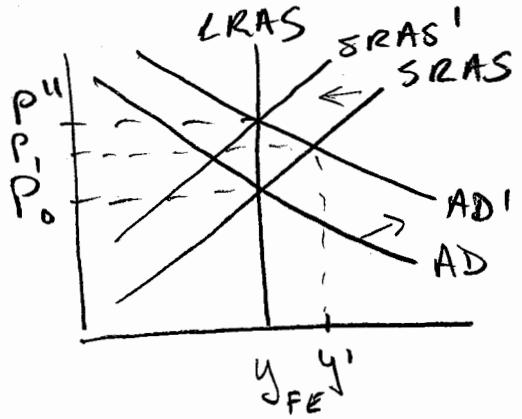
Name: KEY

1. (5 pts.) Using a basic Aggregate Supply – Aggregate Demand model, analyze the effects of an increase in the nominal money supply. (Include the short-run and long-run effects on the price level, output and unemployment.) $\uparrow M^S$



SR: $\uparrow M^S \rightarrow \uparrow AD$

$\uparrow P$ to P_1

$\uparrow y$ to y_1 $\downarrow U$

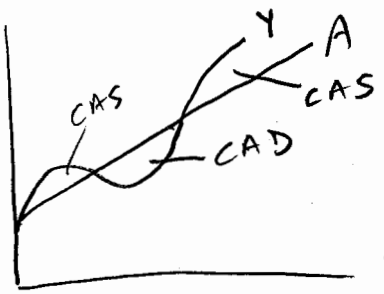
LR: $\uparrow P^e \rightarrow \downarrow SRAS$

$\uparrow P$ to P_{11}

$\downarrow y$ to y_{FE} $\uparrow U$ to U^{NR}

2. (10 pts.) Discuss what it means that normal current account deficits and surpluses are just an economy smoothing consumption over time while large and persistent current account deficits and surpluses are likely to be problematic (be sure to include any equations or identities that are appropriate).

$CA = Y - A$



as Y fluctuates, A is kept relatively smooth. To achieve this the economy must borrow in recessions, reflected by CADs, and lend/repay during booms, represented by CASs

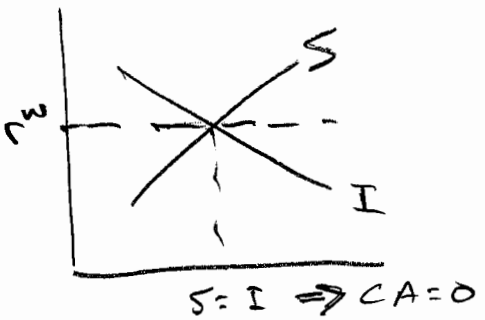
If either a CAD or CAS is large & persistent, this is a problem.

Large CAD - leaders worry about the ability to repay and may lead to a sudden stop

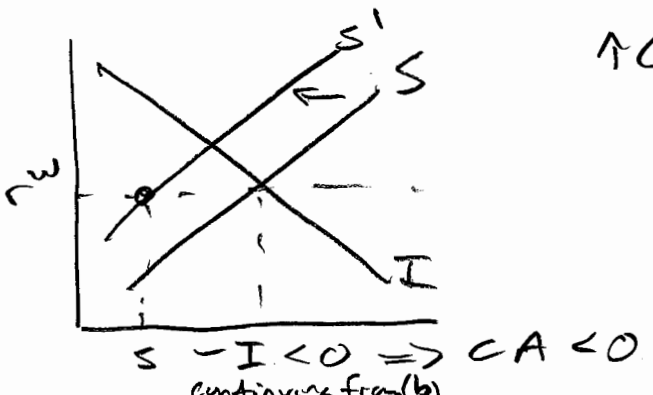
Large CAS: Since $S - I = CA > 0$ implies large S and low I, over time the country is under-investing in domestic capital accumulation and this will harm long run growth.

3. Use the loanable funds diagram for a small open economy. Suppose that initially the world real interest rate equal to the domestic market clearing rate.

