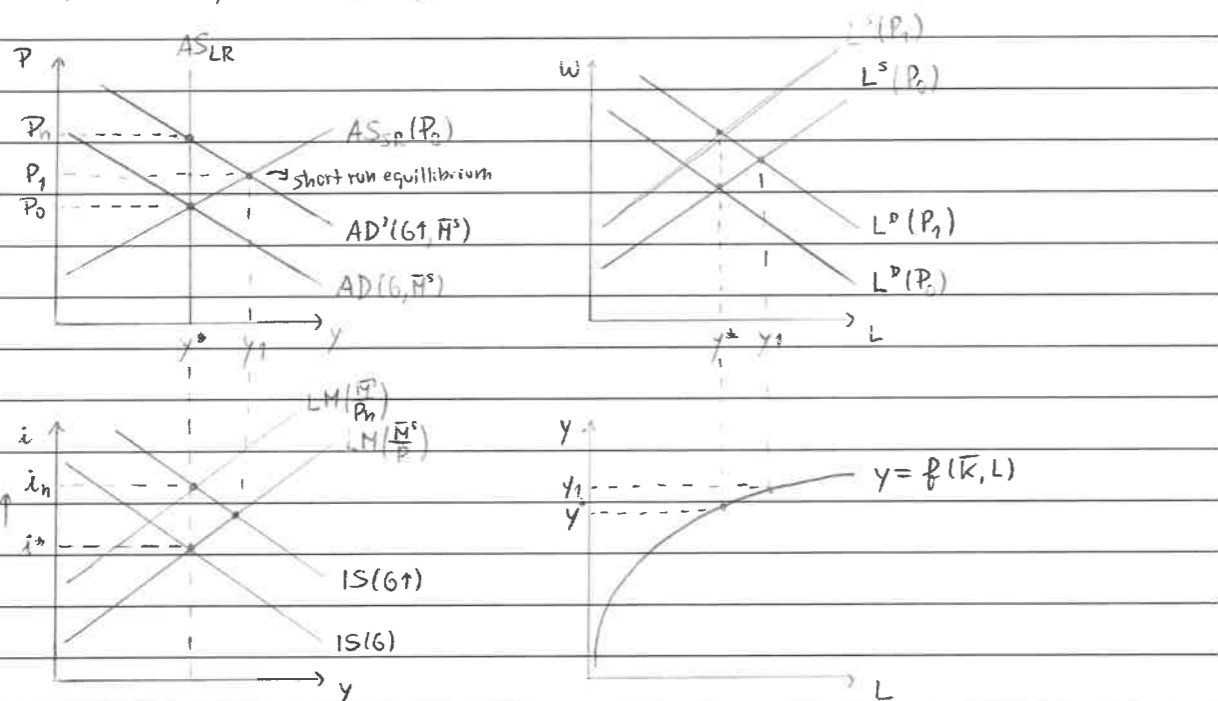


d) Expansionary fiscal policy



- In the long run interest rates are higher,  $i \uparrow$ , so investments are lower  $I \downarrow$ . The crowding-out effect is total because in the long run  $y = c = x$  and  $X, M$  are quiet (in this model), so every € in  $G \uparrow$  brought down  $I$ , as there must be a compensation.

III

a) Banks play the role of intermediaries between savers and investors, those who have money to spare for a while and those who need it temporarily. They receive money from depositors and ~~and~~ lend it to others with interests, making some money in the process.

Banks must be supervised because they may risk too much in order to get more credit, creating a crash in the system.

They are also the intermediaries between the Central Bank and the production of money ~~meaning~~ seeing that the Central Bank  $p$  triggers the money production with bonds auction, but the money is multiplied by the normal banking cycle.

If a bank crashes individually, it may result in a ~~small~~ recession period because all agents become cautious and policies are, therefore, ineffective.

*P.*

16

I 25  
II 35  
III 20 / 80

I.

a) False - there are several macroeconomic models that do not include money and that are very useful to explain interactions between economic agents, such as firms, households, workers, the government etc.

