



ECONOMICS

PRIVATE AND PUBLIC CHOICE

16TH EDITION

GWARTNEY – STROUP – SOBEL – MACPHERSON

International Finance and the Foreign Exchange Market

Full Length Text — Part: 4 Chapter: 19

Macro Only Text — Part: 4 Chapter: 19

To Accompany: “***Economics: Private and Public Choice, 16th ed.***”

James Gwartney, Richard Stroup, Russell Sobel, & David Macpherson

Slides prepared by Joseph Connors with the assistance of Charles Skipton & James Gwartney

Foreign Exchange Market



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Foreign Exchange Market

- **Foreign Exchange market:**

Market where different currencies are traded, one for another.

- The exchange rate enables people in one country to translate the prices of foreign goods into units of their own currency.
 - An ***appreciation*** of a nation's currency will make foreign goods cheaper.
 - A ***depreciation*** of a nation's currency will make foreign goods more expensive.

Foreign Exchange Rates, 2000-2016

U.S. Cents Price for Foreign Currency

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YEAR	EURO	JAPANESE YEN	BRITISH POUND	CANADIAN DOLLAR	INDEX OF EXCHANGE RATE VALUE OF THE DOLLAR ^a
					(26 CURRENCIES)
2000	92.3	0.928	151.56	67.3	119.6
2001	89.5	0.823	143.96	64.6	126.1
2002	94.5	0.799	150.25	63.7	126.8
2003	113.2	0.863	163.47	71.4	119.3
2004	124.4	0.925	183.30	76.8	113.8
2005	124.5	0.908	182.04	82.5	110.8
2006	125.6	0.860	184.34	88.2	108.7
2007	137.1	0.849	200.20	93.2	103.6
2008	147.3	0.967	185.45	93.8	99.9
2009	139.4	1.067	156.61	87.6	105.7
2010	132.6	1.139	154.52	97.1	101.8
2011	139.3	1.255	160.43	101.1	97.2
2012	128.6	1.253	158.53	100.1	99.8
2013	132.8	1.025	156.42	97.1	101.0
2014	133.0	0.946	164.84	90.6	104.1
2015	111.0	0.826	152.84	78.2	117.3
2016	113.9	0.890	143.81	77.1	119.4
	103.8	.846	124.09	74.69	127.1

^a 2016 figures are as of December 15, 2016.

Determinants of the Exchange Rate

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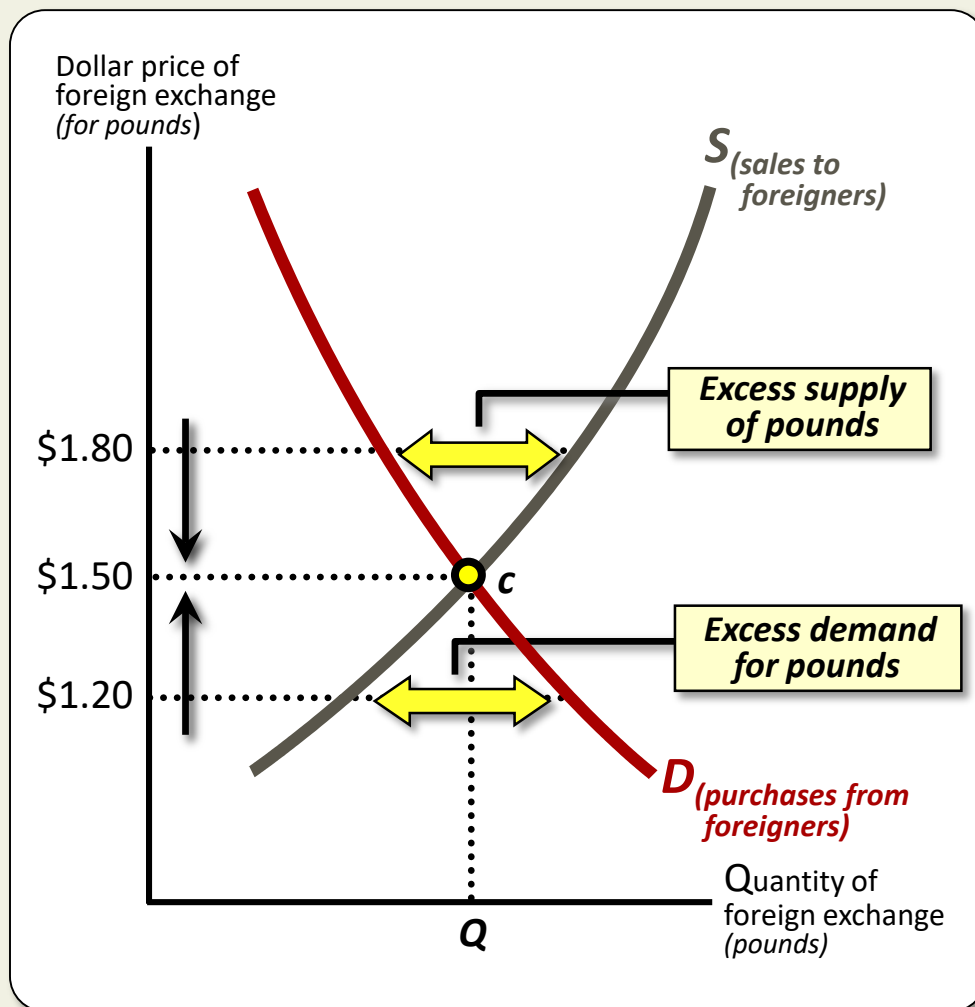
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Determinants of the Exchange Rate

