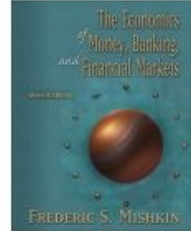


# ECON 354 Money and Banking

Professor Yamin Ahmad

## Lecture 6

- Market for Reserves and Federal Funds Rate
- Effects of Policy Tools:
  - Open Market Operations
  - Discount Loans
  - Reserve Requirements



## Big Concepts

- Market for Reserves:
  - Demand for reserves
  - Supply of reserves
- Determination of the Federal Funds Rate
- How changes in monetary policy instruments affect the interbank market.

Note: These lecture notes are incomplete without having attended lectures

## The Market for Reserves and the Federal Funds Rate

### Demand Curve for Reserves

1.  $R = RR + ER$
2.  $i \downarrow$ , opportunity cost of  $ER \downarrow$ ,  $ER \uparrow$
3. Demand curve slopes down

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## The Market for Reserves and the Federal Funds Rate

### Supply Curve for Reserves

1. If  $i_{ff}$  is below  $i_d$ , then discount borrowing,  $R^s = R_n$
2. Supply curve flat (infinitely elastic) at  $i_d$  because as  $i_{ff}$  starts to go above  $i_d$ , banks borrow more at  $i_d$

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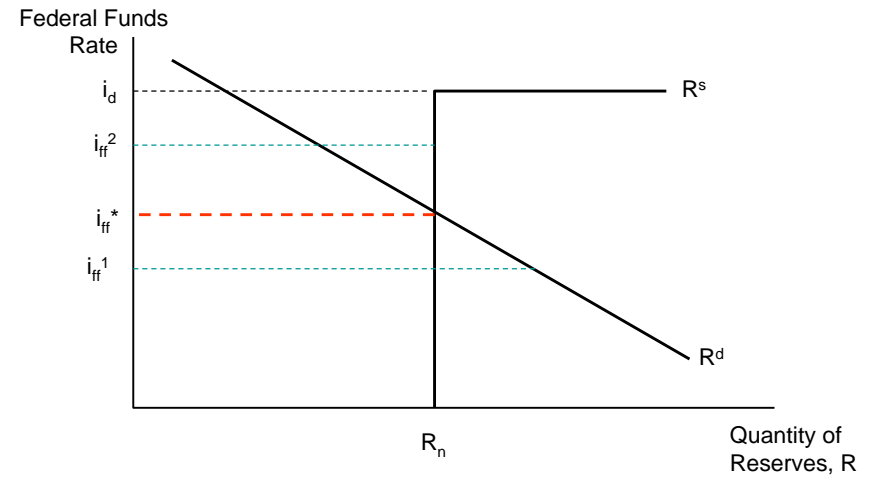
# The Market for Reserves and the Federal Funds Rate

Market Equilibrium:

$$R^d = R^s \text{ at } i_{ff}^*$$

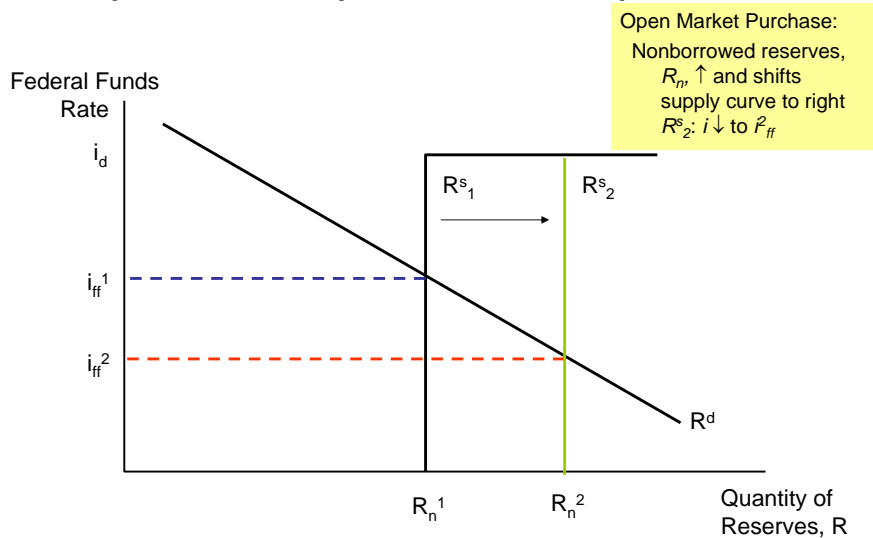
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# Supply and Demand for Reserves



