Lecture7: Tools of Monetary Policy

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Outline

- Reserves Demand and Supply
- Affecting the Fed Funds Rate
- Tools of Monetary Policy
  - Open Market Operations (OMOs)
  - Discount Lending
  - Reserve Requirement
- Tools of Monetary Policy: The European Experience
- Tools of Monetary Policy: The Thai Experience

Tools of Monetary Policy

- Open market operations
  - Affect the quantity of reserves and the monetary base
- Changes in borrowed reserves
  - Affect the monetary base
- Changes in reserve requirements
  - Affect the money multiplier
- Federal funds rate—the interest rate on overnight loans of reserves from one bank to another
  - Primary indicator of the stance of monetary policy

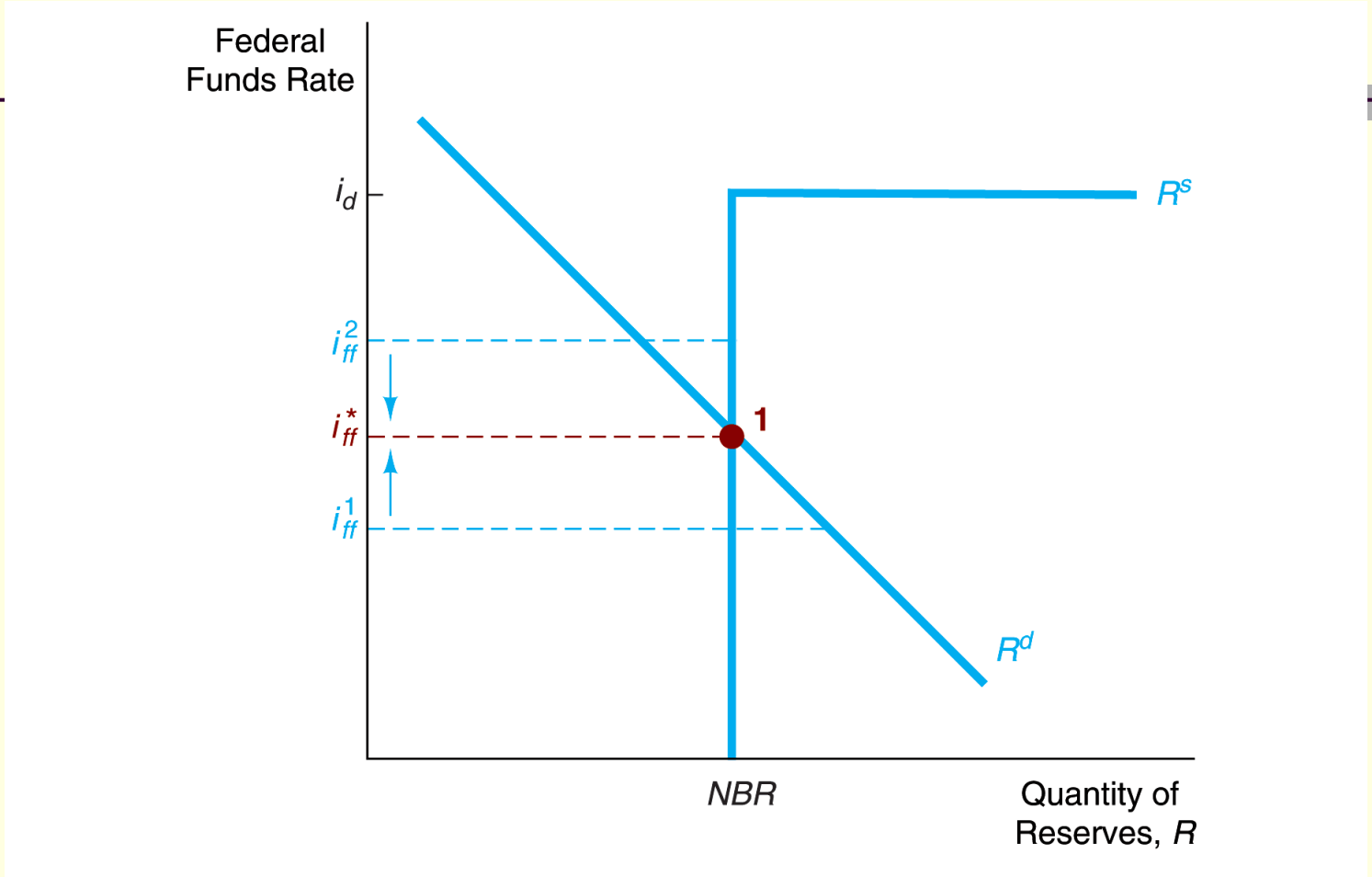
Demand in the Market for Reserves

- What happens to the quantity of reserves demanded, holding everything else constant, as the federal funds rate changes?
- Two components: required reserves and excess reserves
  - Excess reserves are insurance against deposit outflows
  - The cost of holding these is the interest rate that could have been earned
- As the federal funds rate decreases, the opportunity cost of holding excess reserves falls and the quantity of reserves demanded rises
- Downward sloping demand curve

Supply in the Market for Reserves

- Two components: non-borrowed and borrowed reserves
- Cost of borrowing from the Fed is the discount rate
- Borrowing from the Fed is a substitute for borrowing from other banks
- If $i_{ff} < i_d$, then banks will not borrow from the Fed and borrowed reserves are zero
- The supply curve will be vertical
- As i_{ff} rises above i_d, banks will borrow more and more at i_d, and re-lend at i_{ff}
- The supply curve is horizontal (perfectly elastic) at i_d

