

Chapter 7: The International Monetary System

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Objective

- This chapter gives a review of the development of the international monetary system. The chapter also discusses the working of macroeconomic policies under different monetary systems.

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Content

- Goals of macroeconomic policies
- Gold standard
- Bretton Woods system
- Collapse of the Bretton Woods system
- International effects of US macroeconomic policies
- The current monetary system

1. Macroeconomic Goals

Internal Balance

- “Internal balance” is a name given to the macroeconomic goals of **full employment** (or normal production) and **price stability** (or low inflation).
 - Over-employment tends to lead to increased prices and under-employment tends to lead to decreased prices.
 - Volatile aggregate demand and output tend to create volatile prices.
 - Unexpected inflation redistributes income from creditors to debtors and makes planning for the future more difficult.

1. Macroeconomic Goals

Internal Balance

- “External balance” is a name given to a current account that is not “too” negative or “too” positive.
 - A large current account *deficit* can make foreigners think that an economy can not repay its debts and therefore make them stop lending, causing a financial crisis.
 - A large current account *surplus* can cause protectionist or other political pressure by foreign governments (e.g., pressure on Japan in the 1980s and China in the 2000s).

1. Macroeconomic Goals

External Balance

- “External balance” can also mean a **balance of payments equilibrium**:
 - a current account (plus capital account) that matches the non-reserve financial account in a given period, so that official international reserves do not change.

2. The Gold Standard

External balance

- The gold standard from 1870–1914 and after 1918 had mechanisms that prevented flows of gold reserves (the balance of payments) from becoming too positive or too negative.
 - Prices tended to adjust according to the amount of gold circulating in an economy, which had effects on the flows of goods and services: the current account.
 - Central banks influenced financial capital flows, so that the non-reserve part of the financial account matched the current account, thereby reducing gold outflows or inflows.

2. The Gold Standard

External balance

- **Price specie flow mechanism** is the adjustment of prices as gold (“specie”) flows into or out of a country, causing an adjustment in the flow of goods.
 - An inflow of gold tends to inflate prices.
 - An outflow of gold tends to deflate prices.
 - If a domestic country has a current account surplus in excess of the non-reserve financial account, gold earned from exports flows into the country—raising prices in that country and lowering prices in foreign countries.
 - Goods from the domestic country become expensive and goods from foreign countries become cheap, reducing the current account surplus of the domestic country and the deficits of the foreign countries.

2. The Gold Standard

External balance

- Thus, price specie flow mechanism of the gold standard could reduce current account surpluses and deficits, achieving a measure of external balance for all countries.

2. The Gold Standard

External balance

- The “**Rules of the Game**” under the gold standard refer to another adjustment process that was theoretically carried out by central banks:
 - When gold exits the country to pay for imports, the money supply decreased and the interest rates increased, attracting financial capital inflows to match a current account deficit, reducing gold outflows.
 - When gold enters the country as income from exports, the money supply increased and the interest rates decreased, reducing financial capital inflows to match the current account, reducing gold inflows.

2. The Gold Standard

Internal balance

- The gold standard's record for internal balance was mixed.
 - The US suffered from deflation and depression in the 1870s and 1880s after its adherence to the gold standard: prices (and output) were reduced after inflation during the 1860s.
 - The US unemployment rate averaged 6.8% from 1890–1913, but it averaged under 5.7% from 1946–1992.

2. The Gold Standard

The gold standard in interwar years

- The gold standard was stopped in 1914 due to war, but after 1918 was attempted again.
 - The US reinstated the gold standard from 1919–1933 at \$20.67 per ounce and from 1934–1944 at \$35.00 ounce, (a devaluation the dollar).
 - The UK reinstated the gold standard from 1925–1931.
- But countries that adhered to the gold standard the longest, without devaluing the paper currency, suffered most from deflation and reduced output in the 1930s.

