Global Finance II Problem Set

1) You have $10,000 that you are going to invest in Japan for one year. You initially buy yen at 100¥/$.
Over the year, your investment in Japan earns a 14% return (in yen). At the end of the year, you turn
your yen back into dollars at an exchange rate of 105¥/$.

What happened to the value of the yen?

What rate of return did you earn on your investment?

2) There is an investment in Germany that requires €50,000. The initial exchange rate is 0.9€/$. You will
invest there for a year and then exchange your euros for dollars at the end of the year. You expect the
exchange rate at the end of the year to be 0.8€/$ and your investment to earn 5% in euros.

How many dollars will you need?

What happened to the value of the euro?

What is the expected return to your investment?

3) Using the data from question (2), what is the break-even change in the exchange rate; that is, what is
the change in the exchange rate such that you end up with as many dollars as you started with?

Answers to Problems:

1) You have $10,000 that you are going to invest in Japan for one year. You initially buy yen at 100¥/$. Over the year, your investment in Japan earns a 14% return (in yen). At the end of the year, you turn your yen back into dollars at an exchange rate of 105¥/$.

What happened to the value of the yen?

> The yen has depreciated in value by about 5%.
> Since we're talking about yen we need to take the inverse of the exchange rate and then divide the new rate by the old:
> $$(1/105)/(1/100) - 1 = 100/105 - 1 = -0.0476$$

What rate of return did you earn on your investment?

> ($10,000)(100¥/$)(1.14)/(105¥/$) = $10,857.14

> ($10,857.14)/($10,000) - 1 = 0.0857 or 8.57%

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How many dollars will you need?

> (€50,000)/(0.9€/$) = $55,555.56

What do you expect to happen to the value of the euro?

> The euro is expected to appreciate by 12.5%
> $$0.9/0.8 - 1 = 0.125$$

What is the expected return to your investment?

> ($55,555.56)(0.9€/$)(1.05)/(0.8€/$) = $65,625.01

> ($65,625.01)/($55,555.56) - 1 = 0.1813 or 18.13%

3) Using the data from question (2), what is the break-even change in the exchange rate; that is, what is the change in the exchange rate such that you end up with as many dollars as you started with?

> ($55,555.56)(0.9€/$)(1.05)/(X€/$) = ($55,555.56)   X = 0.945

> $$0.9/0.945 - 1 = -0.0476$$