Fixed Exchange Rates

- Fixed-exchange-rate systems are historically important.
  - The U.S. was on a fixed exchange rate system before the early 1970s.
  - Fixed exchange rates are still used by many countries.

Agenda

- Fixed Exchange Rates
- Macroeconomic Policy in an Open Economy with Fixed Exchange Rates
- Fixed versus Flexible Exchange Rates

Fixed Exchange Rates

- Two key questions:
  - How does the use of a fixed-exchange-rate system affect an economy and macroeconomic policy?
  - Which is the better system, flexible or fixed exchange rates?
Fixed Exchange Rates

• Fixing the exchange rate:
  - The government sets the exchange rate.
    • Either unilaterally or in agreement with other countries.
    • The “official rate” is the rate set by the government.
  - What happens if the official rate differs from the fundamental rate determined by the supply and demand of the currency?

Fixing the exchange rate

• An overvalued currency:
  - When the official rate is above its fundamental value, the currency is said to be overvalued.

An overvalued exchange rate

- The government has three choices for dealing with an overvalued currency.
  - First, the government could devalue the currency, reducing the official rate to the fundamental value.
Fixing the exchange rate

- An overvalued currency:
  - The government has three choices for dealing with an overvalued currency.
    - Second, the country could restrict international transactions.
      - This would reduce the supply of its currency to the foreign exchange market and raise the fundamental value of the currency.
      - If a country prohibits people from trading the currency at all, the currency is said to be inconvertible.

Restricting international transactions
Fixing the exchange rate

- An overvalued currency:
  - A speculative run (or attack) may end the attempt to support an overvalued currency.
    - If investors think a currency may soon be devalued, they may sell assets denominated in the overvalued currency, increasing the supply of that currency on the foreign exchange market.
  - An overvalued currency cannot be maintained forever.
    - The country will eventually run out of official reserve assets and have to devalue its currency.
Fixing the exchange rate

• An overvalued currency:
  ➢ *A speculative run* (or attack) may end the attempt to support an overvalued currency.
  • This causes even bigger losses of official reserves from the central bank and speeds up the likelihood of devaluation.

Fixing the exchange rate

• An undervalued currency:
  ➢ When the official rate is *below* its fundamental value, the currency is said to be *undervalued*.

An undervalued exchange rate

![Diagram showing an undervalued exchange rate](image)

Fixing the exchange rate

• An undervalued currency:
  ➢ The government has *three* choices for dealing with an *undervalued currency*.
    • **First**, the government could *revalue* the currency, increasing the official rate to the fundamental value.
Revaluing the currency

Fixing the exchange rate

• An undervalued currency:

  ➢ The government has three choices for dealing with an undervalued currency.

    • Second, the government could ease restrictions on international transactions.

      – This would increase the supply of its currency to the foreign exchange market and raise the fundamental value of the currency.

Easing restrictions on int’l transactions

Fixing the exchange rate

• An undervalued currency:

  ➢ The government has three choices for dealing with an undervalued currency.

    • Third, the central bank can continue to acquire official reserve assets.

      – The central bank sells the domestic currency in the foreign exchange market to buy official reserve assets.

      – The increase in official reserve assets equals the country’s balance of payments surplus.
Foreign exchange market intervention

Fixing the exchange rate

- An undervalued currency:
  - An overvalued currency can seemingly be maintained forever, except …
    - If the domestic central bank is gaining official reserve assets, foreign central banks must be losing them.
      - Or the foreign country is selling assets.
    - So the undervalued currency cannot be maintained for forever.

Macro policy with fixed exchange rates

- Monetary policy and the fixed exchange rate:
  - The best way for a country to make the fundamental value of a currency equal the official rate is through the use of monetary policy.
  - The nominal exchange rate is given by:

\[ e_{\text{nom}} = eP_{\text{For}} / P \]
Macro policy with fixed exchange rates

- Monetary policy and the fixed exchange rate:
  
  ➢ For an overvalued currency, a monetary contraction is desirable:
    
    • The relationship between the money supply and the nominal exchange rate determines the level of the money supply for which the fundamental value of the exchange rate equals the official rate.

