

Chapter 10

The Money Supply & the Federal Reserve System



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BIZ 203

Macroeconomics

AN OVERVIEW OF MONEY

WHAT IS MONEY?

FUNCTIONS OF MONEY

[1]

- What sellers generally accept and buyers generally use to pay for goods and services.

FUNCTIONS OF MONEY

[2]

- An asset that can be used to transport purchasing power from one time period to another.

- Advantage of money

- Disadvantage of money

FUNCTIONS OF MONEY

[3]

- A standard unit that provides a consistent way of quoting prices.

= Items used as money that also have intrinsic value in some other use.

Bretton-Woods System:

= Items designated as money that are intrinsically worthless.

= The decrease in the value of money that occurs when its supply is increased rapidly.

MEASURING THE SUPPLY OF MONEY IN THE UNITED STATES

[1]

- Money that can be directly used for transactions.
- Currency in circulation + demand deposits + traveler's checks + other checkable deposits

MEASURING THE SUPPLY OF MONEY IN THE UNITED STATES

[2]

- \equiv M1 + savings accounts + money market accounts + other near monies.
- Money market accounts = They allow only a few checks per month but pay market-determined interest rates.

HOW BANKS CREATE MONEY

THE MODERN BANKING SYSTEM

A Brief Review of Accounting

HOW BANKS CREATE MONEY

- Currency held by commercial banks =
- Location:

- Purpose?

FIGURE 10.1**T-Account for a Typical Bank (millions of dollars)**

	Assets	Liabilities	
Reserves	20	100	Deposits
Loans	90	10	Net worth
Total	110	110	Total

THE CREATION OF MONEY

Money multiplier = The multiple by which deposits can increase for every dollar increase in reserves; equal to

?

