

Economics 470/570

Midterm 1

Fall 2006

Definitions

- ① Discount rate: This is the rate the Fed charges banks for loans from the discount window
- ② Member banks: members of the Federal Reserve system. To be a member bank, you must purchase stock in the district bank for your geographic area
- ③ Excess reserves are those over and above required by the Fed. If $RR = r_D D$, then any Reserves over this amount are excess reserves
- ④ Federal funds rate: the rate banks charge each other for overnight loans of reserves
- ⑤ Double coincidence of wants: This is the problem under pure barter. To trade, there must be a double coincidence of wants, i.e. A person needs to find someone who wants what they have and has what they want. That could involve considerable transaction costs
- ⑥ Borrowed Reserves are reserves borrowed through the discount window. Non-Borrowed Reserves come from open-market operations

Part II

① The ex-ante real i -rate is set at the beginning of the loan period. It is based on expected inflation. The ex-post real i -rate is measured at the end of the period and is based on actual inflation

$$\text{ex-ante: } r = i - \pi^e$$

$$\text{ex-post: } r = i - \pi$$

Decisions are made at beginning of period (i.e. to take loan or not) so, it's the ex-ante rate that affects decisions

② It should be

- easily standardized, easy to verify its value
- widely accepted, e.g. no pictures that are offensive
- divisible so as to make change
- easy to carry
- storable/durable so it doesn't deteriorate as savings, etc.
- supply can be controlled.

③ The Federal Open Market Committee
Consists of

7 - members of Board of Gov.

1 - NY Fed representative

4 - representatives of other 11
district banks, positions
rotate annually

12 members

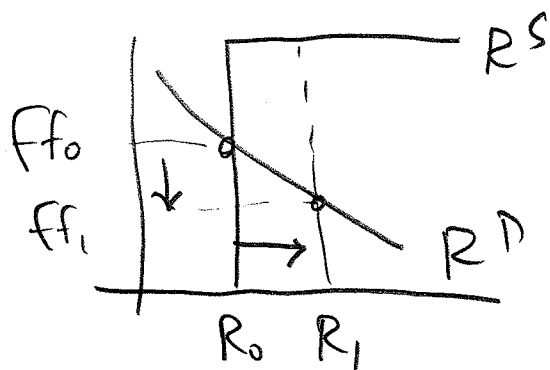
- Meets eight times per year
- Decides monetary policy until the next meeting
- Effectively decides discount rate and reserve req., though not formally set by FOMC.

④(a) The demand for reserves comes from two sources:

Required reserves
excess reserves.

Excess reserves provide insurance against unexpected deposit outflows. However, holding excess reserves means they cannot be lent to other banks at the f_f -rate, so, f_f -rate is opportunity cost of holding excess reserves. Thus, as f_f -rate \uparrow , cost of holding insurance (excess reserves) \uparrow \rightarrow less held and the d -curve is downward sloping

(b) when Fed buys bonds, supply of reserves goes \uparrow \rightarrow supply shifts out



$R \uparrow$ and $ff \downarrow$

Part III

- ① The Federal Reserve is divided into 12 districts, each with its own district bank. Branches off of the main bank in each district exist as well. The district banks themselves are governed by a president and a board of directors consisting of
- | | |
|-------|---|
| 3 | type A - Bankers, elected by banks |
| 3 | type B - non-bankers, elected by banks (Bus. Interest) |
| 3 | type C - Appointed by Board of Gov to serve public interest |
| <hr/> | |
| 9 | Board members |

Banks are quasi-public, and owned by member banks (see defn for what a member bank is).

The Board of Governors consists of seven members appointed by president with the advice and

Consent of the Senate. It is

- Head of system
- Serve 14 year terms, Board members cannot be reappointed
- One gov. term expires every other January
- Required to come from different Fed districts
- Chair comes from one of the seven Board members, serves 4 year term, can be reappointed.
- All are on FOMC, so, can dominate policy as a group.
- Chair testifies before congress, advises U.S. president
- Effectively set res. req., discount rate.
- Sets margin requirements in financial markets

① The Fed is fairly free from Political Pressure because

1. 14 year, non-renewable terms for 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. 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.

[cont.]

② [cont.]

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, every when they go, parties, store, etc., the public expresses their displeasure with policy, then this can affect board members

[cont.]

(2) [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 \rightarrow reelection, but inflation in LR).
3. Less temptation to monetize debt.
4. Cross-country studies show that Less independence is associated with higher Inflation.

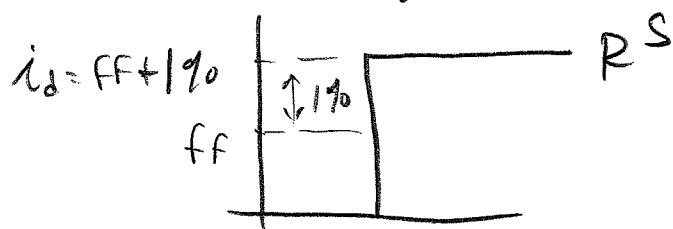
[cont.]

