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Deflation: Who Let the Air Out?

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"Inflation that is 'too low' can be problematic, as the Japanese experience has shown."
—James Bullard, President and CEO, Federal Reserve Bank of St. Louis, August 19, 2010

The Federal Open Market Committee (FOMC), the Federal Reserve's policy-setting committee, took further steps in early November 2010 to attempt to alleviate economic strains from a high unemployment rate and falling inflation rates.[1] While it is clear that a high unemployment rate and rapidly increasing prices (inflation) are undesirable for economies, it is less obvious why decreasing prices (deflation) can also restrain economic growth.

At its November meeting, the FOMC discussed the potential of further slow growth in prices (disinflation). That month, the price level, as measured by the Consumer Price Index (CPI), was 1 percent higher than it was the previous November.[2] However, less than a year earlier, in December 2009, the year-to-year change was 2.8 percent. While both rates are positive and indicate inflation, the downward trend indicates disinflation. Economists worry about disinflation when the inflation rate is extremely low because it can potentially lead to deflation, a phenomenon that may be difficult for central bankers to combat and can have various negative implications on an economy.

While the idea of lower prices may sound attractive, deflation is a real concern for several reasons. Deflation discourages spending and investment because consumers, expecting prices to fall further, delay purchases, preferring instead to save and wait for even lower prices. Decreased spending, in turn, lowers company sales and profits, which eventually increases unemployment. At the same time, borrowing by businesses for investment or by households for big-ticket items (i.e., cars and homes) becomes equally unattractive. For example, consider a $100 loan at a 2 percent interest rate with full payment, $102, due at the end of the year. If during the year there is 5 percent inflation (the price level increases), only $97 in *real* terms is owed at the end of the year because the money borrowed now purchases *fewer* goods and services.[3] Alternatively, if during the year there is 5 percent deflation (the price level decreases), then $107 dollars in *real* terms is owed at the end of the year because the money borrowed now purchases *more* goods and services.[4] Because of its potential to cause such an increase in the real cost of borrowing, deflation could cause further pain to an already hard-hit U.S. housing sector as households continue delaying home purchases to circumvent such losses.

Deflation also creates an additional pressure for businesses—wages that remain steady as the price level falls. Unlike pay raises, pay cuts are not well received and usually take time.[5] The burden of these higher real wages in a weak economy can further depress business profits, expansion, and hiring. For much of the 1990s and 2000s, these effects plagued Japan as it battled disinflation or deflation in a malaise termed the Lost Decade.

During the Lost Decade, Japan's economy experienced a sluggish and lengthy recovery and mild deflation. Although largely contained, companies still faced falling sales and declining profits, which in turn led to higher unemployment and a beleaguered business climate. Declining company profits made funding new business investments difficult, and paying down debt took precedence over business expansion. Stock prices help tell the story: In 2003, Japan's stock prices were trading at 1984 prices.[6] Federal Reserve policymakers intend to prevent Japanese-style deflation and stagnant growth from taking hold in the United States. To further pursue this goal, at their November 2010 meeting the FOMC voted to begin purchasing long-term Treasury bonds, a policy termed "quantitative easing," in an effort to (i) lower long-term interest rates, thereby encouraging sales and investment, and (ii) discourage price decreases (deflation).[7]

—By Hoda El-Ghazaly, Research Associate

[1] Since the beginning of the financial crisis, to ease economic pressures the Federal Reserve has lowered the federal funds rate to near zero and created lending programs to increase business and consumer access to money. See Anderson, Richard G. and Gascon, Charles S. "A Closer Look: Assistance Programs in the Wake of the Crisis." Federal Reserve Bank of St. Louis *Regional Economist*, January 2011.

[2] The FOMC prefers to consider core rather than headline price index values (as used here). Core inflation eliminates items that can cause temporary price shocks (such as energy and food products) and can therefore serve as a better indicator of long-term inflation trends.

[3] The real cost of the loan is the nominal interest rate (2 percent) less the inflation rate (5 percent): 2 – 5 = –3

[4] The real cost of the loan is the nominal interest rate (2 percent) less the inflation rate (–5 percent): (2 – –5 = 7).

[5] It is also politically difficult, if not impossible, for lawmakers to decrease the minimum wage or Social Security benefits.

[6] See Tokyo Stock Exchange. "History of TOPIX." January 22, 2010.

[7] The April 2011 *Liber8* newsletter will describe the quantitative easing strategy.

Recent Articles on Inflation and Deflation

"U.S. Historical Experience with Deflation," by Christopher J. Neely, Federal Reserve Bank of St. Louis *Economic Synopses*, No. 30, October 19, 2010.

Provides a historical account of deflation in the United States.

"Why Worry About Low Inflation?" by Daniel Indiviglio, *Atlantic*, October 16, 2010.

Explains the impact deflation can have on an economy.

"The Breadth of Disinflation," by Hart Hobijn and Colin Gardiner, Federal Reserve Bank of San Francisco *Economic Letter*, No. 36, December 6, 2010.

Examines the rate of inflation across a range of goods and services to help explain downward pressures on inflation.

Free Resources and Data Sources

Resource: Consumer Price Index (CPI) Historical Table
Description: Provides monthly data, the yearly average, and the year-to-year percent change in CPI from 1913 to the present.
Published by: Bureau of Labor Statistics
Location: ftp://ftp.bls.gov/pub/special.requests/cpi/cpiai.txt

Resource: The Economic Lowdown
Description: A podcast covering inflation, deflation, and disinflation (by Scott Wolla, Volume 1, Episode 4).
Published by: Federal Reserve Bank of St. Louis
Location: http://stlouisfed.org/education_resources/podcasts/economic_lowdownv1ep4.cfm

Resource: The Inflation Project
Description: A compilation of regularly updated inflation-related data, research, and reports.
Published by: Federal Reserve Bank of Atlanta
Location: http://www.frbatlanta.org/research/inflationproject/

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