3-1 Inflation and the Value of Money

GOALS

- Explain inflation and how it is measured.
- List the types of inflation and how they affect consumers.
- Discuss the causes of inflation and how consumer spending, saving, and investing are affected.

KEY TERMS

- inflation, p. 77
- disinflation, p. 79
- reflation, p. 79
- hyperinflation, p. 79
- deflation, p. 80
- demand-pull inflation, p. 81
- cost-push inflation, p. 81
- productivity, p. 82
- real-cost inflation, p. 82
- time value of money, p. 83

What Is Inflation?

The price is the amount a buyer pays for a good or service. **Inflation** is an increase in the general level of prices for goods and services. Inflation reflects how much prices are rising. When prices are rising faster than income, buyers lose purchasing power. In other words, the money workers earn will buy less as prices rise. Changing prices affect the purchasing power of both producers and consumers.

inflation increase in the general level of prices for goods and services

How does inflation affect you?

The economy changes over time based on events and on habits and attitudes of producers and consumers. For example, an event such as a flood or hurricane that wipes out crops may affect prices. The supply of crops becomes small compared to demand, driving up price. As new digital devices, such as cell phones and video games, are invented, we are eager to buy them. Because demand for these devices is high, prices are also high.

Habits and attitudes explain how people react to changes in the supply of goods, world events, and their individual situations. We buy things without thinking about it to support our *habits*. As our habits change, so does our spending. *Attitudes* reflect how people think about their future and about the product being sold. We ask ourselves questions such as: Will this product help me stay healthy? Is it worth the price? As consumers make choices and spend money, they affect prices and inflation.

MEASURING INFLATION

Inflation is measured by the U.S. government. The measurement tool used is called the *Consumer Price Index (CPI)*. The CPI uses a list of goods and services that are commonly bought by consumers. The index measures changes in price from a base or starting point in time to the current time (or time of measurement). For example, if the price of an item was $1.00 in the base year and it is now $1.12, that is a 12 percent increase in the price. If the increase happened in just one year and it happened to all the goods on the list, the inflation rate for that year would also be 12 percent. You can learn more about the CPI at the Bureau of Labor Statistics website, as shown in Figure 3-1.1.

The government also gathers information about consumer spending. This information can be found at the Bureau of Economic Analysis website and the U.S. Census Bureau website (see *Statistical Abstract of the United States*). Economists use this information to assess and predict what is happening with the economy.

INFLATION VS. PURCHASING POWER

As inflation rises, the true purchasing power of each dollar falls. That means you must earn more to maintain the same standard of living. If you do not earn more, your standard of living will drop.

Many people receive annual *cost-of-living adjustments (COLAs)* or pay increases from their employers to keep pace with inflation. The COLA does not provide more purchasing power but keeps purchasing power equal to rising costs. On top of the COLA, workers are often given merit raises and/or bonuses. These increases in income provide more purchasing power.

Figure 3-1.1 Consumer Price Index at Bureau of Labor Statistics Website

UNITED STATES DEPARTMENT OF LABOR

BUREAU OF LABOR STATISTICS

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INFLATION | SPENDING | UNEMPLOYMENT | EMPLOYMENT | PAY & BENEFITS | PRODUCTIVITY | INJURIES

Consumer Price Index

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CPI FAQS
CONTACT CPI

SEARCH CPI

CPI TOPICS
RESEARCH PAPERS
ITEM RELATED TOPICS

Frequently Asked Questions (FAQs)

On this Page:

1. What is the CPI?
2. How is the CPI used?
3. Whose buying habits does the CPI reflect?
4. Is the CPI a cost-of-living index?
5. Does the CPI measure my experience with price changes?
6. How is the CPI market basket determined?
7. What goods and services does the CPI cover?
8. How are CPI prices collected and reviewed?
9. How is the CPI calculated?
10. How are taxes treated in the CPI?
11. How do I read or interpret an index?
12. Is the CPI the best measure of inflation?
13. Which index is the "Official CPI" reported in the media?
14. What index should I use for escalation?

Source: United States Department of Labor, Bureau of Labor Statistics, http://www.bls.gov/cpi/cpifaq.htm.

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How can a cost-of-living adjustment help you maintain your same standard of living?

What Are the Types of Inflation?

Businesses base pricing decisions in part on what consumers are buying and not buying. Changes in prices may show different patterns over time. These patterns result in varying types of inflation.

