

Answers to Midterm Exam

Section I (5 points each)

1. True. There is a one-to-one relationship between a nation's savings-investment gap and its current account. A country's current account balance will change only if there is a change in its net capital outflows (net foreign investment), and that can only happen through a change in savings relative to investment: $CA \equiv net\ foreign\ investment \equiv S - I$. (Note that exports and imports can change too, but only if there is S-I adjustment at the same time.)

We can imagine several ways that savings and investment might be altered by a natural disaster. The need to rebuild may require households to draw down savings, and firms to raise capital investment. Public savings may also fall as the government increases its fiscal deficit to help finance infrastructure repair. These adjustments would tend to reduce the current account.

2. False. The expected dollar return on the pound investment is approximately equal to the pound interest rate plus the expected rate of dollar depreciation:

$$.05 + \frac{(1.65 - 1.5)}{1.5} = .05 + .10 = .15 \text{ (15\%)}$$

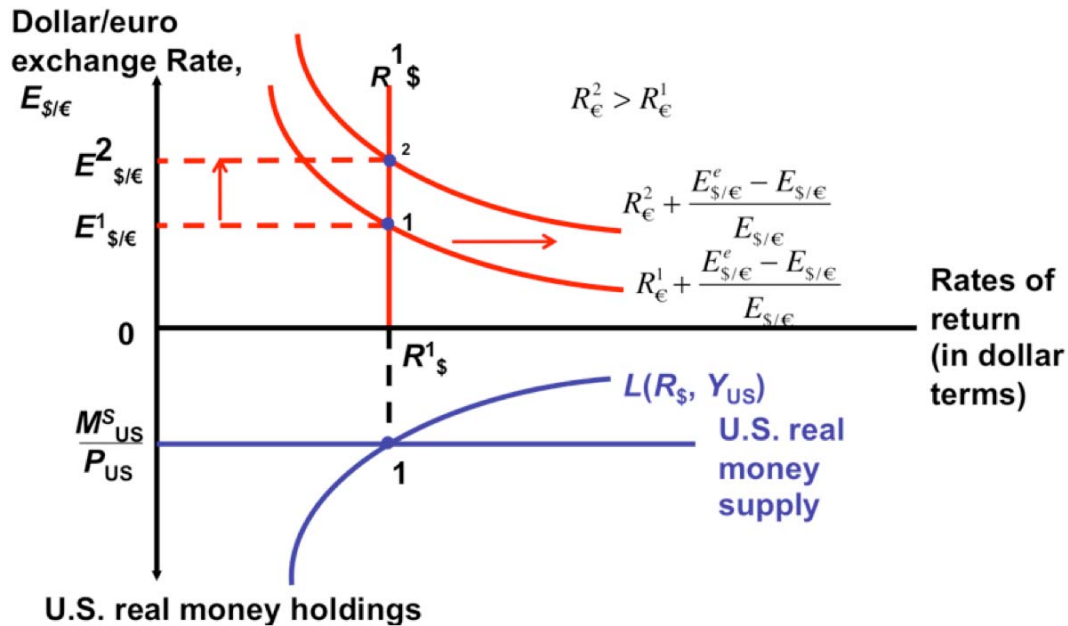
Since this exceeds the return on dollar deposits (10%), an investor will prefer to hold the pound deposit.

3. True. Exchange rate overshooting refers to the tendency for exchange rates to fluctuate more widely in the short run (when prices are sticky) than in the long run (when prices are fully flexible). In the asset market model, overshooting occurs because, although prices are fixed in the short run, people's expectations adjust in anticipation of long-run changes in prices and exchange rates. With low short-term interest rates and expected long-run currency depreciation, investors perceive wide expected return differentials in favor of foreign currency deposits, causing them to sell domestic assets until the exchange rate has depreciated considerably. The large spot depreciation is partly offset in the long run.
4. False. An increase in E (a depreciation) tends to raise the current account by increasing the price competitiveness of domestically produced goods relative to foreign goods, so that exports rise and imports fall. This is the volume effect. At the same time, higher import prices from a depreciation raise the cost of a given import volume, tending to reduce the CA. This is the value effect. When we draw an upward-sloping DD curve, we are assuming that the volume effect is bigger than the value effect. Then, as the depreciation improves the CA, total demand for domestic goods rises, and firms meet the greater demand by increasing output.
5. False. Arbitrage refers to the tendency for people to buy goods or services where they are cheap and sell them where they are expensive, which tends to keep prices from getting too far apart in different locales. While this certainly occurs to some extent in Hawaii (for example, tourists will shift toward other destinations if Hawaii becomes too pricey), it does not completely eliminate the "paradise premium" that we pay to live here. The main reason is that many of the things we consume are either shipped in with transportation costs (e.g. food) or are non-tradable (e.g. land). Since there is a strong demand to live here, prices will always be higher here than in the typical mainland location.

