

Chapter 2

Money and the Monetary
System

A low-angle, upward-looking photograph of several modern skyscrapers with glass facades, reaching towards a clear blue sky. The perspective creates a sense of height and scale.

INTRODUCTION TO **FINANCE**

MARKETS, INVESTMENTS,
AND FINANCIAL MANAGEMENT

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Learning Objectives

- LO 2.1 Discuss the developments that led to the 2007–2008 financial crisis.
- LO 2.2 Describe three ways in which money is transferred from savers to businesses.
- LO 2.3 Identify the major components of the monetary system.



Learning Objectives

- LO 2.4 Describe the functions of money.
- LO 2.5 Discuss how money developed in the United States.
- LO 2.6 Describe major types of money market securities.



Learning Objectives

- LO 2.7 Explain the M1 and M2 definitions of the money supply.
- LO 2.8 Explain possible relationships between money supply and economic activity.
- LO 2.9 Describe developments in the international monetary system.



Section 2.1 The 2007–2008 Financial Crisis and Subsequent Recovery

- LO 2.1 Discuss the developments that led to the 2007–2008 financial crisis



Financial Crisis Developments

- As the twenty-first century began, U.S. government policies encouraged home ownership
- Lenders were willing to make home mortgage loans to financially “risky” borrowers
- After several years of increasing housing prices, a rapid decline in housing prices began in 2006



Financial Crisis Developments

- Many jobs in housing-related industries were lost as housing prices continued to decline
- Soon many homeowners were unable to make their mortgage loan payments and were defaulting on their mortgage loans
- Mortgage-backed securities (backed by home mortgage loans) declined in value as housing prices declined



Financial Crisis Developments

- Many financial institutions had inadequate equity capital due to the loss in value of their mortgage-backed debt securities
- The result was a credit crunch and a major decline in economic activity
- During 2008, the federal government moved to help merge or bail out some troubled financial institutions



Section 2.2 Process of Moving Savings into Investments

- LO 2.2 Describe three ways in which money is transferred from savers to businesses



Characteristics of Economic Units

- Economic units are groups viewed in the aggregate such as individuals, business firms, or governments
- **Surplus Economic Unit**
Generates more money than it spends resulting in excess money to save or invest
- **Deficit Economic Unit**
Generates less money than it spends resulting in a need for additional money



What is the Savings-Investment Process?

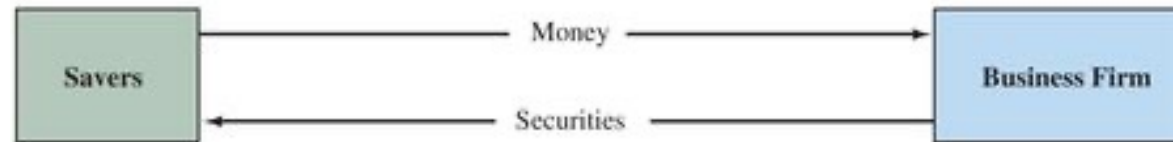
- **Savings-Investment Process**

Involves the direct or indirect transfer of individual savings to business firms in exchange for debt and equity securities of the firm

[Figure 2.1 provides a graphical presentation of how the savings investment process works]

Figure 2.1 Savings-Investment Process: From Individual Savers to a Business Firm

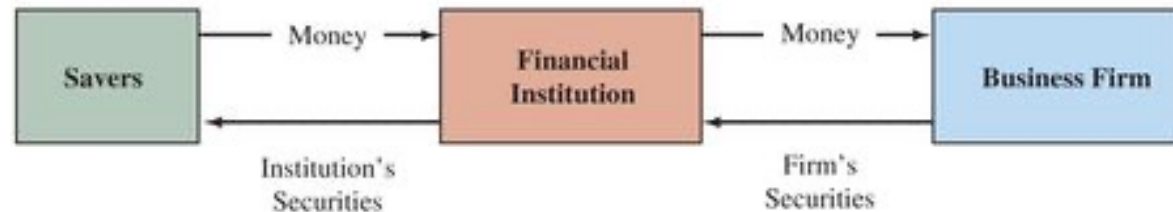
Direct Transfers



Indirect Transfers
(through an investment banking firm)



Indirect Transfers
(through a financial intermediary)





Section 2.3 Overview of the Monetary System

- LO 2.3 Identify the major components of the monetary system.



U.S. Monetary System Participants

U. S. Central Bank

- Referred to as the Federal Reserve System (or Fed, for short)
- Comprised of a system of Federal Reserve Banks

Central Bank Responsibilities:

- Defines and Regulates Money Supply
- Facilitates the Transferring of Money Through check processing and clearing



