Economics 470/570

Fall 2010

Final Exam

Part I

(1) Fractionally backed currency means there is more money in circulation than there is assets in the banks (eg gold or silver) backing them. With fiat money, nothing backs it at all. It is only accepted because you know the next person will accept it too

(2) The discount window is the facility through which banks take out loans from the Fed. The discount rate is is interest rate they pay on those loans

(3) Crowding out occurs when government spending causes an increase in the interst rate which, in turn, reduces (crowds out) investment.

(4) The effectiveness lag is the time period between when montary or fiscal policy is implemented and when it impacts the economy

(5) The natural rate of output is the level of output where labor and all other resources are both fully and efficiently employed. Alternatively, it is the level of output where prices are neither rising nor falling.

(6) Monetary neutrality means that expected changes in the money supply have no impact on real variables such as output and employment.

Part III

Problem 1

1. The Fed is fairly free from Political Pressure because

   1. 14 year, non-renewable terms for governors. The term is ~~longer~~ than president who appointed them, and since it cannot be renewed, they won't change policies in an attempt to get reappointed
   2. Independent financially. The Fed holds securities, makes billions per year. From these earnings it can finance itself completely and still have funds left over (which it gives back to Treasury at end of year). So, it cannot be pressured financially by Congress

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3. Can refuse audits by GAO (General Accounting Office, the Govs "watchdog") giving it further financial independence

Factors Against Independence:

1. Congress can still pass legislation to take away independence so freedom not unlimited
2. Chair appointed by president, Testifies before congress, and is subject to political pressure.
3. Public Opinion. If, everywhere they go, parties, store, etc., the public expresses their displeasure with policy, then this can affect board members

[cont.]

[cont.]

For Independence

1. Subject to less political pressure, less temptation to pursue SR objectives which are costly in LR. E.g., a recession may be good in LR if inflation falls, but bad in SR. A politician may only care about SR.

2. Avoids Political Business Cycles, i.e. avoids manipulation of economy to get reelected (Create boom today → reelection, but inflation in LR).

3. Less temptation to monetize debt.

4. Cross-country studies show that Less independence is associated with higher Inflation.

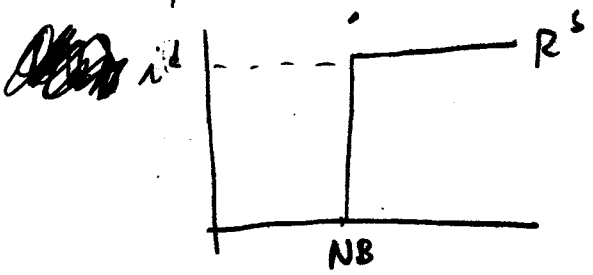
[cont.]

Against Independence

1. Monetary policy too important to be in the hands of non-elected officials free of public accountability. Should be in control of elected officials who will pursue the public interest. Elected officials make LR decisions all the time, there is nothing special about monetary policy.
2. Difficult to coordinate Monetary and fiscal policies
3. Book adds that Fed has made mistakes

Part III

② (a) The demand curve for reserves slopes downward because when the i ↑, the oppr. cost of excess reserves, held as insurance against unexpected deposit outflows, goes up.

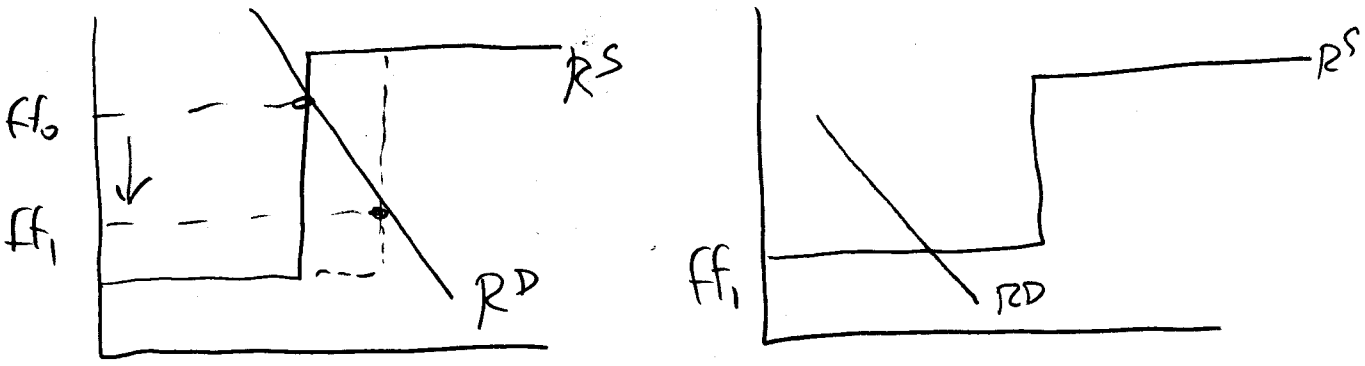


The supply of reserves is kinked. When the FF rate is below the discount rate (i^d), Banks will borrow on the ff-market. Since, at a point in time, the supply of non-borrowed reserves is fixed, the supply curve is vertical below i^d.

