

(1) What is the monetary policy objective of the Federal Reserve?

The Federal Reserve's objective for open market operations has varied over the years. During the 1980s, the focus gradually shifted toward attaining a specified level of the federal funds rate, a process that was largely complete by the end of the decade. Beginning in 1994, the FOMC began announcing changes in its policy stance, and in 1995 it began to explicitly state its target level for the federal funds rate. Since February 2000, the statement issued by the FOMC shortly after each of its meetings usually has included the Committee's assessment of the risks to the attainment of its long-run goals of price stability and sustainable economic growth.

In short, stable prices, maximum employment, and moderate long term interest rates.

(2) In the context of the Federal Reserve, what is “Monetary Policy”?

The term *monetary policy* refers to the actions undertaken by a central bank, such as the Federal Reserve, to influence the availability and cost of money and credit as a means of helping to promote national economic goals.

What are the three tools used by the Federal Reserve to control monetary policy?

The Federal Reserve controls the three tools of monetary policy--open market operations, the discount rate, and reserve requirements

### **Open Market Operations**

Open market operations--purchases and sales of U.S. Treasury and federal agency securities--are the Federal Reserve's principal tool for implementing monetary policy. The short-term objective for open market operations is specified by the [Federal Open Market Committee](#) (FOMC). This objective can be a desired quantity of reserves or a desired price (the federal funds rate). The federal funds rate is the interest rate at which depository institutions lend balances at the Federal Reserve to other depository institutions overnight.

They call the trading desk at the FED bank and tell them to buy back government bonds which increases liquidity in the system, puts funds on the street. Selling bonds has the opposite effect. Buying and selling of government bonds by the government influences the liquidity in the market, the amount of cash available for lending. When supply of funds is reduced (shifts the supply curve LEFT) the rate goes up.

Open market operations comprise the Federal Reserve Banks most important tool of monetary policy.

### **Discount Rate**

The discount rate is the interest rate charged to commercial banks and other depository institutions on loans they receive from their regional Federal Reserve Bank's lending facility--the discount window. The Federal Reserve Banks offer three discount window programs to depository institutions: primary credit, secondary credit, and seasonal credit, each with its own interest rate. All discount window loans are fully secured.

The FED tries to change the market rate by adjusting this rate (this is the rate at the very beginning of the yield curve). All other interest rates, the rest of the yield curve, are set by supply and demand.

### **Reserve Requirements**

Required reserves must be held in the form of vault cash and, if vault cash is insufficient, also in the form of a deposit maintained with a Federal Reserve Bank. An institution that is a member of the Federal Reserve System must hold that deposit directly with a Reserve Bank; an institution that is not a member of the System can maintain that deposit directly with a Reserve Bank or with another institution in a pass-through relationship. Reserve requirements are imposed on commercial banks, savings banks, savings and loan associations, credit unions, U.S. branches and agencies of foreign banks, Edge corporations, and agreement corporations.

- (3) The Federal Funds Rate is an interest rate used to price what type of borrowing?

The federal funds rate is the interest rate at which depository institutions lend balances at the Federal Reserve to other depository institutions overnight.

Changes in the federal funds rate trigger a chain of events that affect other short-term interest rates, foreign exchange rates, long-term interest rates, the amount of money and credit, and, ultimately, a range of economic variables, including employment, output, and prices of goods and services.

- (4) When did the last two announcements occur that changed the intended Fed Funds Rate?

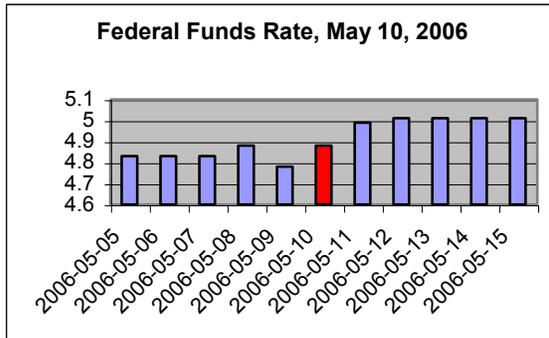
**June 29, 2006:** The Federal Open Market Committee decided to raise its target for the federal funds rate by 25 basis points to 5-1/4 percent.

**May 10, 2006:** The Federal Open Market Committee decided to raise its target for the federal funds rate by 25 basis points to 5 percent.

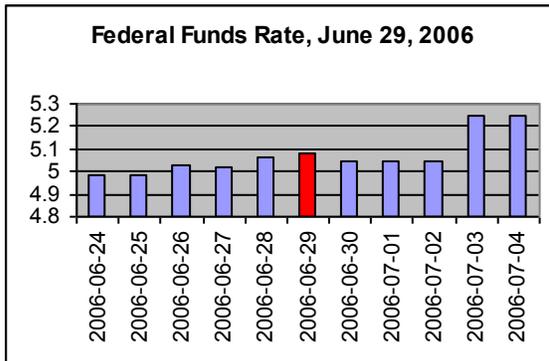
- a. What was the actual rate the day after the last announcement and how did it compare to the intended rate?

