Solutions for Exam #1

1. See the definition of “real sector” on p. 6 of the text, in the section entitled “The Real and Financial Sectors of an Economy.”

2. See the relevant discussion on pp. 27-28 of the text, in the section entitled “Relating the Current Account Balance and Capital Flows.”

3. See the first equation on p. 28 of the text, which states that:

\[ \text{Domestic Saving} - \text{Domestic Investment} \equiv \text{Current Account Balance}. \]

This relationship implies:

\[ \text{Current Account Balance} \equiv 10 - 6 = 4. \]

4. The relationship referred to in the solution for Problem #3 gives us:

\[ \text{Current Account Balance} \equiv 6 - 10 = -4. \]

Next, recall that:

\[ \text{Current Account Balance} = \text{Net Capital Flows}. \]

So, since the current account balance is negative, the country is experiencing a net capital inflow.


6. This a straightforward definition-question; see p. 12 of the text.

7. See the discussion in the section entitled “Other Deficit and Surplus Measures” on p. 19 of the text.

8. See, for example, Table 1-2 of the text.

9. Recalling that a unilateral transfer is a negative entry on the current account, we have:

\[ \text{Current Account Balance} = -120 + 45 - 15 = -90. \]

10. See “Example 2: A College Student Travels Abroad” on p. 21 of the text.

11. See the discussion on p. 25 of the text.

12. See the discussion on pp. 17 and 19 of the text.

13. See the definition given on p. 36 of the text.

14. Just compute the inverse of 1.5 NZD/$, which is given by:

\[ \frac{1}{1.5} \text{NZD} = 0.67\text{NZD}. \]

15. Let \( S_t \) be the US dollar/peso bilateral exchange rate. Letting \( S_t \) refer to the initial value of this exchange rate, we have \( S_1 = 1 \). Then, if the peso were to undergo a 50% depreciation, we have:
\[ \frac{S_2 - S_1}{S_1} = \frac{S_2 - 1}{1} = 0.5, \text{ where} \]

\( S_2 \) is the exchange rate after the depreciation of the peso. Straightforward calculation shows that \( S_2 = 0.5 \), i.e., 1 peso would be worth $0.50, which implies that the dollar equivalent exchange rate of the peso would be 2 pesos (since 2 pesos would be required to purchase a dollar).

16. [Note: There was a typo/mistake in the version of the exam distributed to the class. For the purposes of this set of solutions, assume that option (a) reads as follows: £1 = 15 French francs; $3.00 = £1; $1 = 6 French francs. In this case, option (a) is not a correct answer.]

From option (c) we have:

\[ £1 = 4DM \text{ and } 3SF = 1DM \Rightarrow (\frac{£1}{4DM}) = (\frac{3SF}{1DM}) \Rightarrow (£1 \times 1DM) = (3SF \times 4DM) \Rightarrow £1 = 12SF. \]

17. We have:

\[ $1 = 1.37CD \text{ and } $1 = £0.66 \Rightarrow (\frac{$1}{1.37CD}) = (\frac{$1}{£0.66}) \Rightarrow £0.66 = 1.37CD \Rightarrow 1CD = £0.48. \]

18. See the definitions of “bid price” and “ask price” on p. 41 of the text.

19. Applying the definition of the “bid ask margin” given on p. 41 of the text, we have:

\[ \text{Bid ask margin} = \frac{1.51 - 1.49}{1.51} = \frac{0.02}{1.51} = 0.013 \text{ (or } 1.3\%) \]

20. That the Indonesian rupiah experienced a nominal depreciation is immediately clear, since a year later a dollar exchanges for more rupiahs. To determine whether there has been a real depreciation, we need to compute the real exchange rate for each year:

a. Real rate in 1997 = \( \frac{2435}{100/100} = 2435. \)

b. Real rate in 1998 = \( \frac{14500}{152/102} = 9730.26. \)

These calculations show that there also was a real depreciation of the rupiah against the dollar over this time period.

21. See the definition of “spatial arbitrage” on p. 51.

22. See the discussion on p. 53 about the demand for a currency being a “derived demand.”

23. [Note: there was a typo/mistake on the version of the exam distributed to the class. Option (d) should have read as it reads on the version of the exam available on this web site.]

From the discussion on “A Change in Demand” on p. 54, we know that an increase in the demand from French goods and services will, all else equal, increase the demand for French francs (which is represented by option (a)).

24. From the discussion on “The Supply of a Currency” on pp. 54-56, we know that an increase in U.S. demand for foreign assets will increase the U.S. demand for foreign currency (since foreign currency is required to purchase the foreign assets), which means that more U.S. dollars will be offered in exchange for foreign currency. This is another way of saying that the supply of U.S. dollars increases (and this result is represented by option (a)).

25. Starting with the basic demand-supply model of a currency, an increase in demand shifts the demand curve for Canadian dollars to the right. This brings about an equilibrium with a higher “price” (i.e., higher value, or an appreciation of the Canadian dollar) and a higher quantity. Make sure you know how to represent this graphically.