- Under a ***flexible rate system***, the exchange rate is determined by supply and demand.
 - The ***dollar demand for foreign exchange*** originates from U.S. purchases for foreign goods, services, and assets (real and financial).
 - The ***supply of foreign exchange*** originates from sales of goods, services, and assets from Americans to foreigners.
 - The foreign exchange market brings the quantity demanded and quantity supplied into balance.
 - Also brings the purchases of Americans from foreigners into equality with the sales of Americans to foreigners.

Foreign Exchange Market Equilibrium

- The dollar price of the English pound is measured on the vertical axis. The horizontal axis indicates the flow of pounds in exchange for dollars.
- The demand and supply of pounds are in equilibrium at the exchange rate of \$1.50 = 1 English pound.
- At this price, quantity ***demanded*** equals quantity ***supplied***.
- A higher price of pounds (like \$1.80 = 1 pound), leads to an ***excess supply of pounds*** ... causing the dollar price of the pound to fall (***depreciate***).
- A lower price of pounds (like \$1.20 = 1 pound), leads to an ***excess demand for pounds*** ... causing the dollar price of pounds to rise (***appreciate***).



Why Do Exchange Rates Change?



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Changes in the Exchange Rate

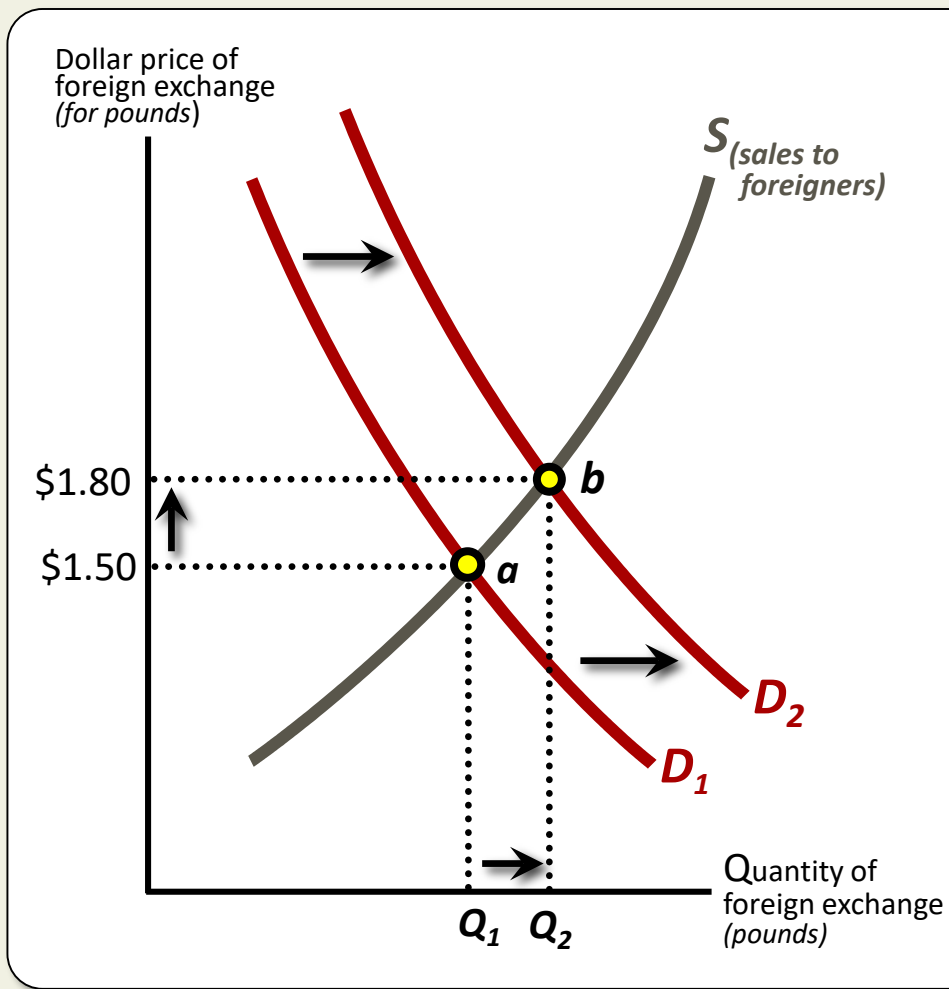
- Factors that cause a currency to depreciate:
 - a rapid growth of income (relative to trading partners) that stimulates imports relative to exports
 - a higher rate of inflation than one's trading partners
 - a reduction in domestic real interest rates (relative to rates abroad)
 - a reduction in the attractiveness of the domestic investment environment that leads to an outflow of capital