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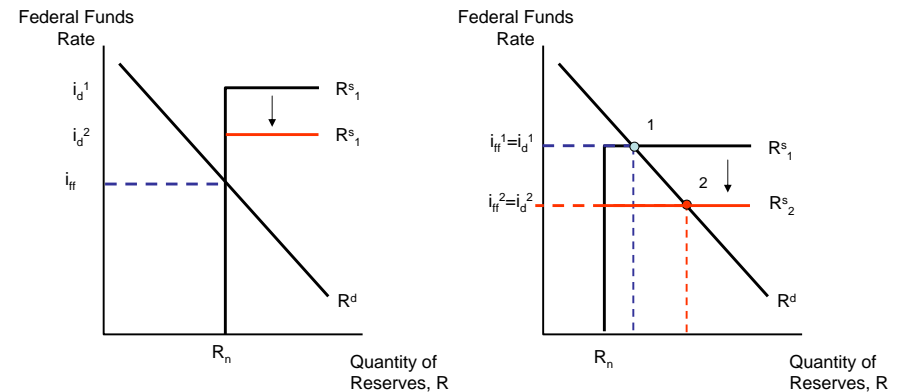
# Response to Open Market Operations



Open Market Purchase:  
Nonborrowed reserves,  $R_n \uparrow$  and shifts supply curve to right  $R^{s_2}$ ;  $i \downarrow$  to  $i_{ff}^2$

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# Response To A Change In The Discount Rate

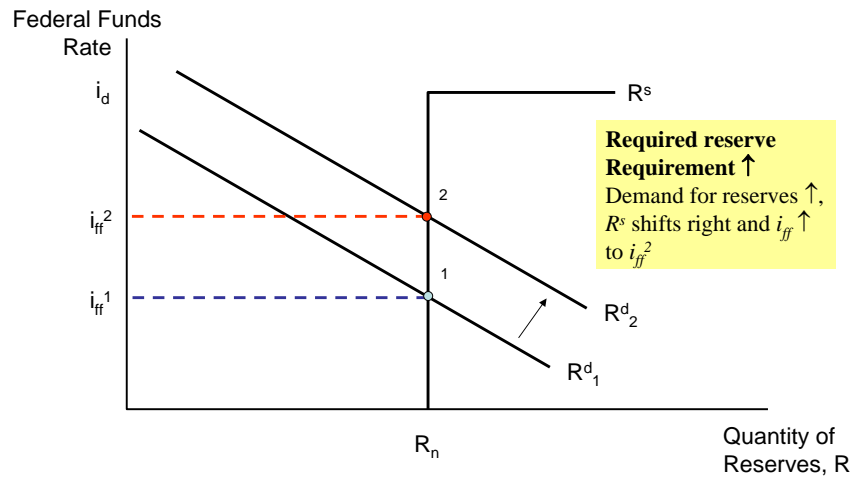


(a) No discount lending: **Lower Discount Rate**  
Horizontal section  $\downarrow$  and supply curve just shortens,  $i_{ff}$  stays same

(b) Some discount lending: **Lower Discount Rate**  
Horizontal section  $\downarrow$ ,  $i_{ff} \downarrow$  to  $i_{ff}^2 = i_d^2$

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## Response To A Change In Required Reserves



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## Open Market Operations

### Two Types of Open Market Operations (OMO):

#### 1. Dynamic:

- Meant to change MB

#### 2. Defensive:

- Meant to offset other factors affecting MB, typically using **repo** (repurchase agreements) for a temporary OM purchase and a matched-sale purchase transaction (or **reverse repo**) for a temporary open market sale.

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## Advantages of Open Market Operations

1. Fed has complete control
  - Fed completely controls the volume of transactions
2. Flexible and precise
3. Easily reversed
4. Implemented quickly

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## Discount Loans

### Three Types of Discount Loans

#### 1. Primary Credit/ Standing Lending Facility

- Healthy banks are allowed to borrow all they want from the primary credit facility
- Interest rate on these loans is the discount rate, typically set at 100 basis points (1%) above the Fed Funds rate target.

