



# What Is Inflation?

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**I**T may be one of the most familiar words in economics. Inflation has plunged countries into long periods of instability. Central bankers often aspire to be known as “inflation hawks.” Politicians have won elections with promises to combat inflation, only to lose power after failing to do so. Inflation was even declared Public Enemy No. 1 in the United States—by President Gerald Ford in 1974. What, then, is inflation, and why is it so important?

Inflation is the rate of increase in prices over a given period of time. Inflation is typically a broad measure, such as the overall increase in prices or the increase in the cost of living in a country. But it can also be more narrowly calculated—for certain goods, such as food, or for services, such as a haircut, for example. Whatever the context, inflation represents how much more expensive the relevant set of goods and/or services has become over a certain period, most commonly a year.

## Measuring inflation

Consumers’ cost of living depends on the prices of many goods and services and the share of each in the household budget. To measure the average consumer’s cost of living, government agencies conduct household surveys to identify a basket of commonly purchased items and track over time the cost of purchasing this basket. (Housing expenses, including rent and mortgages, constitute the largest component of the consumer basket in the United States.) The cost of this basket at a given time expressed relative to a base year is the *consumer price index* (CPI), and the percentage change in the CPI over a certain period is *consumer price inflation*, the most widely used measure of inflation. (For example, if the base year CPI is 100 and the current CPI is 110, inflation is 10 percent over the period.)

*Core consumer inflation* focuses on the underlying and persistent trends in inflation by excluding prices set by the government and the more volatile prices of products, such as food and energy, most affected by seasonal factors or temporary supply conditions. Core inflation is also watched closely by policymakers. Calculation of an overall inflation rate—for a country, say, and not just for

consumers—requires an index with broader coverage, such as the *gross domestic product (GDP) deflator*.

The CPI basket is mostly kept constant over time for consistency, but is tweaked occasionally to reflect changing consumption patterns—for example, to include new hi-tech goods and to replace items no longer widely purchased. Because it shows how, on average, prices change over time for everything produced in an economy, the contents of the GDP deflator vary each year and are more current than the mostly fixed CPI basket. On the other hand, the deflator includes non-consumer items (such as military spending) and is therefore not a good measure of the cost of living.

## The good and the bad

To the extent that households’ *nominal* income, which they receive in current money, does not increase as much as prices, they are worse off, because they can afford to purchase less. In other words, their *purchasing power* or *real*—inflation-adjusted—income falls. Real income is a proxy for the standard of living. When real incomes are rising, so is the standard of living, and vice versa.

In reality, prices change at different paces. Some, such as the prices of traded commodities, change every day; others, such as wages established by contracts, take longer to adjust (or are “sticky,” in economic parlance). In an inflationary environment, unevenly rising prices inevitably reduce the purchasing power of some consumers, and this erosion of real income is the single biggest cost of inflation.

Inflation can also distort purchasing power over time for recipients and payers of fixed interest rates. Take pensioners who receive a fixed 5 percent yearly increase to their pension. If inflation is higher than 5 percent, a pensioner’s purchasing power falls. On the other hand, a borrower who pays a fixed-rate mortgage of 5 percent would benefit from 5 percent inflation, because the *real interest rate* (the nominal rate minus the inflation rate) would be zero; servicing this debt would be even easier if inflation were higher, as long as the borrower’s income keeps up with inflation. The lender’s real income, of course, suffers. To the extent that inflation is not factored into *nominal interest rates*, some gain and some lose purchasing power.

Indeed, many countries have grappled with high inflation—and in some cases *hyperinflation*, 1,000 percent or more a year. In 2008, Zimbabwe experienced one of the worst cases of hyperinflation ever, with estimated annual inflation at one point of 500 billion percent. Such high levels of inflation have been disastrous, and countries have had to take difficult and painful policy measures to bring inflation back to reasonable levels, sometimes by giving up their national currency, as Zimbabwe has.

