

Economics 420/570

Final Exam

Winter 2007

Defs

① The discount window is the name given to the process whereby banks can take out loans from the Fed. The interest rate they pay on these loans is called the discount rate.

② Banks must hold a percentage of their deposits as reserves (either cash inside the bank or deposits with the Fed). That is, $RR = r_D D$

$\begin{matrix} \swarrow & & \downarrow & & \searrow \\ \text{req.} & & \text{req.} & & \text{Deposits} \\ \text{res} & & \text{res} & & \\ & & \text{ratio} & & \end{matrix}$

Any amount of reserves held over and above the required amount are called excess reserves.

③ The velocity of money is a measure of how fast money circulates in an economy, i.e., how fast it changes hands on average. Formally, $V \equiv \frac{PY}{M} = \frac{\text{Nominal GDP}}{\text{Money Supply}}$

- ④ The policy ineffectiveness proposition states that only unanticipated changes in AD (e.g. from a change in M) can affect real variables such as output. Anticipated changes have no effect.
- ⑤ Demand-pull inflation is generated from a continual increase (outward shift) in the AD curve due to money growth. As the AD shifts out continuously and the SRAS shifts back to offset its effects, prices rise continuously generating inflation.
- ⑥ This is the time it takes, after data has been collected, to figure out what it is telling us and whether a response is required (e.g. whether a downturn in GDP is permanent or temporary).

Part II

① The Fomc has 12 members. The make-up of the committee is

7 members Board of Governors

1 Rep from NY Fed

4 Reps from other 11 District Banks, these positions rotate annually

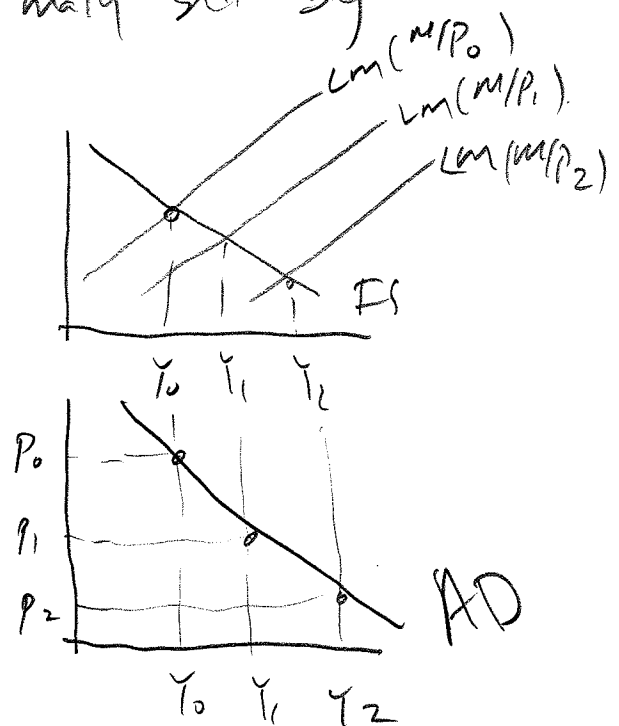
12 members total

The Fomc meets eight times per year to set the course for monetary policy, and it effectively decides the discount rate, reserve requirements, though they are not formally set by the Fomc.

② Sketch of intuition:
(Should explain full credit)

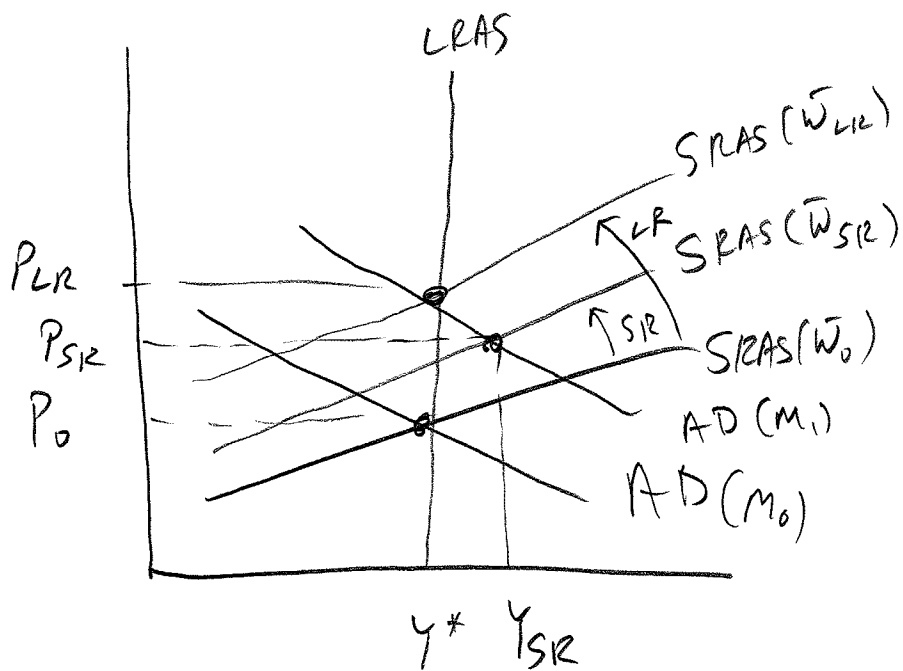
$P \downarrow \rightarrow \frac{M}{P} \uparrow \rightarrow i \downarrow \rightarrow I \uparrow$
 $NX \uparrow$