#### 2. Secondary Credit

- Given to banks in financial trouble experiencing severe liquidity problems
- Interest rate here is typically 50 basis points (0.5%) above the discount rate

#### 3. Seasonal Credit

- Given to limited number of small banks that have a seasonal pattern of deposits
- Interest rate charged here is tied to the average of the Fed Funds rate and the CD rate

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## Discount Loans

### Lender of Last Resort Function:

#### 1. To prevent banking panics

*FDIC fund not big enough:* Although FDIC insures depositors up to a limit of \$100,000 per account, the insurance funds are approx 1% of the deposits outstanding

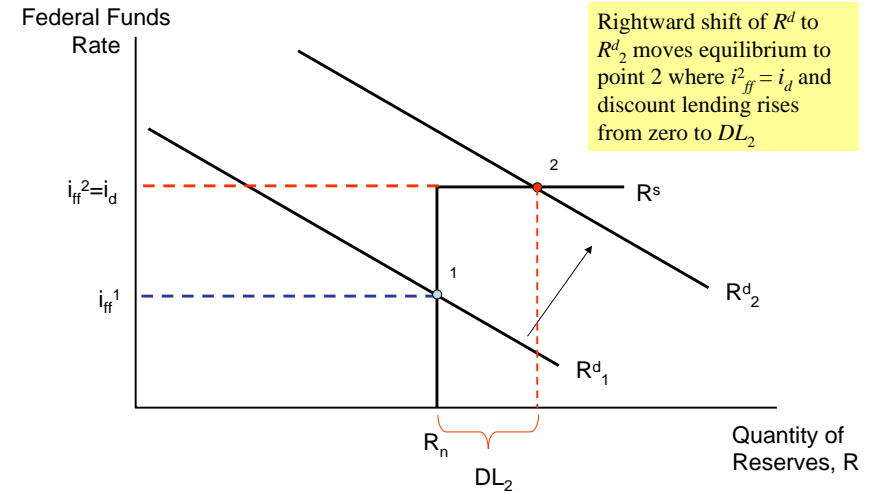
**Example:** Continental Illinois

#### 2. To prevent nonbank financial panics

**Examples:** 1987 stock market crash and September 11 terrorist incident

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## How Primary Credit Facility Puts Ceiling on $i_{ff}$



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## Discount Policy

### Advantages

1. Lender of Last Resort Role

### Disadvantages

1. Confusion interpreting discount rate changes
2. Fluctuations in discount loans cause unintended fluctuations in money supply
3. Not fully controlled by Fed

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## Reserve Requirements

### Advantages

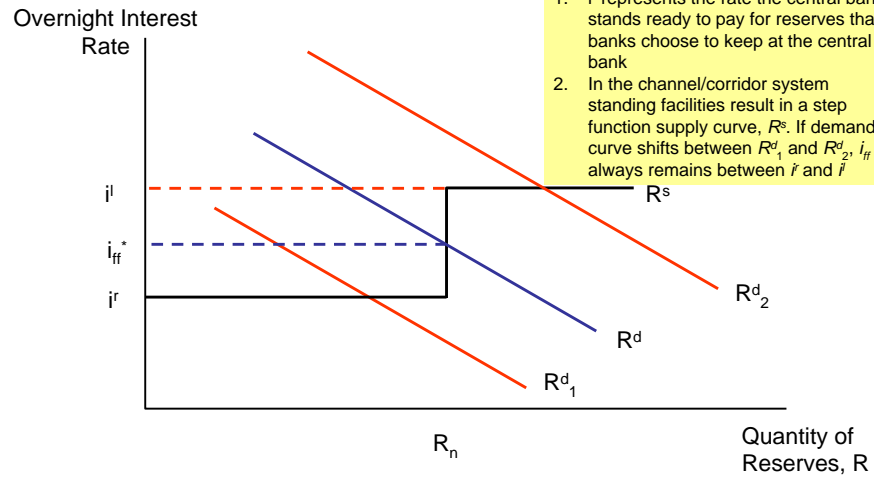
- Powerful effect

### Disadvantages

1. Small changes have very large effect on  $M^s$
2. Raising causes liquidity problems for banks
3. Frequent changes cause uncertainty for banks
4. Tax on banks

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# Channel/Corridor System for Setting Interest Rates in Other Countries



Note: These lecture notes are incomplete without having attended lectures