

Chapter Objectives

- Describe the exchange rate system used by various governments.
- Describe the development and implications of a single European currency.
- Explain how governments can use direct intervention to influence exchange rates.
- Explain how governments can use indirect intervention to influence exchange rates.

Exchange Rate Systems (1 of 10)

Exchange rate systems can be classified according to the degree of government control and fall into the following categories:

- Fixed
- Freely floating
- Managed float
- Pegged

Exchange Rate Systems (2 of 10)

Fixed Exchange Rate System

- Exchange rates are either held constant or allowed to fluctuate only within very narrow boundaries.
- Central bank can reset a fixed exchange rate by **devaluing** or reducing the value of the currency against other currencies.
- Central bank can also **revalue** or increase the value of its currency against other currencies.

Exchange Rate Systems (3 of 10)

Fixed Exchange Rate System (continued)

- **Bretton Woods Agreement 1944 – 1971** — Each currency was valued in terms of gold.
- **Smithsonian Agreement 1971 – 1973** — called for a devaluation of the U.S. dollar by about 8% against other currencies.
- **Advantages of fixed exchange rates**
 - Insulate country from risk of currency appreciation.
 - Allow firms to engage in direct foreign investment without currency risk.
- **Disadvantages of fixed exchange rates**
 - Risk that government will alter value of currency.
 - Country and MNC may be more vulnerable to economic conditions in other countries.
 - Central banks might need to constantly intervene to maintain their currency's value

Exchange Rate Systems (4 of 10)

Freely Floating Exchange Rate System

- Exchange rates are determined by market forces without government intervention.
- **Advantages of a freely floating system:**
 - Country is more insulated from inflation of other countries.
 - Country is more insulated from unemployment of other countries.
 - Does not require central bank to maintain exchange rates within specified boundaries.
- **Disadvantages of a freely floating exchange rate system:**
 - Can adversely affect a country that has high unemployment.
 - Can adversely affect a country with high inflation.

Exchange Rate Systems (5 of 10)

Managed Float Exchange Rate System

- Governments sometimes intervene to prevent their currencies from moving too far in a certain direction.
- **Countries with floating exchange rates:** Currencies of most large developed countries are allowed to float, although they may be periodically managed by their respective central banks. (Exhibit 6.1)
- **Criticisms of the managed float system:** Critics suggest that managed float allows a government to manipulate exchange rates to benefit its own country at the expense of others.

Exhibit 6.1 Countries with Floating Exchange Rates and Their Currencies (1 of 2)

COUNTRY	CURRENCY
Afghanistan	New afghani
Argentina	Peso
Australia	Dollar
Brazil	Real
Canada	Dollar
Chile	Peso
Euro participants	Euro
Hungary	Forint
India	Rupee
Indonesia	Rupiah
Israel	New shekel
Jamaica	Dollar
Japan	Yen

Exhibit 6.1 Countries with Floating Exchange Rates and Their Currencies (2 of 2)

COUNTRY	CURRENCY
Mexico	Peso
Norway	Bone
Paraguay	Guarani
Poland	Zloty
Romania	Leu
Russia	Ruble
Singapore	Dollar
South Africa	Rand
South Korea	Won
Sweden	Krona
Switzerland	Franc
Taiwan	New dollar
Thailand	Baht
United Kingdom	Pound

Exchange Rate Systems (6 of 10)

Pegged Exchange Rate System

- Home currency value is pegged to one foreign currency or to an index of currencies.
- **Limitations of pegged exchange rate**
 - May attract foreign investment because exchange rate is expected to remain stable.
 - Weak economic or political conditions can cause firms and investors to question whether the peg will be broken.

Exchange Rate Systems (7 of 10)

Pegged Exchange Rate System (continued)

Examples:

- Europe's Snake Arrangement 1972 – 1979
- European Monetary System (EMS) 1979 – 1992
- Mexico's Pegged System 1994
- Asian Pegged Exchange Rates in the Late 1990s
- China's Pegged Exchange Rate 1996 - 2005
- Venezuela's Pegged Exchange Rate 2010

Exchange Rate Systems (8 of 10)

Pegged Exchange Rate System (continued)

- **Currency Boards Used to Peg Currency Values**

- A system for pegging the value of the local currency to some other specified currency. The board must maintain currency reserves for all the currency that it has printed.

