

# Reading Essentials and Study Guide



## Chapter 13: Economic Instability

### Lesson 2 Inflation

#### ESSENTIAL QUESTION

*What are the causes and consequences of instability in the economy?*

#### Reading HELPDESK

##### Academic Vocabulary

**construction** creation by assembling individual parts

**recover** to get back

##### Content Vocabulary

**inflation** sustained rise in the general level of prices of goods and services

**deflation** sustained decrease in the general level of the prices of goods and services

**price index** statistical series used to measure changes in the price level over time

**consumer price index (CPI)** index used to measure price changes for a market basket of frequently used consumer items

**market basket** representative collection of goods and services used to compile a price index

**base year** year serving as point of comparison for other years in a price index or other statistical measure

**creeping inflation** relatively low rate of inflation, usually 1 to 3 percent annually

**hyperinflation** abnormal inflation in excess of 500 percent per year; last stage of monetary collapse

**stagflation** combination of stagnant economic growth and inflation

**producer price index (PPI)** index used to measure prices received by domestic producers; formerly called the wholesale price index

**implicit GDP price deflator** index used to measure price changes in gross domestic product

**demand-pull inflation** explanation that prices rise because all sectors of the economy try to buy more goods and services than the economy can produce

**cost-push inflation** explanation that rising input costs, especially energy and organized labor, drive up the cost of products for manufacturers and thus cause inflation

**creditors** persons or institutions to whom money is owed

**debtors** persons or institutions that owe money

#### TAKING NOTES: *Key Ideas and Details*

Use a graphic organizer like the one below to differentiate these two main explanations for inflation.

	Causes	Effects
Demand-Pull Inflation		
Cost-Push Inflation		

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## Chapter 13: Economic Instability

### Lesson 2 Inflation, Continued

#### Measuring Prices and Inflation

**Guiding Question** *How is the consumer price index used to calculate inflation?*

Macroeconomic instability is not limited to fluctuations in the level of national output (GDP) or national income (GNP). Changes in prices can also disrupt the economy. A general rise in prices is called **inflation**. A general decline in prices is called **deflation**. Both situations are harmful to the economy and should be prevented, if possible.

To understand inflation, we must first examine how it is measured. This requires the **construction** of a **price index**, a statistical series used to measure changes in the level of prices over time. We will focus on the popular **consumer price index (CPI)**. The CPI tracks monthly changes in prices paid by consumers for a representative “basket” of goods and services.

#### The Market Basket

To create an index, economists must select a **market basket**, a group of commonly purchased goods and services. The CPI includes the prices of about 300 goods and services, such as those shown in **Figure 13.3**. This may seem like a small number. However, these items are scientifically chosen to represent the types of purchases that most consumers make.

The next step is to find the average price of each item in the market basket. To do so, every month employees of the U.S. Census Bureau sample the prices of nearly 80,000 items across the country. They then add up the prices to find the total cost of the market basket. See Figure 13.3 for a made-up example of what the results might be for three separate periods.

A **base year**—a period or year that all others are compared to—is needed to measure changes. Almost any base will do, but the Bureau of Labor Statistics (BLS) currently uses average prices from the beginning of 1982 through 1984. While this is likely to be updated in the future, it is still the most popular base for price indexes.

#### The Consumer Price Index

The last step is to make the numbers in the table easier to read by converting the dollar cost of a market basket to an index value. This is done by dividing the chosen year’s market basket cost by the base-year’s market basket cost. For example, the \$4,190 cost for August 2013 is divided by the \$1,792 base-year cost to get 2.338, or 233.8 percent. The index number for August 2013 (233.8) represents the level of that year’s prices in comparison to the base.

All the conversions are understood to be a percentage of the base-year cost, even though the % sign or the word *percent* is not used. For example, prices in August 2013 are 233.8 percent of those in the base year. This is another way to say that prices have more than doubled. A different base year would give a different index number. However, to avoid confusion, the base year is hardly ever changed.

