

CHAPTER 12: SECTION 1

Inflation and Deflation

What Is Inflation?

- **Inflation** is an increase in the price level, or the average level of prices.

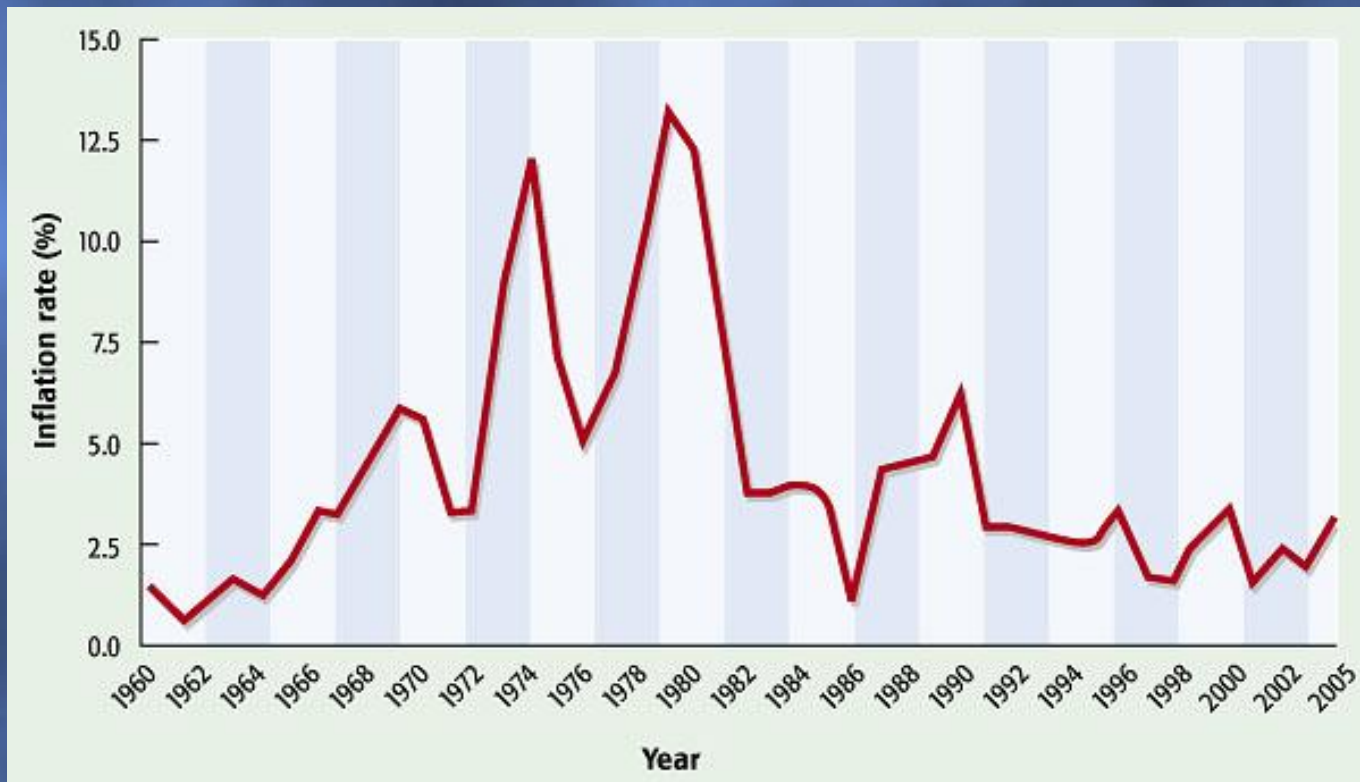
How Do We Measure Inflation?