3. Bretton Woods System

- In July 1944, 44 countries met in Bretton Woods, NH
- They established the Bretton Woods system: fixed exchange rates against the US dollar and a fixed dollar price of gold (\$35 per ounce).
- They also established other institutions:
 1. The International Monetary Fund
 2. The World Bank
 3. General Agreement on Trade and Tariffs (GATT), the predecessor to the World Trade Organization (WTO).

3. Bretton Woods System

International Monetary Fund

- The IMF was constructed to lend to countries with persistent balance of payments deficits (or current account deficits), and to approve of devaluations.
 - Loans were made from a fund paid for by members in gold and currencies.
 - Each country had a quota, which determined its contribution to the fund and the maximum amount it could borrow.
 - Large loans were made conditional on the supervision of domestic policies by the IMF: **IMF conditionality**.
 - Devaluations could occur if the IMF determined that the economy was experiencing a “fundamental disequilibrium”.

3. Bretton Woods System

Restriction on capital inflows

- In order to avoid sudden changes in the financial account (possibly causing a balance of payments crisis), countries in the Bretton Woods system often prevented flows of financial capital across countries.
- Yet, they encouraged flows of goods and services because of the view that trade benefits all economies.
 - Currencies were gradually made convertible (exchangeable) between member countries to encourage trade in goods and services valued in different currencies.

3. Bretton Woods System

External balance and internal balance

- Under a system of fixed exchange rates, all countries but the US had ineffective monetary policies for internal balance.
- The principal tool for internal balance was fiscal policy (government purchases or taxes).
- The principal tools for external balance were borrowing from the IMF, financial capital restrictions and infrequent changes in exchange rates.

3. Bretton Woods System

Internal balance

- Suppose internal balance in the short run occurs when output at full employment equals aggregate demand:

$$Y^f = C(Y^f - T) + I + G + CA(EP^*/P, Y^f - T)$$

- An increase in government purchases (or a decrease in taxes) increases aggregate demand and output above its full employment level.
- To restore internal balance in the short run, a revaluation (a fall in E) must occur.

3. Bretton Woods System

External balance

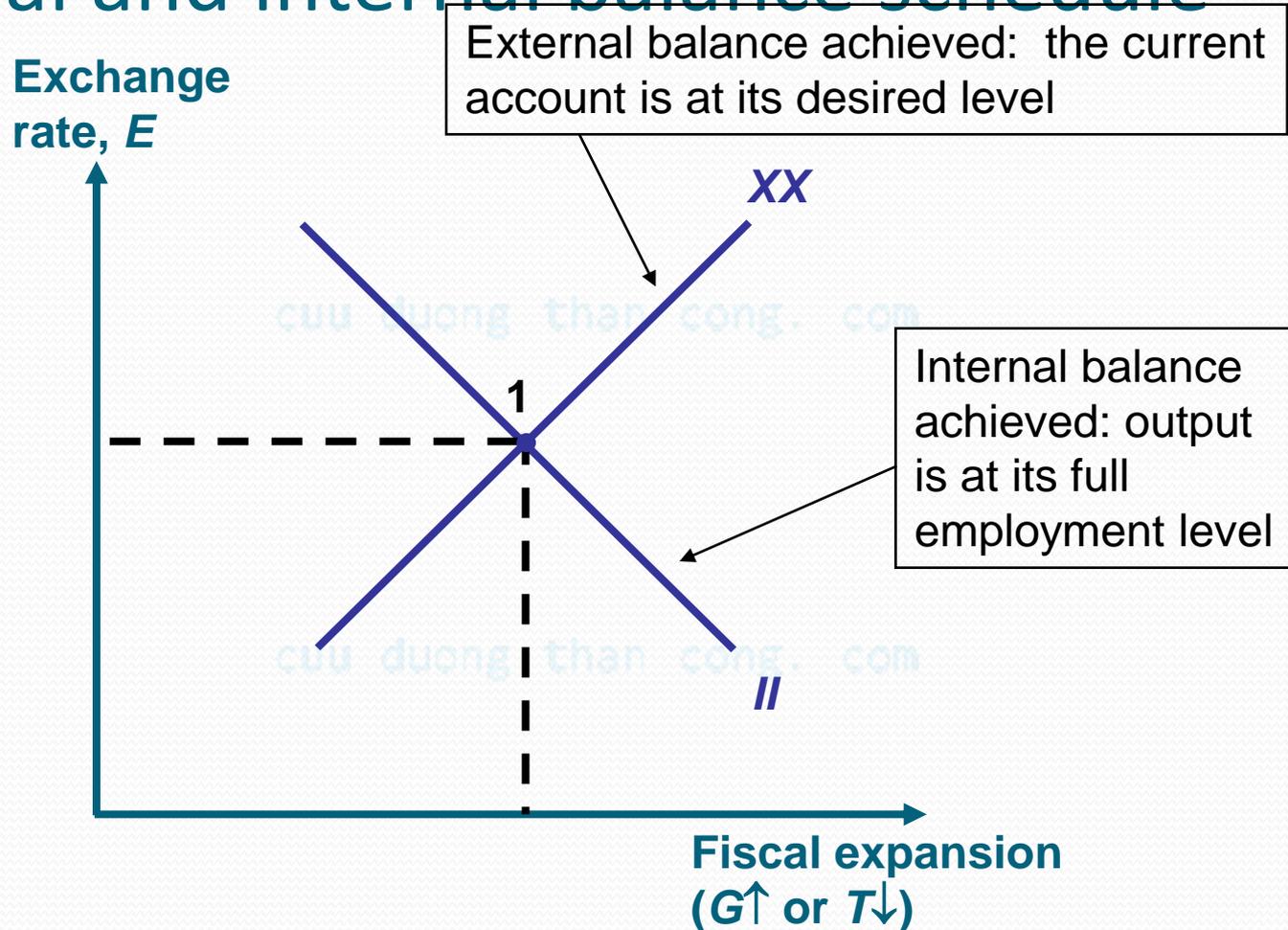
- Suppose external balance in the short run occurs when the current account achieves some value X :

