PSET 9 Solutions

Flexible Exchange Rates

1. Say that India depreciates it currency and in the quarter following this its current account worsens. Is this inconsistent with the theory that a depreciation increases a country's exports and decreases it imports? Explain.

This is NOT inconsistent. The current account may worsen due to an initial worsening in the balance of trade. Balance of Trade for India = [Rupee price of exports *quantity of exports] LESS [Rupee price of imports *quantity of imports]. Export prices are unlikely to change significantly in the short term but the rupee price of imports increases following the depreciation. The quantity of exports and imports may take time to adjust. Thus, in the immediate aftermath of the depreciation, increase in the value of imports may be greater than any increase in the value of exports and this would lead to a worsening of the balance of trade, which in turn, would worse then current account.

2. What are the first round effects on the domestic price level in a country if its currency is devalued? Explain using the AS/AD model.

A devaluation of currency in a country decreases domestic demand for imports (because of the higher relative prices) and increase the foreign demand for exports (because of the lower relative prices). This improves the country's balance of trade (exports minus imports). This improvement in the balance of trade corresponds to a rightward shift of the AD curve, thereby increasing the price level (i.e., causing inflation). Note that the effect on output depends on the shape of the AS curve.

3. If in a surprise announcement the Fed said it was raising the interest rate, what effect is this likely to have on the value of the dollar vis a vis other countries' currencies and why?

A surprise increase in the U.S. interest rate will cause the dollar to appreciate. The reason is twofold.

First, the surprise increase in the U.S. interest rate will incentivize foreign investors to buy more U.S. securities (because of the relatively higher interest rate). In order to buy U.S. securities, the foreign investor will first need to purchase U.S. dollars. Therefore, there will be an increase in demand for U.S. dollars, thereby causing the dollar to appreciate.

Second, the surprise increase in the U.S. interest rate will incentivize U.S. investors to

buy less foreign securities (because of the relatively lower interest rate). As a result, there will be a decrease in demand for foreign currencies, thereby causing foreign currencies to depreciate.

Combined, these two impacts will result in a relative appreciation in the dollar.

4. In what sense is fiscal policy possibly less effective under flexible exchange rates than under fixed exchange rates? What about monetary policy?

Fiscal policy is less effective. In the AS/AD model, an increase in fiscal spending (G) causes the AD curve to shift right, which leads to an increase in the general price level (P), which, according to the Fed rule, will lead to an increase in the interest rate (r). The higher interest rate will likely lead to an appreciation of the currency under flexible exchange rate, which according to the theory will worsen the trade balance.

Monetary policy is more effective. Suppose there is high inflation and the Fed raises the interest rate. In the basic model, Investment decreases, Y decreases, which in turn leads to a decrease in C and a multiplied decrease in output. The decrease in AD lowers P. With flexible exchange rates, there is an additional effect. The value of the dollar relative to foreign currencies increases; exports become more expensive and imports become cheaper. As exports fall and imports rise, Y decreases further. As AD falls further, there is a greater drop in price. This makes monetary policy more effective.

<u>Financial Crisis</u>

Answer one of the two following questions.

1. There are a number of examples in the last 30 years where a country tried to keep its exchange rate fixed (usually relative to the U.S. dollar) that led to a crisis and forced the country to abandon the fixed rate. Explain in general why this might happen and then briefly discuss one example in history where it actually happened. In your example, roughly how much did the value of the exchange rate change when the country abandoned the fixed rate? How did the country do economically in the two years following the depreciation?

There are many examples: 1994 Mexico peso crisis, 1997 Asian financial crisis, 1998 Russian financial crisis, 1999-2002 Argentina crisis. All these crises involved devaluation of currency that followed fixed exchange rate regime. For example, the peso depreciated by as much as 50%, from 3.4 to 7.2 pesos per US dollar. A general reason for such currency crises to happen was that a large inflow of foreign capital occurred prior to a

sudden reverse of capital flows, usually due to foreign investors' loss of confidence in the economy. When the government ran out of reserves to defend its currency, it was forced to devalue its currency. The crisis usually lasted for quite a while before the economy was able to recover to the pre-crisis level. There are vast online resources to learn more details about these events.

2. There are a number of small countries in the world that fix their exchange rate to another currency (dollar, euro, etc.), thus giving up their monetary policy. Choose one of these countries and discuss how it is doing economically—real output, inflation, unemployment rate, government deficit, current account, etc.

Hong Kong, Lithuania, Bulgaria, Brunei and Denmark are some examples of fixed exchange rate regime. You can argue either side by considering the advantages and disadvantages of fixed exchange rate regime and these economies' general performances. In general fixed exchange rates are not encouraged, especially after the series of currency crises took place. Small open economies that lack a sophisticated monetary system are some exceptions. They fix exchange rate to the central economies such as the US or UK in order to promote price and exchange rate stability.