The Federal Funds Rate on June 30, 2006 was 5.05%, .2% below the intended rate. The actual Federal Funds Rate reached the intended rate of 5.25% on July 3, 2006. This was the Monday following the Thursday on which the FED announced the new target rate.

- b. What happened to the fed funds rate before and after the announcements came out?



The rate increase announcement made on May 10, 2006, a Wednesday, was preceded by a dip, 10 basis points, in the Federal Funds Rate and followed immediately by a sustained increase in the rate starting at 4.99% and leveling off at 5.01% (at least for the next 4 days).



The announcement of June 29, 2006 occurred on a Thursday. The rate on Thursday June 29 represented a high in recent days, up 2 basis points from the Wednesday June 28 rate of 5.06%. The rate slipped 3 basis points the day after the announcement, Friday, and then rose 20 basis points the following Monday to 5.25%.

- (5) There are three forms of discount rate, what are the current rates?

<i>Current Interest Rates: July 30, 2006</i>	
<b>Primary Credit</b>	6.25%
<b>Secondary Credit</b>	6.75%
<b>Seasonal Credit</b>	5.35%

- a. What are these rates used for?

The Discount Window functions as a safety valve in relieving pressures in reserve markets; extensions of credit can help relieve liquidity strains in a depository institution and in the banking system as a whole. By supplying liquidity during times of systemic stress, the Discount Window also helps to assure the basic stability of the payments system more generally. Banks and other depository institutions traditionally have borrowed from the Federal Reserve's Discount Window when they face a temporary, unexpected, need for funds. Historically, the Federal Reserve lent "adjustment credit" to meet such needs.

Under the primary credit program, loans are extended for a very short term (usually overnight) to depository institutions in generally sound financial condition. Generally, there are no restrictions on borrowers' use of primary credit. The primary credit program minimizes the administration of and restrictions on the use of Discount Window credit. Moreover, only generally sound institutions are eligible to borrow primary credit, so borrowing primary credit should not be seen a sign of financial weakness. Thus, the primary credit program should reduce depository institutions' reluctance to borrow, thereby making the Discount Window a more effective policy instrument. Here are some examples of common borrowing situations:

- Tight money markets or undue market volatility
- Preventing an overnight overdraft
- Meeting a need for backup funding, including a short-term liquidity demand that may arise from unexpected deposit withdrawals or a spike in loan demand
- Arbitrage opportunities

Depository institutions that are not eligible for primary credit may apply for secondary credit to meet short-term liquidity needs or to resolve severe financial difficulties. Secondary credit is subject to a higher level of lending administration than primary credit, Reserve Banks will collect information necessary to confirm that borrowing is consistent with regulatory requirements. Appropriate uses of secondary credit include a backup source of funding on a very short-term basis, or to facilitate an orderly resolution of serious financial difficulties. Examples of appropriate uses of secondary credit include:

- Tight money markets or undue market volatility
- Addressing an overnight overdraft
- Meeting a need for backup funding, including a short-term liquidity demand
- Inability to obtain funding from normal sources
- To assist the primary regulator in prompt closure of a troubled institution

Seasonal credit is extended to relatively small depository institutions that have recurring intra-year fluctuations in funding needs, such as banks in agricultural or seasonal resort communities. The Federal Reserve Bank list two examples of *inappropriate* uses of seasonal credit funds:

- Arbitrage opportunities
- To facilitate balance sheet expansion

(6) [What are the current reserve requirements?](#)

The dollar amount of a depository institution's reserve requirement is determined by applying the reserve ratios specified in the Federal Reserve Board's Regulation D to an

institution's reservable liabilities (see table below). Reservable liabilities consist of net transaction accounts, nonpersonal time deposits, and eurocurrency liabilities. Since December 27, 1990, nonpersonal time deposits and eurocurrency liabilities have had a reserve ratio of zero.

The reserve ratio on net transactions accounts depends on the amount of net transactions accounts at the depository institution. The Garn-St Germain Act of 1982 exempted the first \$2 million of reservable liabilities from reserve requirements. This "exemption amount" is adjusted each year according to a formula specified by the act. The amount of net transaction accounts subject to a reserve requirement ratio of 3 percent was set under the Monetary Control Act of 1980 at \$25 million. This "low-reserve tranche" is also adjusted each year. Net transaction accounts in excess of the low-reserve tranche are currently reservable at 10 percent.

