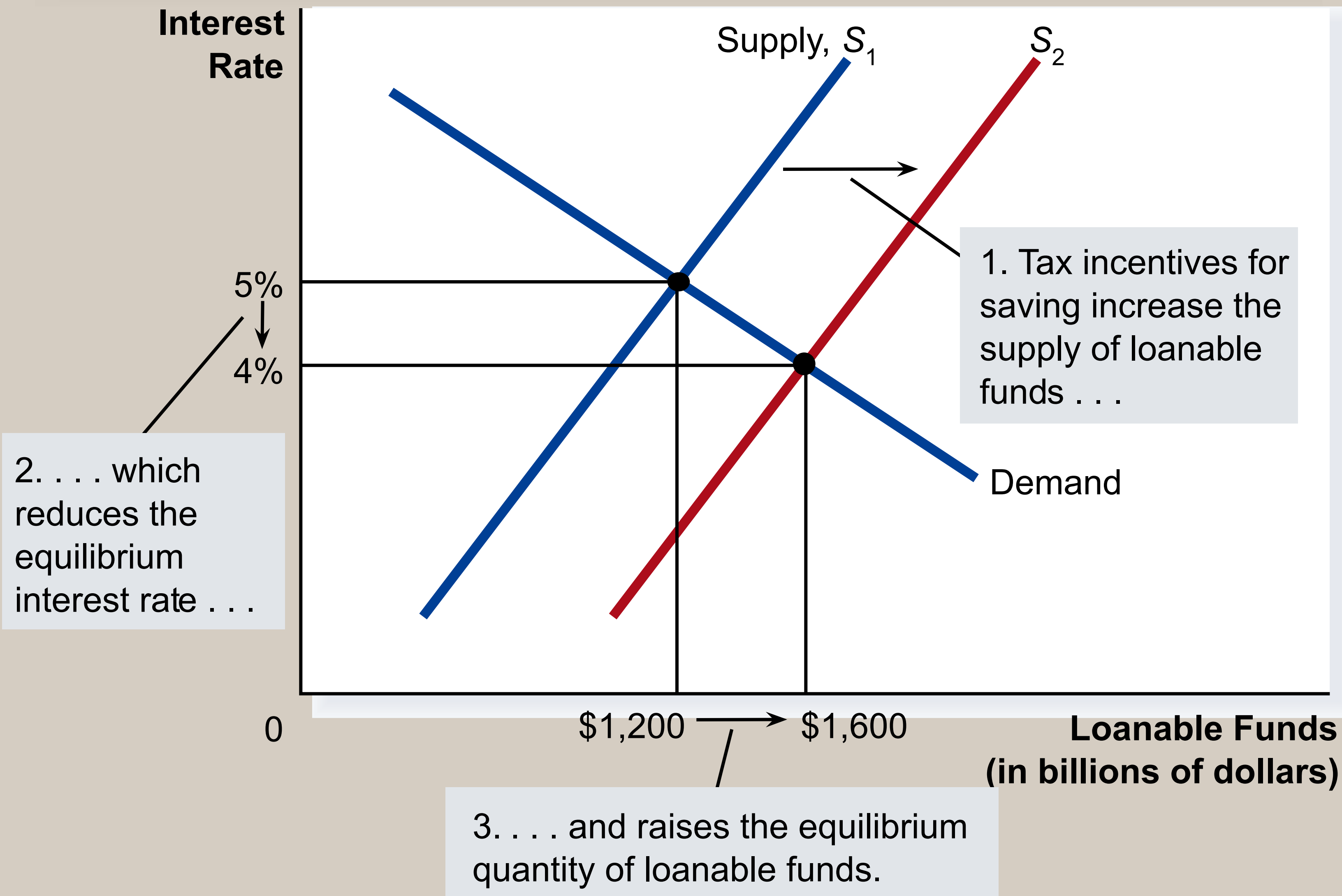
Policy 1: Saving Incentives

- Taxes on interest income substantially reduce the future payoff from current saving and, as a result, reduce the incentive to save.

Policy 1: Saving Incentives

- A tax decrease increases the incentive for households to save at any given interest rate.
  - The supply of loanable funds curve shifts to the right.
  - The equilibrium interest rate decreases.
  - The quantity demanded for loanable funds increases.

Figure 2 An Increase in the Supply of Loanable Funds



Policy 1: Saving Incentives

- If a change in tax law encourages greater saving, the result will be *lower* interest rates and *greater* investment.