Equilibrium in the market for reserves



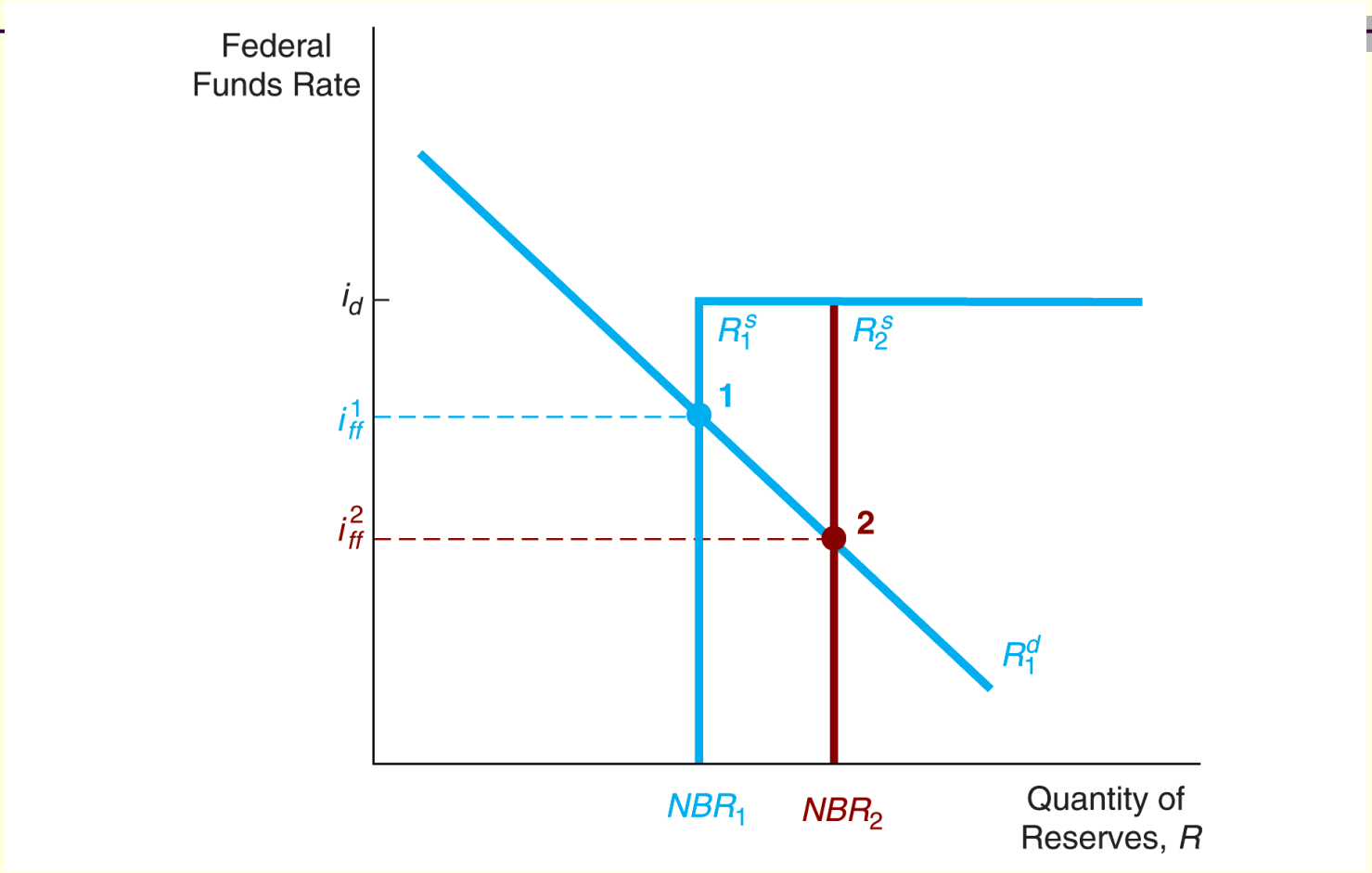
Affecting the Federal Funds Rate

- An open market purchase causes the federal funds rate to fall; an open market sale causes the federal funds rate to rise❶ shifting the supply curve
- If the intersection of supply and demand occurs on the vertical section of the supply curve, a change in the discount rate will have no effect on the federal funds rate

Affecting the Federal Funds Rate (cont'd)

- If the intersection of supply and demand occurs on the horizontal section of the supply curve, a change in the discount rate shifts that portion of the supply curve and the federal funds rate may either rise or fall depending on the change in the discount rate
- When the Fed raises reserve requirement, the federal funds rate rises and when the Fed decreases reserve requirement, the federal funds rate falls shifting the demand curve