THE CREATION OF MONEY

THE CREATION OF MONEY

THE FEDERAL RESERVE SYSTEM

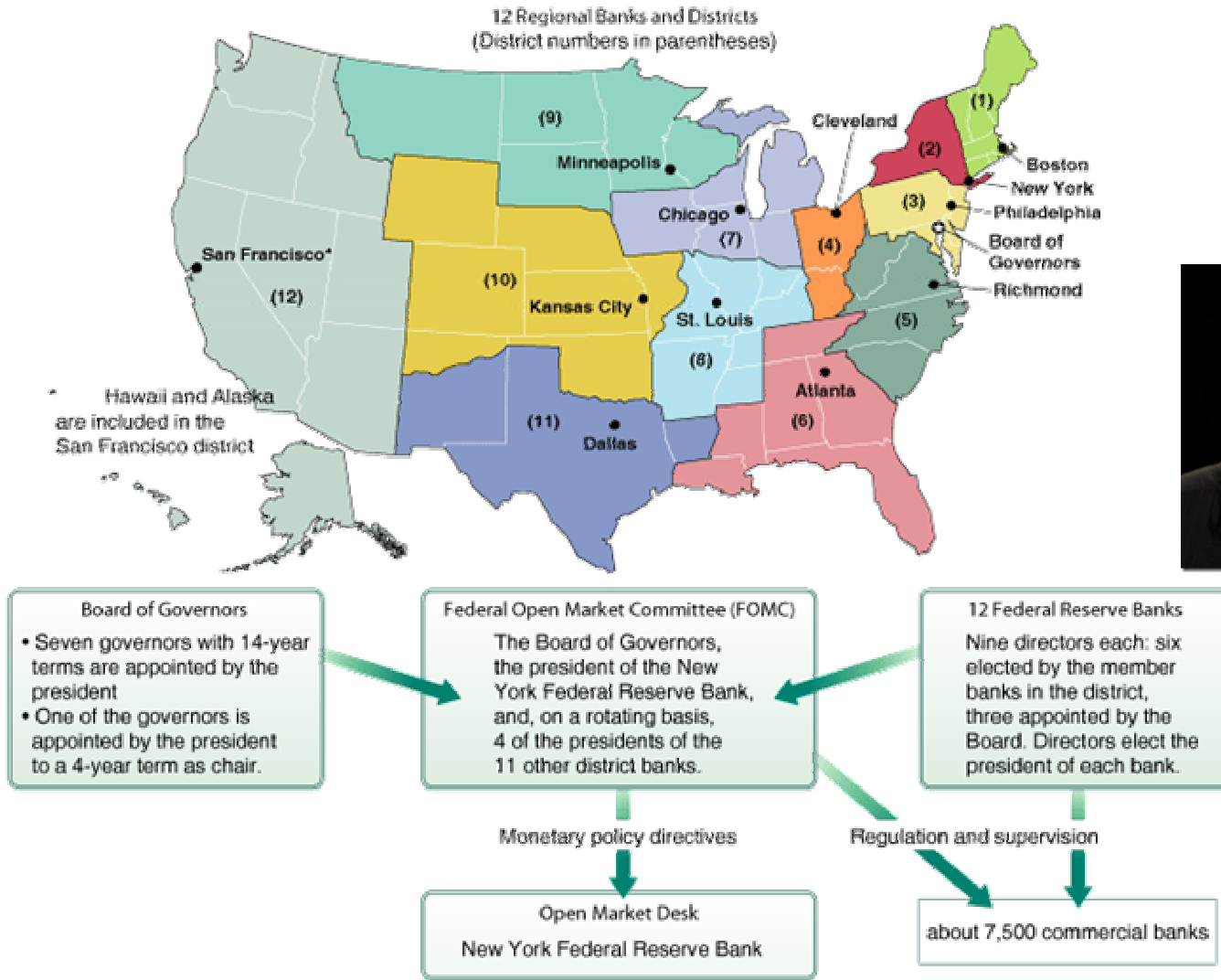


FIGURE 10.4 The Structure of the Federal Reserve System

THE FEDERAL RESERVE SYSTEM

- **Federal Reserve Board** = A group composed of the seven members of the Fed's Board of Governors, the president of the New York Federal Reserve Bank, and four of the other eleven district bank presidents on a rotating basis; it sets goals concerning the money supply and interest rates and directs the operation of the Open Market Desk in New York.

- **Open Market Operations** = The office in the New York Federal Reserve Bank from which government securities are bought and sold by the Fed.



FUNCTIONS OF THE FEDERAL RESERVE

Clearing Interbank Payments

- ✓ Suppose Matsuda writes a \$100 check, drawn on his bank, citibank, to pay for bills from Little Mexico of Ada, OH. Because Little Mexico bank at us bank, how does Matsuda's money get from citibank to us bank?

Other Duties of the Fed

- ✓ Fed has the authority to control mergers between banks.
- ✓ Fed is responsible for examining banks to ensure they are financially sound and they conform to a host of government accounting regulations.
- ✓ Fed sets reserve requirements for all financial institutions.
- ✓ [Link1](#), [link2](#) = One of the functions of the Fed: It provides funds to troubled banks that cannot find any other sources of funds.



THE FEDERAL RESERVE BALANCE SHEET

**TABLE 10.1 Assets and Liabilities of the Federal Reserve System,
August 3, 2005 (Millions of Dollars)**

ASSETS

LIABILITIES

Gold	\$ 4,037	\$729,601	Federal Reserve notes (outstanding)
Loans to banks	3,330		
U.S. Treasury securities	724,700	26,130	Bank reserves (from depository institutions)
		4,813	U.S. Treasury
All other assets	<u>81,843</u>	<u>60,366</u>	All other liabilities and net worth
Total	\$ 820,910	\$820,910	Total

THE FEDERAL RESERVE BALANCE SHEET

**TABLE 10.1 Assets and Liabilities of the Federal Reserve System,
October 24, 2007 (Millions of Dollars)**

Assets		Liabilities	
Gold	\$ 11,037	\$776,701	Federal Reserve notes (outstanding)
Loans to banks	502		
U.S. Treasury securities	779,574	21,107	Bank reserves (from depository institutions)
		4,737	U.S. Treasury
All other assets	<u>93,860</u>	<u>82,428</u>	All other liabilities and net worth
Total	\$ 884,973	\$884,973	Total

Source: Board of Governors of the Federal Reserve System.

