



DATAPOST

Inflation

Measuring Price Changes

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Federal Reserve Bank of San Francisco
Economic Education

Inflation – Did You Know?

Relative

- Inflation is a general increase in the **relative** price level between two time periods
- The price index chart to the right demonstrates one measure of this increase since 1980

Measures

There are different measures of price levels:

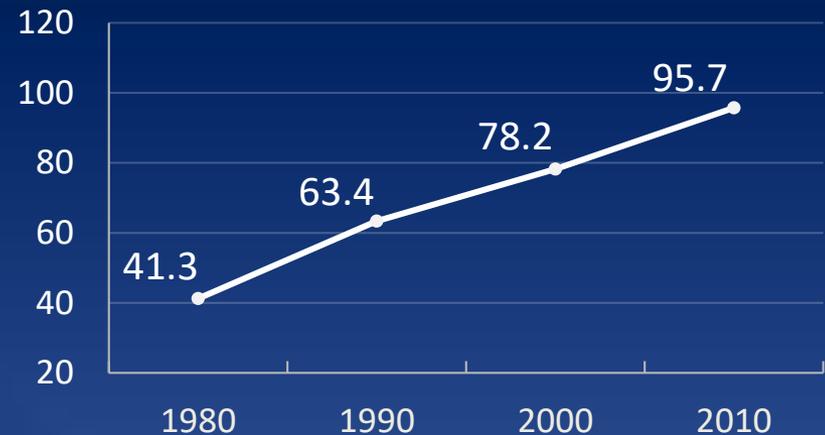
- Consumer Price Index (CPI)
- Producer Price Index (PPI)
- Personal Consumption Expenditures Price Index (PCEPI)

Relationship

- 2% increase in prices, year to year, is considered stable by the Fed
- The PCEPI is the Fed's preferred measure of inflation

Personal Consumption Expenditures Price Index (PCEPI)

(Annual average for years shown, 2012=100)



Source: Bureau of Economic Analysis

Since 1980 prices have been increasing. Compared to 1980, consumers in 2010 were paying 132% more on average, according to the PCEPI.

Measures of Price Levels

Consumer Price Index (CPI)

Change in the prices paid by urban consumers for a representative basket of goods and services

Producer Price Index (PPI)

Average change over time in the selling prices received by domestic producers for their output

GDP Price Index

Measure of the level of prices of all new, domestically produced, final goods and services in the economy

Personal Consumption Expenditures Price Index (PCEPI)

Measures the prices paid for goods and services purchased by U.S. residents

Fed's Preferred Measure

Sources: Bureau of Labor Statistics and Bureau of Economic Analysis

Note: See PowerPoint file for references

Using the PCEPI

(Personal Consumption Expenditures Price Index)

PCEPI Levels

(Annual average for years shown, 2012=100)



Source: Bureau of Economic Analysis

What is the percentage change in prices for all domestic personal consumption?

$$\frac{(\text{Current Price} - \text{Past Price}) \times 100}{\text{Past Price}}$$

$$\frac{(109.9 - 94.1) \times 100}{94.1} = 16.7\%$$

This means that consumers were paying, on average, **16.7% more** in 2019 for the same items as in 2009.