The money supply and fixed exchange rates

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Macro policy with fixed exchange rates

- Monetary policy and the fixed exchange rate:

  ➢ A large money supply yields an overvalued currency.
    
    • Larger than the level of the money supply for which the fundamental value of the exchange rate equals the official rate.

Macro policy with fixed exchange rates

- Monetary policy and the fixed exchange rate:

  ➢ IMPLICATION: Countries cannot both maintain a fixed exchange rate and use monetary policy to affect output.
    
    • Expansionary monetary policy to fight a recession would lead to an overvalued currency.
    
    • Contractionary monetary policy to fight rising inflation would lead to an undervalued currency.
Macro policy with fixed exchange rates

- Monetary policy and the fixed exchange rate:
  - A group of countries may be able to coordinate their use of monetary policy.
  - If two countries that have fixed their exchange rates both increase their money supplies to fight joint recessions, there need not be an overvaluation.

Macro policy with fixed exchange rates

- Monetary policy and the fixed exchange rate:
  - A group of countries may be able to coordinate their use of monetary policy.
  - If only the first country increases its money supply it would lead to a depreciation of its currency.
  - Meanwhile, the second country would experience an appreciation of its currency.

Macro policy with fixed exchange rates

- Monetary policy and the fixed exchange rate:
  - However, if the second country also increases its money supply, it provides an offsetting effect.
  - If the money supplies expand in both country, they offset each other, so their exchange rate need not change.
Coordinated monetary expansion

Fixed versus flexible exchange rates

• Currency unions:
  ➢ Under a currency union, countries agree to share a common currency:
    • They often agree to cooperate economically and politically as well.

• Currency unions:
  ➢ To work effectively, a currency union must have just one central bank.
    • Because countries do not usually want to give up control over their own monetary policy, currency unions are very rare.

• Currency unions:
  ➢ Major advantages of currency unions:
    • Reduces the costs of trading goods and assets across countries.
    • Speculative attacks on a national currency can no longer occur.
Fixed versus flexible exchange rates

• Currency unions:
  ➢ Major disadvantages of currency unions:
    • All countries share a common monetary policy.
      – A problem that also arises with fixed exchange rates.
      – If one country is in recession while another is concerned about inflation, monetary policy cannot help both.
      – With flexible exchange rates, the countries could have independent monetary policies to help their particular situation.

• Which is better?
  ➢ Both fixed and flexible exchange rate systems have benefits and disadvantages.
  ➢ Which exchange rate system is better for an individual country depends on its economic and political circumstances and those of its major trading partners.

Fixed versus flexible exchange rates

• Major benefits of fixed exchange rates:
  ➢ First, stable exchange rates make international trades easier and less costly.
  ➢ Second, fixed exchange rates help discipline monetary policy, making it impossible for a country to engage in expansionary policy.
    – Which may result in lower inflation in the long run.

• Major disadvantages to fixed exchange rates:
  ➢ First, they take away a country’s ability to use expansionary monetary policy to combat recessions.
  ➢ Second, disagreement among countries about the conduct of monetary policy may lead to the breakdown of the system.
Fixed versus flexible exchange rates

• Major benefits of **flexible exchange rates**:
  
  ➢ **First**, flexible exchange rates allow countries to use monetary policy to combat recessions and inflations.
  
  ➢ **Second**, flexible exchange rates permit countries to follow independent monetary and fiscal policies.

• Which is better?
  
  ➢ Which is better depends on the circumstances.
    
    • **Fixed exchange rates** are more desirable:
      
      – If there are large benefits to be gained from increased trade and economic integration, **AND**
      
      – If countries can coordinate their monetary policies closely.

Fixed versus flexible exchange rates

• Major disadvantages to **flexible exchange rates**:
  
  ➢ **First**, exchange rate volatility introduces uncertainty into international transactions, making them more costly.
  
  ➢ **Second**, there is no independent restraint on expansionary monetary and fiscal policies.

• Which is better?
  
  ➢ Which is better depends on the circumstances.
    
    • **Flexible exchange rates** are more desirable:
      
      ➢ If countries value having independent monetary policies.
        
        » Either because they face different macroeconomic shocks or hold different views about the costs of unemployment and inflation than other countries.