6. True. Because Federal government spending is heavily biased toward goods produced in the U.S., an increase in Federal spending will increase the relative demand for U.S. goods compared with goods produced in other countries. This will lead to a real appreciation of the dollar.

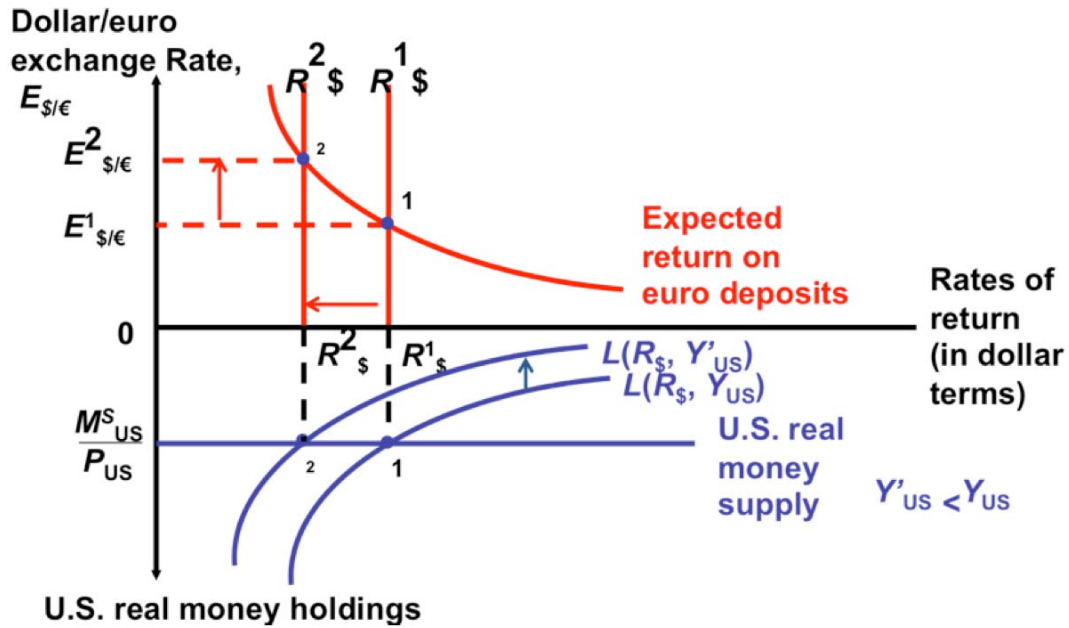
Section II

1. (7 points) This would tend to cause the dollar to depreciate. An increase in foreign interest rates will create an excess return differential favoring foreign currency deposits. Investors will sell the dollar and buy the euro, causing the dollar to depreciate. Even before foreign interest rates rise, the anticipation would undermine the dollar by raising the expected future dollar/euro exchange rate and therefore raising the expected return on foreign currency deposits (not shown). The central bank that actually raised interest rates this past week was the Central Bank of Australia, but I have graphed the dollar/euro exchange rate since that's the diagram I had handy!