$\rightarrow Y \uparrow \rightarrow$ offsetting, but $Y \uparrow$ small.



③

In SR,
 MT, SRAS
 shifts back,
 but sluggish
 adjustment of
 wages/prices prevents



a full offset. But in LR the price and
 wage rigidities go away \rightarrow full adjustment
 of SRAS

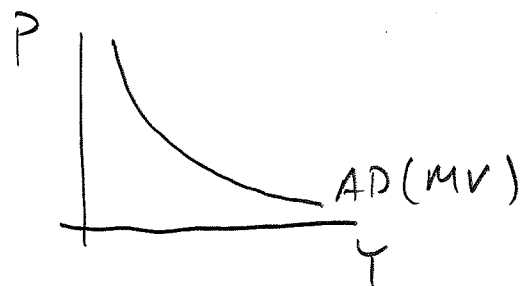
SR: $Y \uparrow$ $P \uparrow$

LR: Y no change $P \uparrow$ more

④ The monetarist view of AD is derived
 from the quantity equation:

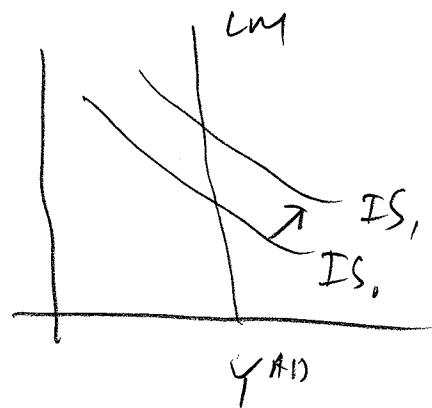
$$MV = PY$$

$$P = \frac{1}{Y} (MV)$$



[cont.]

④ [cont.]. Note that only factors affecting the LM curve (m and v) can shift the AD curve, IS shifters are not present. To see this another way, recall that the LM curve is vertical in this model. In such a case, shifts in the IS curve do not affect output or aggregate demand.



⑤ The LRAS and Y^* come from the aggregate production function $Y = F(K, L)$. Thus, changes in Y^* , the full employment value (when K, L fully and efficiently employed), come from Technology (in F), Capital growth, and labor supply growth.

Monetary policy does not affect the economy in the LR, e.g. see ③ above.

Essay - Part III

① The Fed is fairly free from political pressure because

1. 14 year, non-renewable terms for Board of Governors. The term is longer than the president who appointed them, and since it cannot be renewed, they won't change policies in an attempt to get reappointed.

2. The Fed is independent financially. The Fed gains securities through open market operations, makes billions per year. From these earnings it can finance itself completely and still have funds left over (which it gives back to the Treasury at the end of the fiscal year). So, it cannot be pressured financially by Congress.

① [cont.]

3. Can refuse audits by GAO (General Accounting Office, the Gov's "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.]

① [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.]

① [cont.]

Against Independence

1. Monetary policy is too important to be in the hands of non-elected officials who are free of accountability. Monetary policy should be in the hands of elected officials who will pursue the public interest. Elected officials make decisions with differing SR and LR consequences all the time, there is nothing special about monetary policy.
2. It's difficult to coordinate monetary and fiscal policies because they are under separate authority.

② Poole's rules answers the question of whether to use i -rate or money supply targeting when conducting monetary policy. The answer depends upon whether it is the IS or LM curve that is unstable.