$$CA(EP^*/P, Y - T) = X$$

- An increase in government purchases (or a decrease in taxes) increases aggregate demand, output and income, decreasing the current account.
- To restore external balance in the short run, a devaluation (a rise in E) must occur.

3. Bretton Woods System

External and internal balance schedule



3. Bretton Woods System

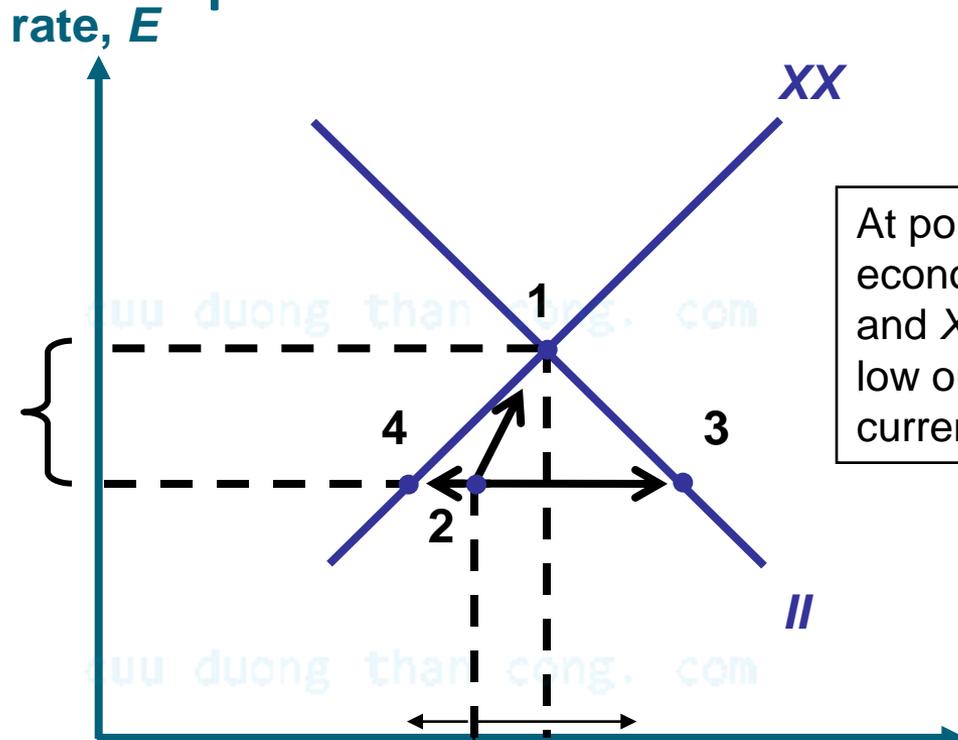
Macroeconomic policies

- But under the fixed exchange rates of the Bretton Woods system, devaluations were supposed to be infrequent, and fiscal policy was supposed to be the main policy tool to achieve both internal and external balance.
- But in general, fiscal policy can not attain both internal balance and external balance at the same time.
- A devaluation, however, can attain both internal balance and external balance at the same time.

3. Bretton Woods System

Macroeconomic policies

Devaluation that results in internal *and* external balance: by making domestic goods cheaper, aggregate demand, output and the current account increase.



At point 2, the economy is below *II* and *XX*: it experiences low output and a low current account

Fiscal policy that results in internal *or* external balance: by reducing demand for imports and output *or* increasing demand for imports and output.

Fiscal expansion
($G \uparrow$ or $T \downarrow$)

4. The collapse of Bretton Woods System

Macroeconomic policies

- Under the Bretton Woods system, policy makers generally used fiscal policy to try to achieve internal balance for political reasons.
- Thus, an inability to adjust exchange rates left countries facing external imbalances over time

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4. The collapse of Bretton Woods System

US external and internal imbalance

- The collapse of the Bretton Woods system was caused primarily by imbalances of the US in 1960s and 1970s.
 - The US current account surplus became a deficit in 1971.
 - Rapidly increasing government purchases increased aggregate demand and output, as well as prices.
 - A rapidly rising price level and money supply caused the US dollar to become over-valued in terms of gold and in terms of foreign currencies.

