# HW1

Thursday, September 21, 2023 11:52 AM

1) (30 points) Suppose that the pound is pegged to gold at £6 per ounce, and the U.S. dollar is pegged to gold at $36 per ounce. The current market exchange rate between pounds and U.S. dollars is $5 = £1.
   a. If you have $500 to invest, how would you take advantage of this situation and how much profit would you make in terms of dollar?

1oz = 36 USD
1oz = 6 GBP

Market rate: 5 USD / GBP

Gold rate: 6 USD / GBP

500 USD into GBP thru market = 100 GBP

100 GBP into gold = 100/6 = 16.67 oz

16.67 oz into USD = 16.67 x 36 = 600 USD

$\boxed{\text{Profit} = 100 \text{ USD}}$

b. If you have £100 to invest, how would you take advantage of this situation and how much profit would you make in terms of pound?

100 GBP into gold = $\frac{100}{6}$ = 16.67 oz

16.67 oz into USD = 16.67 x 36 = 600 USD

600 USD into GBP thru market = 600/5 = 120 GBP

$\boxed{\text{Profit} = 20 \text{ GBP}}$

c. We assume that there is no transaction cost or shipping cost in part a and b, what would be the effect of these costs?

Transaction costs and/or shipping costs would decrease the arbitrage opportunity because the profit of moving the currencies around would be consumed by transcation/shipping costs.

2. (30 points) Assess the possibility of a future international monetary system based on cryptocurrencies such as Bitcoin along the three criteria of an ideal international monetary system.

Liquidity: Most cryptocurrencies have a finite number of total coins that can ever be produced. This could be changed with something like a USDC; but in its current state, crypto would still need to be pegged to something in order to maintain value.

Adjustment: Crypto would have the same problems in this regard as ledger currencies. Given that there is not one, international currency, abritrage would serve as the "automatic adjustment" to return balance-of-payment equilibrium.

Confidence: In its current state, no, cryptocurrencies are only in the news when something goes horribly wrong. Perhaps after ample time, the public will have the same faith in cryptos stability as they do in ledger currencies.

3. (20 points) Discuss the benefits and costs for countries of the European Monetary Union to have a common currency Euro. You can refer to the impossible trinity theory.

Benefits: Exchange rate stability ✓
Full Financial integration ✓

Costs: Monetary independence ✗
- The EU cannot allow euro countries to fail
- i.e. Greece Financial Crisis of 2009

4. (20 points) Explain how each of the following transactions will be recorded as the debit or credit of the U.S. balance of payments:
   A. Japanese insurance company purchases $1,000,000 U.S. Treasury bonds and pays out of its bank account kept in New York City.

| | credit | debit |
|---|---|---|
| Buying of bonds | 1 M | |
| Payment from Bank | | -1 M |

B. A Chinese immigrant living in Los Angeles sends a check of $5,000 drawn on his L.A. bank account as a gift to his parents living in Beijing.

| | Credit | debit |
|---|---|---|
| Sending the check | | -5000 |
| Check is cashed | 5000 | |

C. A U.S. computer programmer is hired by a British company for consulting and gets paid for $80,000 from the U.S. bank account maintained by the British company.

| | credit | debit |
|---|---|---|
| programmer paid | 80,000 | |
| payment from bank | | -80,000 |