THE FEDERAL RESERVE BALANCE SHEET

Assets and Liabilities of the Federal Reserve System,
October 22, 2008 (Millions of Dollars)

Assets

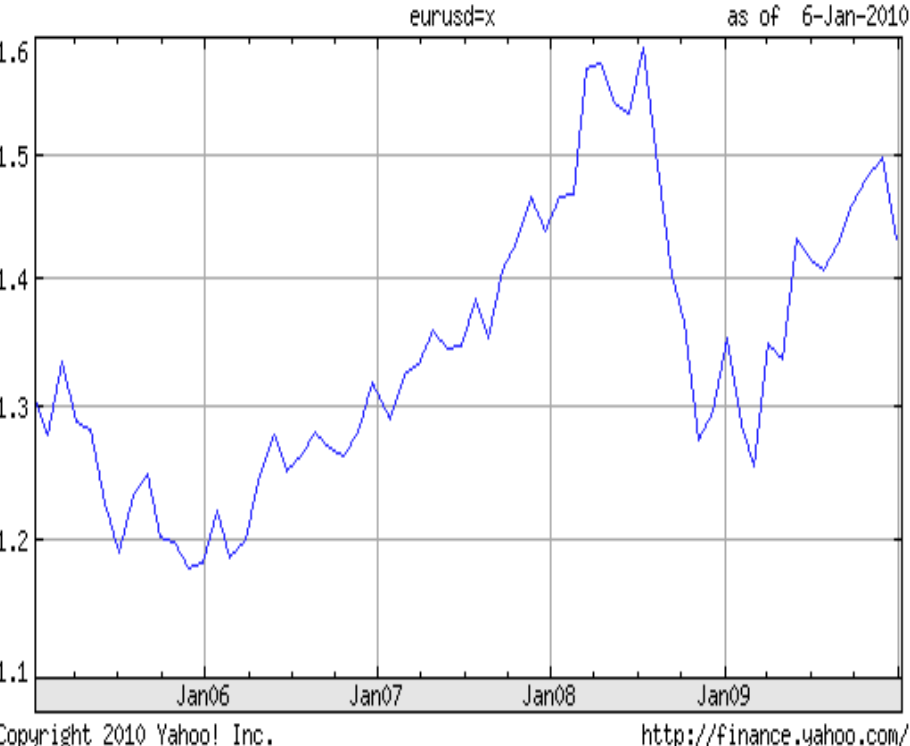
Liabilities

Gold	11,037	\$840,741	Federal Reserve notes (outstanding)
Loans to banks	734,503		
U.S. Treasury securities	476,138	801,742	Bank reserves (from depository institutions)
CPFF	318,843	484,620	U.S. Treasury
All other assets	<u>771,372</u>	<u>184,790</u>	All other liabilities and net worth
Total	\$2,311,893	\$2,311,893	Total

Source: Board of Governors of the Federal Reserve System.