Many prices are sampled all over the country. Therefore, the BLS publishes specific CPIs for selected cities and large urban areas, as well as one for the whole country.

#### Measuring Inflation

Now that we have the price index, we can find the annual percentage change in the price level. This is how inflation is measured. Based on Figure 13.3, the CPI in August of 2012 is 230.4 and 233.8 one year later. To find the annual percentage change, we divide the change in the CPI by the value of the CPI at the beginning of the period being measured, like this:

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### Lesson 2 Inflation, Continued

$$\frac{233.8 - 230.4}{230.4} = \frac{3.4}{230.4} = 0.0148 = 1.48\%$$

This shows that the rate of inflation was 1.48 percent for the 12-month period.

The rate of inflation tends to change over long periods of time. In the last 20 years, the United States could be described as having **creeping inflation**. This is inflation in the range of 1 to 3 percent per year. When inflation is this low, it is not much of a problem. However, inflation can rise to the point where it gets out of control. **Hyperinflation**—inflation in the range of 500 percent a year and above—does not happen very often. When it does, it is often the last stage before a total monetary collapse.

The record for hyperinflation was set in Hungary during World War II. At that time, huge amounts of currency (pengős) were printed to pay the government's bills. By the end of the war, it was claimed that 828 *octillion* (828,000,000,000,000,000,000,000,000) pengős equaled 1 prewar pengő.

An economy also may have **stagflation**. This is a period of stagnant economic growth with inflation. Stagflation was a concern in the United States in the 1970s, a time of rising prices as well as high unemployment. Today, some people worry that the high price of oil could cause prices to go up and economic growth to slow down.

### Other Price Indexes

*A price index can be made for any part of the economy in exactly the same way. The agricultural sector, for example, uses a separate price index for the products it buys (diesel fuel, fertilizer, and herbicides), and then compares it to the prices it gets for its products.*

The **producer price index (PPI)** is a monthly series that reports prices domestic producers receive for about 100,000 commodities. Prices in this series are recorded when a producer sells its output to the very first buyer. 1982 is the base year. Although the PPI covers all kinds of commodities, it is then broken down into various subcategories. These include farm products, fuels, chemicals, rubber, pulp and paper, and processed foods.

Another series is the **implicit GDP price deflator**, to measure the effect of inflation on GDP. This series is used less often because the government announces real GDP, which is already adjusted for price increases.

These are just a few of the many price indexes that the government tracks. The CPI is by far the most popular.



#### Reading Progress Check

**Analyzing** How is a market basket used to measure price levels?

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### Lesson 2 Inflation, Continued

#### Exploring the Essential Question

You've decided to save \$5,000 over three years in order to buy a car. But you learn that the annual inflation rate is now 2.9 percent. So you can assume that a car you like that costs \$5,000 today will cost more in three years. If inflation stays the same each year, about how much extra money, beyond the \$5,000, should you also save in order to afford the car you want?

- a. \$279
  - b. \$323
  - c. \$447
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#### Causes of Inflation

**Guiding Question** *Why is there no single cause of inflation?*

Economists have several explanations for the causes of inflation. Nearly every period of inflation arises from one of the following causes: demand-pull, cost-push, wage-price spiral, or excessive monetary growth.

##### Demand-Pull

**Demand-pull inflation** arises when people try to buy more goods and services than the economy can produce. As consumers, businesses, and governments all look for ways to get what they need, they encounter shortages. Prices are "pulled" up by the extra demand. One reason this might happen is if consumers overuse their credit cards and go into debt to buy things they cannot afford.

A similar explanation blames inflation on excessive spending by the federal government. After all, the government also borrows and then spends billions of dollars, pushing prices up. The demand-pull explanation, however, cites excess demand from all sectors of the economy, not just the federal government.

##### Cost-Push

The **cost-push inflation** explanation claims that rising input costs drive up the cost of manufacturing, causing inflation. Among the likely inputs are energy and organized labor. For example when a strong national union wins an increase in wages, manufacturers may raise prices to **recover** the increase in labor costs.

