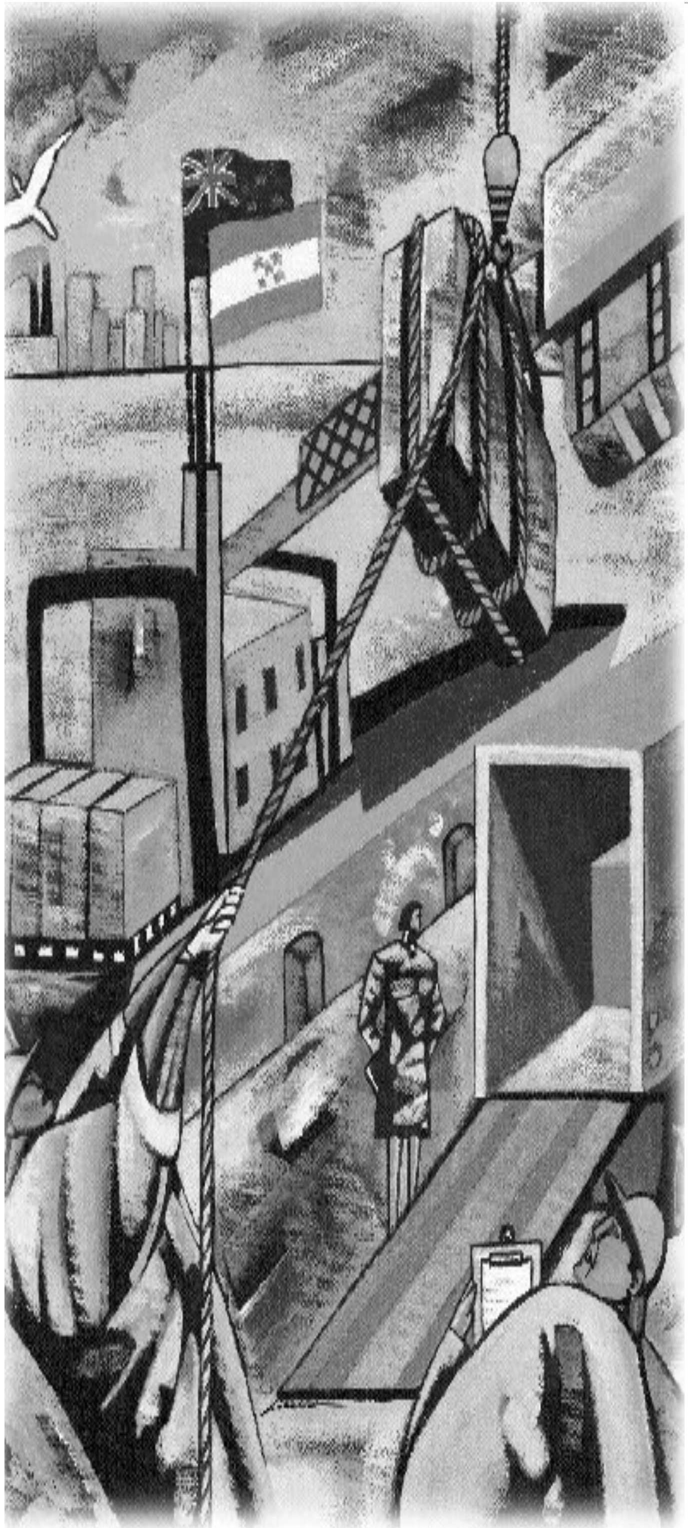


A Macroeconomic Theory of the Open Economy

Chapter 30

Key Macroeconomic Variables in an Open Economy

- **The important macroeconomic variables of an open economy include:**
  - **net exports**
  - **net foreign investment**
  - **nominal exchange rates**
  - **real exchange rates**

Basic Assumptions of a Macroeconomic Model of an Open Economy

- The model takes the economy's GDP as given.
- The model takes the economy's price level as given.

The Market for Loanable Funds

$$S = I + NFI$$

- At the equilibrium interest rate, the amount that people want to save exactly balances the desired quantities of investment and net foreign investment.