Foreign Exchange Market Equilibrium

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- Other things constant, if incomes increase in the United States, U.S. imports of foreign goods and services will grow.
- The increase in imports will increase the **demand** for pounds (in the foreign exchange market) causing the dollar price of the pound to increase from \$1.50 to \$1.80.

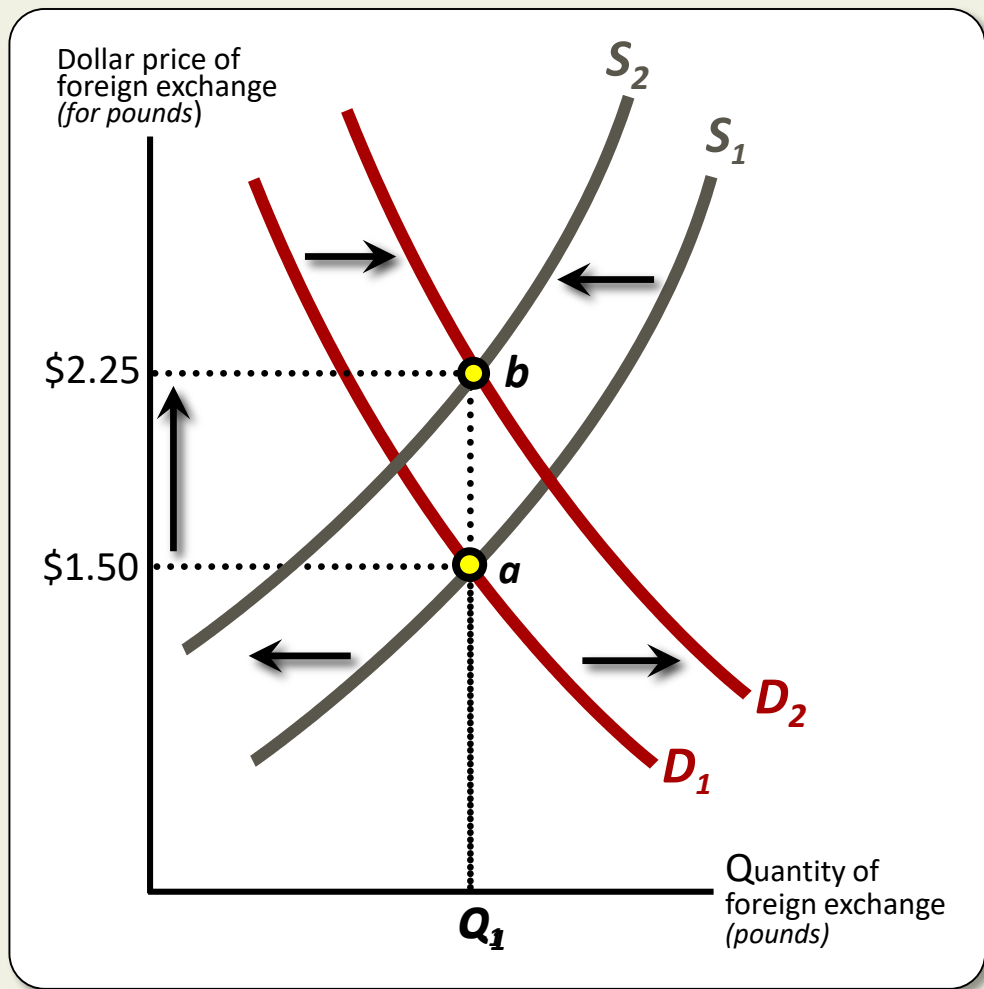


Inflation with Flexible Exchange Rates

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- If prices were stable in England while the price level in the U.S. increased by 50% ... the U.S. demand for British goods (and pounds) would increase ... as U.S. exports to Britain would be relatively more expensive they would decline and thereby cause the **supply** of pounds to fall.
- These forces would cause the dollar to **depreciate** relative to the pound.



Changes in the Exchange Rate

- Factors that cause a currency to appreciate:
 - a slower growth rate relative to one's trading partners
 - a lower inflation rate than one's trading partners
 - an increase in domestic real interest rates
(relative to rates abroad)
 - an improvement in the attractiveness of the domestic investment environment that leads to an inflow of capital

International Finance and Alternative Exchange Rate Regimes

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Three Major Types of Exchange Rate Regimes

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- There are three major types of exchange rate regimes:
 - flexible rates;
 - fixed-rate, unified currency; and,
 - pegged exchange rates.
- We have discussed flexible exchange rate regimes extensively.
- We will now explain the nature and operation of the other two major regimes.

Fixed Rate, Unified Currency Regime

- ***Fixed rate, unified currency regime:***
a system where currencies are linked to each other at a fixed rate.
 - A single central bank conducts the monetary policy that influences the value of the unified currency relative to other world currencies.
- The linkage may be either through the use of the same currency or through a currency board that agrees to trade the currencies, one for another, at a fixed rate.

Fixed Rate, Unified Currency Regime

- Some examples of *fixed rate, unified currency systems* --
