

Understanding the Impacts of Deflation

Persistent low inflation or deflation is not a positive for economic growth.

Executive summary

When there is inflation, prices go up and a dollar can buy less. Deflation is the opposite. Prices of goods go down, so consumers and businesses can get more for their dollar (or local currency). We often hear concerns about inflation, but rarely hear concerns about deflation. Perhaps it is more widely believed that inflation is bad, so deflation must be good. If prices go down, it makes sense to believe the situation would likely encourage more buying. In fact, it can actually have the opposite effect. If consumers and corporations expect prices to go down, they will often delay purchases, waiting for a better price—dramatically slowing demand and causing prices to drop further. This leads to a downward spiral that reduces the circulation of money through the economy, which may limit growth. Therefore, deflation can be quite detrimental to an economy and the people and businesses that comprise that economy. In this paper, we discuss the definition of deflation, how it affects economies, provide examples of historical effects of deflation and end with a look at deflationary risks in the context of the current economic environment. Ultimately, we believe deflation is a potentially dangerous condition that can impede economic growth and job creation.

What is deflation?

Deflation is an economic phenomenon characterized by a general and persistent broad-based decline in prices over time. Deflation becomes a concern when an economy experiences low or negative levels of growth. The variety of prices affected by deflation can include services, energy and non-energy industrial goods. It generally occurs during periods of high unemployment, industrial overcapacity, stagnant wages and falling labor costs. High unemployment leads to lower aggregate consumer demand for goods and services. As demand decreases, businesses generally lower their prices of goods and services. Over time, lower prices can result in less cash flow and profits for companies who then are inclined to reduce or postpone hiring and initiate layoffs.

Deflation is different from disinflation or stagflation. Disinflation represents a decline in the rate of inflation. Decreases in the rate of inflation are the result of slowdowns in the business cycle or the rate of growth in the money supply. Stagflation is the coupling of low growth and high inflation. Random shocks to the economic system can cause prices to rise.

Investment products and services are:

NOT A DEPOSIT	NOT FDIC INSURED	MAY LOSE VALUE	NOT BANK GUARANTEED	NOT INSURED BY ANY FEDERAL GOVERNMENT AGENCY
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Economic conditions underlying the rate of inflation/deflation

	Inflation	Deflation	Disinflation	Stagflation
Prices	High	Low	Falling	High
Wages	High	Low	Falling	Low-high
Growth (GDP*)	High	Low	Low	Low
S&P returns	Low	High	Low or falling	Low

Source: U.S. Bank Asset Management Group. *GDP: gross domestic product.

Examples of supply shocks include severe agricultural shortages, shortages of certain strategic raw materials and oil disruptions. The low growth component of stagflation is due to lack of underlying demand, which could be attributed to low consumer spending as a result of debt deleveraging. While central banks can mount defenses against inflation by raising short-term interest rates, deflation is much tougher to fight. Generally, in the face of deflation, a central bank would decrease short-term interest rates to encourage borrowing and spending in response to negative growth. However, interest rates are very difficult to decrease below zero—referred to as zero bound. Once interest rates are at zero, central banks have difficulty creating negative rates where depositors would pay banks to hold their money, and lenders would pay borrowers to take out loans. Recent noteworthy efforts to curtail deflation include Japan's current monetary stimulus program, the European Central Bank's recent lowering of its interest rate and quantitative easing (QE) programs in the United States.

How does deflation affect an economy?

In the 20th century, there were two main examples of deflation's effect on economies:

- The Great Depression of the 1930s, which began in the United States and spread globally
- Japan's "lost decades," which began in the early 1990s

These two historical examples both involved an asset bubble, which was supported by debt that was unsustainable and eventually led to a stock market crash or bubble bursting. In the shadow of a debt-fueled bubble bursting, there was resulting deleveraging, which created a drop in consumption and investment to free up

cash to pay off debt. As the stock market fell, investors fled risky investments in search of safe havens for cash. Banks failed and the financial system consolidated and contracted, resulting in a restrained lending environment. Consumer and corporate spending decreased in the face of uncertainty. Growth and prices decreased in the face of demand interruptions. Both instances of deflation and slow or negative growth lasted over a decade.

Deflation can have varying effects on an economy depending on other factors. While these two historical examples of deflation share many similarities, there were also distinct differences. For example:

- Due to a drought in the agricultural states during the Great Depression, food prices actually increased substantially as a result of supply shock in the face of inelastic demand.
- Additionally, the U.S. unemployment level during the Great Depression was very high despite government programs, while in Japan the unemployment stayed below 5 percent, even though growth was nominal, due to more aggressive government guarantees of employment.
- Another difference is the contagion to the global economy. The Great Depression affected the global economy, while Japan's "lost decades" had less of an effect on the global economy.