Let instability be in IS-curve

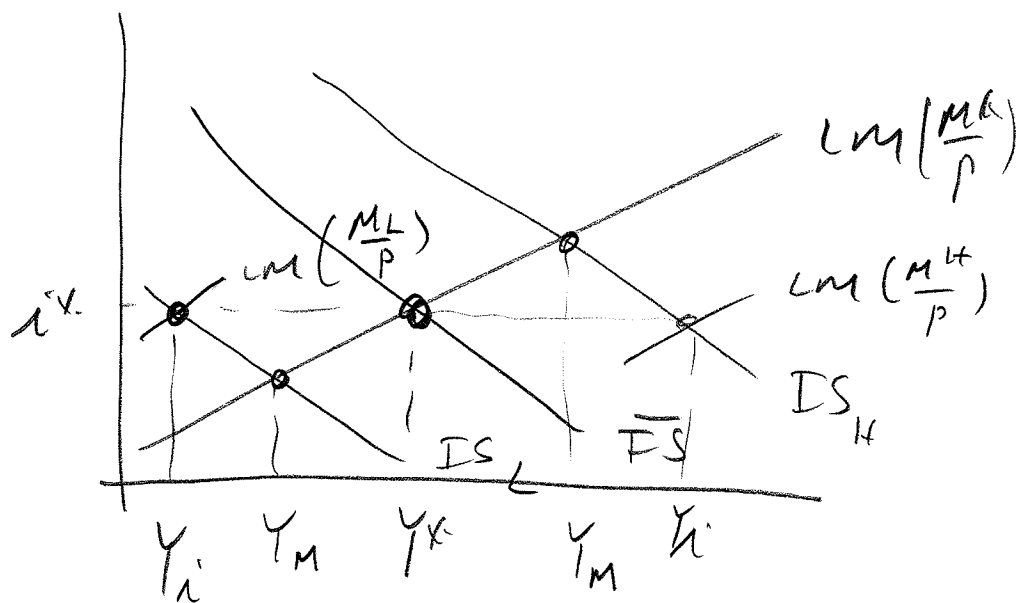
\bar{IS} = Average, the expected value

If at Avg, then hit all targets

Let Actual IS be either IS_H

or IS_L , If

the Fed keeps m^* , go to Y_M . If Fed changes M to hit i^* , get to Y_i . Since Y_i further from Y^* than is Y_M , M -target is better in this case.