[cont.]

When the i-rate on reserves (i.e. the ff-rate) tries to rise above i^d, banks will prefer to borrow from the Fed. Since the Fed will supply all the reserves banks want at i^d, the curve is horizontal (i.e. infinitely elastic).

(b)



If the shift is large enough, could end up at lower bound for ff

Part III

(3) (a) money serves as a

Medium of exchange: Money used to purchase goods/services, etc., overcomes double coincidence of wants problem under barter.

Unit of Account: Money gives us a convenient way to express prices. Without money, each good has N-1 prices, with money, only one. (N → # of goods in economy)

Store of value: Gives people a perfect liquid means of storing their wealth.

[cont.]

Part III. Essay

(3)(b)

Nominal i-rate = real i-rate + expected rate of inflation

$[\ i = r + \pi^e$ where i = nominal rate
r = real rate
π^e = expected inflation

Nominal interest rate: measures the $ return on an asset, it is just the number of $ promised, not the purchasing power of the $

Real interest rate: measures the purchasing power of the return on an asset; it is the nominal return adjusted for inflation

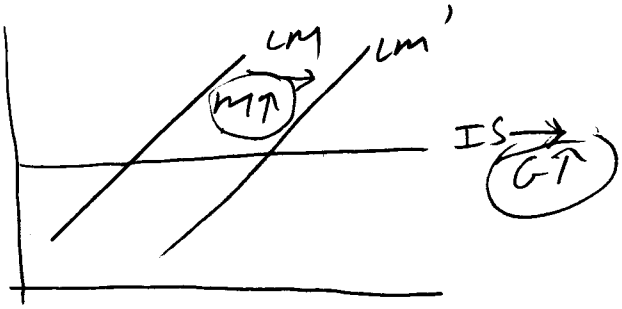
The difference is that the ex-ante real rate is measured at the time the contract is negotiated and signed and therefore uses the expected inflation rate. The ex-post is measured after the contract expires and uses the actual inflation rate.

ex-ante $r = i - \pi^e$ "forward looking"

ex-post $r = i - \pi$ "backward looking"

(4) (a) In a recession, when businesses have plants and equipment sitting idle, they are less likely to invest in new plants and equipment when the interest rate falls than if all of their capital is already fully employed. Essentially, the responsiveness of Investment to the interest rate is lower when capacity utilization falls

(b)



This is the case when $|I_i| = 00$, i.e. when Investment is infinitely sensitive to i-rate (as sensitive as it can be) $i \downarrow \rightarrow I \uparrow \rightarrow y \uparrow$ max

A shift in LM (from M↑) → y ↑, so Mon. Policy is effective. But when G↑ or T↓, the IS curve shifts horizontally (stretches), and then if no change in y. (ineffective)

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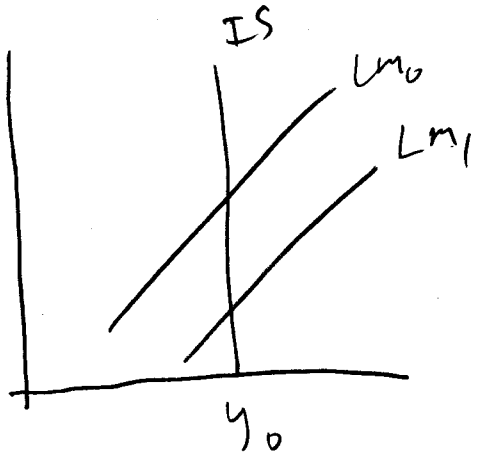
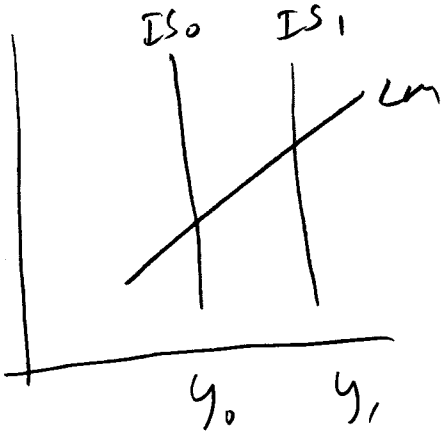


Mon. Policy ineffective



fiscal policy effective

This is the case when $|I_i| = 0$, i.e. when I does not respond at all to a change in i. $i \downarrow \rightarrow$ no change in $I \rightarrow$ no change in Y

Overall: IS vertical is recession case
IS horiz is full-emp case

So, fiscal policy more effective in recession.

