

Lecture 7: 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

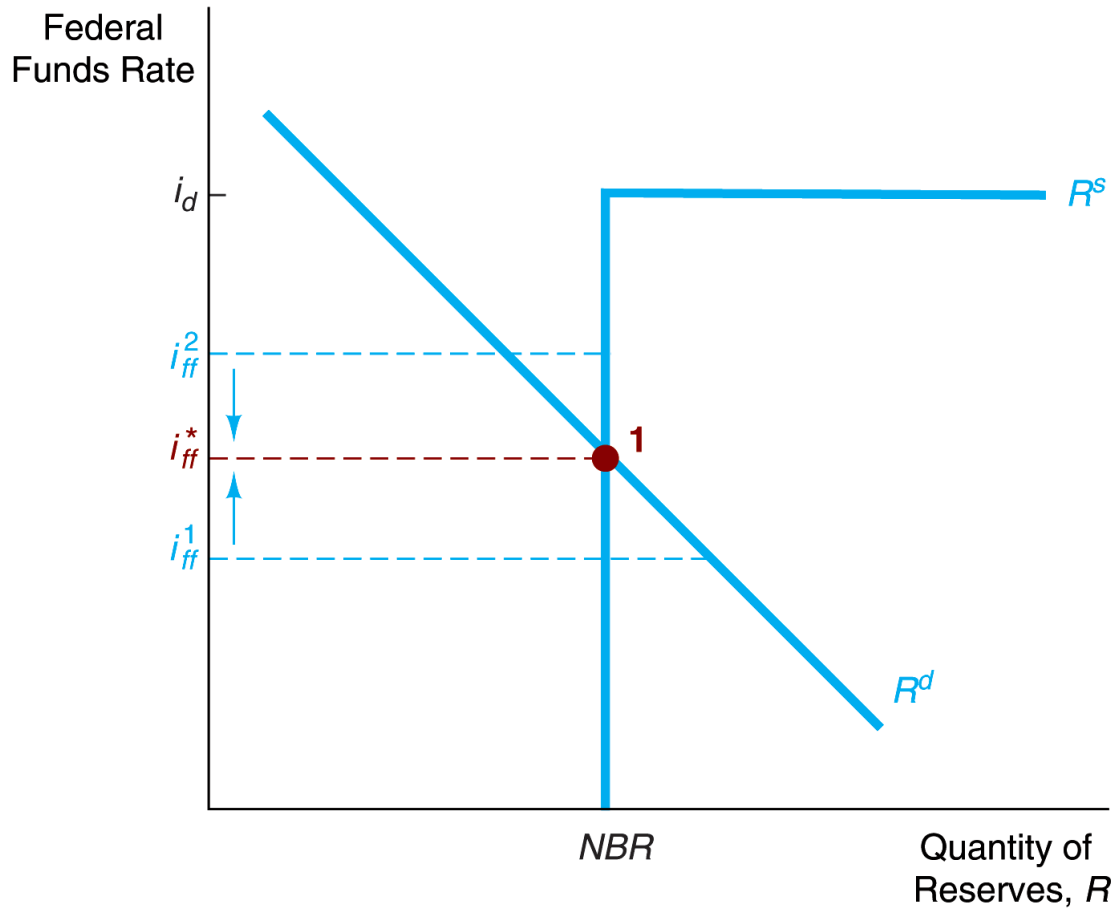
Demand in the Market for Reserves

- 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



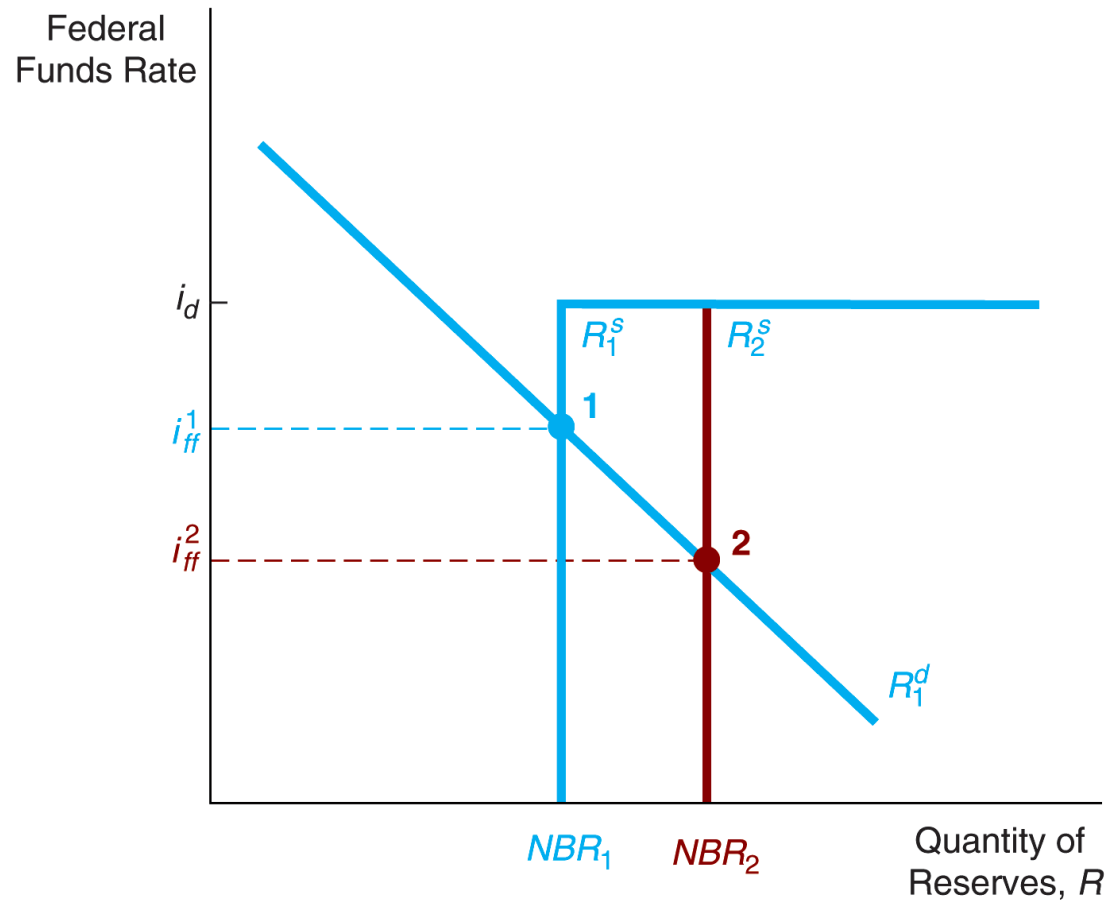
Affecting the Federal Funds Rate

- An open market purchase causes the federal funds rate to fall; an open market sale causes the federal funds rate to rise ➡ 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