- **Interest Rates of Pegged Currencies**

- Interest rate will move in tandem with the interest rate of the currency to which it is tied.

- **Exchange Rate Risk of a Pegged Currency**

- Provides examples of countries that have pegged the exchange rate of their currency to a specific currency. Currencies are commonly pegged to the U.S. dollar or to the euro.

- **Classification of Pegged Exchange Rates (Exhibit 6.2)**

Exhibit 6.2 Countries with Pegged Exchange Rates and the Currencies to Which They Are Pegged

COUNTRY	NAME OF LOCAL CURRENCY	PEGGED TO
Bahamas	Dollar	U.S. dollar
Barbados	Dollar	U.S. dollar
Bermuda	Dollar	U.S. dollar
Brunei	Dollar	Singapore dollar
Bulgaria	Lev	Euro
Denmark	Krone	Euro
Hong Kong	Dollar	U.S. dollar
Saudi Arabia	Riyal	U.S. dollar
United Arab Emirates	Dirham	U.S. dollar
Venezuela	Bolivar	U.S. dollar

Exchange Rate Systems (9 of 10)

Dollarization

- Replacement of a foreign currency with U.S. dollars.
- This process is a step beyond a currency board because it forces the local currency to be replaced by the U.S. dollar. Although dollarization and a currency board both attempt to peg the local currency's value, the currency board does not replace the local currency with dollars.

Exchange Rate Systems (10 of 10)

Black Markets for Currencies:

- When a government sets a fixed exchange rate and imposes restrictions on residents that require them to exchange currency at that official rate, it may trigger the creation of a “black market” for foreign exchange.
- The term black market refers to an underground (illegal) network that circumvents the legal (formal) network in the economy.
- A black market for foreign exchange becomes especially active when local residents fear an impending currency crisis.

A Single European Currency (1 of 4)

Monetary Policy in the Eurozone

- **European Central Bank** — Based in Frankfurt and is responsible for setting monetary policy for all participating European countries
- **Objective** is to control inflation in the participating countries and to stabilize (within reasonable boundaries) the value of the euro with respect to other major currencies.

Impact on Firms in the Eurozone — Prices of products are now more comparable among European countries.

Impact on Financial Flows in the Eurozone — Bond investors who reside in the eurozone can now invest in bonds issued by governments and corporations in these countries without concern about exchange rate risk, as long as the bonds are denominated in euros.

A Single European Currency (2 of 4)

Impact of a Eurozone Country Crisis on Other Eurozone Countries

- Financial problems of one bank can easily spread to other banks.
- Banks in Eurozone frequently engage in loan participations. If companies have trouble repaying, all banks may be affected.
- News about concerns in one area of Eurozone can trigger actions in other areas.
- Eurozone country governments must rely on fiscal policy when they experience serious financial problems.
- Banks lend heavily to governments. Performance is related to whether that government can repay its debts.

A Single European Currency (3 of 4)

- **ECB Role in Resolving Economic Crises**
 - In recent years the bank's role has expanded to include providing credit for eurozone countries that are experiencing a financial crisis.
 - The ECB imposes restrictions intended to help resolve the country's budget deficit problems over time.

A Single European Currency (4 of 4)

Impact of a Country Abandoning the Euro

- Would allow a country to set its own exchange rate to encourage purchasers of exports.
- Would possibly be expelled from the European Union, which would almost certainly reduce its trade with other European Union countries.

Impact of Abandoning the Euro on Eurozone Conditions

- A fear of future declines in the value of euro-denominated assets could cause the euro to weaken.
- An economic analysts contend that the mere threat to abandon the euro would create more problems for the eurozone than would an actual abandonment.