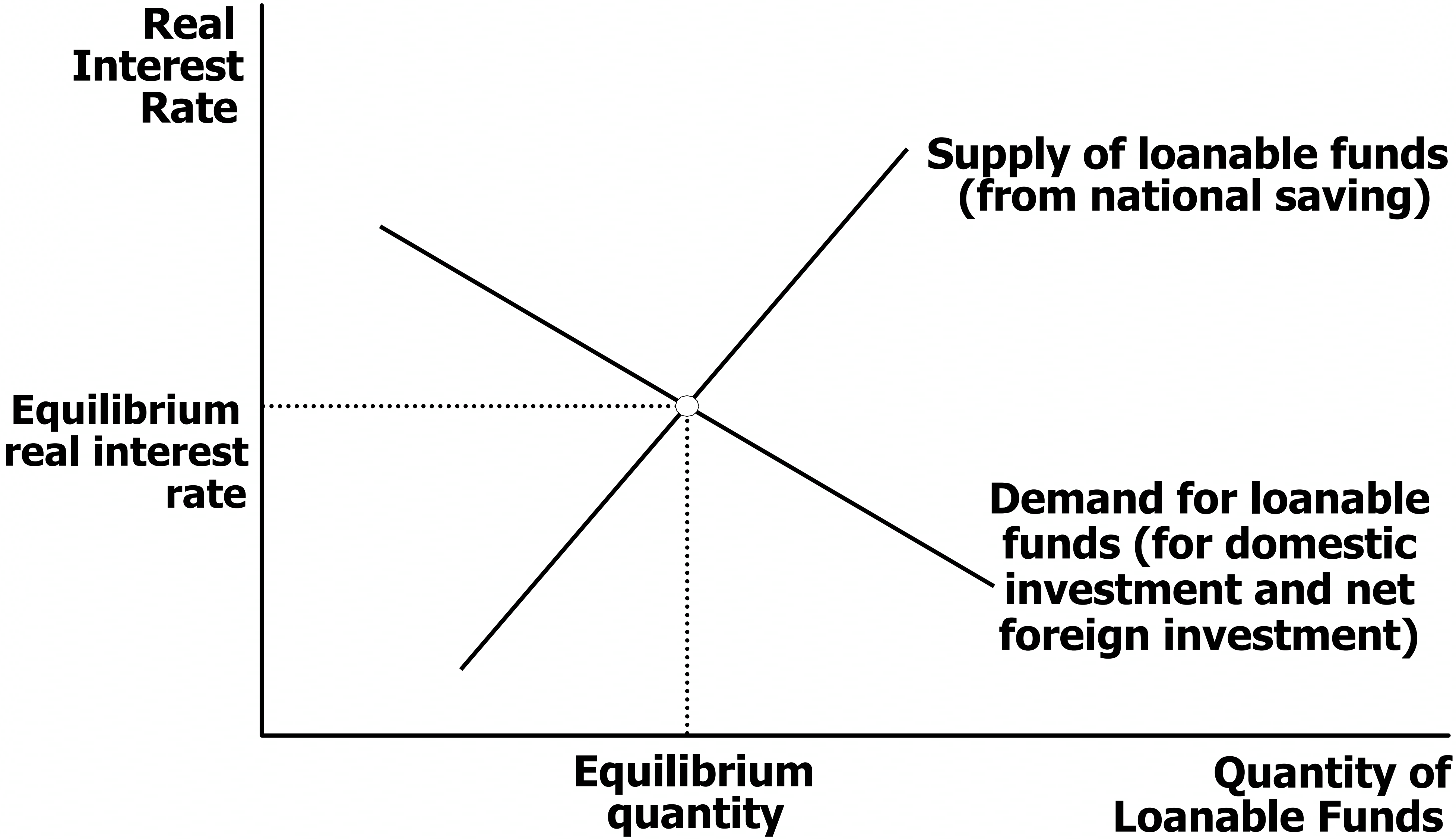
The Market for Loanable Funds

- **The supply of loanable funds comes from national saving (S).**
- **The demand for loanable funds comes from domestic investment (*I*) and net foreign investment (*NFI*).**

The Market for Loanable Funds

- The supply and demand for loanable funds depend on the real interest rate.
- A higher real interest rate encourages people to save and raises the quantity of loanable funds supplied.
- The interest rate adjusts to bring the supply and demand for loanable funds into balance.