4. The collapse of Bretton Woods System

US external and internal imbalance

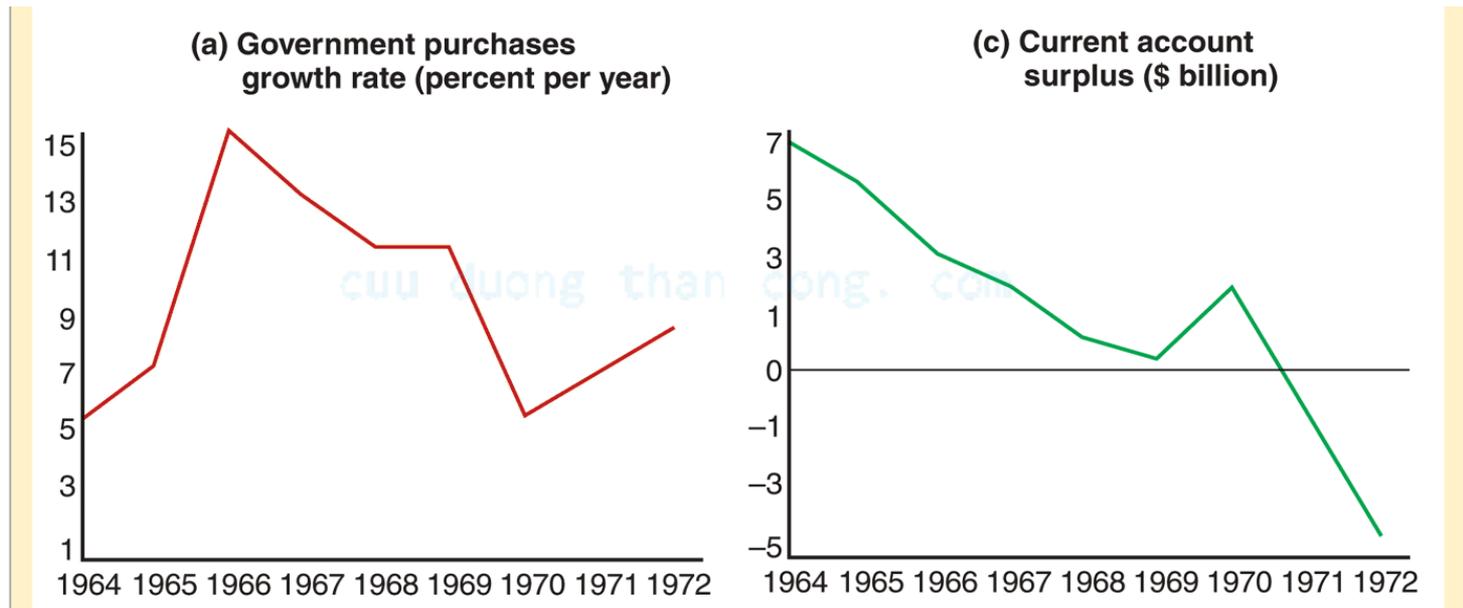


Figure 18-3

U.S. Macroeconomic Data, 1964–1972

Source: *Economic Report of the President*, 1985. Money supply growth rate is the December to December percentage increase in M1. Inflation rate is the percentage increase in each year's average consumer price index over the average consumer price index for the previous year.

4. The collapse of Bretton Woods System

US external and internal imbalance

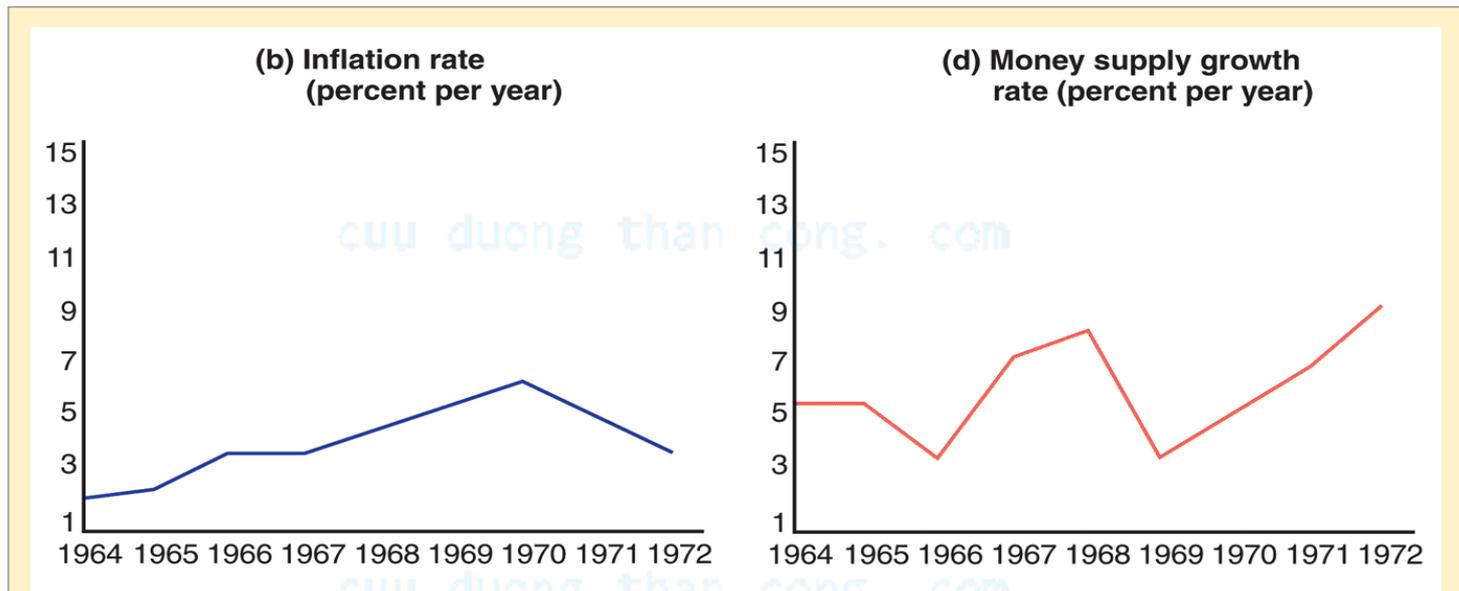


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4. The collapse of Bretton Woods System