Direct Intervention (1 of 6)

Reasons for Direct Intervention

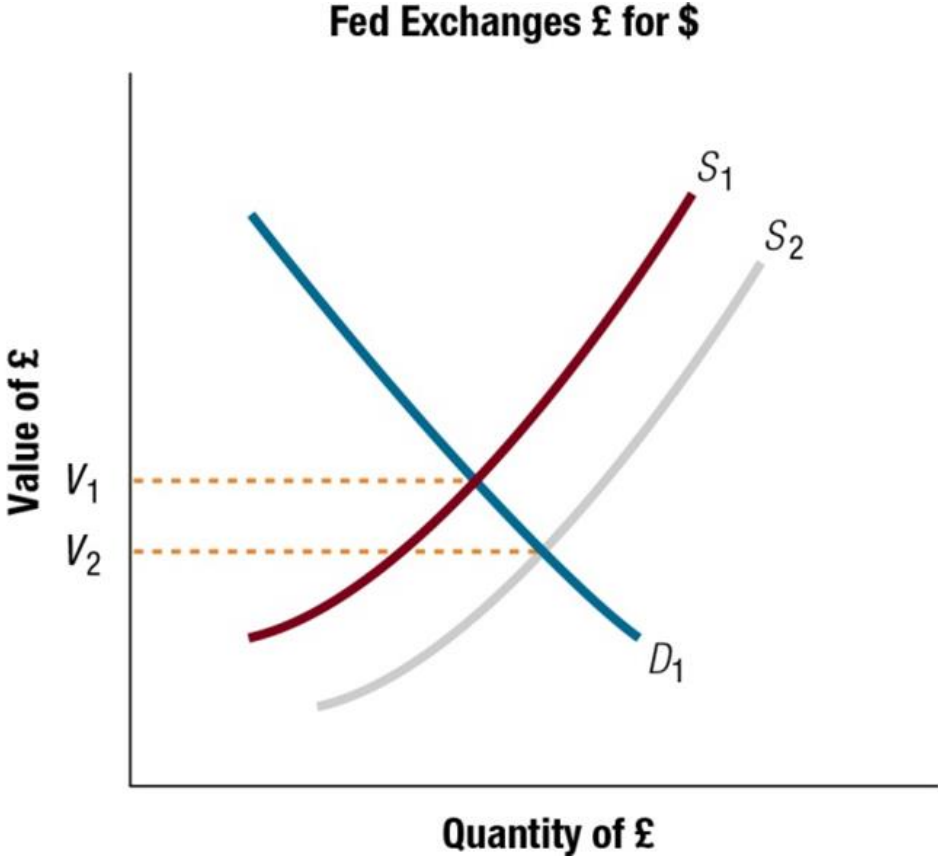
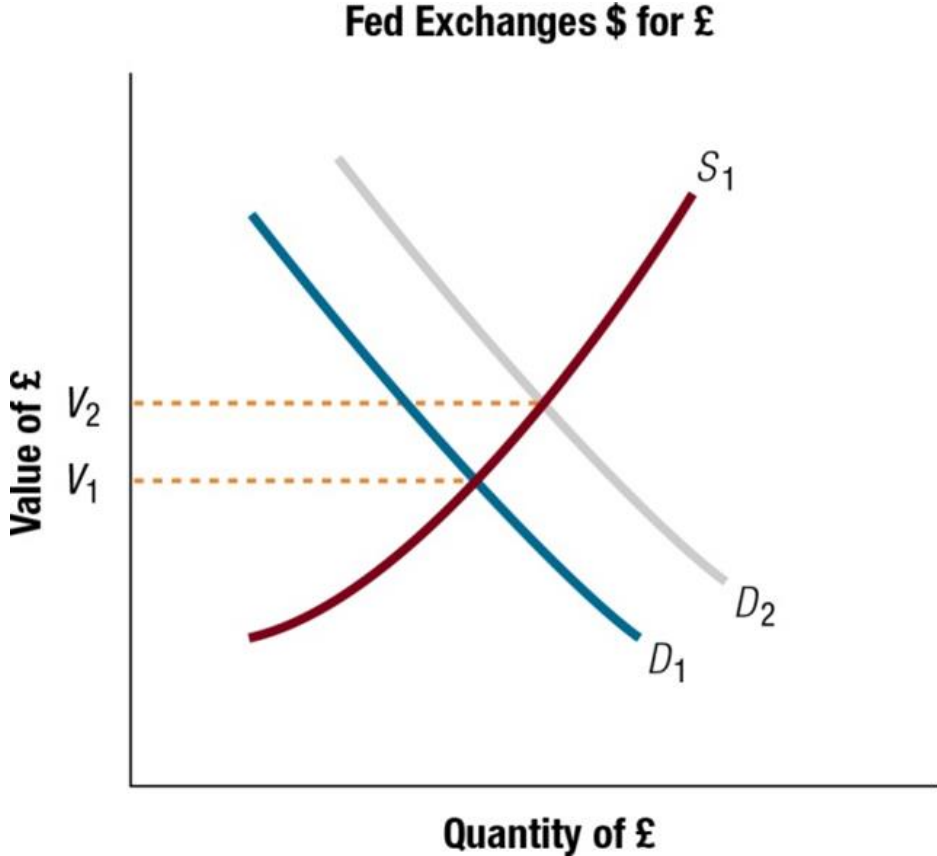
- **Smoothing exchange rate movements**
 - If a central bank is concerned that its economy will be affected by abrupt movements in its home currency's value, it may attempt to smooth the currency movements over time.
- **Establishing implicit exchange rate boundaries**
 - Some central banks attempt to maintain their home currency rates within some unofficial, or implicit, boundaries.
- **Responding to temporary disturbances**
 - A central bank may intervene to insulate a currency's value from a temporary disturbance.