Deflation can have numerous negative effects. However, there can also be perceived positive effects. In the case of Ireland after the 2008 financial collapse and the resulting recession, deflation was treated as a temporary condition that allowed for an improvement in competitiveness and balancing the budget. Additionally, moderate deflation may benefit savers and investors because the value of their assets is appreciating relative to the rate of deflation. On the other hand, deflation can be detrimental for borrowers since they are paying back debts in currency that is in effect more expensive due to deflation. In general, when there is slack in the labor force there is downward pressure on wages, which can seem positive for businesses. Business owners can improve margins by

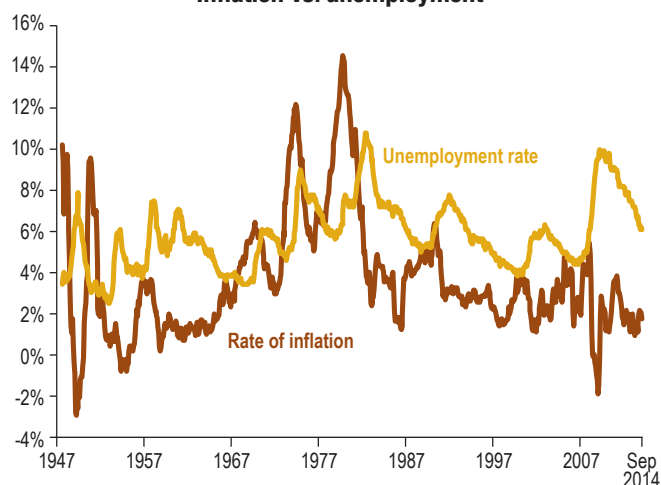


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paying workers less. In some cases, consumers will have an opportunity to choose goods declining in price instead of goods that are rising in price.

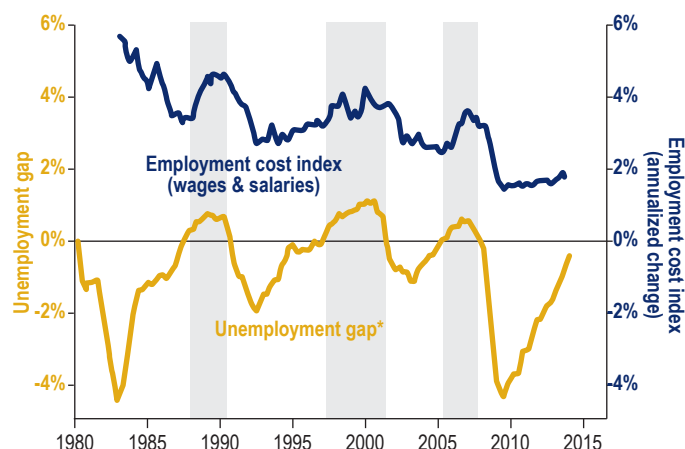
However, it is important to remember that workers are consumers. In the United States, consumer spending is 70 percent of Gross Domestic Product (GDP), which is a popularly used measure of growth. If wages are flat, then growth is likely to be flat—unless consumers offset flat wages with consumer credit, which is not sustainable in the long term, as experienced in 2007-2008. In general, flat wages are something that restrains consumption growth, and therefore can have a deflationary effect. Low inflation in prices and wages can support growth, but not if it's persistent. Low inflation or deflation, therefore, is correlated with high unemployment. Within the current economic environment, the deflationary gap between unemployment and wage inflation is narrowing, as depicted in the following charts.

Inflation vs. unemployment



Source: FactSet Research Systems. Data period: Jan 1947-Sep 2014.

It's too soon to expect wage inflation



Source: BCA Research, Inc. Data period: 1980-2015 projected.*NAIRU minus unemployment rate. Shaded areas indicate unemployment rate below NAIRU. NAIRU: non-accelerating inflation rate of unemployment.

Investment concerns

Current low levels of inflation could be a concern for investors. Inflation levels in major developed countries such as the United States, Britain, Japan, Germany and France are currently all below 2 percent. Central banks, including the United States Federal Reserve Bank, would prefer to see inflation around 2 percent. Fed policy affects capital markets and therefore, investments. Additionally, if businesses or individuals expect prices to continue to drop, they will likely postpone many purchases waiting for a lower price, further reducing demand—and therefore, growth.



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Conclusion

In general, persistent low inflation or deflation is not a positive for economic growth. As a short-term condition, lower prices might give the consumer a break in the face of low wage inflation. Anemic growth in wages can be good for businesses in the short run as margins improve. Longer term, however, deflation can lead to lower profits and cash flow for these same businesses. For central banks, deflation is an economic situation they want to avoid since deflation and high unemployment tend to go hand in hand. It's important in these situations that consumers and businesses have an expectation that prices will rise in the future. Otherwise, there's the potential for businesses to put off hiring and investing in new equipment if there's the expectation that the cost will be comparable, or less, in the future. Likewise, consumers can continue to put off many purchases if there's no concern that the price will rise. In this way, low inflation or deflation acts as a disincentive for investment and expenditure.

Global deflationary conditions increased following the financial crisis of 2008. Global economic recovery following this crisis has remained frustratingly weak in many

countries. Since that time, global monetary settings remain constructive, yet we still have deflationary concerns, especially in economies like the eurozone and Japan. Deflationary concerns in the United States have decreased as economic growth prospects appear to have improved. The growing middle class and rising wages in China and India has led to increased global demand for goods and therefore, an increase in global manufacturing. The growth in manufacturing will help companies sell more goods and services and eventually also help raise wages in other countries, which should bolster growth and avoid deflation.

When confronted with deflation in the past, investors historically have done better when giving preference to bonds and underweighting allocations to stocks and commodities. In a weakening price environment, stocks can benefit from cheaper labor costs but are harmed by lowered prices for their wares. Bonds will likely perform better than stocks in a deflationary environment where declining prices typically lead to declining interest rates, which can be a potential benefit for bond owners.

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