1. Introduction

a.

- a. This another important chapter because its conclusions differ from those that you often read in the newspapers.
- b. We are shifting from a closed to an open economy.
- c. Closed economy is an economy that does not interact with other economies in the world. P. 654.
- d. Open economy is an economy that interacts freely with other economies around the world. P. 654.
- 2. The International Flows of Goods and Capital
 - The Flow of Goods: Exports, Imports, and Net Exports
 - i. Exports are goods and services that are produced domestically and sold abroad. P. 654.
 - ii. Imports are goods and services that are produced abroad and sold domestically. P. 654.
 - iii. Net exports are the value of a nation's exports minus the value of its imports, also called the trade balance. P. 654.
 - iv. Trade balance is the value of a nation's exports minus the value of its imports, also called net exports. P. 654.
 - v. Trade surplus is an excess of exports over imports. P. 654.
 - vi. Trade deficit is an excess of imports over exports. P. 654.
 - vii. Balanced trade is a situation in which exports equal imports. P. 655.

b. Case Study: The Increasing Openness of the U.S. Economy, P. 655.

- i. Over the last 50 years, both exports and imports as a share of GDP have more than doubled due to improvements in
 - (1) transportation,
 - (2) telecommunications,
 - (3) technological progress and
 - (4) the movement toward freer trade.
- ii. Figure 1: The Internationalization of the U.S. Economy. P. 655.
- iii. In the News: The Complicated Politics of Trade Agreements, P. 656.
- c. The Flow of Financial Resources: Net Capital Outflow
 - i. Net Capital Outflow (NCO) is the purchase of foreign assets by domestic residents minus the purchase of domestic assets by foreigners. P. 658.
 - ii. The flow of capital abroad takes two forms.
 - (1) Foreign direct investment and
 - (2) Foreign portfolio investment.
 - iii. A theory to explain net capital outflows is developed in the next

chapter.

- iv. The more important variables that influence net capital outflows are:
 - (1) the real interest rates being paid on foreign assets,
 - (2) the real interest rates being paid on domestic assets,
 - (3) the perceived economic and political risks of holding assets abroad, and
 - (4) the government policies that affect foreign ownership of domestic assets.
- *d.* The Equality of Net Exports and Capital Outflows
 - *i.* Remember, Y = C + I + G + NX
 - *ii.* National Savings(S) = Private savings (Y C T) plus public saving (T G) = Y C G
 - *iii.* S I = NX, but S I is the funds available for investing abroad-net capital outflow (NCO), so
 - iv. NCO = NX
 - (1) This is just a relationship, but it has important implications.
 - (2) If a country has savings greater than investment (NCO>0), it has to have a trade surplus (NX > 0).
 - (3) Alternatively, if a country like the USA has savings that are less than investment (NCO<0), it has to have a trade deficit (NX < 0).
 - (4) This relationship is not altered by microeconomic policies such as limiting imports or stimulating exports because of the effect of these policies on exchange rates-our next topic.
- e. Saving, Investment, and Their Relationship to the International Flows
 - i. Y = C + I + G + NX
 - ii. S = I + NX
 - iii. Domestic saving (S) is used for domestic investment (I) or net capital outflows (NCO).
 - (1) S = I + NCO
 - iv. Summing Up
 - (1) **Table 1: International Flows of Goods and Capital:** Summary, P. 662.
 - v. Case Study: Is the U. S. Trade Deficits a National Problem? P. 662.
 - (1) The US has experienced net inflows of capital in most years since 1970.
 - (2) It was usually due to low savings or high investment in the US.
 - (3) The result has been that the US is now a net debtor, which has become an emotional issue.

- (4) When you bought your first house, you may have moved from being a net creditor to a net debtor, but was that a traumatic experience?
- (5) The key issue is why the flows occurred and how they are used.
- (6) Figure 2: National Saving, Domestic Investment, and Net Capital Outflows. P. 663.
- 3. The Prices for International Transactions: Real and Nominal Exchange Rates
 - a. Nominal exchange rate is the rate at which a person can trade the currency of one country for the currency of another. P. 665.
 - i. In the text, the nominal exchange rate is expressed as units of foreign currency per U. S. Dollar.
 - (1) This was especially convenient so long as the dollar was the relatively most valuable currency.
 - (2) Now, the Dollar is worth less than the euro and the British pound.
 - *ii.* Appreciation is an increase in the value of a currency as measured by the amount of foreign currency it can buy. P. 665.
 - *iii.* Depreciation is a decrease in the value of a currency as measured by the amount of foreign currency it can buy. p. 665.
 - b. Real exchange rate is the rate at which a person can trade the goods and services of one country for the goods and services of another. P. 665.
 - i. It is the key determinant of how much a country exports and imports.
 - ii. Real Exchange Rate = (Nominal Exchange Rate * Domestic Prices)/Foreign Prices or (e x P)/P*, where e is the nominal exchange rate, P is domestic prices and P* is foreign prices.
 - iii. The nominal exchange rate is the real exchange rate times the foreign prices divided by the domestic prices.
 - iv. **FYI: The Euro, P. 666.**
- 4. A First Theory of Exchange Rate Determination: Purchasing Power Parity
 - a. Purchasing power parity, which is the simplest theory of exchange rates, is a theory of exchange rates whereby a unit of any given currency should be able to buy the same quantity of goods in all countries. P. 668.
 - b. The basic logic of purchasing power parity is that it is based on the law of one price.
 - c. Implications of Purchasing Power Parity
 - i. According to the theory of purchasing power parity, the nominal exchange rate between the currencies of two countries must reflect

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the different price levels in those countries.

- ii. If the purchasing power of the dollar is always the same at home and abroad, then the real exchange rate cannot change.
- iii. $1 = e \ge P/P^*$ so
- iv. e = P */P
- v. A key implication of this theory is that nominal exchange rates change when the price levels change.
- vi. When the central bank prints large quantities of money, that money loses value both in terms of the goods and services it can buy and in terms of the amount of other currencies it can buy.
- *vii. Consider an example:*
 - (1) Initially, a good is \$1 in New York, €2 in Paris and the dollar is worth 2 euros.
 - (2) Then France has a 50% inflation rate and the price in Paris rises to $\notin 3$.

If the nominal exchange rate does not change, a French person can take two euros to the US and buy the good cheaper there.

(3) Gradually, the value of the dollar will rise to \notin 3.

(4) Each dollar is worth more and each euro is worth less.

- d. Case Study: The Nominal Exchange Rate During a Hyperinflation, P. 670.
 - i. Figure 3: Money, Prices, and the Nominal Exchange Rate during the German Hyperinflation. P. 670.
- e. Limitations of purchasing power parity
 - i. This is not a perfect theory because
 - (1) there are non-tradable goods and
 - (2) some tradable goods are not good substitutes.
 - (3) Case Study: The Hamburger Standard, P. 671.
- 5. Conclusion
- 6. Summary