DISINFLATION

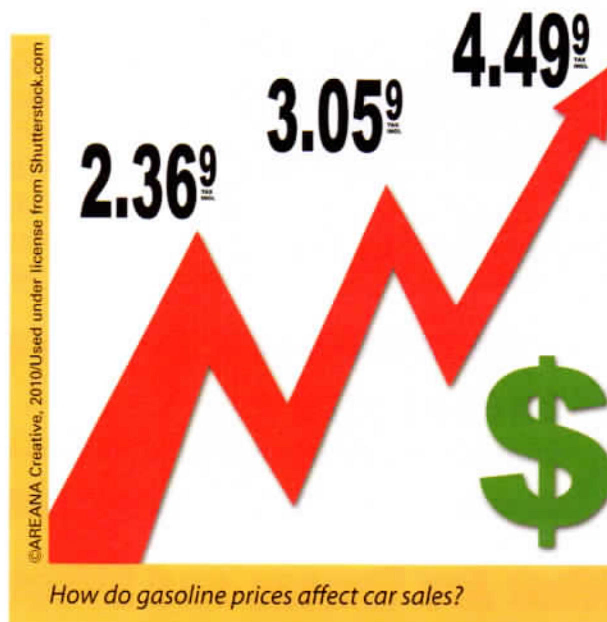
Disinflation occurs when prices are rising, but the rate of increase is slowing down. Some products and services do not increase in price as fast as others. Often, this happens when demand for a product is not the same throughout the year. For example, in spring and summer, the price of swimsuits may be high and rising. In fall and winter, however, if the price is rising, it is doing so at a much slower rate.

disinflation rising prices with the rate of increase slowing down

REFLATION

Reflation occurs when high prices are lowered due to decreased demand, but then are restored to the previous high level. Perhaps you have heard a news reporter use this term to describe crude oil prices. Reflation can happen when the available supply of a product, such as oil, goes up and down. Reflation can also happen when consumers temporarily stop buying a product or service and then, for some reason, start buying it again. For example, when gas prices surge, people may not buy as many big cars and trucks that use more gas. They wait to see what will happen with gas prices. When gas prices fall, they begin buying large vehicles again.

reflation high prices followed by lower prices and then high prices again



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How do gasoline prices affect car sales?

HYPERINFLATION

When prices are rising so rapidly that they are out of control, this is called **hyperinflation**. In the United States, there have been periods of double-digit inflation (10 percent or higher in a year). However, hyperinflation rates are much higher. Although there is no set rule,

hyperinflation rapidly rising prices that are out of control

many economists consider inflation rates of 50 percent or higher to be hyperinflation. Some countries have had rates of several hundred percent per month. For example, Germany's monthly inflation rate reached over 300 percent in the years following World War I.

The effects of very high inflation rates can be devastating. With hyperinflation, prices are rising so rapidly that consumers spend their money as fast as they can. They do this because they fear that prices will be even higher if they wait. This spending leads to even more inflation. Then people are unable to buy the goods that they need to live comfortably.

While the United States has not experienced hyperinflation (other than rapidly increasing oil prices), it is an event that could happen in the future.

deflation decrease in the general level of prices for goods and services

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How does deflation affect businesses and consumers?

DEFLATION

Deflation is a decrease in the general level of prices for goods and services. It is the opposite of inflation. In other words, prices are going down. Deflation occurs when producers are willing and able to provide goods and services at lower prices, but due to certain events, consumers are buying less.

Some products go down in price over time even when the market as a whole is not experiencing a period of deflation. For example, a computer that uses a new, faster processor may sell at a high price when it first comes on the market. A year later, the same computer may sell for hundreds of dollars less. The price is lower because it is no longer the newest, fastest computer available. Other, newer models have been released.

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Explain how disinflation differs from hyperinflation?

What Are Causes and Effects of Inflation?

Inflation can be caused by different factors in the economy. Consumers may want to buy more goods or services than are available, driving up prices. Producers may have to pay more for the resources needed to produce products and, thus, may need to raise prices. Both situations can lead to inflation.

Focus On...
FIGHTING INFLATION

When inflation is rising too fast, it hurts consumers. Two tools are used in the United States to manage the effects of inflation. These tools are called monetary policy and fiscal policy.

Monetary policy refers to actions by the *Federal Reserve System*, commonly called *the Fed*, to stabilize the economy. The Fed is the central bank in the United States created by Congress in 1913. It has many roles, including controlling the money supply. When the Fed sees that prices are rising too fast, it tries to slow them down by decreasing spending. One way to decrease spending is by raising interest rates. When interest rates increase, both individuals and businesses find it more expensive to borrow money to buy goods and services, so spending is slowed.

There are several types of interest rates that are controlled by the Fed:

- The *discount rate* is the rate that banks have to pay to borrow money from the Fed. Banks borrow money when they have the opportunity to make loans but do not have enough cash on hand. Banks are required to have a certain amount of cash on hand, called *reserves*, to meet daily customer demand. If these reserves go below the required amount, banks must borrow money.
- The *federal funds rate* is the rate at which banks can borrow from the excess reserves of other banks. For example, if one bank has more money than it needs, it can loan that extra money to other banks.
- The *prime rate* is the rate that banks charge to their most creditworthy business customers. When the discount rate increases, the prime rate also goes up. The prime rate is usually 3 percent (or more) higher than the discount rate or the federal funds rate.

Fiscal policy refers to actions taken by the federal government to manage the economy. To help curb inflation, the government can raise taxes. When taxes go up, people have less money to spend. This slows inflation. On the other hand, if the economy is sluggish because people are not buying, the government can increase spending by lowering taxes. This gives consumers more disposable income to spend. These actions, taken together, either speed up or slow down spending.