The Market for Loanable Funds



The Market for Loanable Funds

At the equilibrium interest rate, the amount that people want to save exactly balances the desired quantities of domestic investment and net foreign investment.

The Market for Foreign-Currency Exchange

- **The two sides of the foreign-currency exchange market are represented by NFI and NX.**
- **NFI represents the imbalance between the purchases and sales of capital assets.**
- **NX represents the imbalance between exports and imports of goods and services.**

The Market for Foreign-Currency Exchange

- **In the market for foreign-currency exchange, U.S. dollars are traded for foreign currencies.**
- **For an economy as a whole, *NFI* and *NX* must balance each other out, or:**

$$NFI = NX$$

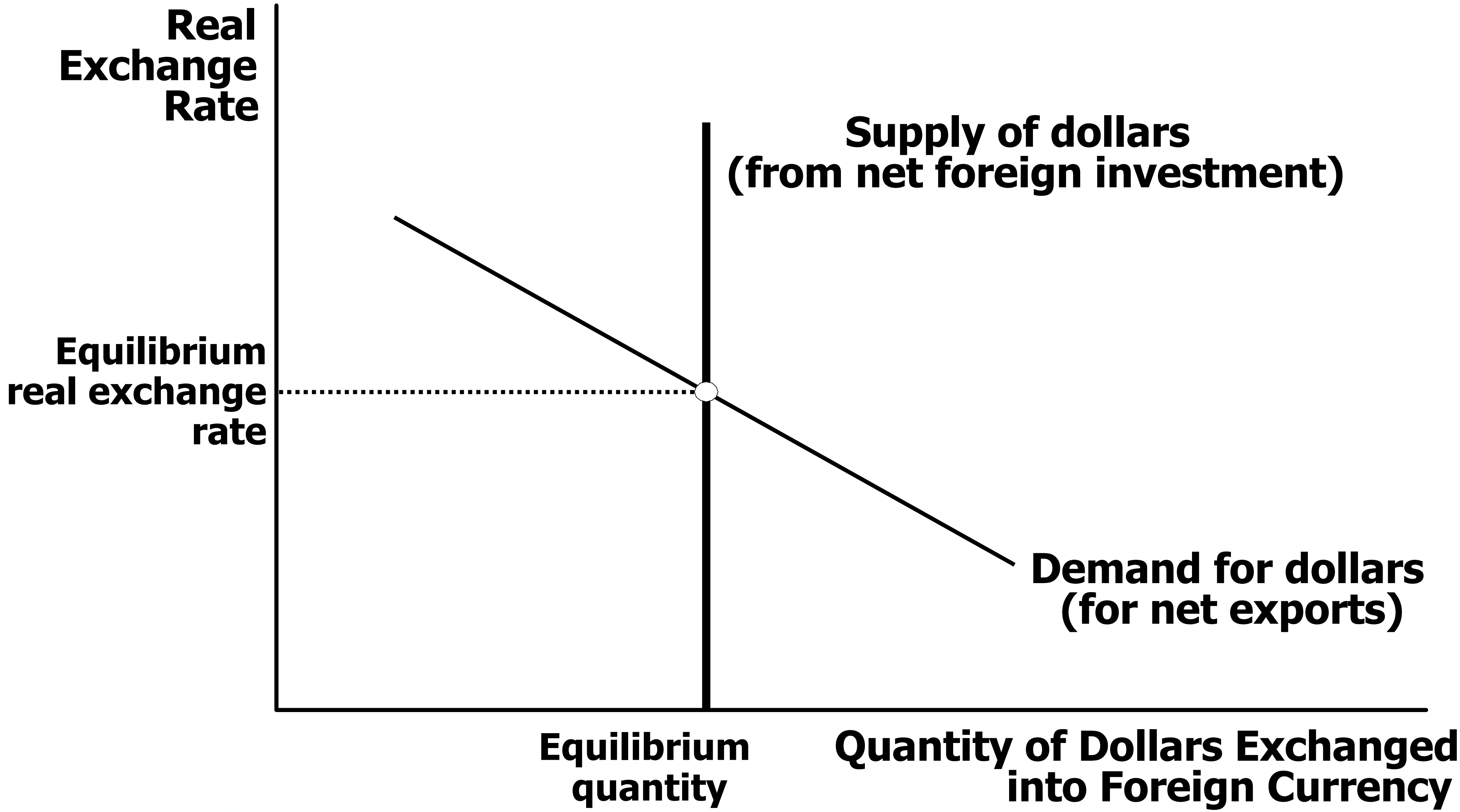
The Market for Foreign-Currency Exchange

