ECON 329 – International Finance
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HW2: Notes on the publisher-provided answers to Chap 3/14 problems

1 It's important to keep the units straight. The instructions provide a hint: "The exchange rate is 30 VND per 1 CFA, $E_{VND/XOF}$ =30." Since the textbook's notational convention is to write the Home country's exchange rate (with Foreign) as $E_{H/F}$, you can infer that Vietnam is the home country. The nominal exchange rate is Vietnam currency (VND) per CFA Franc (XOF), or the relative price of CFA Francs (in terms of Vietnamese currency). The real exchange rate, q, is Vietnamese coffee per unit of Cote d'Ivoire coffee, i.e. the relative price of Cote d'Ivoire coffee in terms of Vietnamese coffee. This relative price is less than one, so Cote d'Ivoire coffee is cheaper than Vietnamese coffee, and traders will buy Cote d'Ivoire coffee (unless, of course, it tastes like crap).

3. There's a typo in the answer key, in particular, in the column labels of the table at the bottom of page S-12 which contains the answers. The third and fourth column labels should be switched. Notice that the real exchange rate, q, is the price of a U.S. basket in terms of a local basket. For example, Brazil's real exchange rate, q = 0.80, is the number of Brazil baskets that trade for one U.S. basket. If PPP holds in the long run, then this exchange rate should equal 1. Thus, q is temporarily low and we expect it to rise. As q rises, U.S. baskets become more expensive relative to Brazil baskets, which means Brazil experiences a real depreciation, or a loss in purchasing power. But in the short run, Brazil's currency has unusually high purchasing power, so we say it is "overvalued." Next, consider Cyprus, whose real exchange rate is, q = 1.14. This means that, at the present time, it takes 1.14 Cyprus baskets to purchase 1 U.S. basket. If PPP holds in the long run, then we expect q to fall, and Cyprus' currency to appreciate in real terms (i.e. to gain purchasing power). But in the short run, Cyprus' currency is worth less than it will eventually be worth, so we say that Cyprus' currency is currently "undervalued" and we expect it will enjoy a real appreciation (as q falls) over time.
Here's the pattern: For any country, if q < 1, then the country's currency is "overvalued" and is expected to depreciate in real terms (lose purchasing power) as q rises toward 1.
Alternatively, if q > 1 for any country, then the country's currency is undervalued – temporarily cheap – and we expect it to appreciate in real terms (or gain purchasing power) as q falls over time toward 1.
The three bullets at the top of p. S-13 say essentially the same thing.

5. Several bright students made an error on 5b. The correct real exchange rate equals the dollar price of the U.K. basket $E_{\$/£}P_{UK}$ divided by the dollar price of the U.S. basket P_{US} . The problem tells us that the dollar price of the U.K. basket is \$120. I.e., $E_{\$/£}P_{UK}$ = \$120. Several bright students mistakenly read this to mean P_{UK} = 120 and they proceeded to multiply 120 by $E_{\$/£}$, when in fact the \$120 has already been converted into dollars.
Part f was tricky for some students. If the real exchange rate is constant (and, say, equal to 1), then the rate of nominal exchange rate depreciation simply equals the difference between the two countries' inflation rates. But if the real exchange rate depreciates, then the nominal rate of depreciation will equal the real rate of depreciation plus the difference in the two countries' inflation rates. For more information, see "Side Bar: Forecasting When the Real Exchange Rate is Undervalued or Overvalued" in the first section of Chapter 3/14.

7. Part d asks you to draw time series diagrams showing how an increase in Korea's money growth rate affects various variables, including "Korea's interest rate." That is a typo – this question asks you to use the simple monetary model, which excludes the interest rate. The graphs for part d are in the left-hand column of p. S-16. The graphs for part f appear in the right-hand column of p. S-16.

8. There's a typo in the answers to parts b and c. The answer to part b should read:

$r_{¥} = i_{¥} - p_J = 3\% - 1\% = 2\%$ ß this line has the problem

$r_{\text{won}} = i_{\text{won}} - p_K = 8\% - 6\% = 2\%$ ß this line is okay as is

The answer to part c should read:

$$i_{\text{won}} = r_{\text{won}} + p_K = 2\% + 9\% = 11\%$$

There aren't any typos in the answers to part d (not that I've found, anyway). Some explanation of the time-series diagrams might be helpful:

When Korea increases its money growth rate, the inflation rate rises. To understand the discrete breaks in some of the lines, we need to think about what happens at the moment the inflation rate rises. The higher inflation rate causes the nominal interest rate to rise, thanks to the Fisher effect. This, in turn, reduces the demand for real money balances, because the liquidity demand variable L depends inversely on the nominal interest rate i. When L falls, M/P must fall to maintain equilibrium in the money market, so either M must fall or P must rise. The Bank of Korea is not reducing M, so P must rise to make M/P fall to maintain equilibrium. Remember – this is long run analysis, and P is both flexible and endogenous in the long run. So, P jumps up at the moment i rises and L falls. After that moment passes, P rises at its new rate (the new, higher inflation rate). What about E? The discrete jump in Korea's price level causes a discrete jump in E (because, in the long run, E equals Korea's P divided by Japan's P). After that moment, Korea's exchange rate depreciates at the new, faster rate (meaning E rises at the new, faster rate).