ECON110B
Summer Session II 2007
Professor Dong Heon Kim

Answer key for Problem Set #3

1. a. IS shifts right

b. LM shifts right

c. There are three effects. First, an increase in expected future taxes tends to reduce expected future after-tax income (for any given level of income), and therefore to reduce consumption. This effect tends to shift IS to the left. Second, the increase in future taxes (a deficit reduction program) will lead to lower real interest rates in the future. The fall in the expected future interest rate tends to shift IS to the right. Third, the fall in future real interest rates leads to an increase in investment in the medium run and an increase in output in the long run. The increase in expected future output tends to shift IS to the right. The net effect on the IS curve is ambiguous. Note that the model of the text has lump sum taxes. More generally, the tax increase may increase distortions in the economy. These effects tend to reduce output (or the growth rate).

d. IS shifts left

2. a. The nominal return on the U.S. bond: 10,000/(9615.38) –1 ≈4%.
The nominal return on the German bond: (10,000/9,433.96) – 1 = 6%.

b. Uncovered interest parity implies that the dollar is expected to appreciate. Thus, the expected exchange rate is

$$E_{t+1}^{e} = E_t \frac{(1+i_t^*)}{(1+i_t)} = 0.75 euro \frac{1.06}{1.04} = 0.764 euro$$

c. If you expect the dollar to depreciate instead, purchase the German bond, since it pays a higher interest rate and you gain by holding Euros.

d. (0.72 – 0.75)euro/0.75euro = -0.04. So, the dollar depreciates by 4%, so the total return on the German bond (in $) is approximately 6% + 4% =10%. Investing in the U.S. bond would have produced a 4% return.

e. No, it is not consistent. The reason is that the uncovered interest parity condition is about equality of expected returns, not equality of actual returns.

3. a. The *ZZ* $(C+I+G-IM/\varepsilon+X)$ and *NX* lines shift up. Domestic output and domestic net exports increase. Please refer to the Graph VII – 4 in my lecture note.

b. Domestic investment will increase because output increases. Assuming taxes are fixed, G does not change and thus, there is no effect on the deficit.

c. Private saving must increase, since $NX=S-I+T-G \Rightarrow S = NX+I+G-T$. Since the deficit is unchanged, and *I* and *NX* increase, S must increase.