Assignment #8

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Exercise I

a)

True.
The risk of default on Mexican public debt us

$$12\% - 5 = 7\%.$$

We can simply subtract them because they are in the same currency (USD).
We can mention the next relation

$$R_{cetes} = Rtesobonds^* + \frac{E^e}{E} - 1$$

and calculate

$$\frac{E^e}{E} - 1 = R_{cetes} - Rtesobonds^* = 35\% - 12\% = 23\%.$$

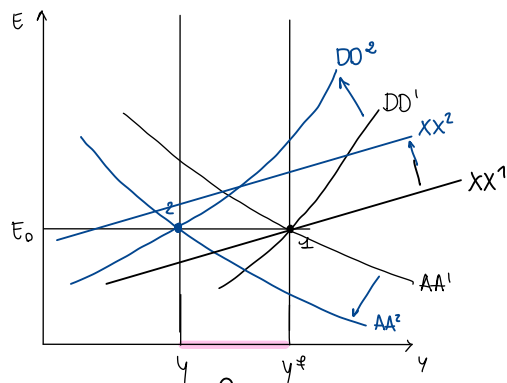So the expected depreciation is bigger than the risk premium.

b)

True.
"Modern economic theory says that inflation expectations are an important determinant of actual inflation. Firms and households take into account the expected rate of inflation when making economic decisions, such as wage contract negotiations or firms' pricing decisions. All of these decisions, in turn, feed into the actual rate of increase in prices. Given that central banks are concerned with price stability, policymakers pay attention to inflation expectations in addition to actual inflation"[1]. So, it is reasonable to talk about actual inflation and inflationary expectation.

Before 2013, "The BOJ has talked about targeting inflation for years without any success, but these changes are more credible"[2]. Bank of Japan engaged in quantitative easing, printing a lot of new money. The goal was to help weaken the value of yen to help exports (Japanese products cheaper in international market). The central bank's plan to pump money into the economy to put back inflation back into the Japanese economy: setting inflation target to 2%. They wanted inflation because Japan has suffered for many years of deflation, which hold back investments. BOJ hopes that, putting a inflation target, people would start to spend and company to invest.

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[1] https://www.stlouisfed.org/publications/regional-economist/april-2016/inflation-expectations-are-important-to-central-bankers-too
[2] https://www.bbc.com/news/business-21136866

a) Short-run equilibrium

$E^e = E_0$ fixed
$Y = G + C + I + CA$
$C = c(Y-T)$

$CA = \underline{CA} + \alpha \dfrac{EP^*}{P} - mc(Y-T)$

$\alpha > 0$
$0 < mc < 1$
$0 < c < 1$

$\Delta \underline{CA} = \Delta WB < 0$

Reduce the demand of domestic products
$\underline{\Delta CA} < 0$ temporary

$\Rightarrow$ the DD curve shifts to the left ___

We want E constant $\Rightarrow$ also AA moves to the left ___

$\Delta CA = \Delta \underline{CA} + \alpha \dfrac{\Delta E^{\;0} P^*}{P} - mc(\Delta Y - \Delta T)$

$\quad = \underbrace{\Delta WC}_{<0} + 0 - mc(\Delta Y - 0)$

$\qquad\qquad\qquad\qquad \underset{Y^2 - Y^\# < 0}{\downarrow}$

b) $\Delta Y = \Delta G + \Delta C + \Delta I + \Delta CA$
$\Delta Y = 0 + c(\Delta Y - 0) + 0 + \Delta \underline{CA} - mc\,\Delta Y$
$\Delta Y = c\Delta Y + \Delta WC - mc\,\Delta Y$

$\in (0,1)$
$\Delta Y(1 - c + mc) = \Delta WC$
$\Delta Y = \dfrac{\Delta WC}{1 - c + mc}$

c) $\Delta CA = 0$ · For $CA = 0$ E is not $E_0 \Rightarrow \Delta \bar{E} \neq 0$
· Full employment $\Rightarrow \Delta Y = 0$

$\Delta CA = \Delta \underline{CA} + \alpha \dfrac{P^*}{P}\Delta\bar{E} - mc\,\cancel{\Delta Y} \Rightarrow 0 = \Delta WC + \alpha \dfrac{P^*}{P}\Delta\bar{E} \Rightarrow \Delta E = \dfrac{-P\Delta WC}{\alpha P^*}$