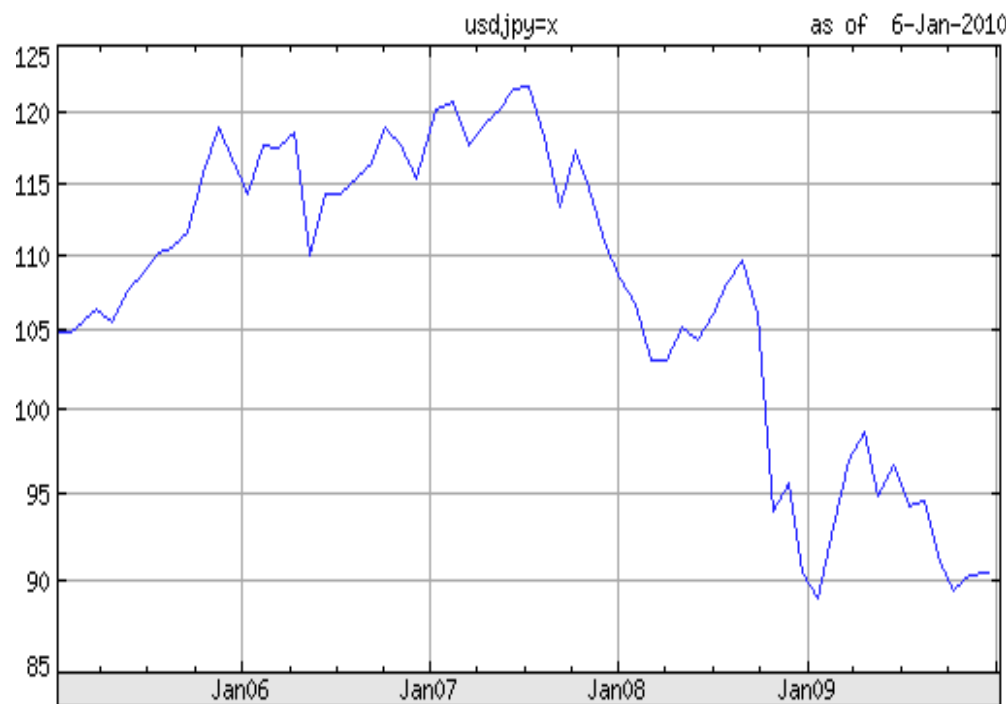
A Look Inside Fed's Balance Sheet — 4/23/09 Update

[Link](#)



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HOW THE FEDERAL RESERVE CONTROLS THE MONEY SUPPLY

Three tools are available to the Fed for changing the money supply:

(1) engaging in ? .

(2) changing the ? ;

(3) changing the ? ;

[1] OPEN MARKET OPERATIONS

- = Fed's purchase of government securities which expands the quantity of reserves in the banking system, increasing the money supply.
- = Fed's sale of government securities which reduces the quantity of reserves in the banking system, decreasing the money supply.

Two Branches of Government Deal in Government Securities

❖ The Treasury Department is responsible for collecting taxes and paying the federal government's bills.



✓ If total government spending exceeds tax receipts, the law requires the Treasury to borrow the difference.

Two Branches of Government Deal in Government Securities

- The Fed is not the Treasury. Instead, it is a quasi-independent agency authorized by Congress to buy and sell *outstanding* (preexisting) U.S. government securities on the open market.

The Mechanics of Open Market Operations

<1>Open Market Purchase from a Bank

- Suppose that the Fed purchases \$100 of bonds from us bank and pays for them with \$100.

The Mechanics of Open Market Operations

<2>Open Market Sale to a Bank

- Suppose that the Fed sells \$100 of bonds to us bank.

The Mechanics of Open Market Operations

We can sum up the effect of these open market operations this way:

- An open market *purchase* of securities by the Fed results in a (an) **?** in reserves and a (an) **?** in the supply of money by an amount equal to the money multiplier times the change in reserves.
- An open market *sale* of securities by the Fed results in a **?** in reserves and a **?** in the supply of money by an amount equal to the money multiplier times the change in reserves.

Open market operations are the Fed's preferred means of controlling the money supply for several reasons:

[1] Open market operations can be used with ? .

[2] Open market operations are ? .

[3] Open market operations have a ? .

Change in THE REQUIRED RESERVE RATIO

[Link](#)

THE DISCOUNT Policy

Discount rate = Interest rate that banks pay to the Fed to borrow from it. [Link](#).

Federal Funds rate [Link](#).

- When the Fed makes a \$100 discount loan to the Ada Metropolitan Bank, the bank is credited with \$100 of reserves from the proceeds of the loan.