 - The U.S., Panama, Ecuador, El Salvador, and Hong Kong all of which use currencies that are unified with the U.S. dollar.
 - The 19 countries of the European Monetary Union all use the euro, which is managed by the European Central Bank. Several other countries, including Bulgaria and Bosnia and Herzegovina use a currency board to link their domestic currencies to the euro. Thus, the euro is a unified currency in all of these countries.

Fixed Rate, Unified Currency Regime

- Countries such as El Salvador & Hong Kong, that link their currency to the dollar at a fixed rate, are no longer in a position to conduct monetary policy. They merely accept the monetary policy of the Federal Reserve.
 - The same can be said for the 19 countries of the European Monetary Union and the other countries that link their currency to the Euro, all of whom accept the monetary policy of the European Central Bank.

Pegged Exchange Rate Regimes

- ***Pegged exchange rate system:***

a system where the country commits to using monetary & fiscal policy to maintain the exchange-rate value of the domestic currency at a fixed rate or within a narrow band relative to another currency (or bundle of currencies).

- Unlike the case of a currency board, however, countries with a pegged exchange rate continue to conduct monetary policy.

When Pegged Regimes Lead to Problems

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- A nation **can** either:
 - follow an independent monetary policy, allowing its exchange rate to fluctuate, or,
 - tie its monetary policy to the maintenance of the fixed exchange rate.
- It **cannot**, however:
 - maintain currency convertibility at a fixed exchange rate while following a monetary policy more expansionary than that of the country to which its currency is tied.

When Pegged Regimes Lead to Problems

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- Attempts to peg rates and follow a monetary policy that is too expansionary have led to several financial crises—a situation where falling foreign reserves eventually force the country to forego the pegged rate.
- The experiences of Mexico in 1989-1994 and of Brazil, Thailand, South Korea, Indonesia, and Malaysia in 1997-1998 illustrate this point very clearly.