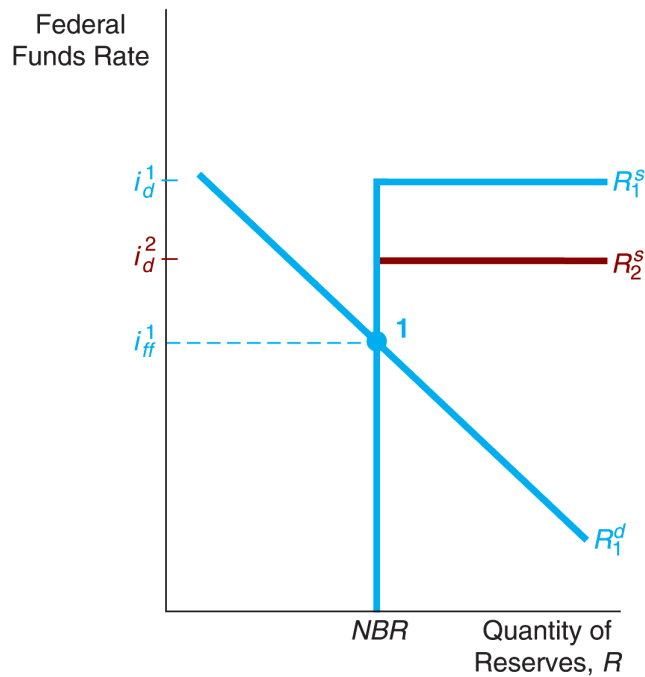
Advantages of Open Market Operations

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

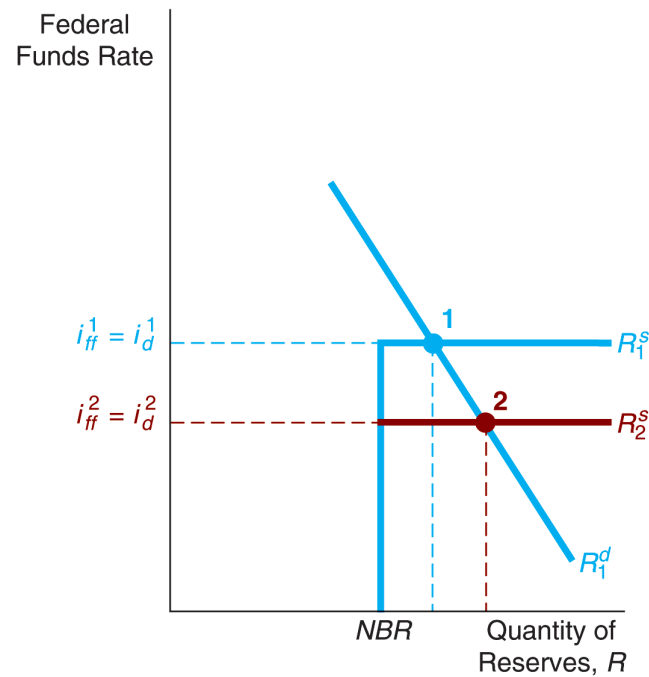
Discount Policy

- 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



(a) No discount lending



(b) Some discount lending

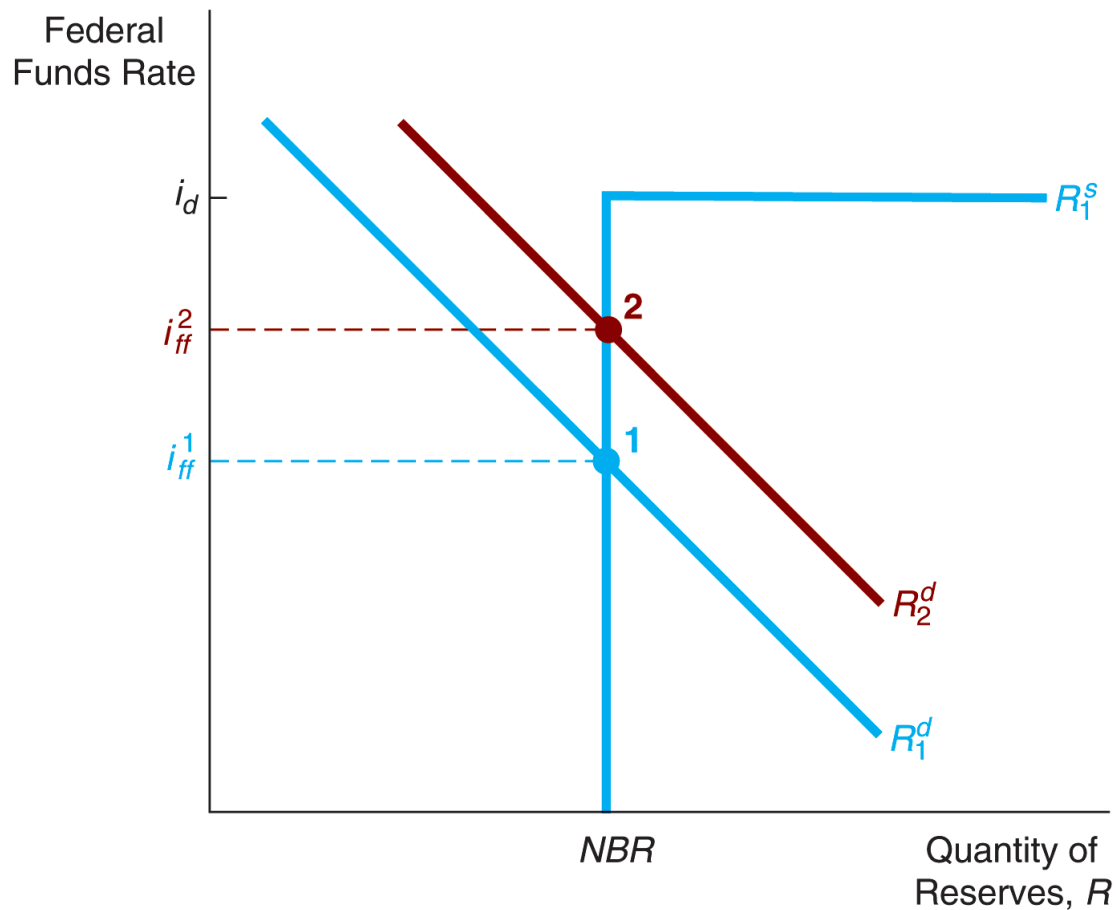
Advantages and Disadvantages of Discount Policy