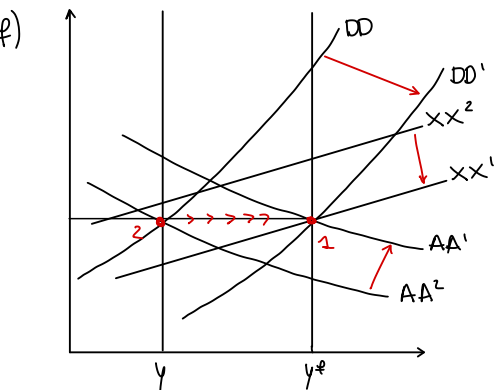d) Short run: change in the current account ΔCA ?

$\Delta CA = \Delta\overline{CA} - mc\,\Delta Y \underset{b)}{=} \Delta WC - mc\,\dfrac{\Delta WC}{1-c+mc} = \Delta WC\left(1 + \dfrac{-mc}{1-c+mc}\right)$

$\quad = \Delta WC\left(\dfrac{1-c}{1-c+mc}\right)$

$\qquad\qquad\qquad \dfrac{1-c+mc-mc}{1-c+mc}$

e) PERMANENT $\Rightarrow$ long-run
The economy continues fixing E $\Rightarrow$ a to d are the same (they are about the short-run)

f)

In the long run everything adjusts and we
go back to 1.
We have full endowment again

The difference from the short run is
represented by the fact that prices can adjust.

g) CB wants Y^f immediately E_0 fixed

- Would a change in money supply achieve this?
- How foreign assets move?

$$R^* + \frac{E^1 - E_0}{E_0}$$
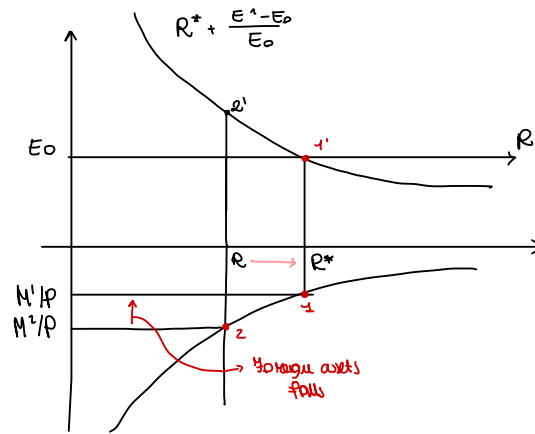
Central banks use foreign exchange intervention to fix exchange rate - If CB fixes exchange rates, they cannot influence the economy through monetary policy.

In our case CB wants to goes back to Y^f ⇒ CB wants to increase output immediately. However, when E is fixed, monetary policy is useless and it does not affect output.

If CB buys domestic assets ⇒ excess in domestic M^S ⇒ $E_{home/f}$ ↓   ← no if E fixed

⇒ CB sells foreign assets for domestic money
(no excess in domestic M^s)

⇒ offset! Change in composition of CB's assets

If Y must ↑ immediately (up to Y^f)

There is a reduction in demand ⇒ to prevent a decrease in home interest rate and depreciation, the CB must sell foreign asset ⇒ decrease in foreign assets

h) World demand domestic pr. ↓ permanent
Y immediately returns to full employment ⇒ devaluation
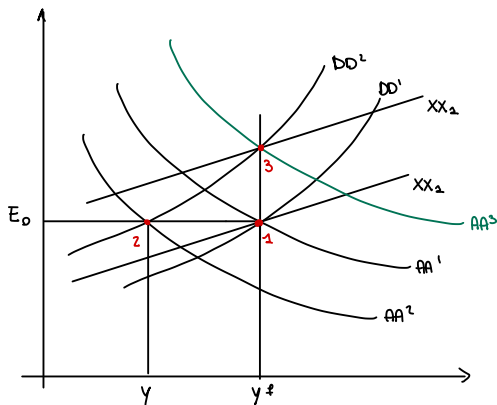
⇒ shift in AA curve

Y want $\Delta Y = 0$

$$\Delta Y = c\Delta Y + \Delta \underline{CA} + \alpha \frac{P^*}{P} \Delta E - mc\Delta Y$$

$$\Delta WD + \frac{P^*}{P} \alpha \Delta E = 0$$

$$\Delta E = -\frac{P \Delta W}{\alpha P^*}$$