Another cause of cost-push inflation could be a sudden rise in the international price of oil, which is linked to the price of everything from plastics and gas to shipping and airfares. This occurred during the 1970s, when prices for crude oil went from \$5 to \$35 a barrel. It happened again in 2008, when the price of oil surged to over \$140 a barrel.

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### Lesson 2 Inflation, *Continued*

#### Wage-Price Spiral

*A more neutral explanation does not blame any one group or event for inflation. According to this view, an upward spiral of wages and prices becomes hard to stop when it feeds on itself.*

The spiral might begin when higher prices force workers to ask for higher wages. If they get higher wages, producers try to recover that cost with higher prices. As each side tries to get more, the rate of inflation keeps rising.

#### Excessive Monetary Growth

*The most popular explanation for inflation is excessive monetary growth, when the money supply grows faster than real GDP. In this scenario, any extra money or additional credit created by the Federal Reserve will raise someone's purchasing power. When people spend this additional money, they cause a demand-pull effect that drives up prices.*

Advocates of this explanation point out that inflation cannot last without a growing money supply. Suppose that the price of gas goes up sharply, but consumers only have the same amount of money. They would be forced to buy less of something else. Producers usually lower prices when demand decreases. So a big increase in the price of gas should cause the prices of other items to fall and keep the overall price level unchanged—unless the money supply also grows.



#### Reading Progress Check

**Explaining** Which explanation do you think gives the most reasonable cause of inflation? Why?

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#### Consequences of Inflation

**Guiding Question** *Whom does inflation hurt the most?*

*Low levels of inflation may not be a problem. However, inflation can hurt the economy if it gets too high, variable, or uncertain.*

#### Reduced Purchasing Power

*As you can see from Figure 13.4, the purchasing power of the dollar has fluctuated many times since 1913. Most of the fluctuations took place between 1913 and 1933. This was when the country was on the gold standard.*

After 1933, the declining purchasing power of the dollar was entirely linked to inflation. Whenever prices rise, the dollar buys less. This may not be a problem for everyone. However, decreasing purchasing power can be very hard on retirees or people with fixed incomes. Their money buys a little less each month. People who can increase their fees or wages to keep up with inflation are less vulnerable.

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### Lesson 2 Inflation, Continued

#### Distorted Spending Patterns

*Inflation can make people change their spending habits. For example, when prices went up in the early 1980s, interest rates—the cost of borrowed money—also went up. Spending on goods that last, especially housing and automobiles, fell sharply.*

Suppose that a couple wanted to borrow \$100,000 to buy a house and repay the loan over 20 years. At a 7-percent interest rate, their monthly mortgage would cost \$660.12. At 14 percent, their payment would be \$1,197.41 each month. In 1981 some mortgage rates reached 18 percent. This meant a monthly payment of \$1,517.32 for the same \$100,000 20-year loan. When interest rates rose that high, the homebuilding industry almost collapsed.

#### Encouraged Speculation

*Inflation tempts some people to take risks. For example, when interest rates were low from 2001 to 2005, housing prices were going up. Many unqualified buyers were able to purchase high-priced homes and thought they would do well selling them at an even higher price. Often they took loans with variable rates that changed. When interest rates went up in 2006 and 2007, some of them couldn't pay their loans.*

Some people make money trying to take advantage of inflation, but for the average consumer, a large loss could have terrible consequences, like losing a home.

#### Distorted Distribution of Income

*During long periods of inflation, **creditors**, or people who lend money, are generally hurt more than **debtors**, or borrowers. This is because earlier loans are repaid later with dollars that have less purchasing power.*

Suppose that you borrow \$100 to buy bread that costs \$1 a loaf. You could buy 100 loaves of bread with that loan. However, if inflation set in, and each loaf now cost \$2, your lender can buy only 50 loaves of bread when you pay back the \$100.



#### Reading Progress Check

**Identifying** Why is inflation especially hard on people with fixed incomes?

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