The price that balances the supply and demand for foreign-currency is the real exchange rate.

The Market for Foreign-Currency Exchange

- The demand curve for foreign currency is downward sloping because a higher exchange rate makes domestic goods more expensive.
- The supply curve is vertical because the quantity of dollars supplied for net foreign investment is unrelated to the real exchange rate.

The Market for Foreign-Currency Exchange...



The Market for Foreign-Currency Exchange

- **The real exchange rate adjusts to balance the supply and demand for dollars.**
- **At the equilibrium real exchange rate, the demand for dollars to buy net exports exactly balances the supply of dollars to be exchanged into foreign currency to buy assets abroad.**

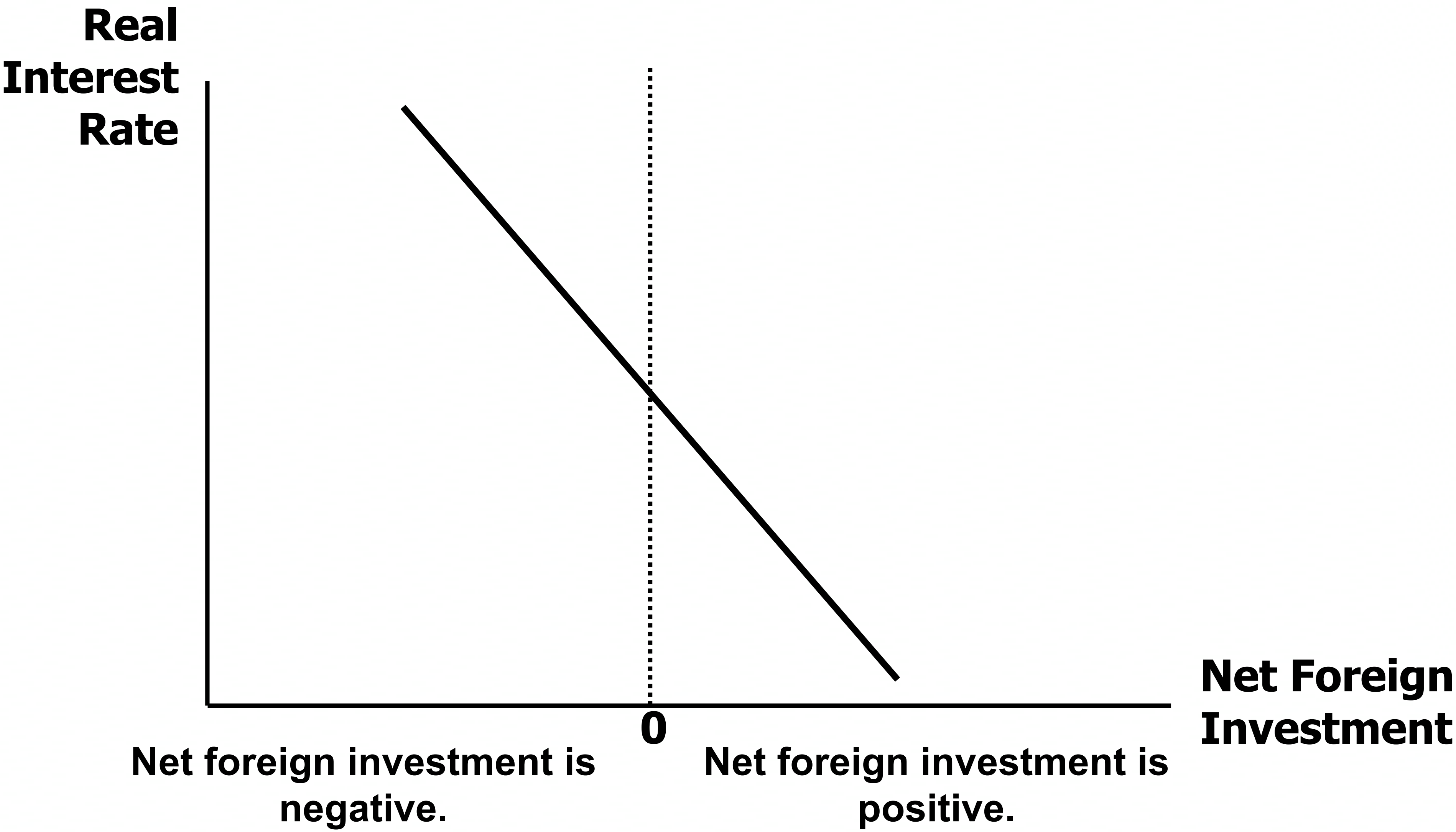
Equilibrium in the Open Economy

- **In the market for loanable funds, supply comes from national saving and demand comes from domestic investment and net foreign investment.**
- **In the market for foreign-currency exchange, supply comes from net foreign investment and demand comes from net exports.**

Equilibrium in the Open Economy

- **Net foreign investment links the loanable funds market and the foreign-currency exchange market.**
  - **The key determinant of net foreign investment is the real interest rate.**

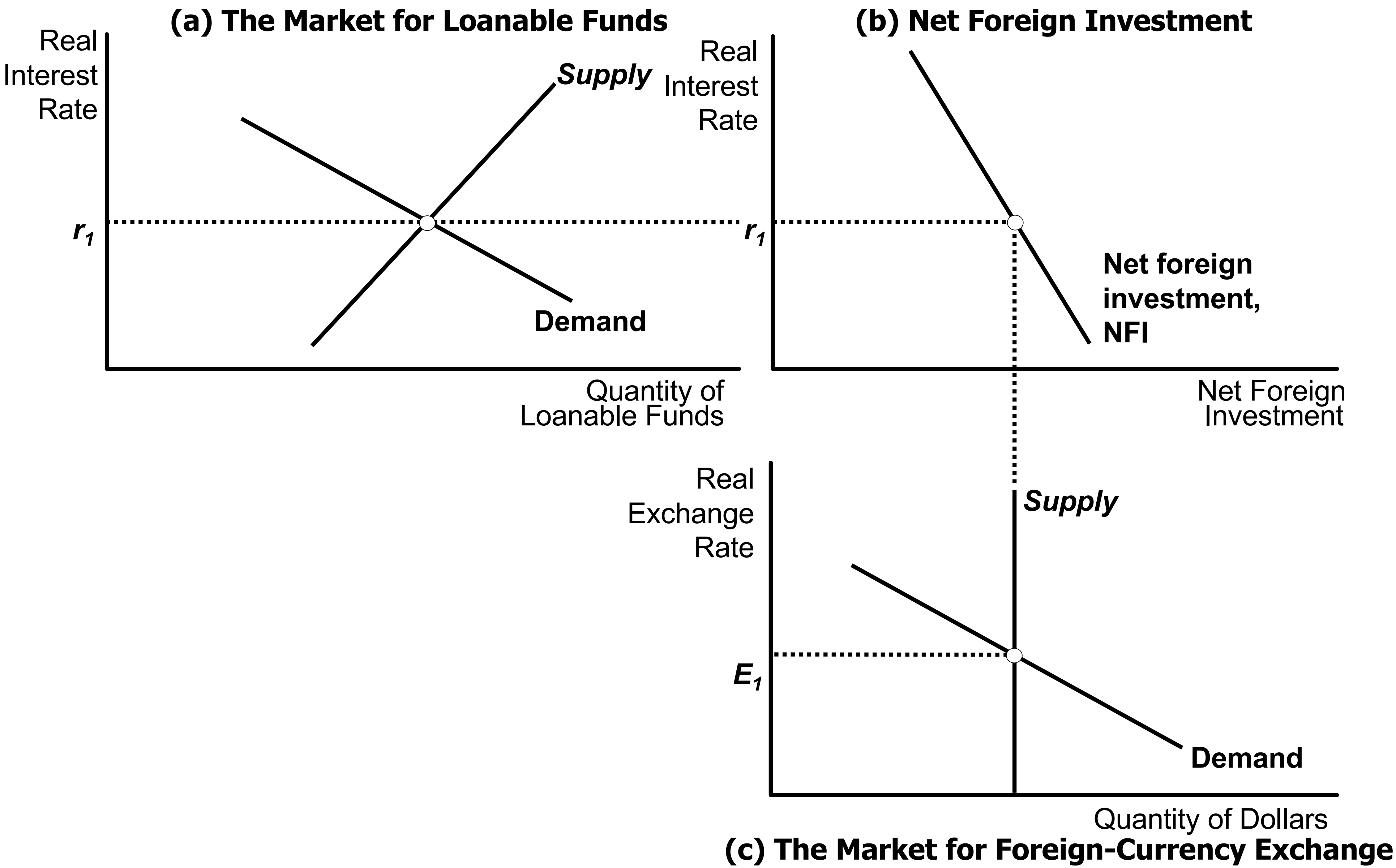
How Net Foreign Investment Depends on the Interest rate...