Balance of Payments

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Balance of Payments

- ***Balance of payments:***

accounts that summarize the transactions of a country's citizens, businesses, and governments with foreigners

- Any transaction that creates a demand for foreign currency (and a supply of the domestic currency) in the foreign exchange market is recorded as a debit item.

Example: Imports

- Transactions that create a supply of foreign currency (and demand for the domestic currency) on the foreign exchange market are recorded as a credit item.

Example: Exports

Balance of Payments

- Under a ***pure flexible rate system***, the foreign exchange market will bring the quantity demanded and the quantity supplied into balance, and as a result, it will also bring the total debits into balance with the total credits.

Balance of Payments

- ***Current account transactions:***
all payments (and gifts) related to the purchase or sale of goods and services and income flows during the current period
- Four categories of current account transactions:
 - Merchandise trade (*import and export of goods*)
 - Service trade (*import and export of services*)
 - Income from investments
 - Unilateral transfers (*gifts to and from foreigners*)

Balance of Payments

- ***Capital account transactions:***
transactions that involve changes in the ownership of real and financial assets
- The *capital account* includes both
 - direct investments by foreigners in the United States and by Americans abroad, and,
 - loans to and from foreigners.
- Under a pure flexible-rate system, official reserve transactions are zero; therefore:
 - a current-account deficit implies a capital-account surplus.
 - a current-account surplus implies a capital-account deficit.

U.S. Balance of Payments, 2015

	Debits	Credits	Balance deficit (-) / surplus (+)
Current account:			
1. U.S. merchandise exports		+ 1513.5	
2. U.S. merchandise imports	- 2272.8		
3. Balance of merchandise trade (1 + 2)			- 759.3
4. U.S. service exports		+ 710.2	
5. U.S. service imports	- 490.6		
6. Balance on service trade (4 + 5)			+ 219.6
7. Balance on goods and services (3 + 6)			- 539.8
8. Income receipts of Americans from abroad		+ 783.1	
9. Income receipts of foreigners in the U.S.	- 591.8		
10. Net income receipts			191.3
11. Net unilateral transfers			- 135.6
12. Balance on current account (7 + 10 + 11)			- 484.1

Source: <http://www.bea.gov>

Continued on next slide ...

* Figures are in Billions of Dollars

U.S. Balance of Payments, 2015

	Debits	Credits	Balance deficit (-) / surplus (+)
Current account:			
12. Balance on current account (7 + 10 + 11)			- 484.1
Capital account:			
13. Foreign investment in the U.S. (capital inflow)		+ 637.2	
14. U.S. investment abroad (capital outflow)	-531.1		
15. Net other currency transactions		+ 348.6	
16. Balance on capital account (13 + 14 + 15)			+ 490.4
Official Reserve Transactions:			
17. U.S. official reserve assets	-6.3		
18. Total (12 + 16 + 17)			0.0

Source: <http://www.bea.gov>

* Figures are in Billions of Dollars

Exchange Rates, Current Account Balance, and Capital Inflow



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Current-Account Balance and Net Foreign Investment

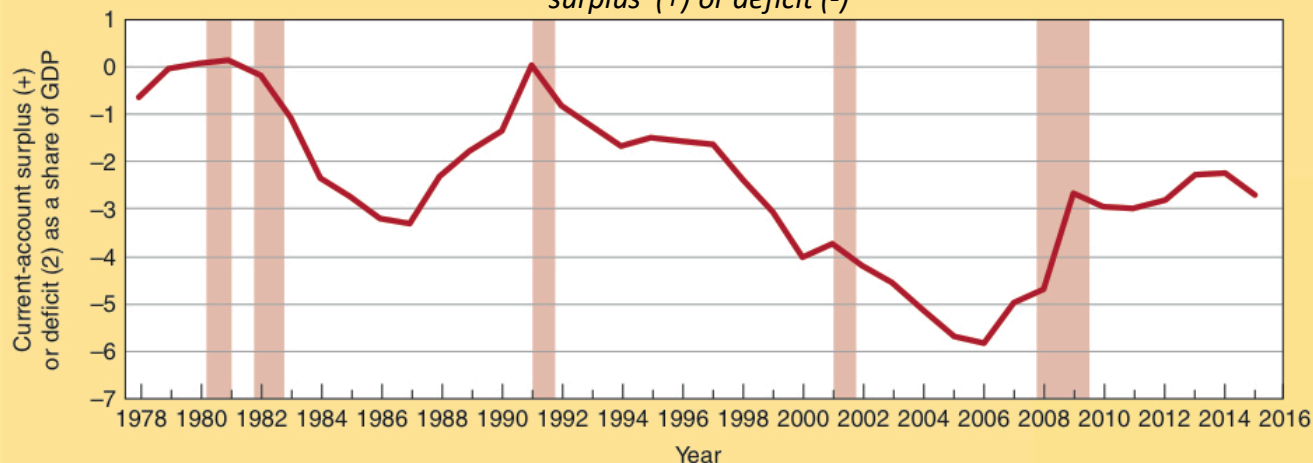
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- As the these figures for the United States indicate, under a flexible exchange rate system, the inflow and outflow of capital exert a major impact on current account balances.

