Saving, Investment, and the Financial System

The Financial System

- The **financial system** consists of institutions 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

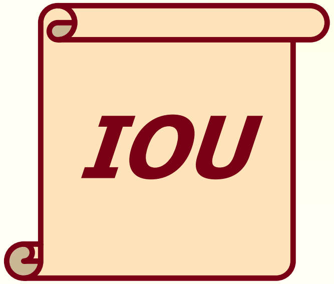
- Financial Markets
  - Stock Market
  - Bond Market
- Financial Intermediaries
  - Banks
  - Mutual Funds

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.

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.

The Stock Market

- **Stock** represents 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 Stock Market

The most important stock exchanges in the United States are the New York Stock Exchange, the American Stock Exchange, and NASDAQ.

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: Banks

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

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 selection, or portfolio, of various types of stocks, bonds, or both.
  - They allow people with small amounts of money to easily diversify.

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:**

$$S = I$$

$$S = Y - C - G$$

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

Private Saving

- **Private saving** is the amount of income that households have left after paying their taxes and paying for their consumption.

Private saving = (Y – T – C)

Public Saving

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

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

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.

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

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.

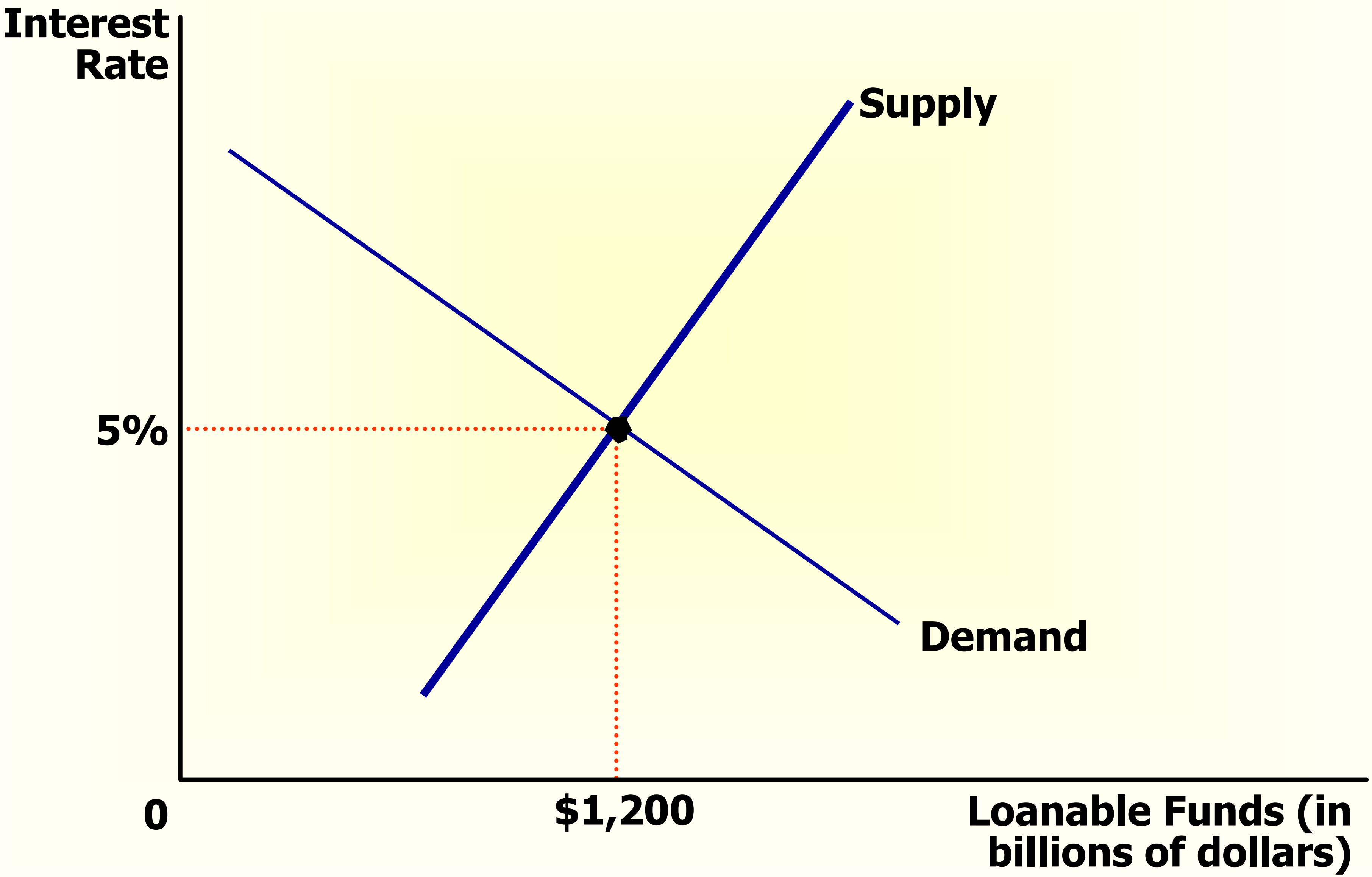
Supply and Demand for Loanable Funds

- 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.**

Market for Loanable Funds...



Government Policies That Affect Saving and Investment

- Taxes and saving
- Taxes and investment
- Government budget deficits

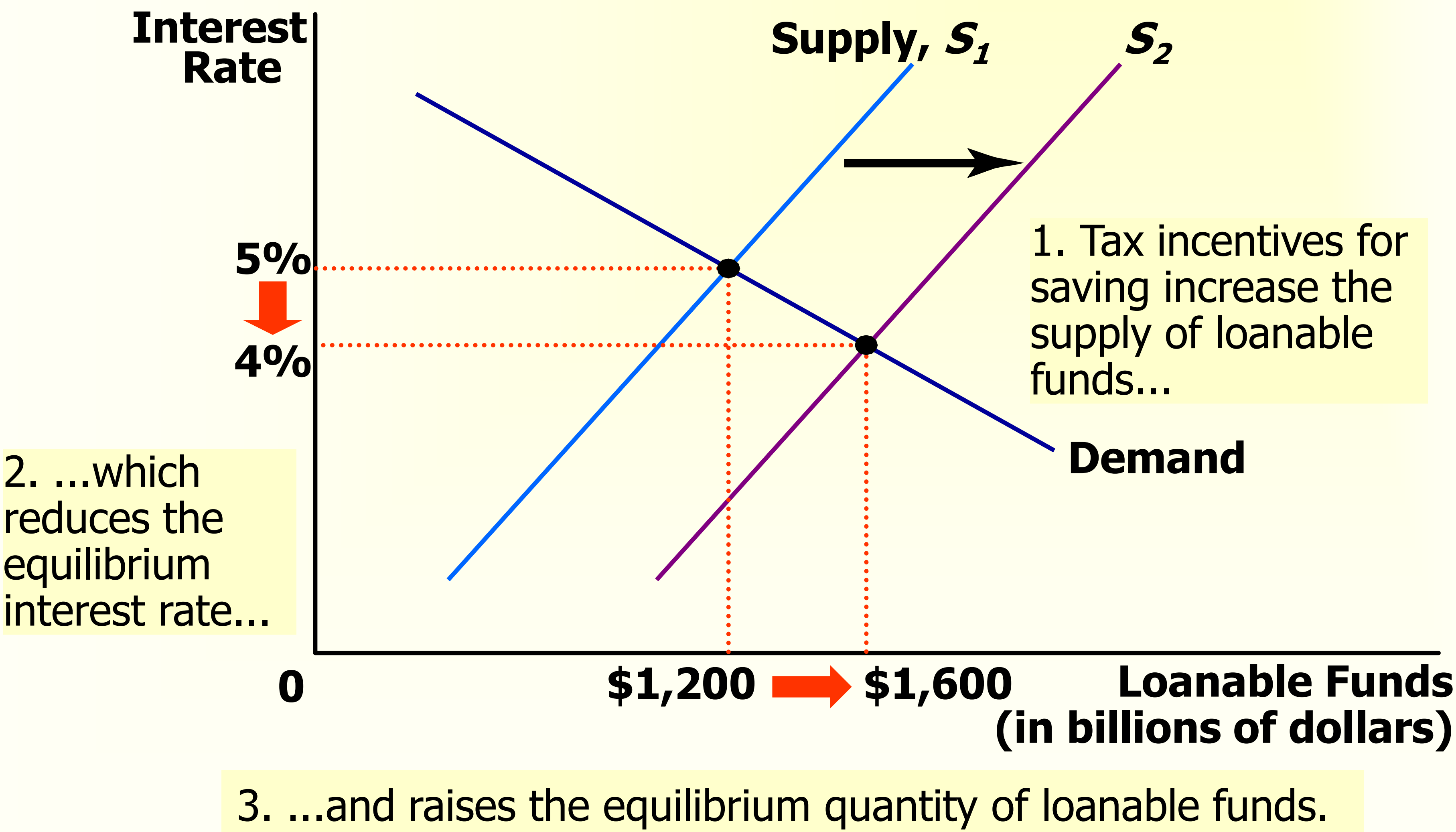
Taxes and Saving

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

Taxes and Saving

- **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.**

An Increase in the Supply of Loanable Funds...