Equilibrium in the Open Economy

- **Prices in the loanable funds market and the foreign-currency exchange market adjust simultaneously to balance supply and demand in these two markets.**
- **As they do, they determine the macroeconomic variables of national saving, domestic investment, net foreign investment, and net exports.**

The Real Equilibrium in an Open Economy



How Changes in Policies and Events Affect an Open Economy

- **The magnitude and variation in important macroeconomic variables depend on the following:**
  - **Government budget deficits**
  - **Trade policies**
  - **Political and economic stability**

Government Budget Deficits

- **In an open economy, government budget deficits . . .**

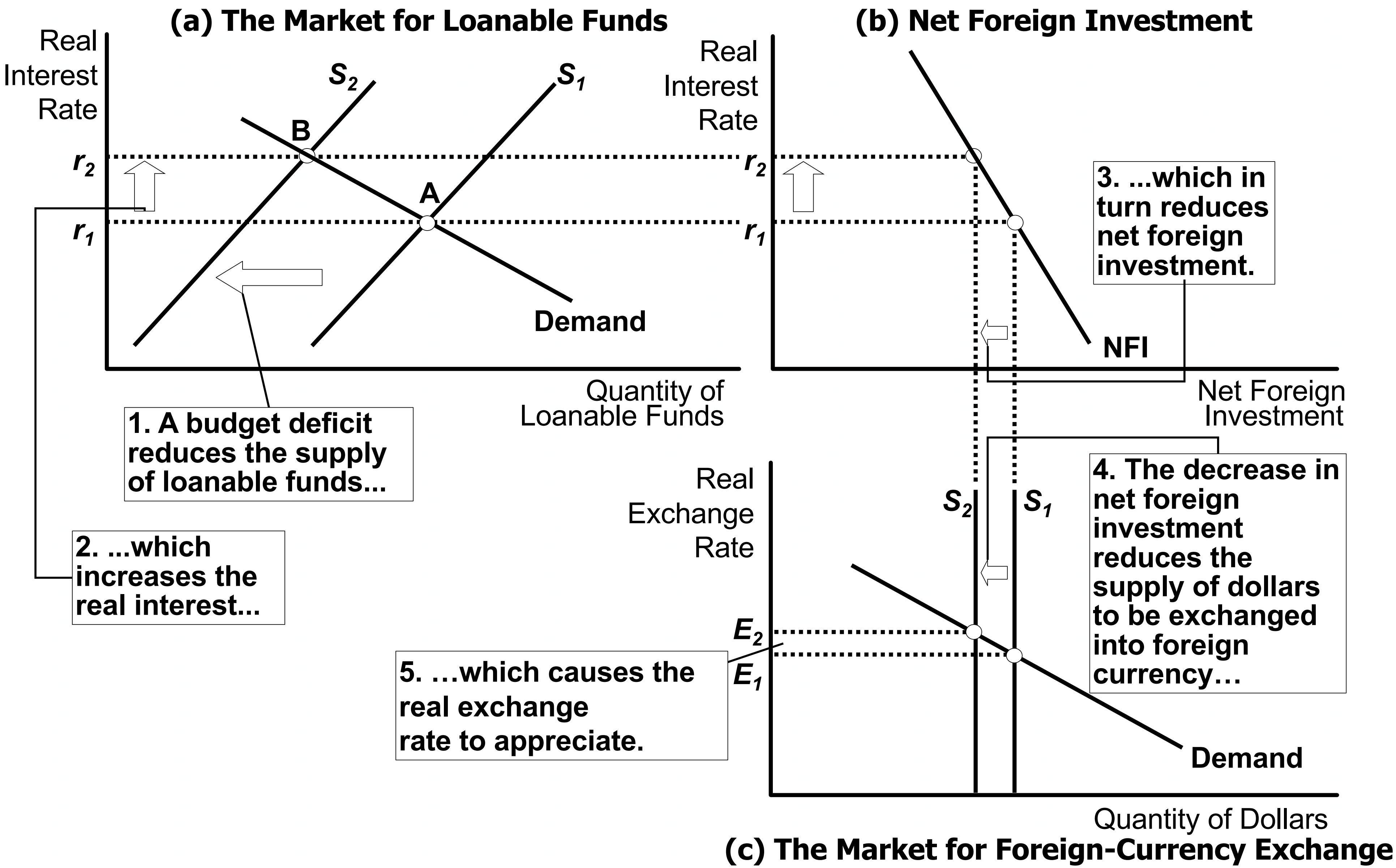
  …**reduces the supply of loanable funds,**

  …**drives up the interest rate,**

  …**crowds out domestic investment,**

  …**cause net foreign investment to fall.**

The Effects of Government Budget Deficit



Effect of Budget Deficits on the Loanable Funds Market

- **A government budget deficit reduces national saving, which . . .**

  . . . shifts the supply curve for loanable funds to the left, which

  . . . <u>raises</u> interest rates.

Effect of Budget Deficits on Net Foreign Investment

- **Higher interest rates reduce net foreign investment.**

Effect on the Foreign-Currency Exchange Market

- **A decrease in net foreign investment reduces the supply of dollars to be exchanged into foreign currency.**
- **This causes the real exchange rate to *appreciate.***

Trade Policy

- **A trade policy is a government policy that directly influences the quantity of goods and services that a country imports or exports.**
- **Tariff: A tax on an imported good.**
- **Import quota: A limit on the quantity of a good produced abroad and sold domestically.**

Trade Policy

- **Because they do not change national saving or domestic investment, trade policies do not affect the trade balance.**
  - **For a given level of national saving and domestic investment, the real exchange rate adjusts to keep the trade balance the same.**
- **Trade policies have a greater effect on microeconomic than on macroeconomic markets.**

Effect of an Import Quota

- **Because foreigners need dollars to buy U.S. net exports, there is an increased demand for dollars in the market for foreign-currency.**
  - **This leads to an appreciation of the real exchange rate.**