Although high inflation hurts an economy, *deflation*, or falling prices, is not desirable either. When prices are falling, consumers delay making purchases if they can, anticipating lower prices in the future. For the economy this means less economic activity, less income generated by producers, and lower economic growth. Japan is one country with a long period of nearly no economic growth, largely because of deflation. Preventing deflation during the global financial crisis that began in 2007 is one of the reasons the U.S. Federal Reserve and other central banks around the world have kept interest rates low for a prolonged period and have instituted other monetary policies to ensure financial systems have plenty of liquidity. Today global inflation is at one of its lowest levels since the early 1960s, partly because of the financial crisis.

## Policymakers must find the right balance between boosting demand and growth when needed without overstimulating the economy and causing inflation.

Most economists now believe that low, stable, and—most important—predictable inflation is good for an economy. If inflation is low and predictable, it is easier to capture it in price-adjustment contracts and interest rates, reducing its distortionary impact. Moreover, knowing that prices will be slightly higher in the future gives consumers an incentive to make purchases sooner, which boosts economic activity. Many central bankers have made their primary policy objective maintaining low and stable inflation, a policy called *inflation targeting* (see “Inflation Targeting Turns 20,” in this issue).

### What creates inflation?

Long-lasting episodes of high inflation are often the result of lax monetary policy. If the money supply grows too big relative to the size of an economy, the unit value of the currency diminishes; in other words, its purchasing power falls and prices rise. This relationship between the money supply and the size of the economy is called the *quantity theory of money*, and is one of the oldest hypotheses in economics.

Pressures on the supply or demand side of the economy can also be inflationary. *Supply shocks* that disrupt production, such as natural disasters, or raise production costs, such

as high oil prices, can reduce overall supply and lead to “cost-push” inflation, in which the impetus for price increases comes from a disruption to supply. The food and fuel inflation of 2008 was such a case for the global economy—sharply rising food and fuel prices were transmitted from country to country by trade. Conversely, *demand shocks*, such as a stock market rally, or *expansionary policies*, such as when a central bank lowers interest rates or a government raises spending, can temporarily boost overall demand and economic growth. If, however, this increase in demand exceeds an economy’s production capacity, the resulting strain on resources is reflected in “demand-pull” inflation. Policymakers must find the right balance between boosting demand and growth when needed without overstimulating the economy and causing inflation.

*Expectations* also play a key role in determining inflation. If people or firms anticipate higher prices, they build these expectations into wage negotiations and contractual price adjustments (such as automatic rent increases). This behavior partly determines the next period’s inflation; once the contracts are exercised and wages or prices rise as agreed, expectations have become self-fulfilling. And to the extent that people base their expectations on the recent past, inflation will follow similar patterns over time, resulting in inflation *inertia*.

### How policymakers deal with inflation

The right set of *anti-inflation policies*, those aimed at reducing inflation, depends on the causes of inflation. If the economy has overheated, central banks—if they are committed to ensuring price stability—can implement *contractionary* policies that rein in aggregate demand, usually by raising interest rates. Some central bankers have chosen, with varying degrees of success, to impose monetary discipline by *fixing the exchange rate*—tying its currency to another currency and, therefore, its monetary policy to that of the country to which it is linked. However, when inflation is driven by global rather than domestic developments, such policies may not help. In 2008, when inflation rose across the globe on the back of high food and fuel prices, many countries allowed the high global prices to pass through to the domestic economy. In some cases the government may directly set prices (as some did in 2008 to prevent high food and fuel prices from passing through). Such *administrative price-setting* measures usually result in the government’s accrual of large subsidy bills to compensate producers for lost income.

Central bankers are increasingly relying on their ability to influence *inflation expectations* as an inflation-reduction tool. Policymakers announce their intention to keep economic activity low temporarily to bring down inflation, hoping to influence expectations and contracts’ built-in inflation component. The more credibility central banks have, the greater the influence of their pronouncements on inflation expectations. ■

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