- 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

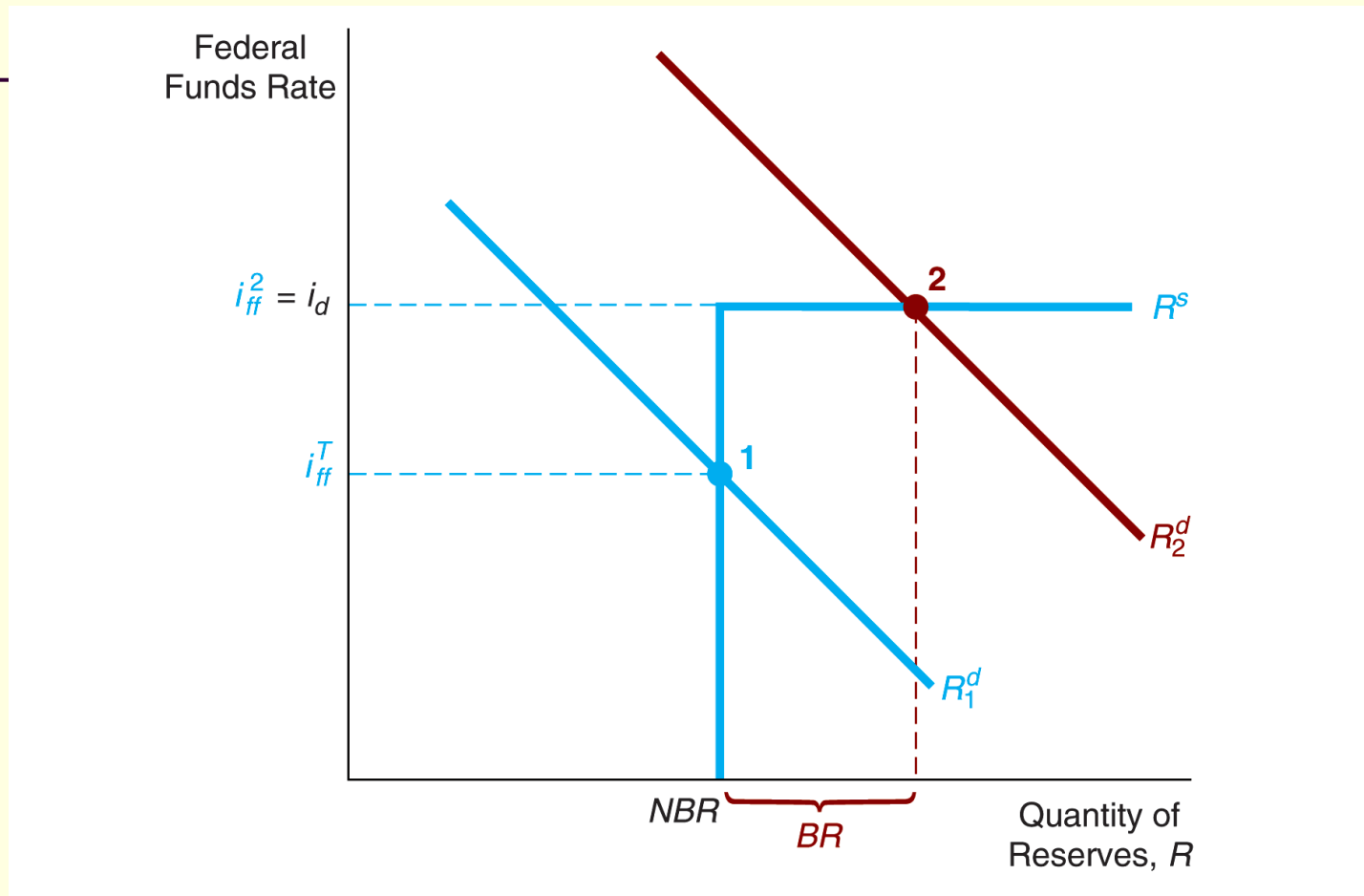
Reserve Requirements

- 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

