Suggested Solutions to the Final

Part I. Definitions

1. A financial account credit is any borrowing from foreigners or, in other words, selling of assets to foreigners ("exports" of assets). These transactions enter the financial account as a credit (hence, with a positive sign) because they represent a financial inflow (sometimes also called a capital inflow) to the country that is borrowing.

2. The referred trilemma basically states that, of the three policy goals that most open economies have – independence in monetary policy, stability in the exchange rate, and the free movement of capital -, only two can be reached simultaneously.

3. The Fischer effect states that, all else equal, a rise in a country's expected inflation rate will eventually cause an equal rise in the interest rate that deposits of its currency offer. Similarly, a fall in the expected inflation rate will eventually cause a fall in the interest rate.

4. The economic stability loss from joining a currency area is the cost that arises from joining the currency area. By joining, the country gives up its ability to use exchange rate and monetary policy for the purpose of stabilizing domestic output and employment. These costs are smaller the more economically integrated the country is with its exchange rate partners.

5. This theory basically states that world income distribution can be explained by the quality of the institutions of each country. In particular, it emphasizes that countries that are prosperous today are those in which settlers implemented European-type institutions.

6. The theory of PPP states that the exchange rate between two countries' currencies equals the ratio of the countries' price levels. It therefore predicts that a fall (rise) in a currency's domestic purchasing power (that is, and increase in the domestic price level) will be associated with a proportional depreciation (appreciation) of the exchange rate.

Part 2. Short Questions

1. A permanent and unexpected devaluation of the currency can only result from a permanent and unexpected rise in money supply. When prices are flexible, the rise in money supply causes an immediate and proportional rise in the price level, meaning that real money supply is not affected. Because real money supply is not affected, the nominal

interest rate also does not move. Real output, for its turn, remain at the full employment level.

In the AA-DD model, because prices are fixed in the short-run, when the exchange rate devalues, real exchange rate also devalues, causing output to rise. This is represented by a shift to the right in the AA schedule. In the long run, when prices already adjusted, both the AA and DD schedules shift back in, causing output to return to its full employment level and exchange rates to decrease to a level consistent with the proportional changes in prices and money supply (just as in the flexible price case).

2. This is an example of the "N-1 problem," in which the US was the Nth country. Under the Bretton Woods system, the N-1 central banks (all central banks except the Fed) had to intervene when necessary to fix their exchange rates to the dollar. Thus the US never needed to intervene to keep the parity to other currencies. As a result, the US was in the privileged position of being able to use its monetary policy for domestic macroeconomic stabilization even though it had fixed exchange rates.

3. When E^e rises the AA schedule shifts the right. Because the central bank is not trying to peg the exchange rate, it will not alter money supply in response to the shift in E^e and both E and Y will rise. The rise in E reduces the expected depreciation of the currency, allowing for a lower interest rate than we would have if the exchange rate was fixed.

Part 3: Short Essays

1. One of the problems faced by monetary policy comes from the fact that European Union countries often experience very different growth performances. Hence, the monetary policy implemented by the European Central Bank is often not appropriate for some countries, causing divergent inflation rates across European Union members.

In the fiscal front, one of the problems is related to the European Union's inability to transfer economic resources from members with healthy economies to those suffering economic setbacks. The absence of such "fiscal federalism" prevents the Union from offsetting the economic stability loss due to fixed exchange rates.

2. The international gold standard played an important role in starting, deepening, and spreading the Great Depression throughout the world. The US, attempting to slow its overheated economy through monetary contraction, and France, having just ended an inflationary period and returned to gold, received huge capital inflows from other countries. As a result, other countries in the gold standard had to sell huge amounts of domestic assets to decrease their money supplies in response to the outflow of gold. The result was a worldwide money contraction that, combined with the 1929 stock market crash, sent the world into deep recession. Many countries, desiring preserve gold stocks

in order to remain in the gold standard, were not willing to provide liquidity to banks suffering the consequences of the depression. As a result, waves of bank failures around the world only caused the deepening and accelerated the spreading of the depression.

Part 4: Essay

a. America's "fiscal irresponsibility" means that US government is spending beyond its resources or, in other words, is running budget deficits. Because of its large budget deficits, the US government has to borrow from abroad, implying a negative current account. To see why we can look at the following identity: $S^P + S^G = I + CA$. When the government has large negative savings (large budget deficits), like the US has nowadays, private savings will not be enough to finance government budget deficits and domestic investment, and foreign borrowing will be necessary ($CA<0$).

b. From the same identity we used in part a, we can see that, if $S^G<0$ and $CA>0$, as in Japan nowadays, we must have that private saving is bigger that domestic investment ($S^P > I$) so that it can be used to finance not only domestic investment but also government's budget deficits, the remainder being used to foreign lending ($CA>0$).

c. Like nowadays, in 1971-1973 foreign central banks were attempting to keep the dollar from appreciating and, for that, they were buying dollars in the foreign exchange markets. To obtain some return on these dollars, foreign central banks bought US Treasury bonds.

d. Because America is issuing foreign liabilities to increase government spending, aggregate demand is being stimulated in the US. With a higher output, money market would only remain in equilibrium if the interest rate increases. For this to happen, the dollar has to appreciate. Note that a shift in the DD schedule to the right (resulting from an increase in G) produces these predictions.

e. The effect of a sterilized intervention in the balance sheet of the central bank is an increase in US Treasury bonds and a decrease in domestic bonds being held by the central bank. Because the return on the first asset is in general smaller than the return on the second, the new portfolio of assets of the central bank yields a smaller return, reducing its net worth. (Note that if the exchange rate were not being stalled from floating, the rate of exchange rate appreciation would make the returns on both assets the same.)

f. A possibility is to issue central bank bonds. This would allow the central bank to reduce money supply without having to use any of its domestic assets for it.

g. If the currency is expected to appreciate, we have $E^e < E$. Hence the expected rate of depreciation would be negative, $(E^e - E)/E < 0$, and the interest parity condition would tell us that domestic interest rates would be smaller than foreign interest rates: $R < R^*$.

h. Japan has reached the zero bound for the nominal interest rate and, because there are deflationary expectations, real interest rates are still high. Hence, it is not the same situation described in part g. In the case of the countries in #4, interest rates are higher even though their currency is kept undervalued relative to the dollar, contrary to the predictions of part g. An explanation for that is the fact that the referred countries face higher risk premiums on their debts. In the case of China, capital controls prevent arbitrage opportunities between domestic and foreign assets and interest parity does not hold. Hence, the link between domestic and foreign interest rates is not necessarily related to expected rates of change of the exchange rate.