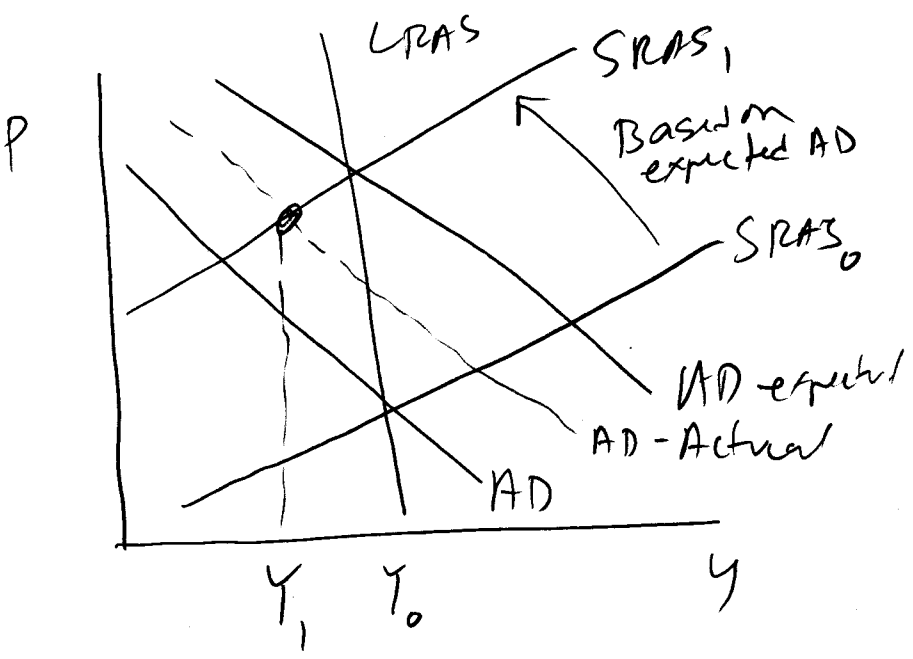
Mon. Policy more effective near full employment

(5) Debt monetization occurs when the Fed purchases Gov. debt and replaces it with money using open market operations
E.g. gov. issues $10,000 in T-Bills (debt).
If the Fed prints $10,000, and then buys T-Bill, the debt is monetized

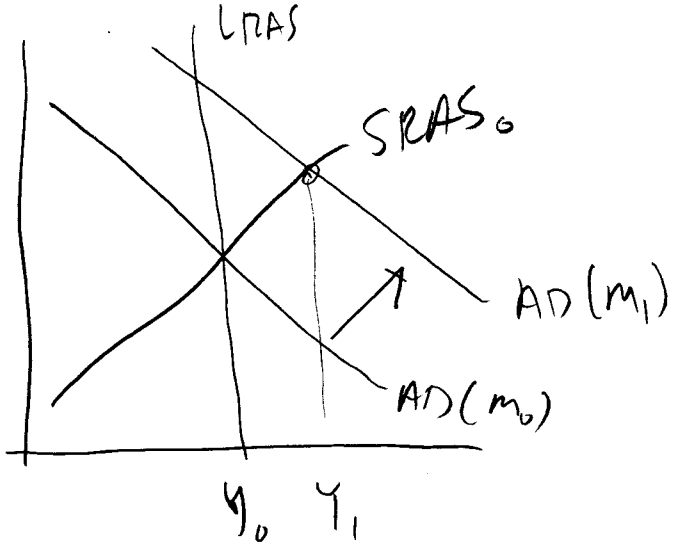
The gov. budget constraint is $G + \text{int on debt} - \text{Taxes} = \Delta M^S + \Delta \text{Bond}^S$

When there is gov. debt due to, say, $G\uparrow$, it must be paid for. $T\uparrow$ is politically unpopular, increasing the debt is also unpopular ($\text{Bond}^S\uparrow$), so gov often chooses lesser of 3 evils politically, which is $M\uparrow$. Also, developing countries may have no choice due to limited ~~tax~~ base and difficulty borrowing. The main problem is that it is inflationary. [This is one reason to have an indep. central bank(C) to avoid temptation to monetize the debt.]

(6) (a) Start at y_0. AD expected to ↑ to $AD_{expected}$, but only ↑ to AD_{Actual}. The SRAS shifts back based upon expected AD ↑ → y ↓.