Liquidity problem

- Another problem was that as foreign economies grew, their need for official international reserves grew.
- But this rate of growth was faster than the growth rate of the gold reserves that central banks held.
 - Supply of gold from new discoveries was growing slowly.
 - Holding dollar denominated assets was the alternative.
- At some point, dollar denominated assets held by foreign central banks would be greater than the amount of gold held by the Federal Reserve.

4. The collapse of Bretton Woods System

Liquidity problem

- The US would eventually not have enough gold: foreigners would *lose confidence* in the ability of the Federal Reserve to maintain the fixed price of gold at \$35/ounce, and therefore would rush to redeem their dollar assets before the gold ran out.
 - This problem is similar to what any central bank may face when it tries to maintain a fixed exchange rate.
 - If markets perceive that the central bank does not have enough official international reserve assets to maintain a fixed rate, a balance of payments crisis is inevitable.

4. The collapse of Bretton Woods System

US policy responses

- The US was not willing to reduce government purchases or increase taxes significantly, nor reduce money supply growth.
- These policies would have reduced output and inflation, and increased unemployment.
- A devaluation, however, could have avoided the costs of low output and high unemployment and still attain external balance (increased current account and official international reserves).

4. The collapse of Bretton Woods System

Speculation against US dollar

- The imbalances of the US, in turn, caused speculation about the value of the US dollar, which caused imbalances for other countries and made the system of fixed exchange rates harder to maintain.
- Financial markets had the perception that the US economy was experiencing a “fundamental equilibrium” and that a devaluation would be necessary.

4. The collapse of Bretton Woods System

Speculation against US dollar

- First, speculation about a devaluation of the dollar caused markets to buy large quantities of gold.
 - The Federal Reserve sold huge quantities of gold in March 1968, but closed markets afterwards.
 - Thereafter, private investors were no longer allowed to redeem gold from the Federal Reserve or other central banks.
 - The Federal Reserve would sell only to other central banks at \$35/ounce.
 - But even this arrangement did not hold: the US devalued its dollar in terms of gold in December 1971 to \$38/ounce.

4. The collapse of Bretton Woods System

Speculation against US dollar

- Second, speculation about a devaluation of the dollar in terms of other currencies caused markets to buy large quantities of foreign currency assets.
 - A coordinated devaluation of the dollar against foreign currencies of about 8% occurred in December 1971.
 - Speculation about another devaluation occurred: European central banks sold huge quantities of European currencies in early February 1973, but closed markets afterwards.
 - Central banks in Japan and Europe stopped selling their currencies and stopped purchasing of dollars in March 1973, and allowed demand and supply of currencies to push the value of the dollar downward.