## Reserve Requirements

Type of liability	Requirement	
	Percentage of liabilities	Effective date
Net transaction accounts <sup>1</sup>		
\$0 to \$7.8 million <sup>2</sup>	0	12-22-05
More than \$7.8 million to \$48.3 million <sup>3</sup>	3	12-22-05
More than \$48.3 million	10	12-22-05
Nonpersonal time deposits	0	12-27-90
Eurocurrency liabilities	0	12-27-90

1. Total transaction accounts consists of demand deposits, automatic transfer service (ATS) accounts, NOW accounts, share draft accounts, telephone or preauthorized transfer accounts, ineligible bankers acceptances, and obligations issued by affiliates maturing in seven days or less. Net transaction accounts are total transaction accounts less amounts due from other depository institutions and less cash items in the process of collection. For a more detailed description of these deposit types, see Form FR 2900 at

2. The amount of net transaction accounts subject to a reserve requirement ratio of zero percent (the "exemption amount") is adjusted each year by statute. The exemption amount is adjusted upward by 80 percent of the previous year's (June 30 to June 30) rate of increase in total reservable liabilities at all depository institutions. No adjustment is made in the event of a decrease in such liabilities.

3. The amount of net transaction accounts subject to a reserve requirement ratio of 3 percent is the "low-reserve tranche." By statute, the upper limit of the low-reserve tranche is adjusted each year by 80 percent of the previous year's (June 30 to June 30) rate of increase or decrease in net transaction accounts held by all depository institutions.

### a. Explain how increasing reserve requirements effects money growth.

The amount (percentage) depository institutions are required to keep in reserve is set by the FED. The FED can adjust this rate as it wishes according to it's monetary policy. Right now the rate is at 10%. As depository institutions come in contact with funds these funds will go through cycles of splitting between amounts held in reserve and amounts

again available for lending. The key is the number of cycles of lending and “reserving” the funds are able to go through before they are depleted. This will determine the amount of money left in the system for lending and the amount held in a FED vault.

b. What is a reserve requirement?

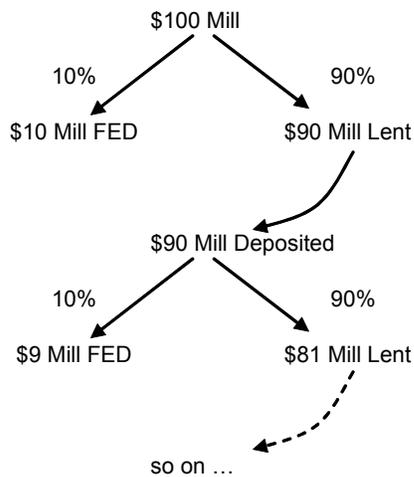
Reserve requirements are the amount of funds that a depository institution must hold in reserve against specified deposit liabilities. Within limits specified by law, the Board of Governors has sole authority over changes in reserve requirements. Presently, as noted recently in class, the reserve rate is 10% on net transaction accounts in excess of \$48.3 million.

c. How does the FED change reserve requirements?

The Fed sets required reserve ratios, which are the minimum percentages of deposits that depository institutions must hold as reserves. The Fed does not change these ratios very often.

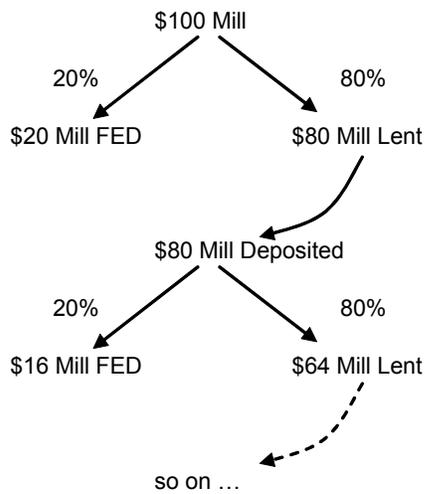
d. What is the impact of reserve requirements on money growth?

This is best illustrated by example.



Say the Federal Reserve requirement is 10% and a bank receives \$100 Mill, 10% goes to FED, 90% goes out to be lent. The \$90 Mill will end up on deposit in the bank system (assuming no leakage). Again, 10% goes to FED and 90%, \$81 MILL goes out to be lent. Cycle repeats. The FED reserve percentage is drained out of the liquidity each cycle. In the end, \$100 Mill will actually increase funds availability in the system

$$\text{by } \frac{\$100\text{MILL}}{10\%} = \$1 \text{ Billion}$$



Now the Federal Reserve requirement is 20% and a bank receives \$100 Mill, 20% goes to FED, 80% goes out to be lent. The \$80 Mill again finds it's way to the bank system (again no leakage). Again, 20% goes to FED and 80%, \$64 MILL goes out to be lent. Cycle repeats. In the end, \$100 Mill will actually increase funds availability in the system by

$$\frac{\$100\text{MILL}}{20\%} = \$500 \text{ Million}$$

The increase in reserve rate is felt as a decrease in available loanable funds.

The money multiplier is the amount by which a change in the monetary base is multiplied to calculate the final change in the money supply. An increase in currency held outside the banks is called a currency drain. Such a drain reduces the amount of banks' reserves, thereby decreasing the amount that banks can loan and reducing the money multiplier.