Taxes and Saving

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

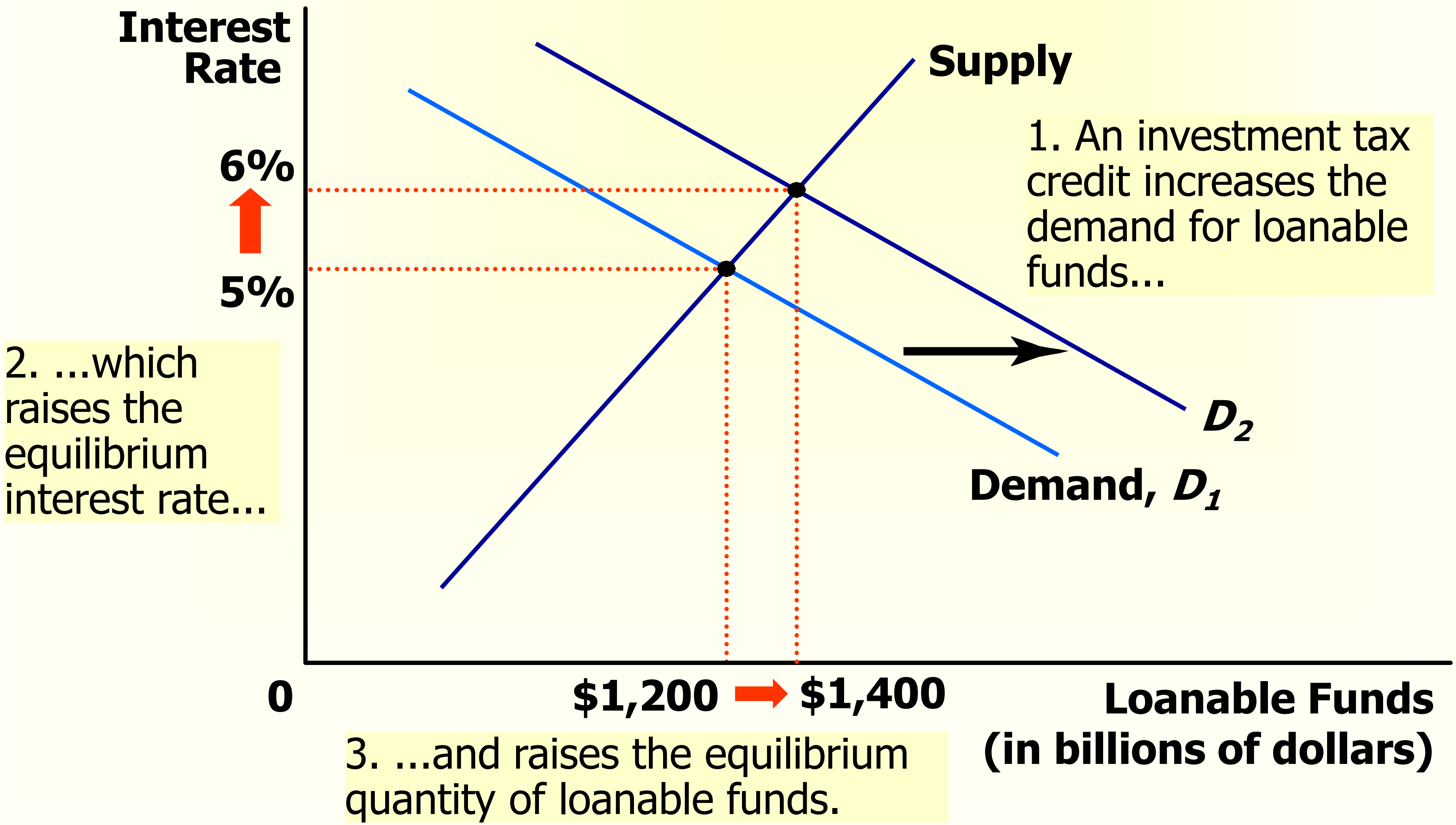
Taxes and Investment

- 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.

Taxes and Investment

If a change in tax laws encourages greater investment, the result will be <u>higher</u> interest rates and <u>greater</u> saving.