5. International Effects of US Macroeconomic Policies

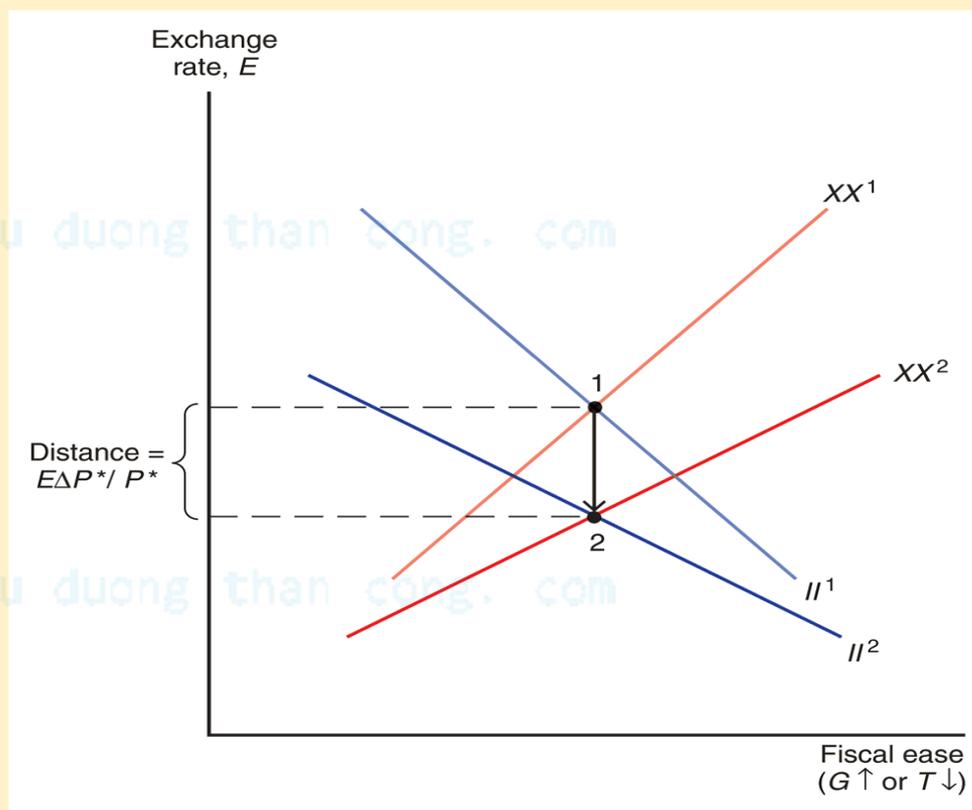
- Recall from chapter 17, that the monetary policy of the country which owns the reserve currency is able to influence other economies in a reserve currency system.