Direct Intervention (2 of 6)

The Direct Intervention Process (Exhibit 6.3)

- A country's central bank can use direct intervention by engaging in foreign exchange transactions that affect the demand or supply market conditions for its currency.
- The outward shift in the demand of pounds in the left graph of Exhibit 6.3.
- The outward shift in the supply of pounds in the right graph of Exhibit 6.3.

Exhibit 6.3 Effects of Direct Central Bank Intervention in the Foreign Exchange Market



Direct Intervention (3 of 6)

- **Reliance on reserves**

- The potential effectiveness of a central bank's direct intervention is the amount of reserves it can use.

- **Coordinated Intervention**

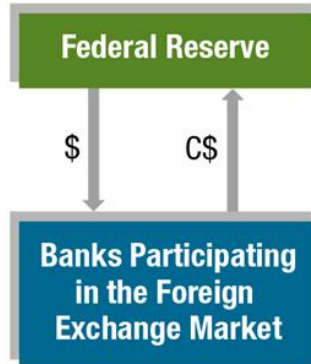
- Intervention more likely to be effective when it is coordinated by several central banks.

Direct Intervention (4 of 6)

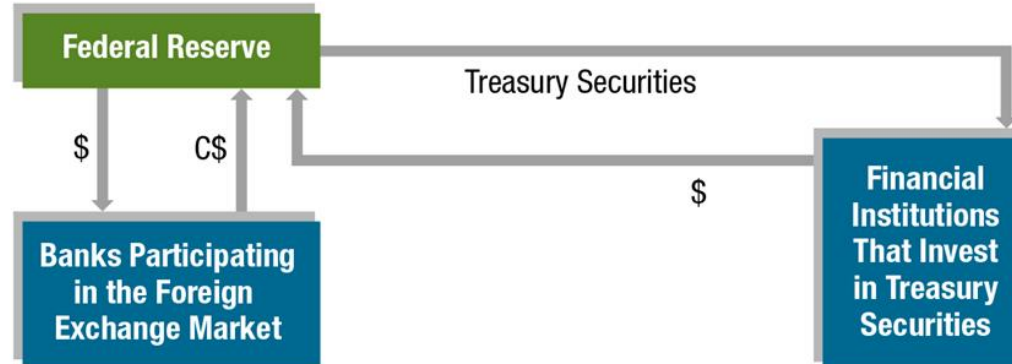
- **Nonsterilized versus sterilized intervention** (See Exhibit 6.4)
 - When the Fed intervenes in the foreign exchange market without adjusting for the change in the money supply, it is engaging in a **nonsterilized intervention**.
 - In a **sterilized intervention**, the Fed intervenes in the foreign exchange market and simultaneously engages in offsetting transactions in the Treasury securities markets.
 - Some traders in the foreign exchange market attempt to determine when Federal Reserve intervention is occurring and the extent of the intervention in order to capitalize on the anticipated results of the intervention effort.