An Increase in the Demand for Loanable Funds...



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.**

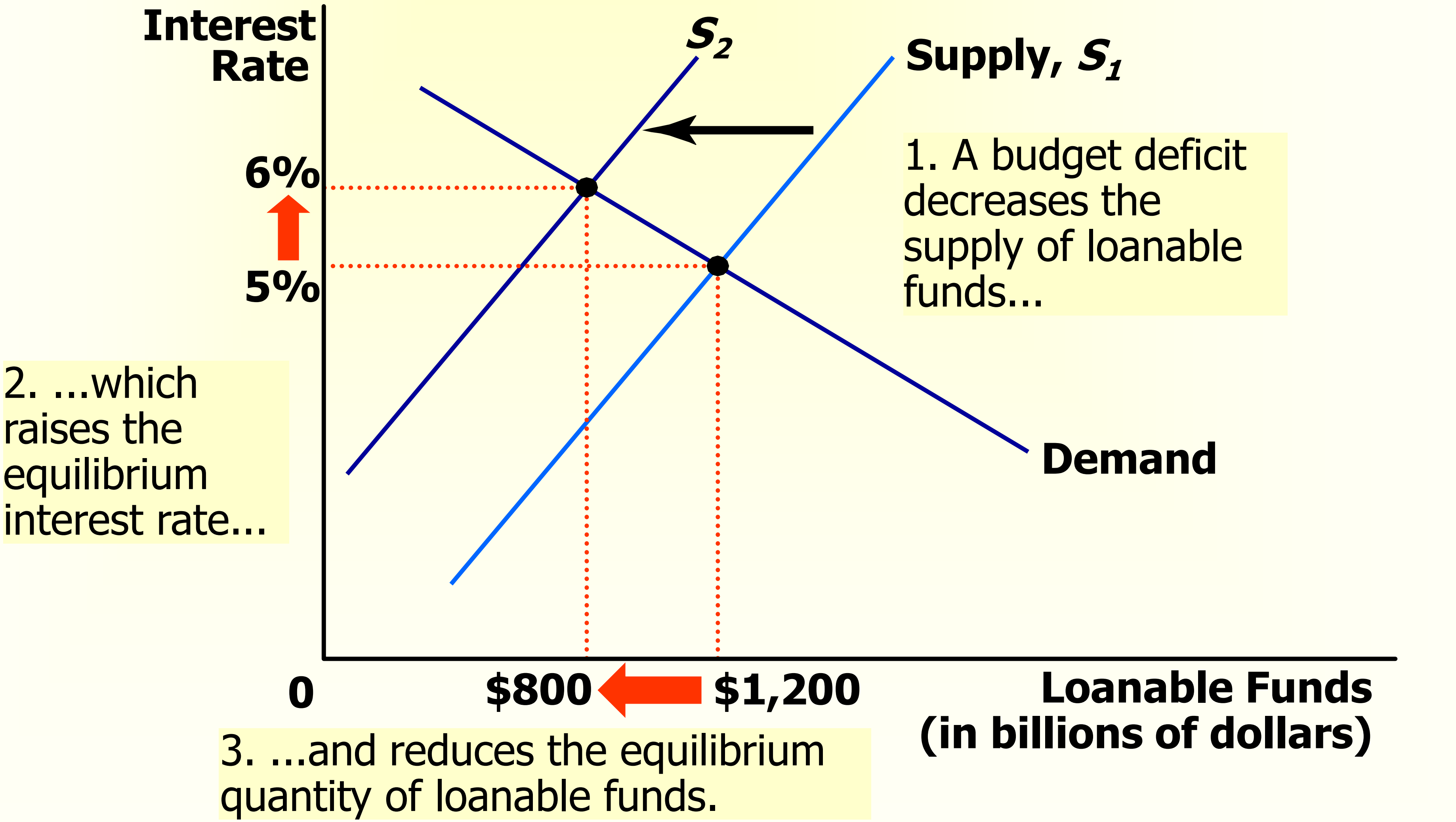
Government Budget Deficits and Surpluses

- 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.

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.

The Effect of a Government Budget Deficit...



Government Budget Deficits and Surpluses

When government reduces national saving by running a deficit, the interest rate <u>rises</u> and investment <u>falls</u>.

Government Budget Deficits and Surpluses

A budget surplus <u>increases</u> the supply of loanable funds, <u>reduces</u> the interest rate, and <u>stimulates</u> investment.

The U.S. Government Debt