Response to an open market operation



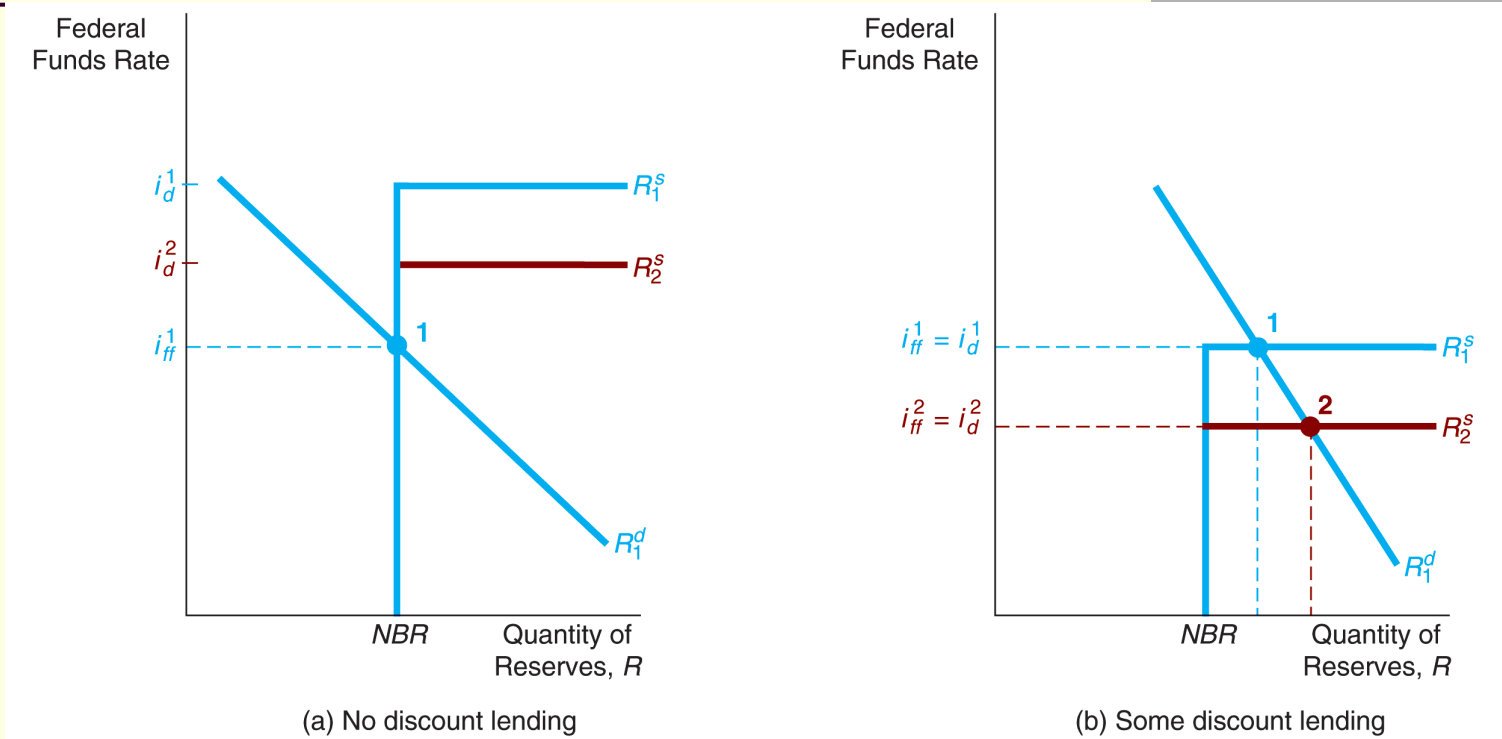
Advantages of Open Market Operations

- The Fed has complete control over the volume
- Flexible and precise
- Easily reversed
- Quickly implemented

Discount Policy

- Discount window