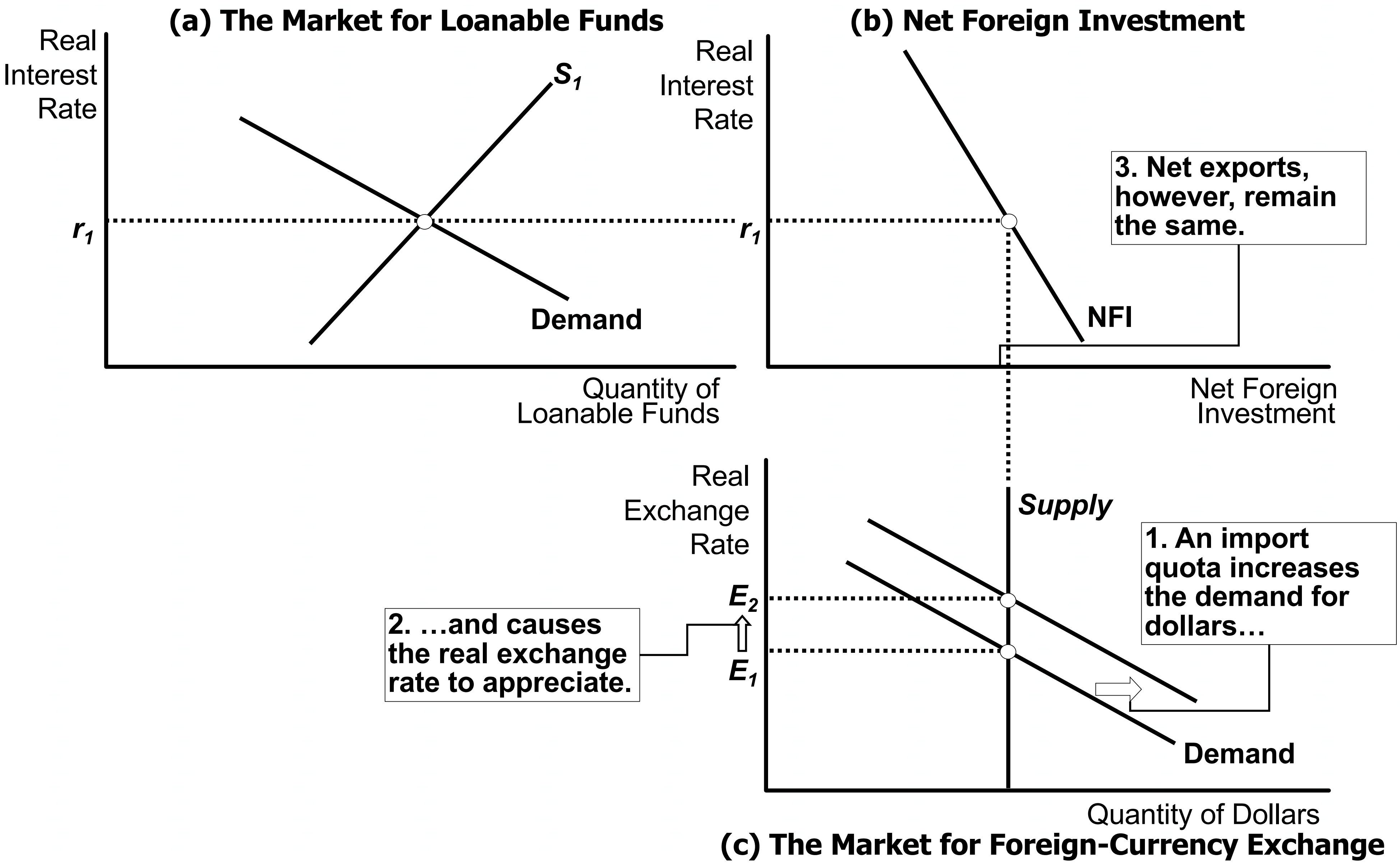
Effect of an Import Quota

- There is no change in the interest rate because nothing happens in the loanable funds market.
- There will be no change in net exports.
- There is no change in net foreign investment even though an import quota reduces imports.

Effect of an Import Quota

- **An appreciation of the dollar in the foreign exchange market encourages imports and discourages exports.**
- **This offsets the initial increase in net exports due to import quota.**

The Effects of an Import Quota



Effect of an Import Quota

Trade policies do not affect the trade balance.