- In fact, the acceleration of inflation that occurred in the US in the late 1960s also occurred internationally during that period.

5. International Effects of US Macroeconomic Policies

Figure 18-4

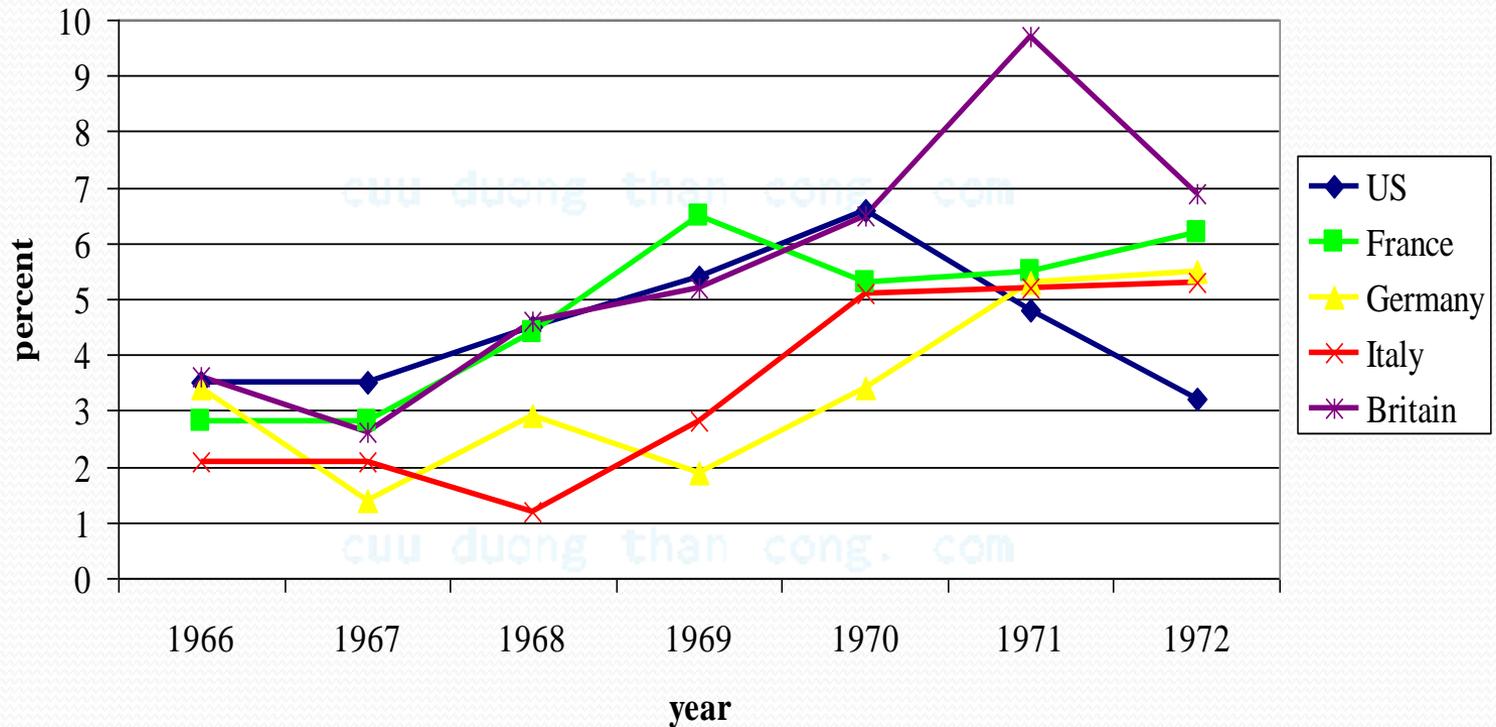
Effect on Internal and External Balance of a Rise in the Foreign Price Level, P^*

