SIMON FRASER UNIVERSITY
Department of Economics

Econ 345
International Finance

Prof. Kasa
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PROBLEM SET 1
(Solutions)

1. (25 points). Suppose the 12-month forward price of the euro in terms of dollars is 1.07 dollars per euro. Suppose the spot price of of the euro in terms of dollars is 1.10. Next, suppose that currently the annual interest rate on dollar deposits is 4%, while the interest rate on a comparable euro deposit is 5%. There are no transactions costs. Is there an arbitrage opportunity here? If so, explain exactly how you would take advantage of this situation to make riskless profits.

   Covered Interest Parity implies

$$\frac{F}{E}(1+R^*) = 1+R$$

   The right-hand side is the dollar return on a dollar investment, while the left-hand side is the (covered) dollar return on a euro investment. Substituting in the given information, we get

$$\frac{F}{E}(1+R^*) = \frac{1.07}{1.10}1.05 \approx 1.021 < 1+R = 1.04$$

   Hence, even though the euro interest rate is higher, the covered rate of return from investing in euro is lower than the return from investing in dollars. You can make arbitrage profits by borrowing euro, then buying dollars spot, investing in dollars, and then simultaneously selling the (known) amount of future dollars forward. You will have more than enough euros to pay back your euro loan. Your profits are only limited by by how many euros you can borrow! In practice, this would be implemented with a swap contract.

2. (25 points). Read the article entitled "It's Been a Privilege", from *The Economist*, which is posted on the class webpage. According to this article, how has the US dollar's role as international reserve currency contributed to the persistence of US current account deficits? Would imposing tariffs (i.e., a tax on imports) help reduce the deficit?

   Because dollar assets are so liquid and in such high demand, foreign investors are willing to hold them at very low rates of return. At the same time, American holdings of foreign assets yield relatively high returns, as they are primarily in the form of risky equity securities. As a result, even though the U.S. has run persistent trade deficits

since the early 1980s, its net investment income has remained positive. This positive net investment income helps the U.S. finace its trade deficits, which makes them more persistent.

From this perspective, current account balances are largely driven by capital flows. The worldwide demand for U.S. assets leads to a strong dollar, which makes U.S. goods uncompetitive in world markets, which then produces a current acount deficit that balances the financial account surplus. Imposing tariffs will only further strengthen the dollar, and have no lasting impact on the current account deficit. For example, if the U.S. imposes a 15% tariff, but the dollar then appreciates by 15%, there will be no effect on the relative price of foreign goods!