These models such as the Circular Income Flow, and the Simple Keynesian Model serve as a base for other more detailed models, and explain the basics that will influence the creation/destruction/use of money.

Moreover, in the long run money doesn't change anything in real terms, as it is a neutral agent (in the long run).

So, although money plays a big role in our economy and in our lives, it isn't a necessary condition for a model to be useful in explaining economic and life phenomena.

b) True - The savings of a country play a role in how much it can invest,

as a country with small saving doesn't have a big margin to invest. The fundamental identity of macroeconomics tells us that investments are negative in relation to savings, so in order to ~~remain~~ keep a balance,  $S$  must be higher

$$(S - I) + (T - G) = (X - M) \text{ than } I. \text{ It can invest continuously, but not strongly.}$$

c) True - this phrase was said by Milton Friedman, a famous economist and monetarist, and it tries to show that in the long run inflation is affected because of money and, therefore, by the changes made by Central Banks.

If we take a look at the results of an expansionary monetary policy, <sup>in the AS/AD</sup> we can see an initial decrease in the interest rates due to higher prices and higher  $\bar{M}^s$ . But in due time, everything will stabilize because things tend to an equilibrium, where prices and  $\bar{M}^s$  oppose each other proportionally.

If we increase money, we increase prices  $\rightarrow$  and so, if there is inflation it is due to changes in money supply.

d) False - A balanced current account depends on the trade balance, which is given by the balance of goods and services, by the primary income account (payments made and the interest rates of other countries can influence this account) and by the secondary income account (which depends on overseas aid, on military grants, on payments made to the EU etc).

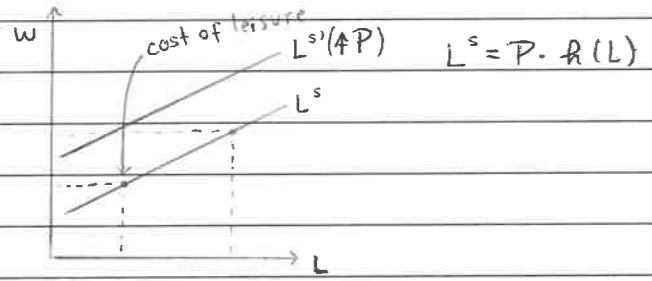
So, the absence of capital flows, which would happen if ~~both~~ both domestic and ~~interest~~ foreign interest rates didn't change would simply mean an absence of money flow, the stagnation of money, and not necessarily a balanced current account, in which other factors play a role.

e) <sup>False</sup> ~~True~~ - The Central Bank determines how much real money is produced/put in circulation when it auctions (buys/sells) bonds. However, while it has a huge roll in the MB, the ~~monetary~~ money stock circulating in the economy depends on the coefficient for preference in liquidity, and on deposits.

$$M = \frac{c+1}{c+n} \times HB$$

f) False - the labour supply curve represents how many hours a workers are willing to work after comparing the wage offered with prices in the economy and with the value of leisure.

There should be a compromise between the value of leisure and the ~~work~~ hours worked, and the price of leisure is wage  $\rightarrow$  if I value leisure more, I work less so I receive less



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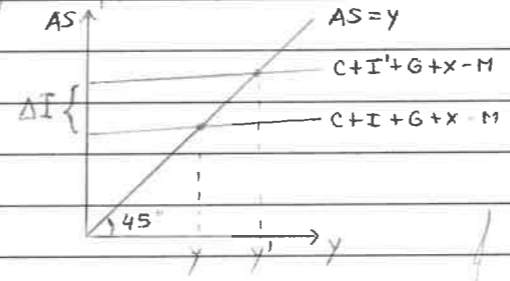
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5

a) Contractionary policies can bring benefits in the long run. They can be used to prevent huge economic ~~catastrophes~~ catastrophes like hiperinflation by reducing money production and putting a stop to a speculative bubble