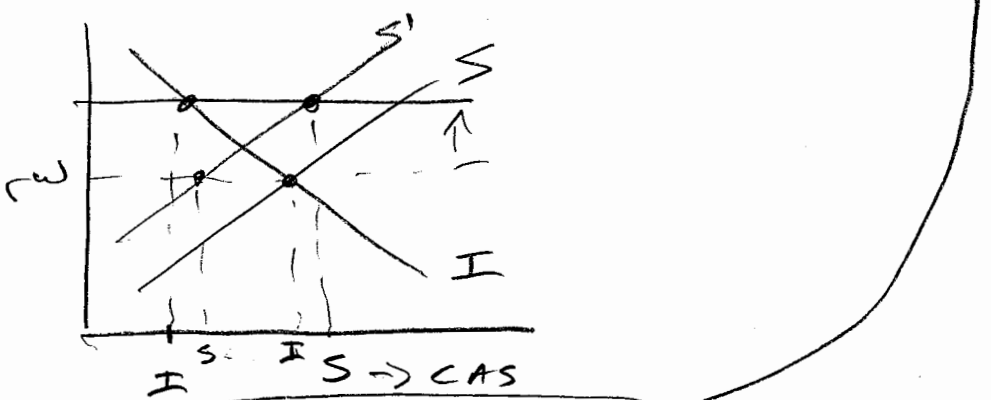
   a. (5 pts.) What is the current account balance for this country? Explain using any appropriate equations.



   b. (5 pts.) Suppose consumer confidence increases. Show the effects in this market. ↑ the CA.



   c. (5 pts.) Next suppose that, without any warning, the world rate rises dramatically until it is above the domestic market clearing rate. Show the effects in this market.



   d. (5 pts.) Explain what happens to the CA, FKA, and ΔR.

$$CA + FKA = \Delta R \quad \text{if } \Delta R = 0$$

$$- \quad +$$

changes to $+ \quad -$

4. Suppose there are 2 countries, the USA and China.

   a. (5 pts.) If the US has 12% inflation and China has 7% inflation, what do you predict the change in the exchange rate will be in the long run? (Include any appropriate equations)

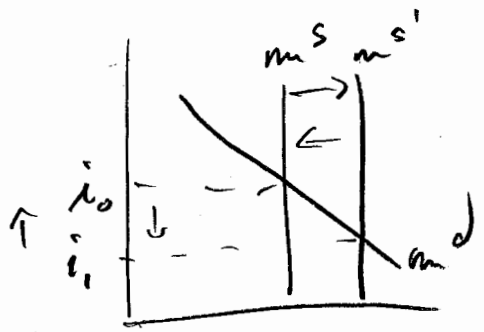
$\hat{\epsilon} = \pi - \pi^*$
$12 - 7 = 5\%$

   b. (5 pts.) Is this an appreciation, depreciation or no change in the value of the currency? Explain the intuition behind this result.

Depreciation. This makes sense because the USD is losing value through π faster than the chinese currency is through π^*.

5. Analyze the short run and long run effects of the Fed increasing the money supply.

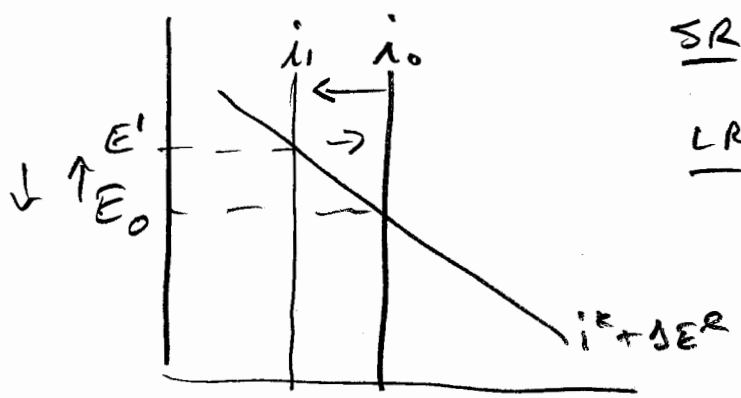
   a. (5 pts.) Show the results in the money market.



SR: $\uparrow M^s \rightarrow \uparrow m^s$; $\downarrow i$ to i_1

LR: $\uparrow P \rightarrow \downarrow m^s$; $\uparrow i$ to i_0

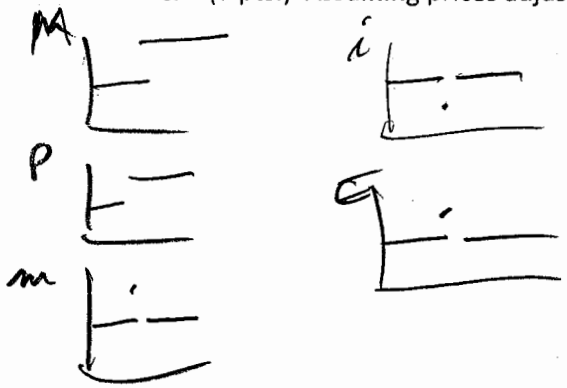
   b. (5 pts.) Show the results in the Forex market.