- Primary credit—standing lending facility
- Secondary credit
- Seasonal credit
- Lender of last resort to prevent financial panics
  - Creates moral hazard problem

Response to a change in the Discount Rate



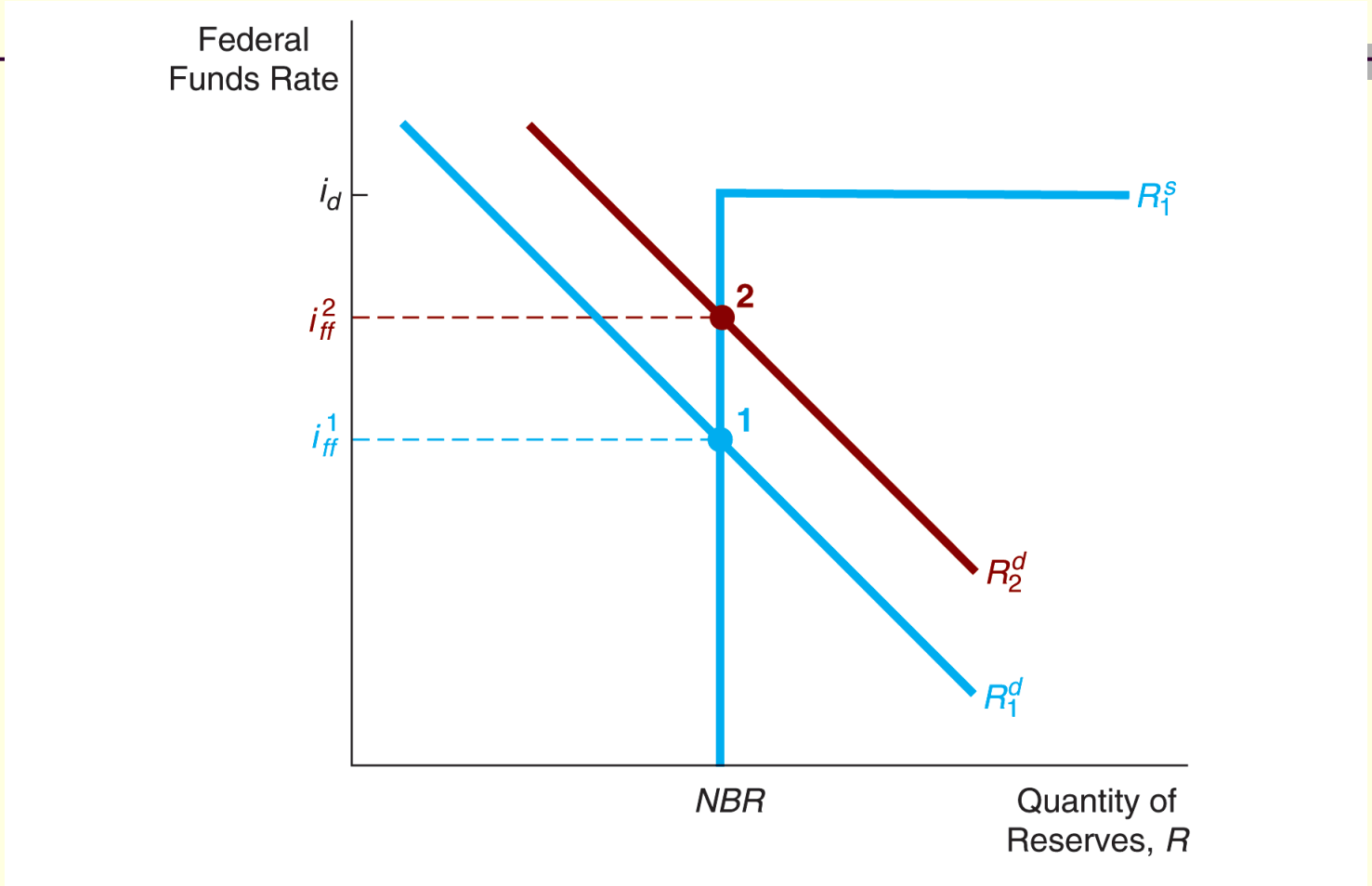
Advantages and Disadvantages of Discount Policy