U.S. Monetary System

Participants

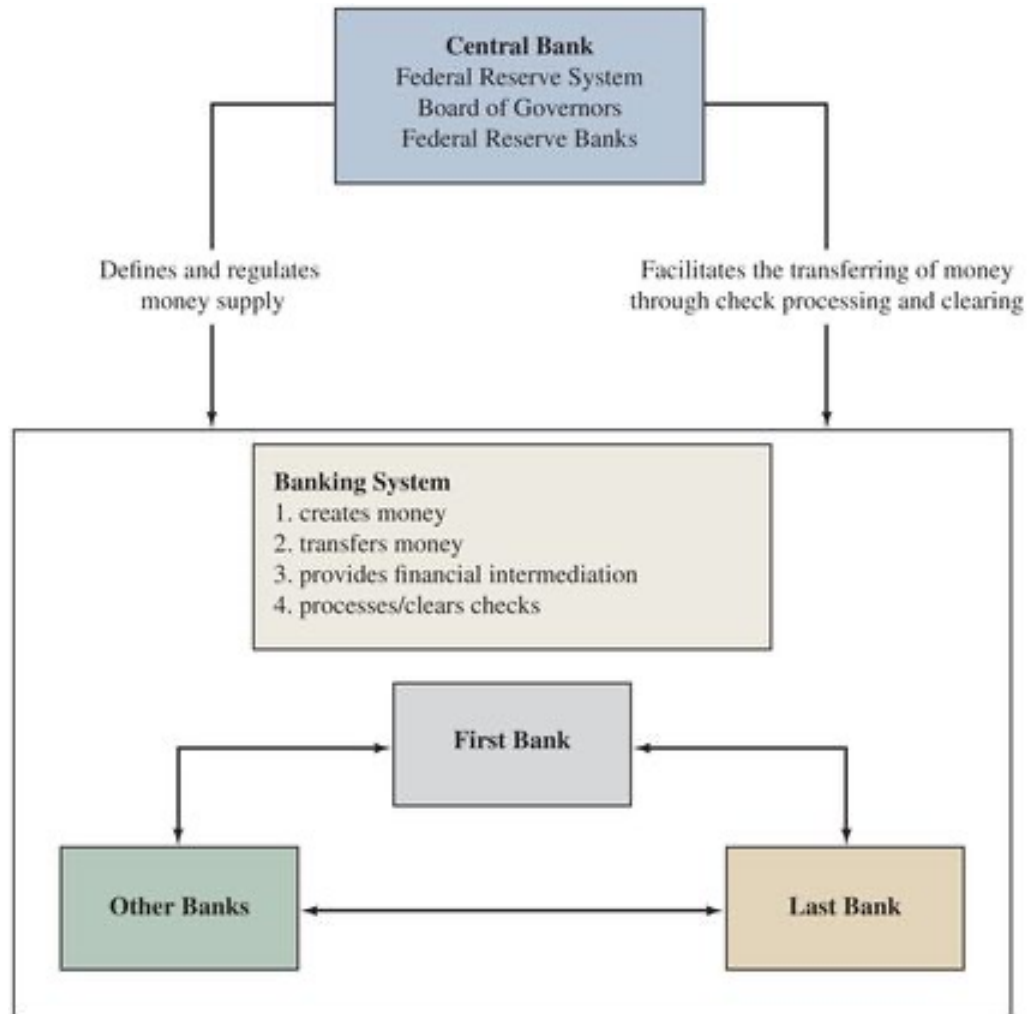
Banking System


- Consists of depository institutions that can create money as a group

Banking System Functions

- Creates Money
- Transfers Money
- Provides Financial Intermediation
- Processes/Clears Checks

Figure 2.2 The U.S. Monetary System





Section 2.4 Characteristics and Functions of Money

- LO 2.4 Describe the functions of money.



Types of Assets

- **Real Assets**

Direct ownership of land, buildings or homes, equipment, inventories, durable goods, and precious metals

- **Financial Assets**

Money, debt securities and financial contracts, and equity securities that are backed by real assets & the earning power of the issuers



Money and Currencies

- **Money**

A physical or electronic asset accepted as payment for goods, services, and debts

- **Digital Currency**

Electronic money accepted for making payments

- **Virtual Currency**

Unregulated digital money issued, and often controlled, by its decentralized developers and used to make electronic payments



Money and Currencies

- **Cryptocurrency**

Decentralized and unregulated digital money that uses cryptography to record, maintain, and secure electronic payments

- **Bitcoin**

Specific type of cryptocurrency that uses a ledger system technology called blockchain to record, maintain, and secure payment transactions



Functions of Money

- **Medium of Exchange**

Money must be accepted and used to facilitate the exchange of goods and services

- **Standard of Value**

Occurs when prices and debts are stated in terms of the money's monetary unit

- **Store of Value**

Exists when the price or value of money remains relatively stable over time



Related Concepts or Terms

- **Barter**
Exchange of goods or services without using money
- **Purchasing Power**
Amount of goods and services that can be purchased with a unit of money
- **Inflation**
An increase in the prices of goods and services that is not offset by increases in their quality



Related Concepts or Terms

- **Liquidity**

How easily, and with little loss of value, an asset can be exchanged for money or other assets

- **Individual Net Worth**

Sum of an individual's money, real assets, and financial assets less the individual's debt obligations



Section 2.5 Development of Money in the United States

- LO 2.5 Discuss how money developed in the United States.