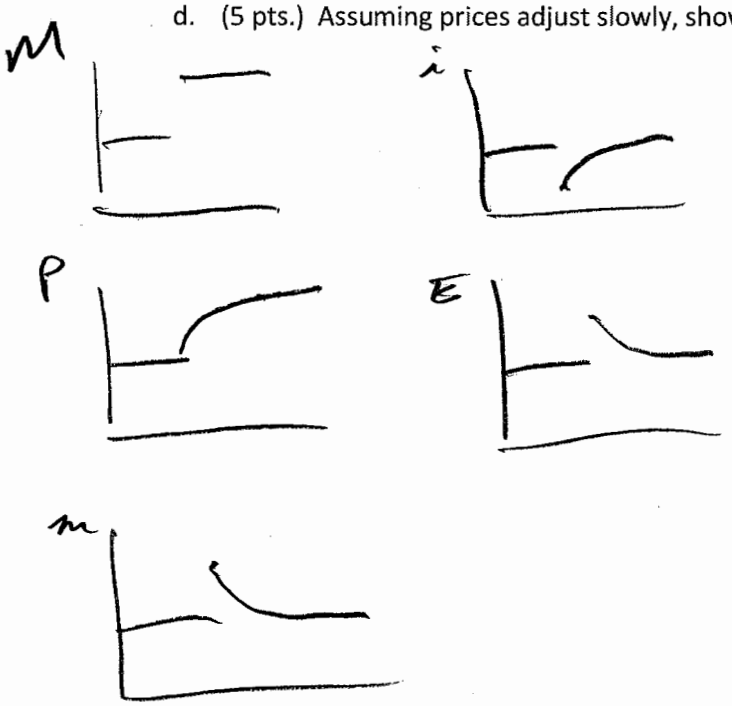
SR: $\downarrow i \rightarrow \uparrow E$ to E'

LR: $\uparrow i \rightarrow \downarrow E$ to E^0

c. (5 pts.) Assuming prices adjust instantanly, show the time paths for *M*, *P*, *m*, *i*, and *E*.



d. (5 pts.) Assuming prices adjust slowly, show the time paths for *M*, *P*, *m*, *i*, and *E*.



6. Consider a fixed exchange rate regime.

a. (5 pts.) List two of the benefits of a fixed exchange rate regime (include any appropriate equations).

(1) Makes trade easier by making ΔE predictable and easy to contract

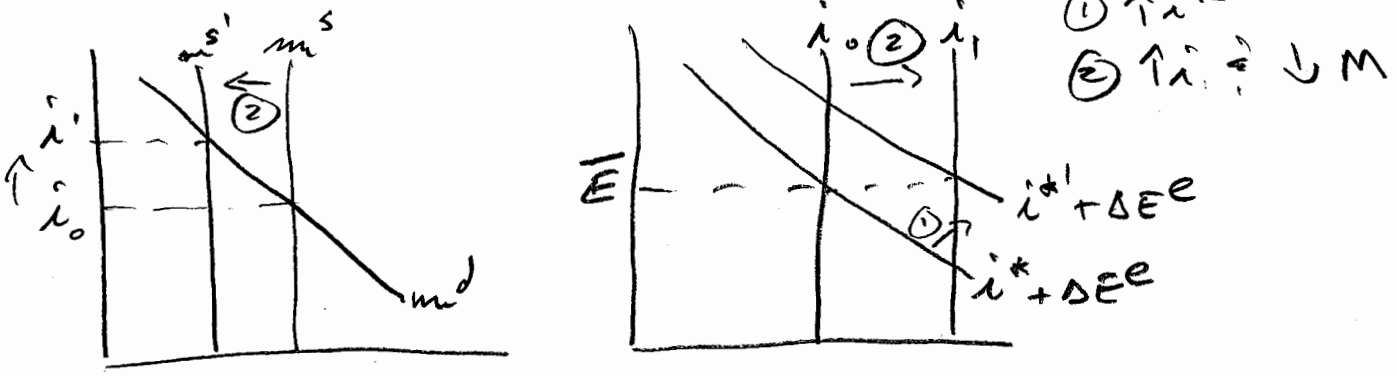
(2) Controls domestic π if you peg to a low inflation country

