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Lecture 7: BOP Adjustment

I. INTRODUCTION

- In the last lecture we looked at the basic structure of the Balance of Payments Accounts, which covers all transactions that a country undertakes with the rest of the world. The BOP is a double entry system of accounts in which the sum of the current account, the capital account and the OSB was zero.
- Intuitively, if we have current income that exceeds current expenditure (a CA surplus) that will be offset by either a capital account deficit or an OSB deficit as the excess income is lent out to foreigners by either the government or by private individuals. The converse story where CA deficits were accompanied by KA or OSB surpluses also held true.
- Today's lecture concentrates on understanding the adjustment process by which these shortfalls or surpluses in the current account are reflected in surpluses or shortfalls in the KA or in the OSB. The adjustment of the BOP in such an economy varies depending on whether the economy has a fixed or a flexible exchange rate system. BOP adjustment under these different exchange rate systems is the focus of this lecture.

II. BOP ADJUSTMENT UNDER A FLEXIBLE EXCHANGE RATE REGIME

- Suppose that the U.S. imports \$700 million worth of goods and exports \$300 million worth of goods all under 90 day trade credit. In 90 days time, the U.S. has to find a way to pay for the extra \$400 million worth of foreign currency in expenditure: it has to either borrow new loans from abroad, sell assets to foreigners or divert some of their holdings of foreign currency to pay their bills.
- Suppose that after 90 days, private individuals in the U.S. have only raised \$200 million worth of foreign currency through sales of assets, new borrowing and reducing holdings of foreign currency. This implies that they still need to come up with \$200 million worth of foreign currency.
- One way is to turn to the government and obtain the \$200 million worth of foreign currency from the government. However, recall that under a truly flexible exchange rate regime, the central bank does not attempt to influence the exchange rate. The value of the currency is determined according to the supply and demand that prevails in the currency market. As a result, we can think of the central bank as not holding any foreign currency reserves under a flexible exchange rate regime.
- At this point, we have a BOP imbalance, i.e. the Balance of Payments is not balanced(!), since $CA + KA + OSB = -400 + 200 + 0 \neq 0$. However, this imbalance does not last very long.

- Individuals and firms will turn to the foreign exchange market to get their hands on foreign currency. As a result we would expect movement in the foreign exchange market: the demand for foreign currency would rise, and the dollar would depreciate.

- The depreciation of the dollar raises the relative price of foreign goods and lowers the relative price of U.S. goods. As a result, the U.S. will tend to export more and import less - the CA deficit will shrink.

- Similarly, foreigners will be much more likely to buy U.S. assets because of their relative cheapness; there will be more money flowing into the country from foreigners buying our assets - the KA surplus will increase.

- So the process of exchange rate depreciation leads to more exports, fewer imports and greater capital inflow. This allows individuals and firms in the domestic economy to get their hands on the vital foreign currency they need to pay back the $200 million in loans. In fact, the depreciation will continue as long as there is a greater demand for foreign currency (i.e. the unpaid loans remain).

- We would expect there to be an equilibrium at some intermediate level, sat $CA+KA+OSB = -300+300+0=0$ or $CA+KA+OSB=-250+250+0=0$, in other words a CA deficit that is less than $400 million and KA surplus that is greater than $200 million.

- Conversely, suppose that the U.S. imports $300 million worth of goods and exports $700 million worth of goods all under 90 day trade credit. In 90 days time, foreigners have to find a way to pay for the extra $400 million in expenditure: they have to either borrow new loans from the United States, sell their assets to the U.S. or use some of their holdings of dollars.

- Suppose that after 90 days the private individuals in the rest of the world have only raised $200 million through sales of assets, new borrowing and reducing holdings of dollars. This implies that they still need to come up with $200 million.

- Individuals and firms will turn to the foreign exchange market to get their hands on dollars. As a result we would expect movement in the foreign exchange market: the demand for dollars would rise, and the dollar would appreciate.

- The appreciation of the domestic currency raises the relative price of U.S. goods and lowers the relative price of foreign goods. As a result, the U.S. will tend to import more and export less. Similarly, foreigners will be much less likely to buy U.S. assets and U.S. residents much more likely to buy foreign assets.

- So the process of exchange rate appreciation leads to more imports, fewer exports and greater capital outflow. This allows individuals and firms in the rest of the world to get their hands on the dollars they need to pay back the $200 million in loans. In fact, the appreciation of the dollar will continue as long as there is a greater demand for dollars (i.e. the unpaid loans remain). The appreciation will stop only when all the loans have been paid back.

- We would expect there to be an equilibrium at some intermediate level, sat $CA+KA+OSB = 300-300+0=0$ or $CA+KA+OSB=250-250+0=0$, in other words a CA surplus that is less than $400 million and KA deficit that is greater than $200 million.

III. BOP ADJUSTMENT UNDER A FIXED EXCHANGE RATE REGIME

- Suppose that Thailand imports 700 million Baht worth of goods and exports 300 million Baht worth of goods all under 90 day trade credit. In 90 days time, Thailand has to find a way to pay for the extra 400 million Baht worth of foreign currency in expenditure: it has to either borrow new loans from abroad, sell foreign assets or use some of their holdings of foreign currency.
- Suppose that after 90 days the private individuals in Thailand have only raised 200 million Baht worth of foreign currency through sales of assets, new borrowing and reducing holdings of foreign currency. This implies that they still need to come up with 200 million Baht worth of foreign currency.
- In a flexible exchange rate system, we said that individuals and firms will turn to the foreign exchange market for the foreign currency. In a fixed exchange rate regime, individuals and firms can turn to the government and obtain the 200 million Baht worth of foreign currency from the government.
- The amount of foreign currency reserves held by the government will fall by 200 million Baht, i.e. the OSB will be 200 million Baht. Notice that the BOP is in balance: CA + KA + OSB = -400 + 200 + 200 =0.
- Conversely, suppose that Thailand imports 300 million Baht worth of goods and exports 700 million Baht worth of goods all under 90 day trade credit. In 90 days time, foreigners have to find a way to pay for the extra 400 million Baht in expenditure: they have to either borrow new loans from Thailand, sell their assets to Thais, or use some of their holdings of Baht.
- Suppose that after 90 days the private individuals and firms in the rest of the world have only raised 200 million Baht through sales of assets, new borrowing and reducing holdings of dollars. This implies that they still need to come up with 200 million Baht.
- Under a fixed exchange rate regime individuals and firms will turn to the Thai Central Bank for the extra 200 million Baht - Thai holdings of f/x reserves would increase, and their holdings of Baht would decrease, i.e. the OSB will be -200 million Baht. Notice that the BOP is in balance: CA + KA + OSB = 400 - 200 - 200 =0.

IV. BOP CRISES

- As we discussed above, occasionally countries face a situation in which there is a shortfall in the amount of foreign currency needed to finance its external obligations, i.e. $CA + KA < 0$. This shortfall will result in an increased demand for foreign currency.
- Under flexible exchange rates, this will lead to a depreciation of the currency, which will eliminate the shortfall and allow the domestic economy more access to foreign exchange, in other words the depreciation will continue until $CA + KA = 0$
- Under fixed exchange rates this shortfall will lead to a reduction in foreign exchange reserves. However, in some cases the shortfall may be too large to be offset by a reduction in reserves: in this case a country will face a BOP crisis.

- If the combination of KA surpluses and reserves are insufficient to meet the CA deficit, which needs to be tackled through devaluation or through a bailout package from the IMF or another donor country.