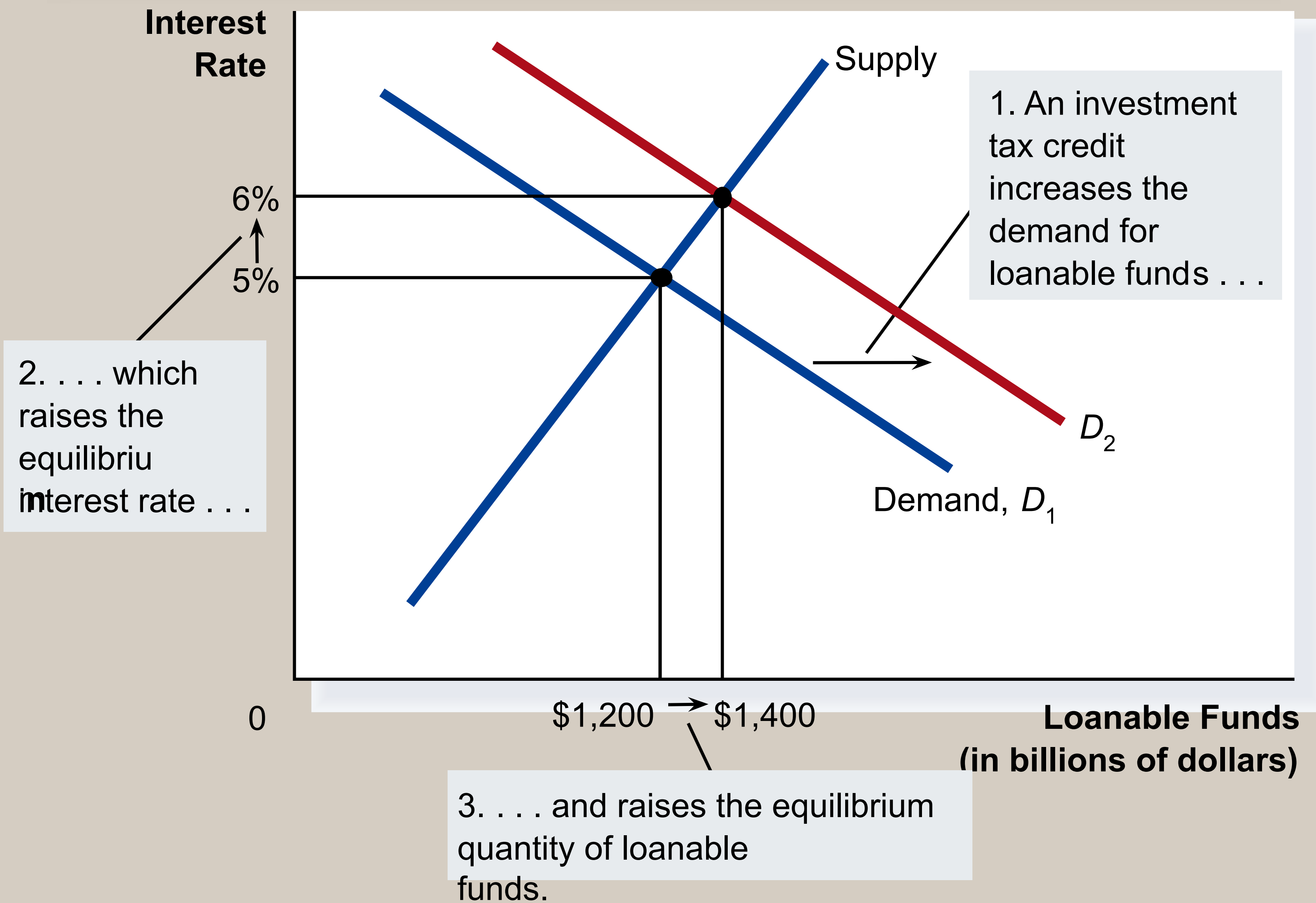
Policy 2: Investment Incentives

- An investment tax credit increases the incentive to borrow.
  - Increases the demand for loanable funds.
  - Shifts the demand curve to the right.
  - Results in a higher interest rate and a greater quantity saved.

Policy 2: Investment Incentives

- If a change in tax laws encourages greater investment, the result will be *higher* interest rates and *greater* saving.

Figure 3 An Increase in the Demand for Loanable Funds



Policy 3: Government Budget Deficits and Surpluses

- When the government spends more than it receives in tax revenues, the short fall is called the *budget deficit*.
- The accumulation of past budget deficits is called the government *debt*.