Think Critically

1. How do actions of the Fed affect your life and that of your family?
2. How does raising tax rates help curb inflation?

DEMAND-PULL INFLATION

The most common type of inflation is called demand pull. **Demand-pull inflation** results in higher prices because consumers want to buy more goods and services than producers supply. Consumers may spend their income as soon as it is received and may also be willing to spend future income (credit). This spending causes businesses to scramble to meet the demand for goods. Because products are selling so quickly, businesses are able to raise prices to balance supply with demand and make bigger profits. This type of inflation is often described as "too many dollars chasing too few goods."

demand-pull inflation higher prices as a result of consumers wanting to buy more goods and services than producers supply

COST-PUSH INFLATION

Cost-push inflation occurs when producers raise prices because their costs to create products are rising. For example, when wages go up, the cost of producing a product goes up. Producers may then raise prices. If producers did not raise prices, profits would shrink.

cost-push inflation rising prices as a result of rising production costs

productivity a measure of the efficiency with which goods and services are made (comparison of total output to total inputs)

Cost-push inflation is affected by productivity. **Productivity** is a measure of the efficiency with which goods and services are made. It compares total output (quantity of goods or services produced) to total inputs (resources used, such as labor, land, or equipment). When input costs, such as wages or the cost of new equipment, are offset by higher output, such as larger quantities of a product, productivity rises. Higher productivity lowers the cost of each unit produced. Lower costs enable the producer to maintain the same price levels. In this case, cost-push inflation (price increases) does not occur. Instead, more products are made at the same price level.

REAL-COST INFLATION

real-cost inflation rising prices due to scarce resources or increased difficulty in obtaining resources

As resources become scarce or more difficult to get, prices rise in the form of **real-cost inflation**. For example, when there is less natural gas, or companies have to dig deeper to get it, the cost of providing natural gas rises. Over time, resources that are in high demand may shrink in supply. With a growing population's ever-increasing demands, this may happen with many resources. To avoid this type of inflation, people must find other resources to use instead of the one that is scarce.

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Why are more businesses hiring during periods of inflation?

INFLATION AFFECTS EMPLOYMENT

Economists believe there is a direct relationship between inflation and employment. Rising prices often are a result of increased demand, which means more people are spending and producers are making more money. Producers, in an effort to keep up with demand, hire more people. Thus, rising prices are associated with higher employment rates. When inflation is reduced and prices drop, the opposite occurs. With reduced demand and lower profits, producers may start laying off workers. This is often called the *inflation/employment tradeoff*. Thus, mild inflation of 2 or 3 percent is said to be good for the economy.

INFLATION AFFECTS SPENDING, SAVING, AND INVESTING

Some jobs provide pay raises only once a year or less often. Employees who do not get raises often enough to keep pace with the inflation rate lose purchasing power. Retirees drawing a fixed monthly pension also lose purchasing power as prices rise. In such cases, consumers have two choices: they can buy less, or they can dip into savings or borrow money

to continue the same level of spending. Either way, it takes more money to keep getting the same amount of goods and services.

Inflation also affects the amount of money consumers may be able to save. In times of rising prices, consumers may have to use more of their *disposable income* to buy needed goods and services. Less money may be available for saving.

The **time value of money** is a concept that says a dollar you receive in the future will be worth less than a dollar you receive today. The concept assumes that prices are rising. For example, suppose you loan a friend $20 today. Your friend promises to pay back the $20 one year from today. The money you receive in one year will not have the same value as the money you loaned your friend. This is because prices will be higher and the $20 will not buy as many goods and services one year from today.

time value of money a concept that says a dollar you receive in the future will be worth less than a dollar you receive today

Consumers consider the expected rate of inflation when choosing investments. They want to invest their money in a way that will provide a return that is greater than the rate of inflation. For example, suppose the inflation rate over 5 years is 5 percent. Investments such as savings accounts, stocks, or bonds must have a growth rate of at least 5 percent for the money invested to keep its purchasing power.

Figure 3-1.2 shows the inflation rates as measured by the CPI-U (Consumer Price Index for Urban Dwellers) for 20 years. It shows that we have had low inflation rates over the past 20 years. These rates are low largely due to actions of the federal government and the Federal Reserve System.

Figure 3-1.2 Inflation as Measured by CPI-U, 1990–2009

Year	Annual Inflation Rate CPI-U	Year	Annual Inflation Rate CPI-U
1990	6.1%	2000	3.4%
1991	3.1%	2001	1.6%
1992	2.9%	2002	2.4%
1993	2.7%	2003	1.9%
1994	2.7%	2004	3.3%
1995	2.5%	2005	2.4%
1996	3.3%	2006	2.5%
1997	1.7%	2007	4.1%
1998	2.7%	2008	0.1%
1999	2.7%	2009	2.7%

Source: http://www.bls.gov/cpi/#tables (accessed March 21, 2010).

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How can productivity affect inflation?