Personal Consumption Expenditures (PCE) Inflation

12-month Percent Change, Seasonally Adjusted through July 2020

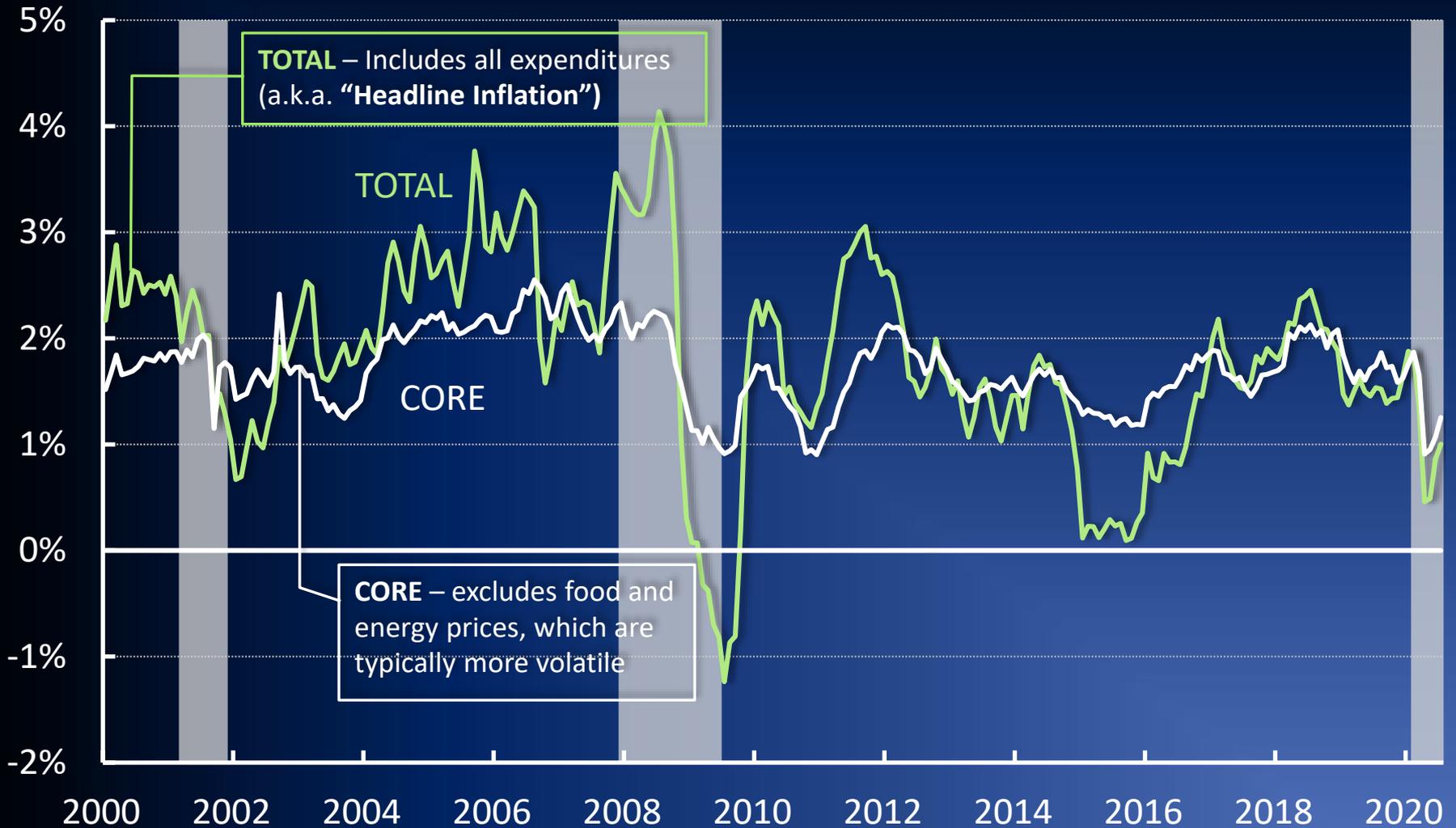


Source: Bureau of Economic Analysis & FRBSF Calculations

Annotated Chart Notes

Personal Consumption Expenditures (PCE) Inflation

12-month Percent Change, Seasonally Adjusted through July 2020



Source: Bureau of Economic Analysis & FRBSF Calculations

What Do You Think?

1. What is the Federal Reserve's preferred measure of inflation in making monetary policy decisions?
2. What was headline inflation in June 2009? Core inflation in October 2013?
3. How would you describe the changes in headline inflation during the 2007-2009 Great Recession?
4. What do you notice about the overall trend in "headline" inflation compared to "core"?