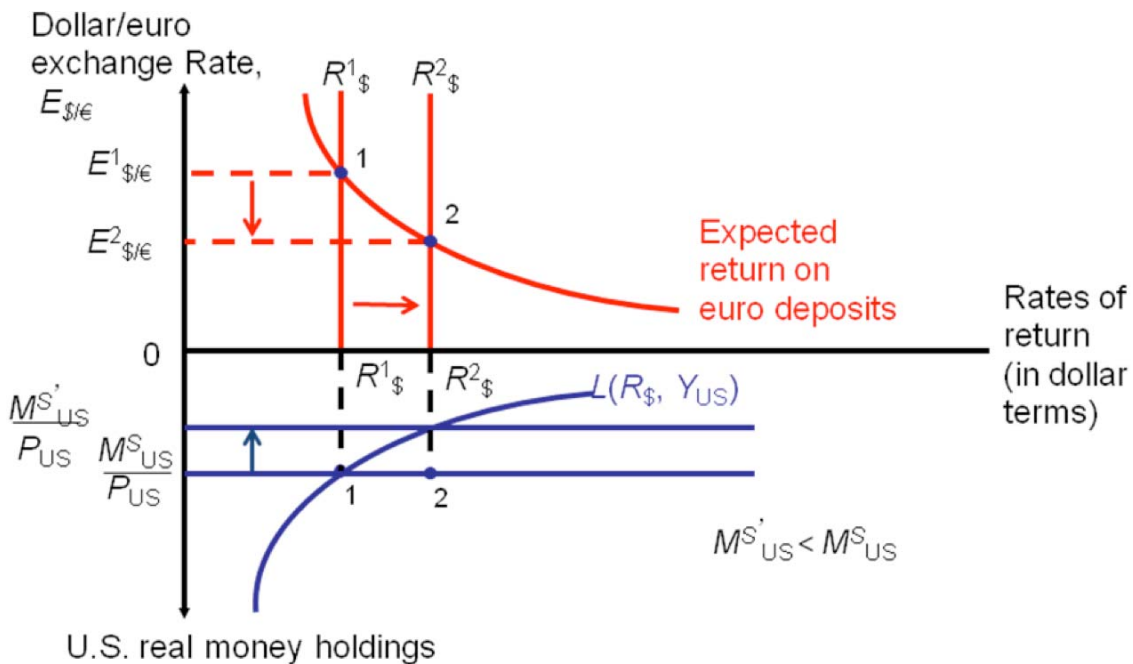
1. (7 points) This would also tend to cause the dollar to depreciate. Job losses reflect a weaker economy, suggesting that GDP and national income will be lower than previously expected. With lower income, American residents would demand smaller cash balances for transactions purposes, reducing real money demand and driving down the interest rate. Investors would then find dollar deposits less attractive as investments; they would sell the dollar and buy the euro, causing the dollar to depreciate. Even before such a slowdown occurs, its anticipation would undermine the dollar by raising the expected future dollar/euro exchange rate and therefore raising the expected return on foreign currency

deposits (not shown).



3. (6 points) The Fed could use contractionary monetary policy to bolster the dollar's value. By selling government bonds on the open market, the Fed can reduce the money supply, driving up the market interest rate. Investors will face a higher expected return on dollar interest-bearing assets than on overseas assets, increasing their demand for the dollar and bidding up its value—an appreciation of the dollar.

It is pretty clear that the Fed would not want to do this at present. They are more concerned about encouraging a U.S. recovery and are likely to keep interest rates low for some time to do so. A monetary policy to support the dollar would run counter to that.



Section III

1. (7 points) Many economists viewed that dollar as "over-valued" in 1986, since it had appreciated significantly more than relative PPP would suggest. Under PPP, changes in nominal exchange rates are expected to roughly match changes in relative inflation rates. The figure shows that the dollar appreciated well beyond this level, indicating a significant decline in the price competitiveness of U.S. goods by the mid-1980s.

2. (8 points) The U.S./Canada real exchange rate clearly appreciated between 1978 and 1986, since the nominal exchange rate fell much more than the relative price ratio. The purchasing power of the dollar in Canada rose compared with 1978; it now took fewer units of U.S. consumption to buy one unit of Canadian consumption.

Many economists blamed the real dollar appreciation on increased U.S. deficit spending associated with the Reagan tax cuts. Higher government deficits raise aggregate demand for American goods, bidding up the relative price of American consumption.

Another possible explanation is a relatively more robust economic recovery in the U.S. than in Canada following the 1982 recession, raising the relative demand for American goods. Relatively tight U.S. monetary policy, coupled with short-run price stickiness, could also create nominal (and real) appreciation by raising U.S. interest rates relative to those in Canada.