ECON 136, Fall 2016
Homework #8
Due Nov. 28, 2016

1. Suppose a Big Mac costs ¥500 in Japan and $4.25 in the U.S. What should the expected ¥/$ XR be if purchasing power parity holds true.
2. Suppose the average U.S. Big Mac price dropped to $4 and the ¥/$ XR changed so that it became 10% over-valued relative to the US$. Calculate the XR in that situation.
3. Go to The Economist's Big Mac web page (http://www.economist.com/content/big-mac-index). What is the world's most over-valued currency according to Big Mac theory? Think of at least one aspect of the economy of this country that might explain this large disparity.
4. Looking at the chart on the right, what do you conclude about the value of the US$ relative to most other currencies?
    - The US$ is over-valued
    - The US$ is under-valued
    - Cannot determine from this chart
5. Read the patty-purchasing article linked near the bottom of the page. How much is China's GDP, measured in burgers? How much is the US GDP in burgers? Are you "fed up" with Big Mac calculations yet? ;-)
6. Suppose a US investor wants to buy a €10,000 bond from a German issuer at a time when the XR is $1.15/€. The bond yields 3% per annum.
    a. How many US$ must he provide to the FX dealer to get the Euros? Assume a transaction fee of 0.2%.
    b. He keeps the bond for two years and then gets his principal and interest (simple interest) in Euros. Calculate the number of Euros he gets.
    c. How many US$ does he get for his Euros if the XR is now 1.35 $/€? Include a transaction fee of 0.2%.
    d. Calculate his round-trip profit or loss in US$
    e. Convert this profit or loss to an annual percent (simple interest).
7. Repeat question 5, but this time make the XR 0.85 $/€ in part c.
8. Suppose the U.S. price level rises by 3% during a time period when the UK price level rises by 5%.
    a. Calculate the expected percent change in the $/£ XR for this time.

    b. If the XR had been $1.30 at the start of the period, what would be its expected value at the end of the period?

9. In general, what do investors do when they "hedge" an investment position?
10. Forward currency contracts are used to hedge exchange rate risks, but they are not perfect. Which of these are drawbacks of forward contracts?
    - There are fees involved
    - Hedgers may not know exactly how much foreign currency they will receive or pay out in the future.
    - There is at least a small risk that one's counterparty (the person from whom the contract is bought or sold) will not honor its provisions.