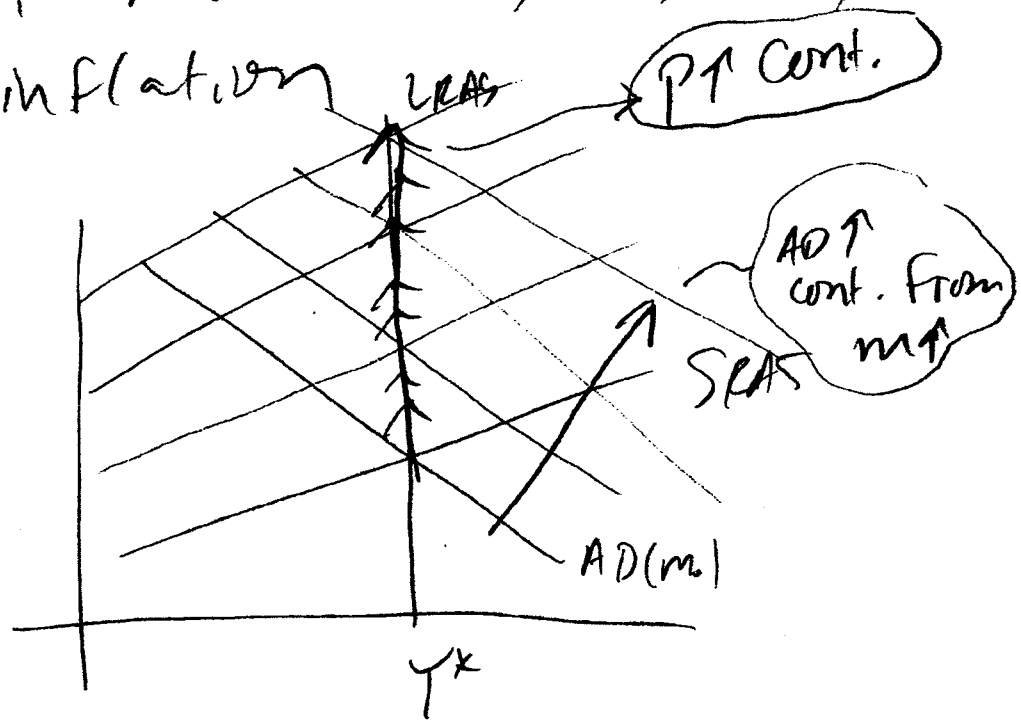


(b) The effect is the same in both cases. Since the ↑ in M is unexpected, the SRAS does not shift. In both the NC and NK models, the SRAS only shifts if there is a chg in expe. But since M↑ is unexpected, expectations do not chg.



(This shows an unexpected ↑. An unexpected ↓ in M is just the opposite, AD shifts in and Y ↓).

(7) Yes, monetarists agree. To see why, show that $M\uparrow$ continuously $\rightarrow$ inflation. Then note that for monetarists, $M\uparrow$ is the only reason $AD\uparrow$, so, only source of inflation



Might move from Y^* in SR, but, in LR, $P\uparrow$ as shown.

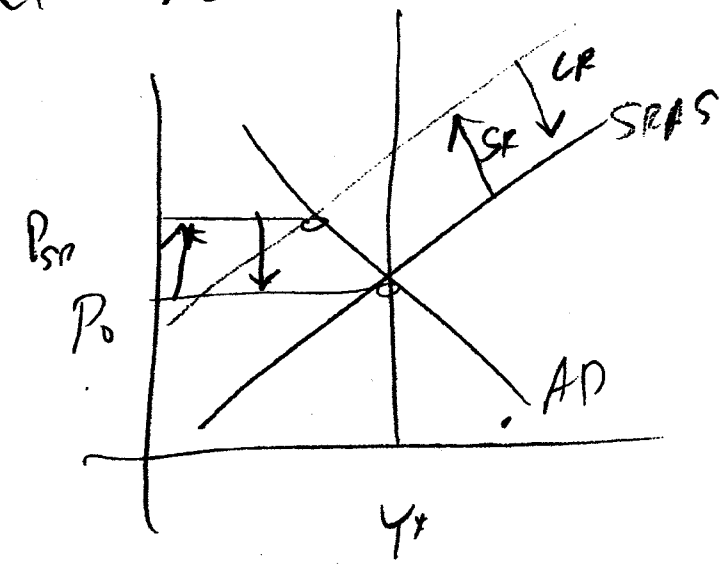
So, $M\uparrow \rightarrow$ inflation. Can G, T, etc $\rightarrow$ inflation? Not in mon. AD. What about Keynesian? In Keynesian AD, G, T, etc. do shift

AD ↑, but, cannot be source of ongoing P↑. Note that Y=C+I+G+NX.
G↑ only so far, bounded by GDP.
Tax ↓ only so much, so, self-limiting.

Thus, Keynesian agree too (M↑ has same effect.

Finally what about AS-shocks

When AS shifts in, P↑ in SR, but not LR.



So, M-growth only source of inflation. Friedman correct.