- If the price level increases from one year to the next, the economy is experiencing inflation.
- One way of determining inflation is to look for changes in the consumer price index (CPI). (See [Transparency 12-1](#).)
 - For example, if the CPI increases from 180 in one year to 187 in the next year, the inflation rate is 3.89 percent.
 - Between 1960 and 2006, the United States experienced wide fluctuations in inflation rates. Approximately what was the highest rate during those years? (*Answer: 13.25 percent*) Approximately what was the lowest rate? (*Answer: 0.5 percent*)

TRANSPARENCY 12-1: Measuring Inflation

$$\text{Inflation rate} = \frac{\text{CPI}_{\text{later year}} - \text{CPI}_{\text{earlier year}}}{\text{CPI}_{\text{earlier year}}} \times 100$$

EXAMPLE: Inflation rate = $\frac{187 - 180}{180} \times 100 = 3.89\%$



Demand-Side Versus Supply-Side Inflation

- Inflation can originate on either the demand side of the economy or the supply side of the economy. If aggregate demand increases and aggregate supply stays the same, inflation will occur.
- **Demand-side inflation** occurs when an increase in the price level originates on the demand side of the economy. Demand-side inflation can be caused by an increase in the money supply.
- **Supply-side inflation** occurs when an increase in the price level originates on the supply side of the economy.

The Simple Quantity Theory of Money

- The simple quantity theory of money presents a clear picture of what causes inflation.
- To understand this theory, you need to understand velocity and the exchange equation.
- **Velocity** is the average number of times a dollar is spent to buy final goods and services in a year.
- The exchange equation says that the money supply multiplied by velocity equals the price level (or average price) multiplied by the quantity of output. (See [Transparency 12-2](#).)
- The **simple quantity theory** of money predicts that changes in the price level will be strictly proportional to changes in the money supply.

TRANSPARENCY 12-2: The Exchange Equation

$$M \times V = P \times Q$$

M = Money supply

V = Velocity

P = Price level

Q = Quantity of output

$$M \times V = P \times Q$$

Let $M = \$500$

$V = 2$

$P = \$10$

$Q = 100$ units

so

$$\$500 \times 2 = \$10 \times 100$$

$$\$1,000 = \$1,000$$

Hold V and Q constant.
In other words, V stays
at 2, and Q stays at 100.

Increase M from
 $\$500$ to $\$1,000$.

$M = \$1,000$

$V = 2$

so

$$M \times V = \$2,000$$

If $M \times V = \$2,000$
and $Q = 100$,
then P must rise to $\$20$.

$M = \$1,000$

$V = 2$

$P = \$20$

$Q = 100$ units

so

$$\$1,000 \times 2 = \$20 \times 100$$

$$\$2,000 = \$2,000$$

Conclusion: If V and Q are held constant, a doubling of the money supply (M) from $\$500$ to $\$1,000$ leads to a doubling of the price level (P) from $\$10$ to $\$20$.

- According to this theory, if the money supply doubles from \$500 to \$1,000, the price level will double from \$10 to \$20—assuming that velocity and quantity of output remain constant.
- In reality, the change will not be perfectly proportional. A 100 percent increase in the money supply may result in a 50 percent increase in the price level.
- Nevertheless, in the real world, we see that the greater the change in the money supply, the greater the change in the price.

The Effects of Inflation

- Inflation increases the amount that people must spend on particular goods or services. It can affect people on fixed incomes, savers, and partners in contracts.
 - Inflation reduces the buying power of people on fixed incomes, such as social security or investment proceeds.
 - If the inflation rate is greater than the interest rate earned on savings accounts, the money in those accounts loses value. As time goes on, savers will be able to buy fewer goods with the same amount of money.

- Over time, inflation can eat up the profits factored into a long-term contract. As the costs of supplies and labor increase during the length of the project, the profit that was factored into the contract begins to disappear.
- To **hedge** against inflation is to try to avoid or lessen a loss by taking some counterbalancing action. People try to figure out the best protection against inflation by investing in items such as gold, real estate, and art.

What Is Deflation?

- Deflation is the opposite of inflation. **Deflation** is a decrease in the price level, or the average level of prices.
- A downward change in the CPI indicates deflation.

Demand-Side Deflation Versus Supply-Side Deflation

- Like inflation, deflation can result from a change in price or a change in supply. For example, if aggregate demand decreases and aggregate supply stays the same, deflation will occur.

Simple Quantity Theory of Money and Deflation

- The simple quantity theory of money can be used to explain deflation, just as it was used to explain inflation.
- According to this theory, if the money supply drops from \$1,000 to \$500, the price level will drop from \$20 to \$10—assuming that velocity and quantity of output remain constant.

A Major Effect of Deflation

- When prices fall, they do not all fall at the same time. When prices do not fall at the same time, deflation can lead to firms going out of business and workers being laid off. These are common results during times of deflation.