$\uparrow$
$E = \pi - \pi^*$
$\uparrow$
$E = 0 \Rightarrow \pi = \pi^*$

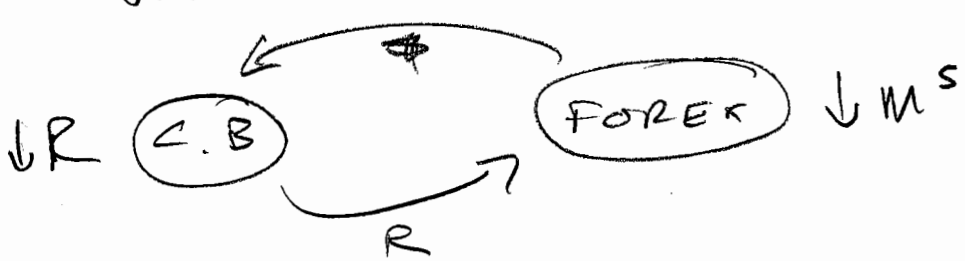
b. (5 pts.) Does the central bank actively increase or decrease the money supply under a FIX? Explain.

No. ΔM^s occurs to keep Δi whatever is necessary to keep $\bar{E}$. This happens automatically as participants in the FOREX markets buy and sell the country's currency and reserves.

c. (5 pts.) Suppose the foreign central bank increases the foreign interest rate. Show the effects in the FOREX market and domestic money market.



d. (5 pts.) Explain what happened to international reserves.



7. (15 pts.) Imagine a country that has a fixed exchange rate regime. It is running a current account deficit and suffers a sudden stop. It tries to offset the sudden stop by spending down international reserves. Discuss the problems it will face doing this and the implications for its exchange rate regime. Be sure to include all equations, identities and diagrams that are appropriate.

$CA + FKA = \Delta R$ SS means $FKA \to 0$

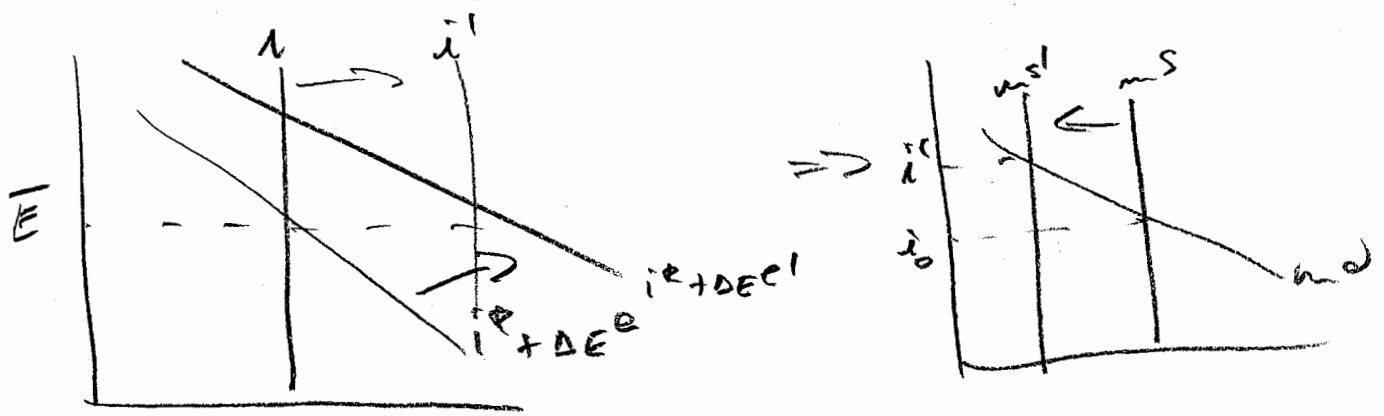
$-$ $+$ 0 If it tries to keep $CA < 0$

0 then it must use Reserves

Problems ① Reserves are limited

② $\Delta R \Rightarrow \Delta E$ which isn't allowed under Fix. So either they sterilize or break their Fix regime. If they sterilize, then they still have problem ① eventually and will suffer a B.o.P crisis.

As $R \to 0$, FOREX participants expect $\uparrow E$ $\Rightarrow \uparrow \Delta E^e$ which requires further $\downarrow M^s = \downarrow R$ $\Rightarrow$ makes the crisis come sooner.



As Crisis Nears.