Money, Banking, and Financial Institutions

Chapter 2 : Money and the Payments System

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Learning Objectives

1. Describe what money is.
2. List and summarize the functions of money.
3. Identify different types of payment systems.
4. Compare and contrast the M_1, M_2, and M_3 money supplies.

Definition of Money

Meaning of Money

- **Money**: Anything that is generally accepted in payment for goods or services or in the repayment of debts.
  - Definition implies that there may debate about the instruments that count as money, and that such instruments may change over time
  - Currency: Money in the form of bank notes and coins

- Money is different from:
  - Wealth: Total property that stores value
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- **Do We Need Money?**

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- In fact, economies **can** function without money.
- Barter is a system of exchange in which individuals trade goods and services directly for other goods and services.
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- Barter is a system of exchange in which individuals trade goods and services directly for other goods and services.
- Barter exchanges prevailed in the early stages of development in our economy, but they were **inefficient**:
  - A *double coincidence* of wants increases the transactions costs;
  - Each good has *many prices*. When there are N items, the number of prices are $N(N+1)/2$;
  - It is difficult to *accumulate* wealth.

Functions of Money

Functions of Money: Medium of Exchange

- **Function #1**: Medium of Exchange
  - Facilitates exchange (lower transaction costs)
  - Eliminates need for double coincidence of wants
  - Allows for specialization and division of labor

- An effective medium of exchange must:
  - Be easily standardized
  - Be widely accepted
  - Be divisible
  - Be easy to carry
  - Not deteriorate quickly

Functions of Money: Unit of Account

- **Function #2**: Unit of Account
  - Units in which value is denominated throughout the economy;
  - Reduces transaction costs.

- Consider a store with 10 goods:
  - If dollars are the unit of account, we only need 10 prices as everything would be reported in dollars
  - Without a unit of account, we would need many more prices to exchange one good for another. In fact: 10 goods, so $10 \times 9/2 = 45$ pairs of goods, so 45 prices

- **Function #3**: Store of Value
  - Repository of purchasing power over time
  - Other assets may provide this function as well, such as stocks, bonds, land, houses, art, jewelry, etc.
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- Functions of money are related. Example: currency is a poor store of value during a hyperinflation at which stage it become a poor medium of exchange at well.

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- E-Money : debit cards, smart cards, e-cash

Measuring the Money Supply

Measuring Monetary aggregates

- Monetary aggregates are measures of the quantity of money that are broader than currency
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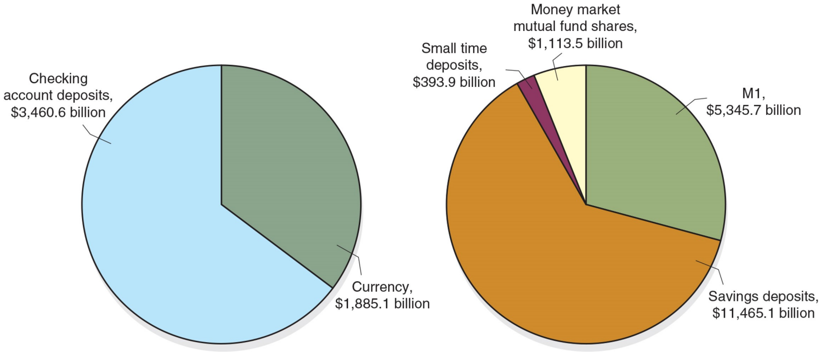
- M_3 includes all the assets in M_2, as well as money market deposit accounts, and noninstitutional money market mutual fund shares or exchange-traded funds ETF_s : $M_3 = M_2 + ETF_s$

Measuring the Money Supply

Figure 1: Federal Reserve Statistical Release, July 30, 2020.



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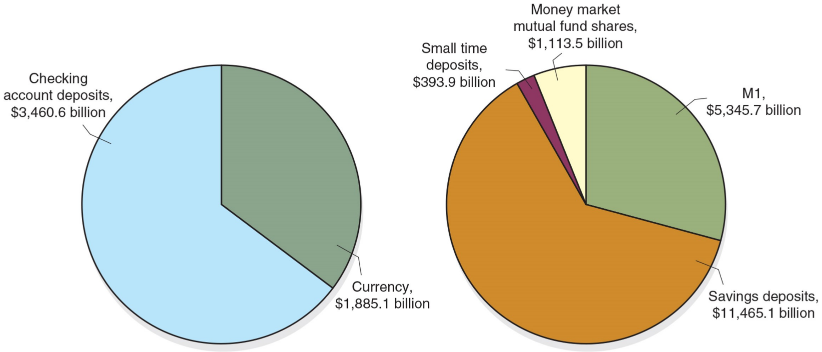
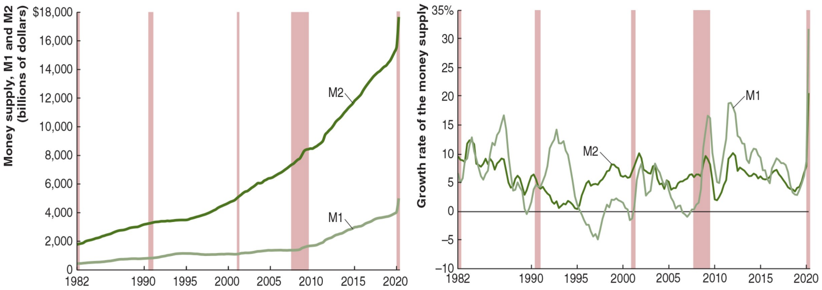


► The Federal Reserve uses **two** different measures of the money supply: M_1 and M_2. M_1 in US includes currency and checking account deposits as in Canada. But M_2 in US includes all the assets in M_1, as well as the additional assets shown in panel (b).

Figure 2: Federal Reserve M_1 and M_2, 1982-2020



► Panel (a) shows that since 1982, M_2 has increased much more rapidly than has M_1. Panel (b) shows that M_1 has experienced much more instability than has M_2. The shaded areas indicate recessions.

Source: *Federal Reserve Bank of St. Louis.*

Takeways

Key Takeaway: Money

- **Definition:** Money is a medium of exchange widely accepted in transactions.
- **Functions:** Medium of Exchange, Unit of Account, Store of Value, Standard of Deferred Payment.
- **Payment Evolution:** From commodity money $\rightarrow$ fiat money $\rightarrow$ digital currencies.
- **Measurement:**
  - M_1 : Cash + Demand Deposits
  - M_2 : M_1 + Savings and Time Deposits