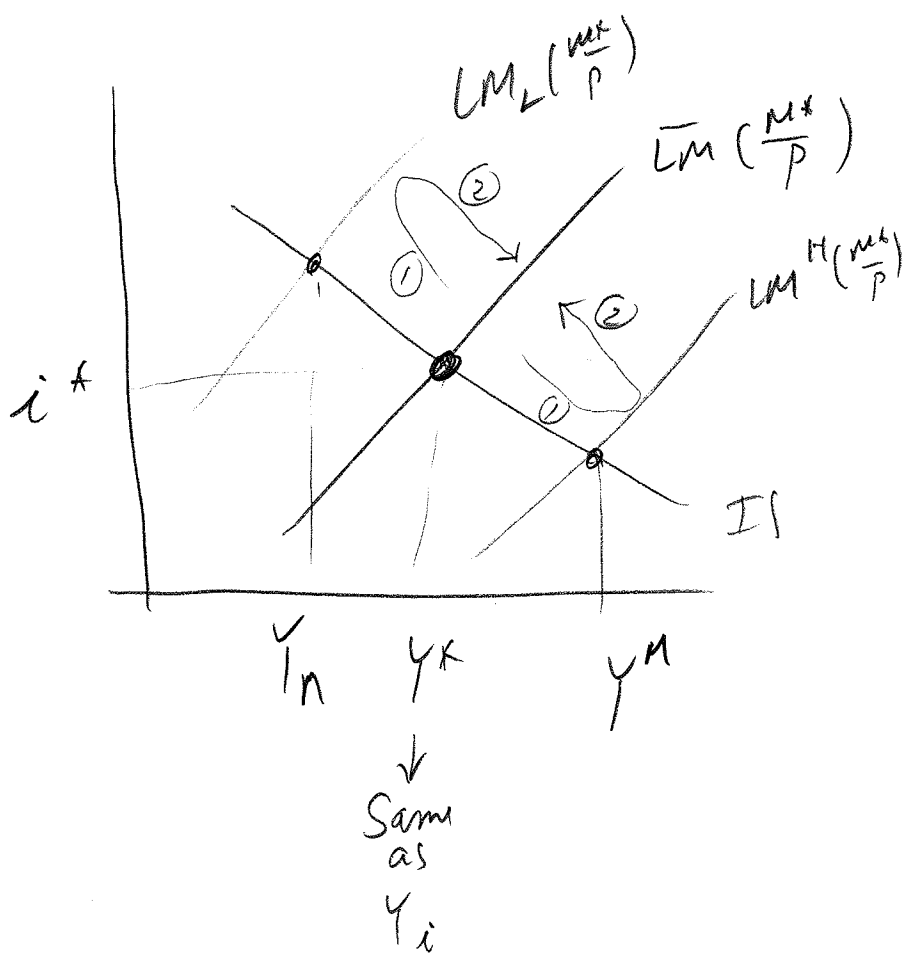


[cont.]

② (cont.)

What if the instability is in the LM curve?

For either LM_L or LM_H , under a money rule, will end up at Y_M .



But, under an i -rate rule, after the LM

curve shifts (shown as ①), the Money supply is changed to hit i^* which in this case takes you back where you started (see to ②). So, i -rate rule best here

③

Activists believe that

Automatic Adjustant mechanisms are slow
so there's time for policy intervention
to be effective

Since policy acts with a lag,
they believe that forecasts are
reliable enough to use for policy
Policy lags are short enough to happen
before automatic adjustt occurs

Non-Activists believe the opposite

Self-correction is quick (so quick, policy
is not needed)

Forecasts too poor to use

Policy takes too long to be useful.

Problems → as above, more on lags:

data lags: takes time before we have
data on condition of economy

recognition lags: once we have data,
must determine what it means

legislation lag: time it takes to
enact policy (past legislature)

Implementation lag: Time it takes for
policy to be put into place

Effectum lag: Time it takes for policy
to effect the economy

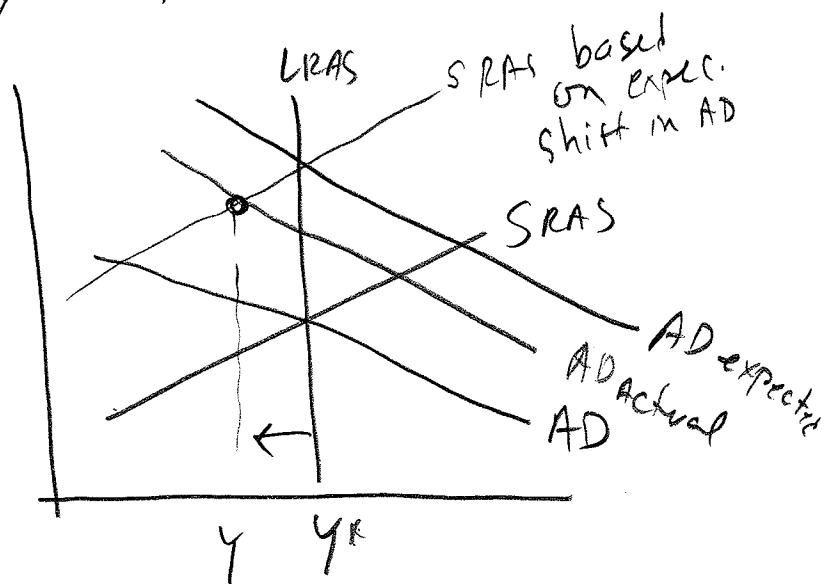
All together,
there can
be as long
as 1 1/2 to
2 years,
a considerable
delay

④ (a) The essential difference is the assumption of price and wage stickiness. In the NC Model, prices and wages are perfectly flexible so any anticipated change in, say, the money supply can be fully reflected in the reaction to it. In the NK Model, agents are equally informed and desire to fully respond to shocks, but price/wage sluggishness prevents them from doing so.

(b)

SRAS shifts to offset expected change.

When actual change is smaller, output falls in SR.



⑤

Y^* is the
Natural rate.
Let Fed shoot
for $Y_{Target} > Y^*$

Start at P_0, M_0 ,
 Y^* . Let $M \uparrow$
to M_1 to hit

target. In SR, $Y \uparrow$ as desired, but over
time SRAS adjusts (to \bar{w}_1) and $Y \downarrow$
again. So, $\uparrow M$ to M_2 and process
repeats. $Y \uparrow$ in SR toward target,
then \downarrow again. So long as Fed
keeps $\uparrow M$ to try to hit Y_{Target} ,
 $P \uparrow$ and there will be inflation