- Used to perform role of lender of last resort
- Cannot be controlled by the Fed; the decision maker is the bank
- Discount facility is used as a backup facility to prevent the federal funds rate from rising too far above the target

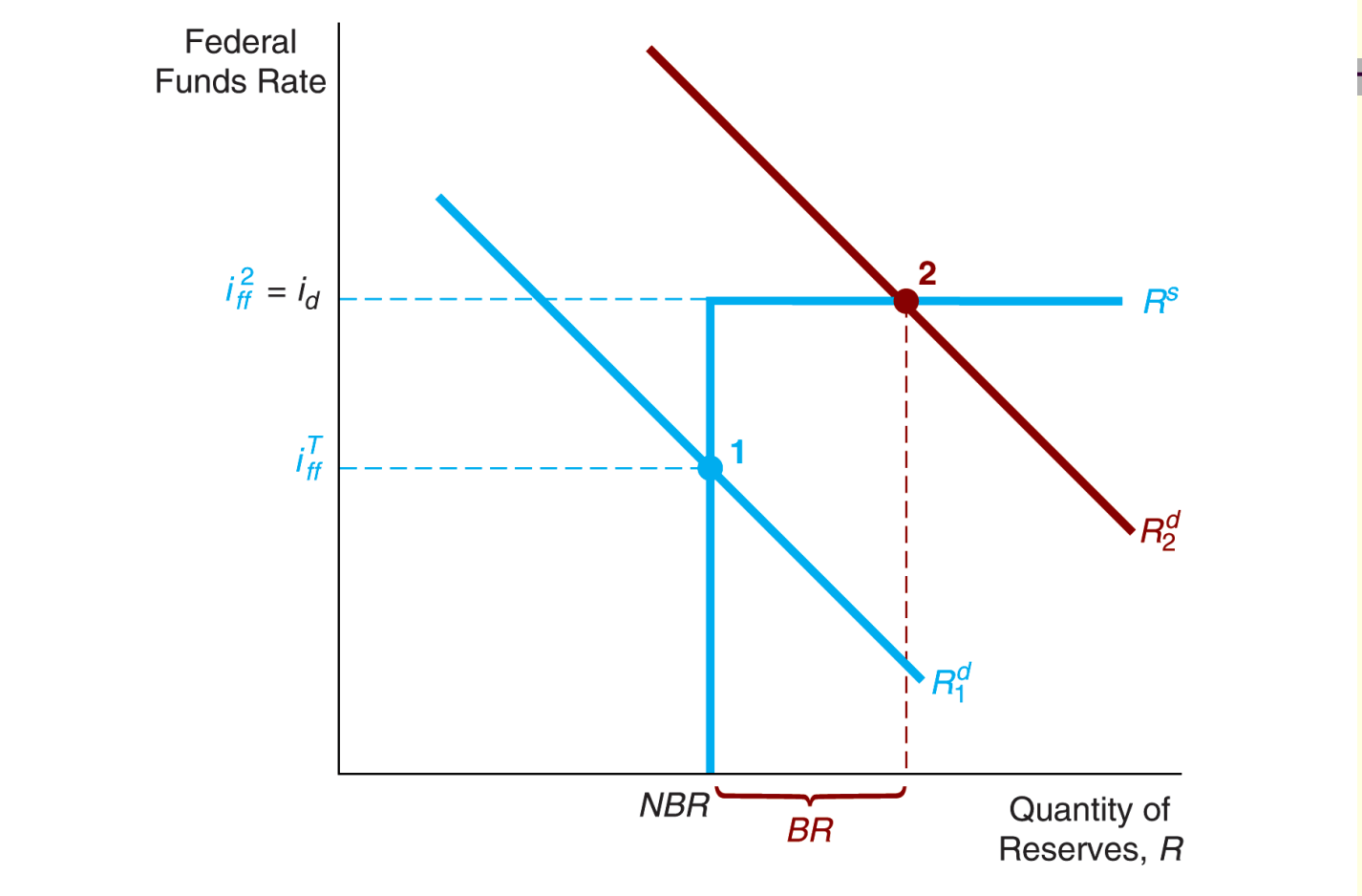
Reserve Requirements

- Depository Institutions Deregulation and Monetary Control Act of 1980 sets the reserve requirement the same for all depository institutions
- 3% of the first $48.3 million of checkable deposits; 10% of checkable deposits over $48.3 million
- The Fed can vary the 10% requirement between 8% to 14%

Response to a change in Required Reserves



How the Discount Rate puts a ceiling on the fed funds rate



Disadvantages of Reserve Requirements

- No longer binding for most banks
- Can cause liquidity problems
- Increases uncertainty
- Recommendations to eliminate