Exhibit 6.4 Forms of Central Bank Intervention in the Foreign Exchange Market

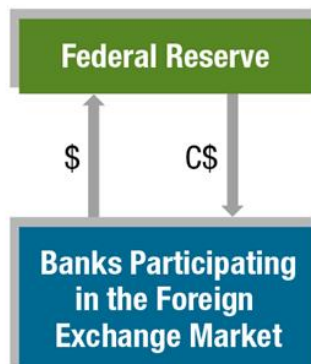
Nonsterilized Intervention
to Strengthen the Canadian Dollar



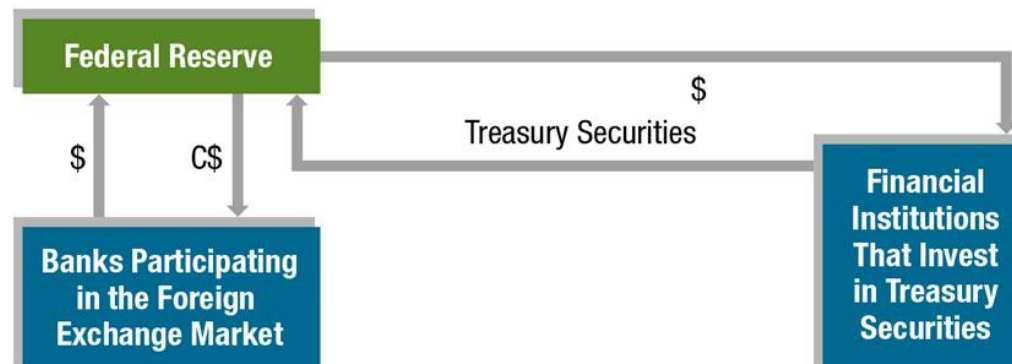
Sterilized Intervention
to Strengthen the Canadian Dollar



Nonsterilized Intervention
to Weaken the Canadian Dollar



Sterilized Intervention
to Weaken the Canadian Dollar



Direct Intervention (5 of 6)

Direct Intervention as a Policy Tool

- **Influence of a Weak Home Currency**
 - The central bank implements a direct intervention to weaken its home currency in an effort to stimulate foreign demand for the country's products. (See Exhibit 6.5)
- **Influence of a Strong Home Currency**
 - The central bank may also implement a direct intervention to strengthen its home currency, which can reduce the country's inflation. (See Exhibit 6.6)

