Soochow University, Winter Session I, 2021
ECON202
Discussion Session II Solution

Question 1. Explain how each of the following events affect the money multiplier, and the money supply.

(a) The Federal Reserve buys bonds in an open-market operation.

Answer When the Fed buys bonds, the dollars that it pays to the public for the bonds increase the money supply. The money multiplier is not affected, assuming no change in the reserve deposit ratio or the currency deposit ratio

(b) The Fed increases the interest rate it pays banks holding reserves.

Answer When the Fed increases the interest rate it pays banks for holding reserves, this gives banks an incentive to hold more reserves relative to deposits. The increase in the reserve deposit ratio will decrease the money multiplier. The decline in the money multiplier will lead to a decrease in the money supply.

(c) Rumors about a computer virus attack on ATMs increase the amount of money people hold as currency rather than demand deposits.

Answer If consumers lose confidence in ATMs and prefer to hold more cash, then the currency deposit ratio will increase, and this will reduce the money multiplier. The money supply will fall because banks have fewer reserves to lend.

(d) The Fed flies a helicopter over the Santa Cruz Boardwalk and drops newly printed $100 bills.

Answer If the Fed drops newly minted $100 bills from a helicopter, then this will increase the money supply. If any of the currency ends up in the bank, then there will be a further increase in the money supply. If people end up holding more currency relative to deposits, then the money multiplier would fall.

Question 2. A macroeconomist threatens to call the Secret Service to have Mr. Biggy Rich arrested for counterfeiting because Mr. Rich claims he "makes a lot of money."

(a) Explain why the macroeconomist is making this threat based on the macroeconomic definition of money. Be sure to explain the macroeconomic functions of money.

Answer Money consists of the assets used to make transactions. Money serves as a store of value, unit of account, and medium of exchange. In most fiat money

economies, the government maintains a monopoly over the supply of money. If Mr. Rich is "making money", i.e. increasing the supply of money, this counterfeiting, which is totally illegal.

(b) Suggest an alternative phrase that Mr. Rich can use that will not result in a charge of counterfeiting.

Answer Mr. Rich could say he "earns a lot of income," "has a lot of wealth/money," "makes big profits," etc.

Question 3. Why do we not use purchasing power parity theory in the short-run? Explain your reasoning.

Answer For purchasing power parity to hold, we require prices to be flexible. In the short run, prices are sticky (not flexible) so PPP is not a good theory for explaining exchange rates in the short run.

Question 4. The Economist publishes the Big Mac Index as an informal way of measuring the purchasing power parity (PPP) between two currencies. This index compares the cost of a single Big Mac burger as sold by different McDonald's restaurants across the world. The following information comes from the July 2020 Index:

Country	Big Mac Price (local currency)	Exchange Rate [1]
United States [2]	$5.71	1
Norway	Kroner 52.0	9.37105
Euro Area [3]	€4.21	0.8796235
China	Yuan 21.7	7.0035
Britain	£3.39	0.79255
Russia	Rouble 135	70.585
Canada	C$6.88	1.3552

[1] Foreign currency per unit of dollar.
[2] Average across different cities.
[3] Weighted average of prices in the euro area.

(a) If purchasing power parity held, what would you expect to be the local price of Big Macs in each country, taking by reference the U.S. price? Explain.

Answer The calculations are are shown in the second last column of the following table:

Country	Big Mac Price(Local Currency)	Exchange Rate(Foreign Cur/$)	Exchange rate calculated as = Big mac's price in Local country / Big Mac's prce in the U.S	Local price if PPP held, in reference to the U.S price= Big mac's U.S's price* Exchange rate	Cost of Big mac in Dollars by making use of the exchange rate given in the question
United States	$5.71	1	1.000000	5.71	$ 5.710
Norway	Kroner 52.0	9.37105	9.106830	53.51	$ 5.549
Euro Area	€ 4.21	0.8796235	0.737303	5.02	$ 4.786
China	Yuan21.7	7.0035	3.800350	39.99	$ 3.098
Britain	**£3.99**	0.79255	0.698774	4.53	$ 5.034
Russia	Rouble 135	70.585	23.642732	403.04	$ 1.913
Canada	C$6.88	1.3552	1.204904	7.74	$ 5.077

(b) Calculate the cost in dollars of a Big Max for each country, given the exchange rate observed in July 16. Assuming that all other goods are priced similar to the Big Mac, which countries are the cheapest and most expensive for Americans to visit?

Answer The last column of the above table shows the dollar price of the Big Mac in the given countries (= Big mac's local price/ Exchange rate given in the question). The cheapest country for American's to visit is Russia, while the most expensive country is Norway.

Question 5. Case Study: – Read the scenario and answer the questions given the information below.

You're 25 years old and you work in the back office of a popular family restaurant. You're in charge of ordering everything that the restaurant needs and, over the last three months, you've noticed that the prices of key ingredients, like beef, have significantly increased. This wasn't a big deal before, but now it's affecting the restaurant's profit. To figure out what's going on, you read a short article about inflation. You also learn that the inflation rate in your country is 7.54%, which is 3% higher than economists forecasted.

(a) The price of beef has gone up over 60%. Is this entirely because of inflation? Why or why not?

Answer The price of beef going up 60% is NOT entirely caused by inflation because inflation is determined by an increase in the price of more than several goods or services over time. So if inflation was the reason then prices would increase on more

goods than just beef alone. Increase in the price of beef could have also been cause by a supply or demand issue.

(b) Why doesn't "core inflation" include the prices of food or energy?

Answer Core Inflation does not include prices of food and energy because the price of food and energy tends to go up and down dramatically and often making it an unreliable measurement.

(c) The price of lettuce has fallen 10%. How this possible if the inflation rate is 7.54%?

Answer If inflation is 7.54% and the price of lettuce has fallen it is because lettuce is a food and food is not included in the "core inflation" measure which is used to identify inflation trends. Even if inflation is high, if the demand for lettuce decreased then that could cause the price to decrease also.

(d) What is the downside of changing the prices on the restaurant's menu to keep up with inflation?

Answer The downside of changing menu prices to keep up with inflation is that the rate of inflation is the percent increase of prices from the beginning to the end of a year. Therefore, raising prices because of inflation contributes to the inflation increasing.

(e) The owner of the restaurant offered to give you a 2% raise. Adjusting for inflation, will your real wage increase, decrease, or stay the same? Why?

Answer A 2% raise accompanied with an inflation rate of 7.54% would cause real wages to decrease, to account for the high inflation at that time.

(f) Do you think that you should ask for a bigger raise? Why or why not?

Answer No, because it puts more pressure on the company to raise prices in order to bring more money in to account for the increase in wages they would be paying out. It would perpetuate the inflation.