~~⑥~~

Things to keep in mind

$M \uparrow \rightarrow r \downarrow$ (via open mkt operations by the CB)

$r \uparrow \rightarrow \begin{cases} \varepsilon \downarrow & \text{(appreciation under flex. rate)} \\ R \uparrow & \text{(under fixed } \varepsilon\text{)} \end{cases}$

$R \uparrow \rightarrow M \uparrow$

$\varepsilon \uparrow \rightarrow (Exp - Imp) \uparrow$ (assuming Marshall Lerner condition holds)

Note that to be rigorous we should write:

$$Exp(\underset{-}{P}, \underset{+}{\varepsilon})\,P - Imp(\underset{-}{P^{foreign}}, \underset{-}{\varepsilon})\,P^{foreign} \cdot \varepsilon$$

real/volumes (under Exp); real/volumes (under Imp)

Nominal value of imports in national currency

Public debt financing

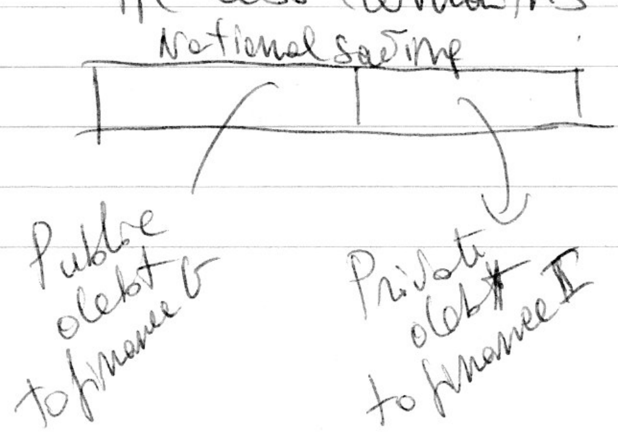
When $(T - G) < 0$ the gov.t budget is in deficit, which can be financed in two ways: money or debt! What are the differences?

① Money financing (fiat money)

This solution provides extra purchasing power to the Govt but normally leads to higher inflation therefore in the end the effect on growth may be zero. You would end up with higher G, but lower C, I and Exp.

② Debt financing

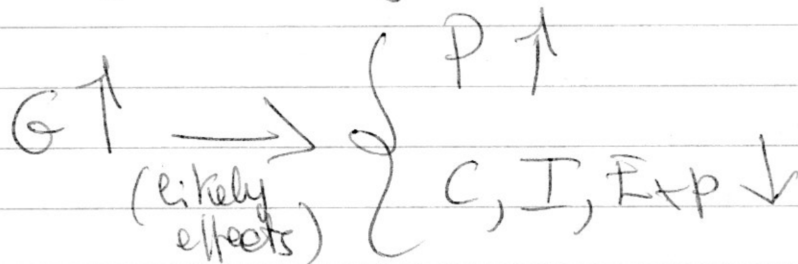
In this case you are (relying) on the existing "pool" of national saving (no extra purchasing power). However, saving is used to finance investment and the more of it is used to pay for public spending, the less remains to finance private investment. This is called: "crowding out" effect.



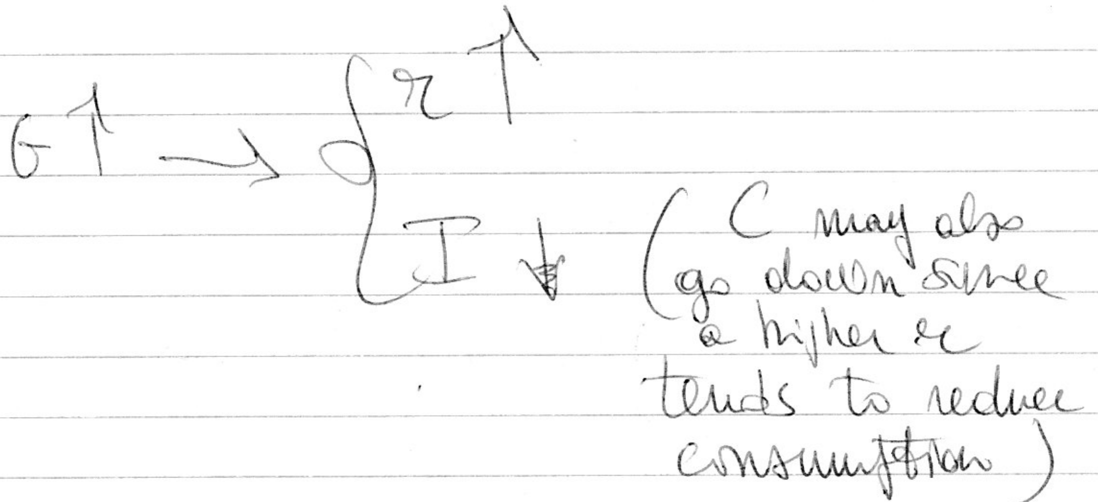
Additional difficulties with debt arise when a share of it is owned by foreigners. In this case you are subject to the scrutiny and possible volatility of international financial mkts.

To summarize:

- With money financing



- With debt financing



A digression on POLICY COORDINATION

In the std IS-LM-BB model it is not specified which authority is responsible for the single policy instrument. Normally fiscal policy is in the hands of the gov.t, monetary policy in those of the CB, whereas the ex. rate falls in the domain of both (the gov.t sets the parity and the CB has to act in order to defend it).

Within the model, policy coordination would allow to achieve better results. In fact, if we could use all three instruments simultaneously, moving all three lines to the right, this would allow to obtain a higher level of income.

However, as said, the model is too simple. It does not take into account inflation and some drawbacks of a devaluation. Indeed, policy coordination is not necessarily a good choice. That's why central banks are typically independent from the political authorities.

Fighting inflation normally implies

that central banks might have to act sometimes in the opposite direction of fiscal policy. Excessive public spending might overheat the economy inducing the central bank to restrict monetary conditions.

Central bank independence is often enshrined in the banks' statutes or in constitutional laws.

Monetary Unions and the Eurozone

Monetary unions pose further challenges to policy management. In the Eurozone, for instance:

- M^S is controlled by the ECB
- exchange rates are fixed within the eurozone but the euro exchange rate fluctuates vis-à-vis other world currencies

Only fiscal policy remains in the hands of the national authorities but is bounded by the Maastricht criteria (deficit $\leq 3\%$ of GDP and Debt $\leq 60\%$ of GDP or on a declining path).