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, but I think I omitted this one in class [so this part is not required].

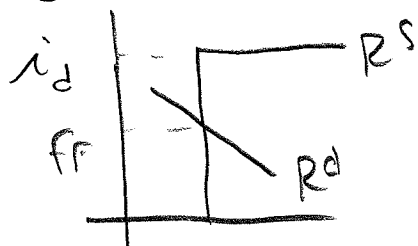
③ The discount window is a place where banks can go to get loans of reserves to help them overcome unexpected deposit outflows and other problems that might leave them short of their required reserves.

The discount rate - the rate the Fed charges on these loans - is currently 1% above the ff-rate. The Fed will loan all banks want to borrow at this rate. Thus, the supply of reserves looks like



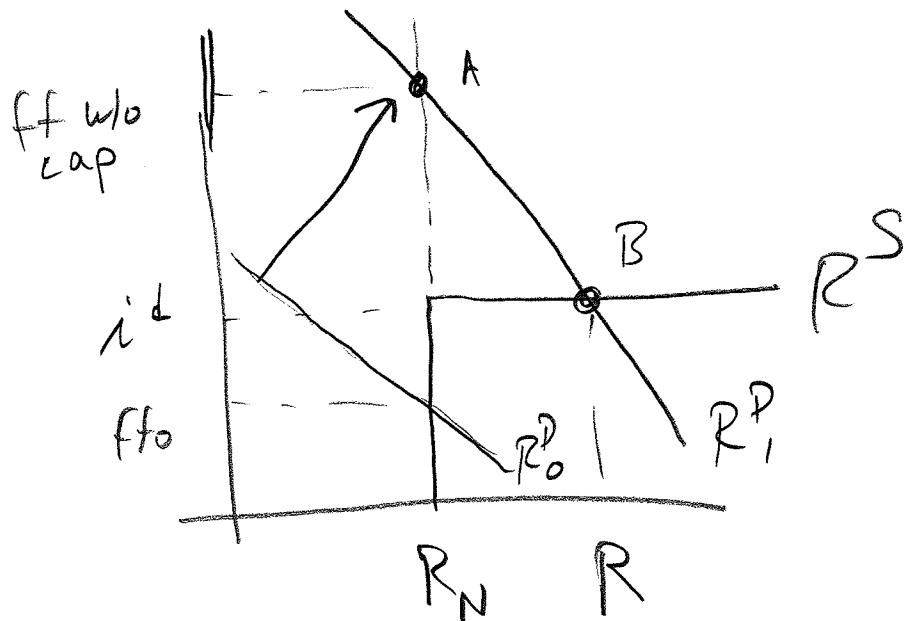
This caps the ff rate at i_d . To

see this, start at equilibrium



and let R^S fall or $R^D \uparrow$. Then

Here,
 $R^D \uparrow$



Without the discount window, ff would rise to point A. With discount window, go to point B and ff does not rise above id . So, even when $R^D \uparrow$ substantially, ff capped at id .

[The result would be the same if $R^S \downarrow$ rather than $R^D \uparrow$]

④ The three tools are open market operations, discount loans, and changes in reserve requirements

Open market operation: Buy T-Bill
from Bank worth 100

<table style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 50%; text-align: center;">A</th> <th style="width: 50%; text-align: center;">L</th> </tr> <tr> <td style="border-right: 1px solid black; padding: 5px;">-Sec 100 +Res 100</td> <td style="padding: 5px;"></td> </tr> </table> <p style="text-align: center;">Bank</p>	A	L	-Sec 100 +Res 100		<table style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 50%; text-align: center;">A</th> <th style="width: 50%; text-align: center;">L</th> </tr> <tr> <td style="border-right: 1px solid black; padding: 5px;">+Sec 100</td> <td style="padding: 5px;">+Res 100</td> </tr> </table> <p style="text-align: center;">Fed</p>	A	L	+Sec 100	+Res 100
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-Sec 100 +Res 100									
A	L								
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So, $R \uparrow$ by 100 and hence MB \uparrow by 100

Discount Loan of 100

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So, R
and MB
 \uparrow by 100.

Let required reserves ↑ from 10% to 20%. This does not change total Reserves in the system, only the amount required

10 RR	100 DD
90 Loans	

→

20 RR	100 DD
80 Loans	

Before
(Total R for all Banks = 100)

After
(Total R still 100)

So, MB unaffected, M^S changes

Because $mu \downarrow$

$$M^S = (mu \downarrow) (MB)$$

Smaller

no change