Historical Types of U.S. Coins

- **Bimetallic Standard**

Monetary standard based on two metals, usually silver and gold

- **Full-Bodied Money**

Coins that contain the same value in metal as their face value

- **Token Coins**

Coins containing metal of less value than their stated value



Historical Types of Paper Currency

- **Representative Full-Bodied Money**
Paper money fully backed by a precious metal
- **Fiat Money**
Paper money proclaimed to be legal tender by the government for making payments and discharging public and private debts



Credit and Deposit Money

- Credit Money

Money backed by the creditworthiness and taxing capabilities of the issuer

- Deposit Money

Electronic money backed by the creditworthiness of the depository institution that issued the deposit



Two Alternatives to “Paper Checks”

- Automatic Transfer Service (ATS)
Accounts

Provide for direct deposits to, and payments from, checkable deposit accounts

- Debit Cards

Provide for immediate direct transfer of deposit amounts



Section 2.6 Money Market Securities

- LO 2.6 Describe major types of money market securities.



Basic Definitions

- **Money Markets**

Markets where debt securities with maturities of one year or less are originated (primary markets) or traded (secondary markets)

- **Money Market Securities**

Debt securities with maturities of one year or less



Types of Money Market Securities

- **Treasury Bill**

Short-term debt obligation issued by the U.S. federal government

- **Commercial Paper**

Short-term unsecured note issued by a high credit-quality corporation



Types of Money Market Securities

- **Negotiable Certificate of Deposit (negotiable CD)**

Short-term debt instrument issued by depository institutions that can be traded in the secondary money markets

- **Banker's Acceptance**

Promise of future payment issued by an importing firm and guaranteed by a bank



Types of Money Market Securities

- Repurchase Agreement

Short-term debt security where the seller agrees to repurchase the security at a specified price and date

- Federal Funds

Very short-term loans between depository institutions with excess funds and those with a need for funds



Section 2.7 Measures of the U.S. Money Supply

- LO 2.7 Explain the M1 and M2 definitions of the money supply.



Components of the M1

Definition of the Money Supply

- **Currency**
U.S. physical money (coins and currency)
- **Demand Deposits**
Commercial bank checking accounts
- **Other Checkable Deposits**
Offered by S&Ls, savings banks, and credit unions
- **Travelers' Checks**
Issued by banks and other organizations



Components of the M2

Definition of the Money Supply

M2 includes M1 Money Supply plus highly liquid financial assets:

- **Savings Accounts**
Including money market deposit accounts
- **Small-Denomination Time Deposits**
Under \$100,000, and less IRA and Keogh balances
- **Retail Money Market Mutual Funds (MMMFs)**
Less IRA and Keogh balances at MMMFs



Exclusions from the Money Supply

The Fed, in its money supply definitions, excludes:

- **Stock and Bond Mutual Funds**

Excluded because the values of shares in these funds often fluctuate and these funds may be held as long-term investments

- **Credit Cards**

Predetermined borrowing limits and outstanding credit card balances are not considered to be part of the money supply



Section 2.8 Money Supply and Economic Activity

- LO 2.8 Explain possible relationships between money supply and economic activity.



Basic Definitions and Relationships

- **Gross Domestic Product (GDP)**
A measure of the output of goods and services in an economy
- **Velocity of Money**
The rate of circulation of the money supply
- **Money Supply and Economic Activity Relationship**
Economists differ as to whether the relationship is direct or indirect



Two Economist Views

- **Monetarists' View**

Amount of money in circulation determines the level of economic activity

- **Keynesians' View**

A change in money supply first causes a change in interest rate levels which, in turn, alters the demand for goods and services



Monetarists' View

- **Basic Equation:** $MS \times VM = GDP$
- **Gross Domestic Product (GDP)**
Measures the output of goods and services in an economy
- **Money Supply (MS)**
Usually defined in terms of M1 or M2
- **Velocity of Money (VM)**
The rate of circulation of the money supply



Another View of GDP

- **Basic Equation:** $RO \times PL = GDP$
- **Gross Domestic Product (GDP)**
Measures the output of goods and services in an economy
- **Real Output (RO)**
Units of goods and services
- **Price Level (PL)**
Average price of goods and services

Two Views of GDP Combined

- Two Basic Equations

$$MS \times VM = GDP$$

$$RO \times PL = GDP$$

- The Equations Combined

$$MS \times VM = RO \times PL$$

- Nominal GDP Increases with:

>an increase in money supply and/or velocity of money

>an increase in real output and/or price level



Section 2.9 International Monetary System

- LO 2.9 Describe developments in the international monetary system.



International Monetary System Developments

- **Historically:** Tied to the gold standard
- **Bretton Woods system (1944):**
Agreement to use fixed or pegged exchange rates tied to the U.S. dollar or gold
- **Early 1970s:** Development of a flexible or floating exchange rate system



International Monetary Concepts

- **Currency Exchange Rate**
Value of one currency relative to another
- **Euro**
A single currency that has replaced the individual currencies of a group of European countries
- **Decentralized Digital Currency Concern**
Cryptocurrencies do not have government credit-backing or central control over the supply of the currencies



Web Links

- www.dnb.com
- www.treas.gov
- www.federalreserve.gov
- www.stlouisfed.org
- www.frbsf.org