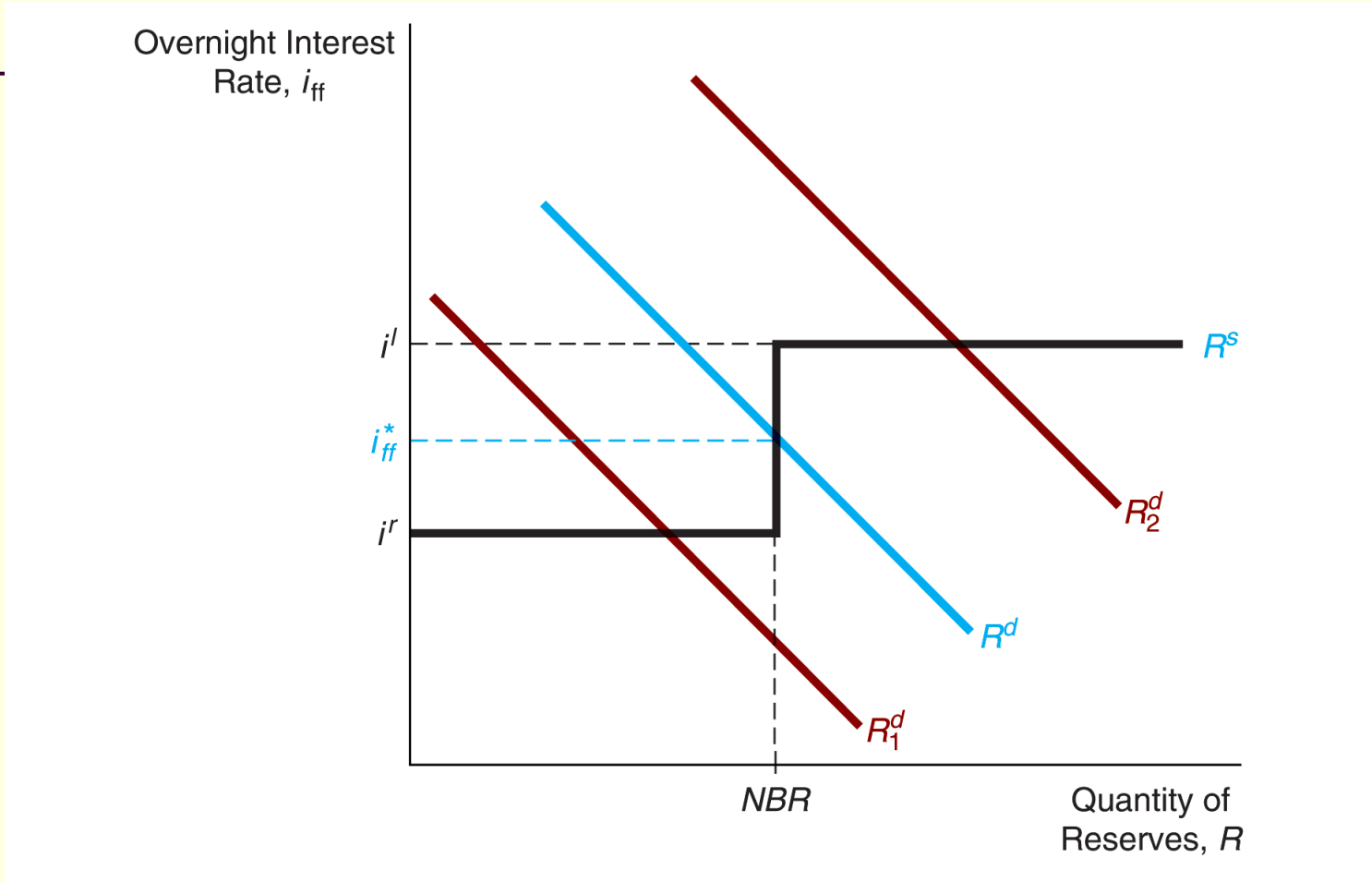
The Channel/Corridor System

- Sets up a standing lending facility (lombard facility) and stands ready to loan overnight any amount banks ask for at a fixed interest rate (lombard rate)
- The supply of reserves is infinitely elastic at this interest rate
- Another standing facility is set up that pays banks a fixed interest rate on any deposits they would like to keep at the central bank

The Channel/Corridor System (cont'd)

- The supply of reserves is also infinitely elastic at this interest rate
- In between these two interest rates the quantity supplied is equal to the non-borrowed reserves
- The demand curve has its usual downward slope

The Corridor system for setting Interest Rates



Monetary Policy Tools of the European Central Bank

- Open market operations
  - Main refinancing operations
    - Weekly reverse transactions
  - Longer-term refinancing operations
- Lending to banks
  - Marginal lending facility/marginal lending rate
  - Deposit facility

Monetary Policy Tools of the European Central Bank (cont'd)

- Reserve Requirements
  - 2% of the total amount of checking deposits and other short-term deposits
  - Pays interest on those deposits so cost of complying is low

Monetary Policy Tools of the Bank of Thailand

Every 6-8 weeks, the MPC meets to decide on the 1-day repurchase rate (the policy rate).

1. Reserve requirements
   - Commercial banks are required to maintain the required reserves on average over a fortnightly period. Currently, the reserve requirement ratio is 6%.

2. Open Market Operations (OMOs)

- *repurchase operations*: to temporarily add or drain reserves available to the banking system
  - The BoT-operated Repurchase Market: BoT as a matched-principal broker (no longer in operation)
  - The Bilateral Repurchase Operations: conducted through appointed Bilateral Primary Dealers (PD)

2. Open Market Operations (OMOs)

- *outright purchase/sale of government securities*: to permanently add or drain reserves available to the banking system
- *issuance of Bank of Thailand Bonds*: to expand the range of instruments used in the monetary policy implementation
- *Foreign exchange swaps*
  - to supplement other OMOs when domestic securities are scarce
  - the Thai baht is exchanged for foreign currency (US dollar) instead of domestic securities

3. Standing facilities

- This is equivalent to the primary credit. The BoT provides a standing overnight credit facility or ‘End-of-Day Liquidity Window’. Financial institutions may either borrow from or lend to the BoT in order to adjust their liquidity positions at the end of the day at +/- 50 basis points relative to the policy rate.