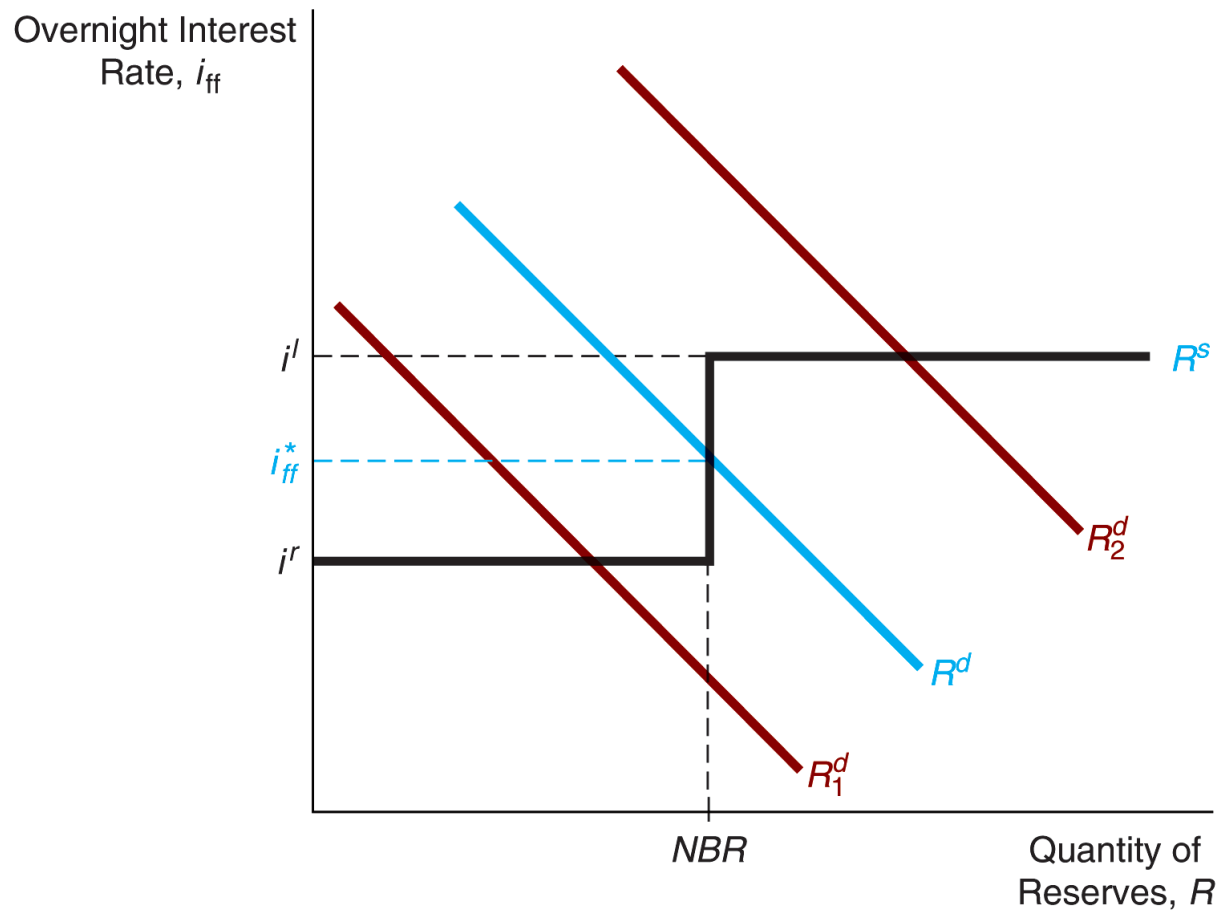
The Channel/Corridor System

- 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.