Exhibit 6.5 How Central Bank Intervention Can Stimulate the U.S. Economy

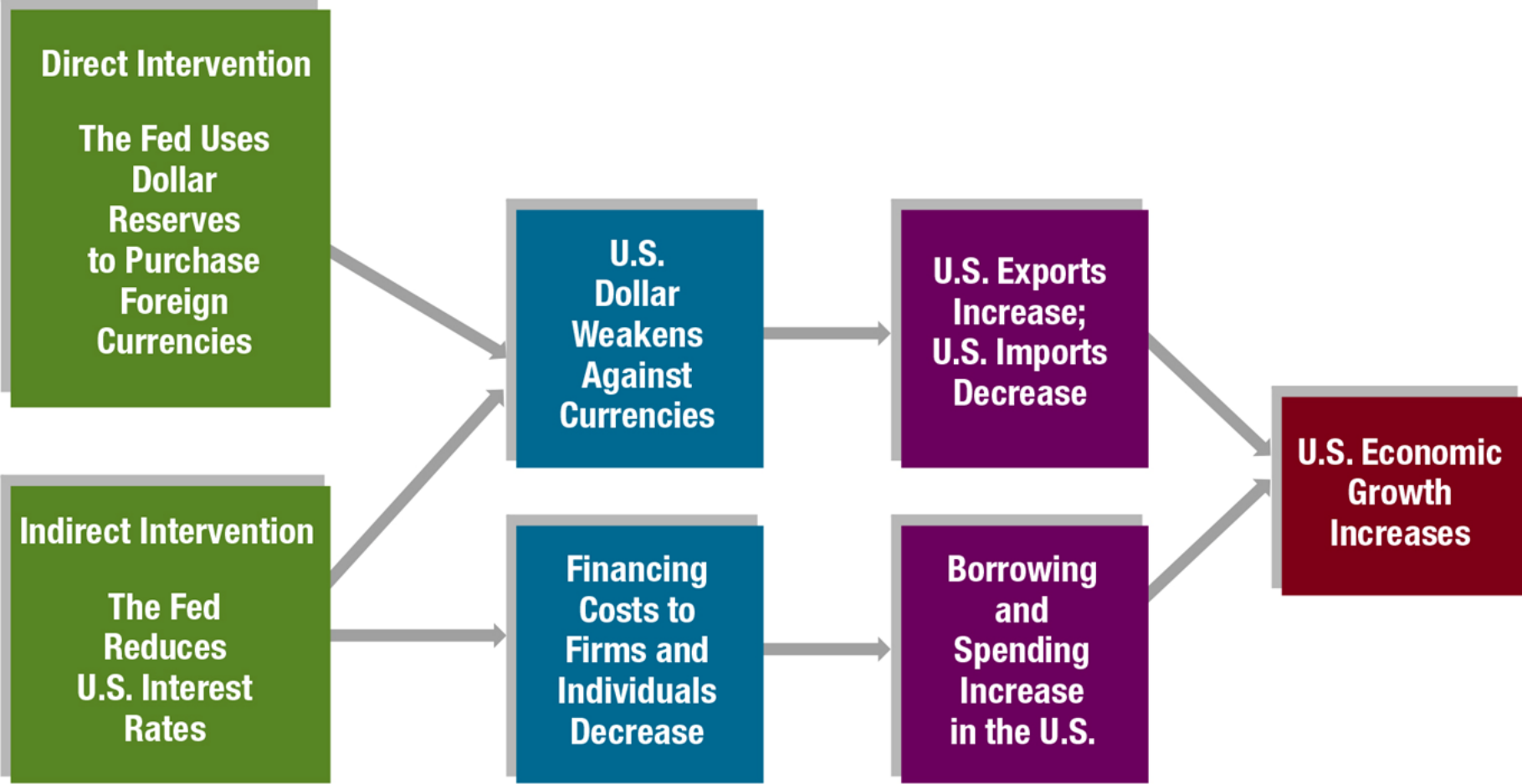
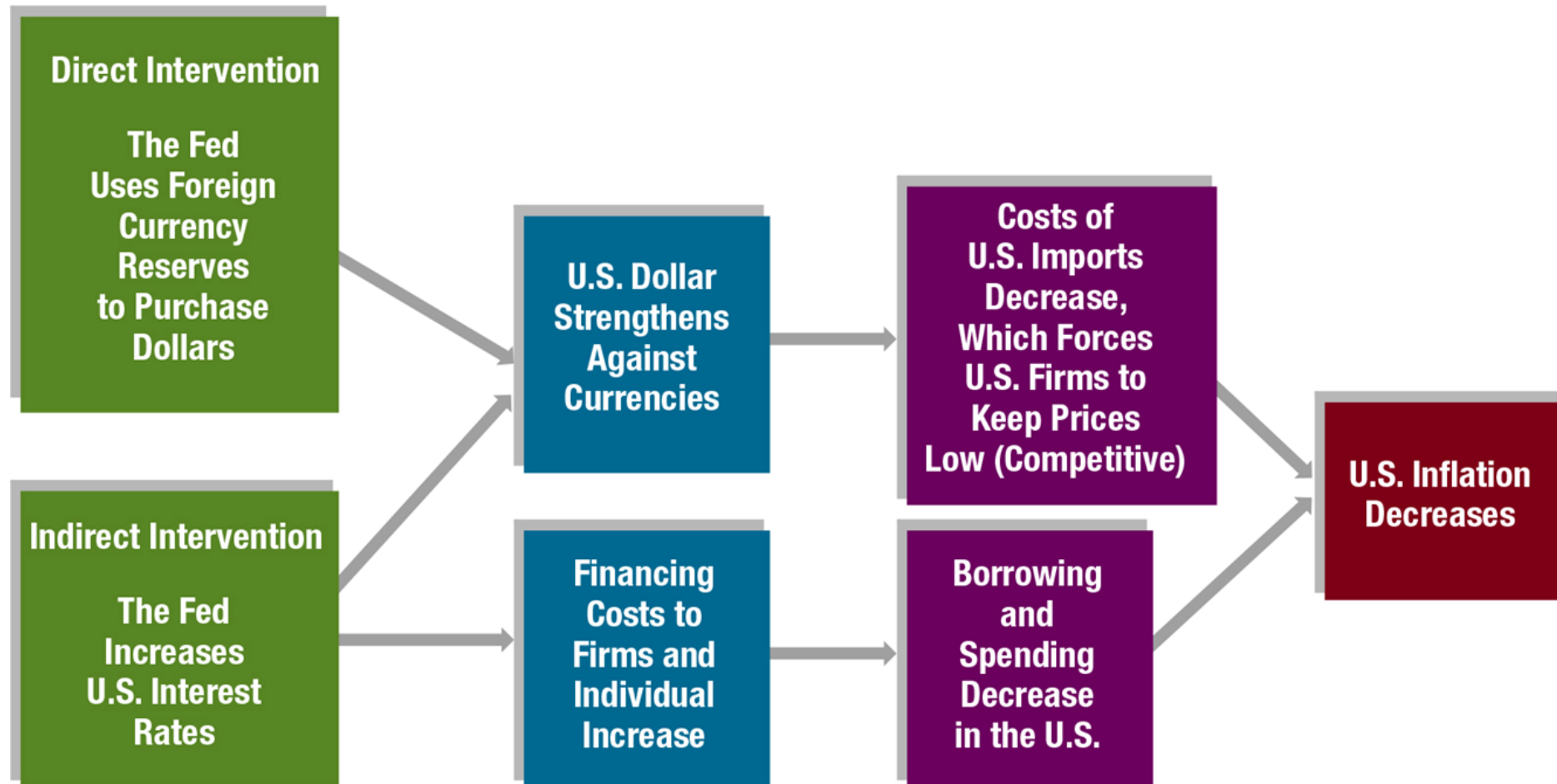