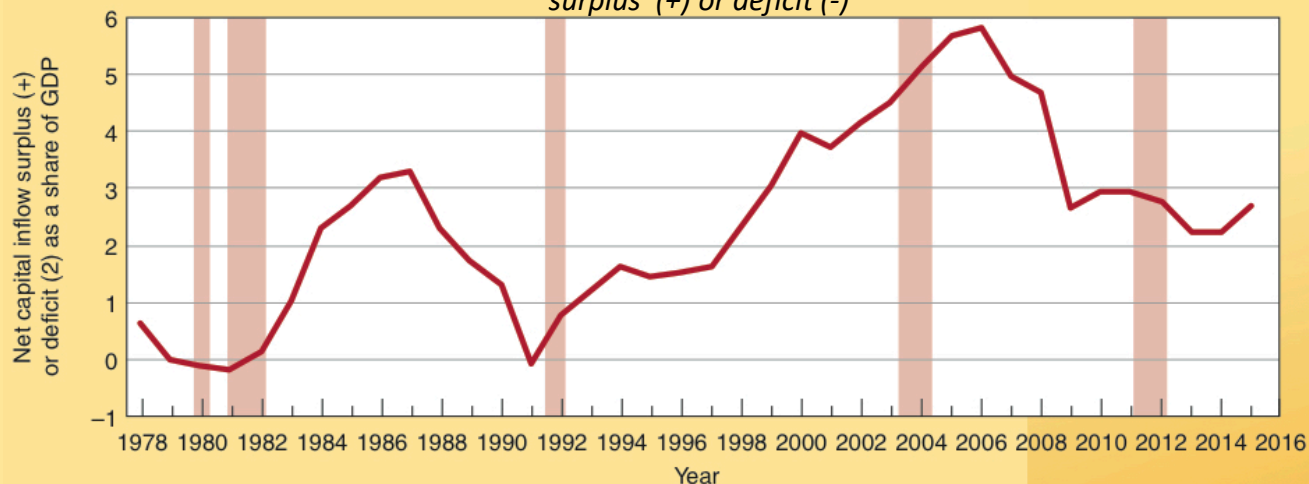
Current Account Balance as % of GDP

surplus (+) or deficit (-)



Net Capital Inflow as % of GDP

surplus (+) or deficit (-)



Are Trade Deficits Good or Bad?

- With flexible exchange rates, an inflow of capital implies a ***trade*** (current account) ***deficit***.
- If a nation's investment environment is attractive, it is likely to result in a net inflow of capital and trade deficit.
 - ***When*** this inflow of capital is channeled into productive investments, ***this is a positive development***.
- However, ***if*** the inflow of capital is used to finance current consumption or for the finance of unproductive projects, ***it will exert an adverse impact on future income***.
 - In recent years a substantial share of the U.S. trade deficits have arisen from this source.

Should Trade Between Countries Balance?

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- Political leaders often imply that U.S. exports to a country, China or Japan for example, should be approximately equal to our imports from that country.
 - ***This is a fallacious view.***
- Under a flexible exchange rate system, overall purchases from foreigners will balance with overall sales to foreigners, but there is no reason why bilateral trade between any two countries will balance.

Should Trade Between Countries Balance?

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- Rather than balance, economics indicates that a country will tend to experience ...
 - trade surpluses with trading partners that buy a lot of goods that it supplies at a low cost, and,
 - trade deficits with trading partners that are economical suppliers of goods that can be produced domestically only at a high cost.