After P^* rises, point 1 is in zone 1 (overemployment and an excessive surplus). Revaluation (a fall in E) restores balance immediately by moving the policy setting to point 2.



5. International Effects of US Macroeconomic Policies

Inflation rates in European economies relative to that in the US



Source: Organization for Economic Cooperation and Development.
Figures are annual percentage increases in consumer price indexes.

5. International Effects of US Macroeconomic Policies

- Evidence shows that money supply growth rates in other countries even exceeded the rate in the US.
- This could be due to the effect of speculation in the foreign exchange markets.
 - Central banks were forced to buy large quantities of dollars to maintain fixed exchange rates, which increased their money supplies at a more rapid rate than occurred in the US.

5. International Effects of US Macroeconomic Policies

TABLE 18-2 Changes in Germany's Money Supply and International Reserves, 1968–1972 (percent per year)

Growth rate of	1968	1969	1970	1971	1972
Money supply	6.4	−6.3	8.9	12.3	14.7
Official international reserves	37.8	−43.6	215.7	36.1	35.8

Source: Organization for Economic Cooperation and Development. *Main Economic Indicators: Historical Statistics, 1964–1983*. Paris: OECD, 1984. Figures are percentage increases in each year's end-of-year money supply or international reserves over the level at the end of the previous year. Official reserves are measured net of gold holdings.

6. The current monetary system

- The current monetary system was established at the IMF conference in Jamaica in 1976
 - The fixed exchange rate system is abandoned, and countries are allowed to choose the appropriate exchange rate system
 - US dollars are used as international reserves, in addition to gold, euro and other major currency.

6. The current monetary system

International monetary problems

- The exchange rate volatility causes macroeconomic instability and affects international trade and investment.
- The exchange rate misalignment leads to large and persistent imbalance in the monetary system.
- The increasing capital mobility causes macroeconomic instability and currency crises become more frequent

6. The current monetary system

Reforming the international monetary system

- Proposals have been put forward to reduce the degree of the exchange rate misalignment and the volatility of capital inflows
 - The targeted exchange rate zone: exchange rates are allowed to fluctuate around the central rates within specified bands.
 - Restricting capital inflows: taxing foreign exchange transactions (or adopting multi-exchange rate system) to discourage speculative capital inflows.
 - International policy coordination: Coordinating monetary and exchange rate policies to maintain stability and growth.



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