Exhibit 6.6 How Central Bank Intervention Can Reduce Inflation



Direct Intervention (6 of 6)

Speculating on Direct Intervention

- *Speculating on Intervention Intended to Strengthen a Currency*
- *Speculating on Intervention Intended to Weaken a Currency*
- *Central Banks' Efforts to Disguise Their Strategy*

Indirect Intervention (1 of 2)

Indirect Intervention

The Fed can affect the dollar's value indirectly by influencing the factors that determine it.

$$e = f(\Delta INF, \Delta INT, \Delta INC, \Delta GC, \Delta EXP)$$

where

e = percentage change in the spot rate

ΔINF = change in the differential between U. S . inflation and the foreign country's inflation

ΔINT = change in the differential between the U.S. interest rate and the foreign country's interest rate

ΔINC = change in the differential between the U.S. income level and the foreign country's income level

ΔGC = change in government controls

ΔEXP = change in expectations of future exchange rates

Indirect Intervention (2 of 2)

Indirect Intervention (continued)

- **Government Control of Interest Rates** by increasing or reducing interest rates.
- **Government Use of Foreign Exchange Controls** such as restrictions on the exchange of the currency.
 - **Intervention Warnings** intended to warn speculators. The announcements could discourage additional speculation and might even encourage some speculators to unwind (liquidate) their existing positions in the currency.

Summary (1 of 4)

- Exchange rate systems can be classified as fixed rate, freely floating, managed float, and pegged. In a fixed exchange rate system, exchange rates are either held constant or allowed to fluctuate only within very narrow boundaries. In a freely floating exchange rate system, exchange rate values are determined by market forces without intervention. In a managed float system, exchange rates are not restricted by boundaries but are subject to government intervention. In a pegged exchange rate system, a currency's value is pegged to a foreign currency or a unit of account and moves in line with that currency (or unit of account) against other currencies.

Summary (2 of 4)

- Numerous European countries use the euro as their home currency. The single currency allows international trade among firms in the eurozone without foreign exchange expenses and without concerns about future exchange rate movements. However, countries that participate in the euro do not have complete control of their monetary policy because a single policy is applied to all countries in the eurozone. In addition, being part of the eurozone may render some countries more susceptible to a crisis occurring in some other eurozone country.

Summary (3 of 4)

- Governments can use direct intervention by purchasing or selling currencies in the foreign exchange market, thereby altering demand and supply conditions and hence the currencies' equilibrium values. When a government purchases a currency in the foreign exchange market, it puts upward pressure on that currency's equilibrium value. When a government sells a currency in the foreign exchange market, it puts downward pressure on the currency's equilibrium value.

Summary (4 of 4)

- Governments can use indirect intervention by influencing the economic factors that affect equilibrium exchange rates. A common form of indirect intervention is to increase interest rates in order to attract more international capital flows, which may cause the local currency to appreciate. However, indirect intervention is not always effective.