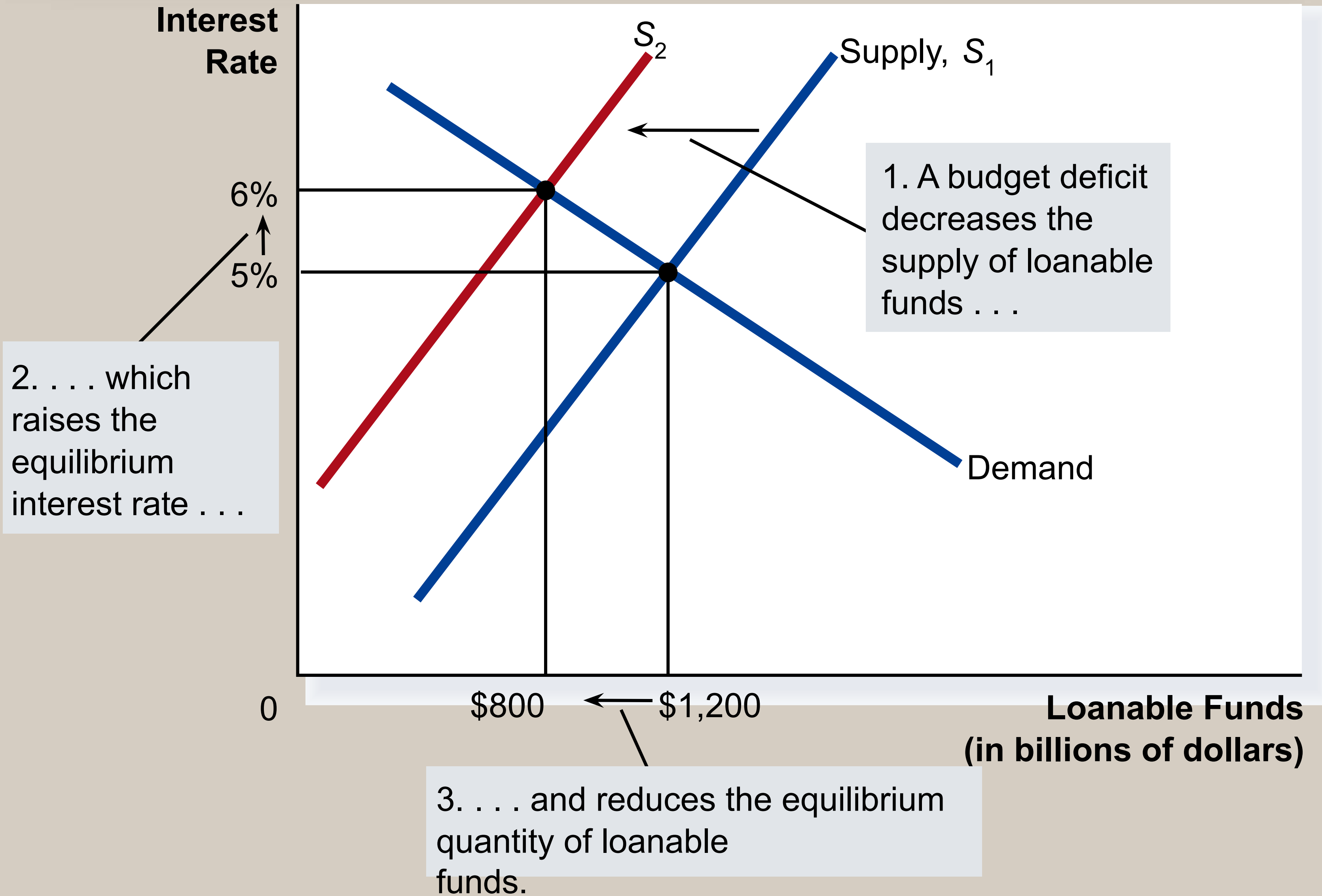
Policy 3: Government Budget Deficits and Surpluses

- Government borrowing to finance its budget deficit reduces the supply of loanable funds available to finance investment by households and firms.
- This fall in investment is referred to as *crowding out*.
    - The deficit borrowing crowds out private borrowers who are trying to finance investments.

Policy 3: Government Budget Deficits and Surpluses

- A budget deficit decreases the supply of loanable funds.
  - Shifts the supply curve to the left.
  - Increases the equilibrium interest rate.
  - Reduces the equilibrium quantity of loanable funds.

Figure 4: The Effect of a Government Budget Deficit



Policy 3: Government Budget Deficits and Surpluses

- When government reduces national saving by running a deficit, the interest rate *rises* and investment *falls*.

Policy 3: Government Budget Deficits and Surpluses

- A budget surplus *increases* the supply of loanable funds, *reduces* the interest rate, and *stimulates* investment.

Figure 5 The U.S. Government Debt

Summary

- The U.S. financial system is made up of financial institutions such as the bond market, the stock market, banks, and mutual funds.
- All these institutions act to direct the resources of households who want to save some of their income into the hands of households and firms who want to borrow.

Summary

- National income accounting identities reveal some important relationships among macroeconomic variables.
- In particular, in a closed economy, national saving must equal investment.
- Financial institutions attempt to match one person's saving with another person's investment.

Summary

- The interest rate is determined by the supply and demand for loanable funds.
- The supply of loanable funds comes from households who want to save some of their income.
- The demand for loanable funds comes from households and firms who want to borrow for investment.

Summary

- National saving equals private saving plus public saving.
- A government budget deficit represents negative public saving and, therefore, reduces national saving and the supply of loanable funds.
- When a government budget deficit crowds out investment, it reduces the growth of productivity and GDP.