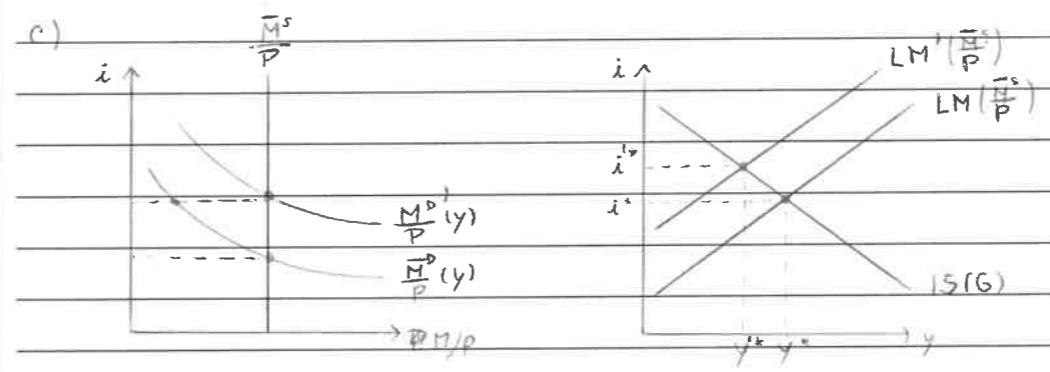
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b) An increase in the desired level of inventories by firms will result in hiring more, which will increase income and consumption, as well as output. Firms are producing more, but consumption is also increasing, and there will be a cycle of increased production/consumption until desired consumption equals production.



Desired investment is affected by both gross fixed capital formation, and changes in the inventories

10



- There is a stronger preference for liquidity by households, so for the same interest rates and the same income people want to have more money in their pockets. In order to match supply and demand, interest rates must be higher for the same output. So the LM curve must contract, as  $i \uparrow$  for the same  $y$ .  
 - So in the new equilibrium  $y' < y^*$  and  $i' > i^*$ .

10

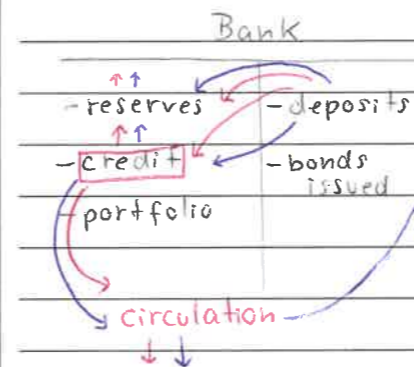
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Ass Professor(a): \_\_\_\_\_

Ano Letivo: 2020 / 2021 Classificação: \_\_\_\_\_

III.

b) The minimum mandatory reserve rate is ~~an amount~~ a share of the deposits <sup>that</sup> banks must put on their reserves. It is a leak in the process of money creation, as it prevents all the deposit from going directly into credit. It is a way of controlling <sup>the</sup> cycle of money production because it ~~assures~~ makes sure there is a more ~~reliable~~ reliable stopper (other than the money that stays in circulation):



c) In order to increase the nominal money supply in the economy the Central Bank sets an auction, announcing that it wants to buy bonds from banks.

- Banks will be selling their bonds to the Central Bank, so there will be a drop in their portfolio, while the Central Bank increases its portfolio and the deposits from banks (which are, in part, mandatory). That means an increase in the banks' reserves.

- Banks now have high reserves, so they will drop some to give credit. This credit will be put into circulation by the lenders, and while some of it will remain in circulation, the other part will be deposited.

- From those deposits, banks will put a part in reserves (obliged by law to do so) and the rest will go to credit, and again in circulation.

- By lending something that is not theirs, banks are creating something new without destroying the initial, so there is money being produced.

The money supply in the economy will then increase, depending on the money base from the central bank, on the coefficient for preference for liquidity, on the reserves rate and on the deposits made:

$$M = \frac{1+c}{c+n} \times MB$$

→ money multiplier

d) A massive creation of basic liquidity by the central bank may lead to a massive money creation, which results in money losing its value due to hyperinflation.

