

Lecture Notes on

**MONEY, BANKING,
AND FINANCIAL MARKETS**

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Chapter 17a: The Tools of Monetary Policy

1. Open Market Operations
2. Discount Loans
3. Changes in Reserve Requirements

Before working through Mishkin’s Chapter 17, on the Tools of Monetary Policy, it is helpful to state a definition that clarifies what is meant by the term “monetary policy” in the first place. We can find such a definition in Chapter 1 of Mishkin’s book, on page 12:

Monetary policy = the management of money and interest rates.

Next, it is useful to recall from our analysis of the money supply process that

$$M = m \times MB,$$

where M is the money supply, MB is the monetary base, and m , the money multiplier, is determined as

$$m = \frac{1 + c}{r + e + c}.$$

These equations reveal that the Fed can manage the money supply—that is, conduct monetary policy, in three ways:

By changing the monetary base through open market operations.

By changing the monetary base through discount lending.

By changing the money multiplier by changing the required reserve ratio.

Thus, the Fed has three tools of monetary policy:

Open market operations.

Discount loans.

Changes in reserve requirements.

Which of these tools is most effective?

Mishkin’s Chapter 17 helps us answer this question.

1 Open Market Operations

We have already distinguished between two types of open market operations:

Open market purchases = Fed buys US government securities to increase the monetary base.

Open market sales = Fed sells US government securities to decrease the monetary base.

Thus, the Fed conducts open market operations by buying and selling US government securities—especially US Treasury bills.

Since the market for US Treasury bills is so active, the Fed can make large purchases and sales quickly and easily, without disrupting the market.

Although the FOMC makes decisions on how open market operations are to be conducted, the trades themselves are executed at the Open Market Desk at the Federal Reserve Bank of New York.

Open market purchases and sales have permanent effects on the monetary base, but sometimes the Fed will want to change the monetary base only temporarily. At these times, it engages in two other types of transactions:

Repurchase Agreement (repo) = The Fed purchases US government securities with an agreement that the seller will buy them back (repurchase them) at a specified price on a specified date, usually within two weeks. A repo is therefore like a temporary open market purchase, temporarily increasing the monetary base.

Matched Sale-Purchase Transaction (reverse repo) = The Fed sells US government securities with an agreement that the buyer will sell them back at a specified price on a specified date, again usually within two weeks. A reverse repo is therefore like a temporary open market sale, temporarily decreasing the monetary base.

Hence, in conducting monetary policy, open market operations have a number of advantages:

They are under the direct and complete control of the Fed.

They can be large or small.

They can be easily reversed.

They can be implemented quickly.

2 Discount Loans

When a bank receives a discount loan from the Fed, it is said to have received a loan at the “discount window.”

The Fed can affect the volume of discount loans by setting the discount rate:

A higher discount rate makes discount borrowing less attractive to banks and will therefore reduce the volume of discount loans.

A lower discount rate makes discount borrowing more attractive to banks and will therefore increase the volume of discount loans.

Discount lending is most important during financial panics:

When depositors lose confidence in the financial system, they will rush to withdraw their money.

This large deposit outflow puts the banking system in great need of reserves.

The Fed stands ready to supply these reserves by making discount loans.

In such situations, the Fed acts as a lender of last resort.

Hence, in October 1987 and again in September 2001, the Fed made it clear that it would supply additional reserves to the financial system, as necessary, through the discount window.

Advantage of discount loans:

They allow the Fed to act as a lender of last resort during a financial panic.

Disadvantages of using discount loans as a tool for monetary policy during normal times:

The volume of discount loans can be influenced by the Fed, but not completely controlled: The Fed cannot be sure how many banks will request discount loans at any given interest rate.

Changes in the discount rate must be proposed by the Federal Reserve Banks before being approved by the Board of Governors. Hence, they are neither quickly made nor easily reversed.

3 Changes in Reserve Requirements

By affecting the money multiplier, changes in the required reserve ratio can lead to changes in the money supply.

Disadvantages to using changes in reserve requirements as a tool for monetary policy:

Large changes in reserves must be approved by Congress.

Hence, large changes cannot be made quickly and easily.

Also, if a bank holds only a small amount of excess reserves and the required reserve ratio is increased, the bank will have to quickly acquire reserves by borrowing, selling securities, or reducing its loans. Each of these three options is costly and disruptive.

Hence, changes in reserve requirements can cause problems for banks by making liquidity management more difficult.

4 Conclusion

Open market operations are by far the most effective tool with which the Fed can conduct monetary policy on a day-to-day basis.

Thus, in practice, the Fed relies most heavily on open market operations in conducting monetary policy.