



## Fueling Expected Inflation

**M**aintaining expectations of a low, stable inflation rate is essential to achieving the goals of monetary policy. But how, exactly, do households and firms form inflation expectations? It seems reasonable that rapidly rising prices for frequently purchased goods would attract more notice than stable prices for goods purchased less frequently. Recent correlations between increases in gasoline prices and in inflation expectations provide an example. Federal Reserve Chairman Bernanke cited this risk in his July 15 Monetary Policy Report to the Congress: "...the currently high level of inflation, if sustained, might lead the public to revise up its expectations for longer-term inflation. If that were to occur, and those revised expectations were to become embedded in the domestic wage- and price-setting process, we could see an unwelcome rise in actual inflation over the longer term. A critical responsibility of monetary policy makers is to prevent that process from taking hold."<sup>1</sup>

During 2008, through June, the U.S. all-items CPI increased at a 5.4 percent rate, while the chain-price index for personal consumption expenditures (PCE) increased at a 3.3 percent pace. The comparable "core" measures that exclude food and energy increased at 2.3 percent and 1.9 percent rates, respectively. By some measures, inflation expectations increased as well. In the University of Michigan's household survey, the median expected inflation rate for the next 12 months increased from 3.4 percent in the December 2007 survey to 5.1 percent in the July 2008 survey, its second-highest level since 1981, just below May's 5.2 percent figure. Although the survey's median expected inflation rate for the next 5 to 10 years changed little, from 3.1 percent in December to 3.2 percent in July, it is at its second-highest level since 1995, just below May and June's 3.4 percent figures. These increases seem incongruous with the 1.9 percent rate of increase of the chain-price index for core PCE, the FOMC's preferred inflation measure.

Linkages between commodity prices and inflation expectations also are a concern in Europe. In the United Kingdom, the all-items CPI increased 0.7 percent in June and is 3.8 percent

higher than one year earlier, the largest year-over-year increase since June 1992. The core CPI, however, was up only 1.6 percent year-over-year. According to the YouGov/Citicorp survey, inflation expected during the next 12 months jumped to 4.6 percent in June from 4.1 percent in May. Similarly, inflation expected for the next 50 years (inferred from inflation-indexed gilt bonds) rose to 4 percent. In the euro area, June consumer price inflation was at a 4 percent annual rate, double the European Central Bank's (ECB) desired rate; on July 3, the ECB raised its benchmark interest rate to 4.25 percent. Press reports cited concern that inflation expectations were increasing.

Increases in gasoline prices are shown in the table. The retail price of gasoline in the United States increased 30 percent during the first half of 2008, while gasoline prices in the United Kingdom and the euro area increased between 8 percent and 15 percent. The relatively higher taxes in Europe, accounting for more than half the retail price, buffer gasoline's retail price against increases in the cost of crude oil.

Recent increases in inflation expectations appear to more strongly reflect rising commodity prices, rather than core inflation rates or policymakers' longer-term inflation goals. Europe's lesser rate of increase in gasoline prices perhaps provides the ECB and the Bank of England a bit more policymaking flexibility. The much larger increase in the United States suggests more difficult circumstances for the Federal Reserve.

—Richard G. Anderson and Charles S. Gascon

<sup>1</sup> Chairman Ben S. Bernanke, Semiannual Monetary Policy Report to the Congress, before the Committee on Banking, Housing, and Urban Affairs, U.S. Senate, July 15, 2008.

### Retail Gasoline Prices

	Belgium	France	Germany	Italy	Netherlands	U.K.	U.S.
<b>Increase per gallon, in each country's own currency, January 7 to July 14, 2008</b>							
	10%	8%	10%	11%	9%	15%	30%
<b>Tax component per gallon, in U.S. dollars, as of July 14, 2008</b>							
Retail price with taxes	\$9.40	\$8.95	\$9.27	\$9.23	\$10.16	\$9.02	\$4.34
Retail price without taxes	\$4.18	\$3.83	\$3.85	\$4.29	\$4.53	\$3.87	\$3.94
Tax share of retail price	55.5%	57.2%	58.5%	53.5%	55.4%	57.1%	9.2%

SOURCE: Energy Information Agency, FRB H.10, and authors' calculations.

*Views expressed do not necessarily reflect official positions of the Federal Reserve System.*