CPI vs. PCE: Insight into inflation.

A tale of two indexes.

The U.S. government compiles data for two separate indexes to track inflation. The consumer-price index (CPI) measures the average change over time in the prices paid by U.S. consumers for a market basket of specific consumer goods and services. The personal-consumer-expenditures price index (PCE) tracks the prices paid for or on behalf of (e.g., medical insurance paid by employers) consumers for a more comprehensive set of goods and services than the CPI.

Inflation is a significant indicator of the health of the U.S. economy. Tracking changes in prices for all products and services in the country would not be feasible, so the U.S. government and economists use two benchmarks that serve as a gauge of inflation: the consumer-price index (CPI) and the personal-consumer-expenditures (PCE) price index.

What are the differences between CPI and PCE?

The CPI tracks the average change over time in the prices that consumers pay for a basket of specific consumer goods and services. The U.S. Department of Labor obtains the CPI information from individual households through its Consumer Expenditure Survey.

The government uses the CPI to calculate adjustments to income requirements for federal assistance programs; cost-of-living increases for social programs such as Social Security, and to determine federal income tax brackets.[1]

The PCE is a measure of the prices paid for goods and services by or on behalf of (e.g., medical insurance paid by employers, Medicare or Medicaid) U.S. consumers. The Department of Commerce sources the PCE data from a survey of businesses (such as the Census Bureau's monthly retail surveys) rather than consumers. The index tracks the prices of a more comprehensive set of goods and services than the CPI, which may provide a more accurate gauge of inflationary pressures. Therefore, the PCE is the U.S. Federal Reserve's preferred measure of inflation.

What services and goods does each price index track?

The two indexes measure prices for eight groups of consumer goods and services.

Housing	Food and beverages
Medical care	Recreation
Apparel	Transportation
Communication and Education	Other goods and services

However, there are varying weights within the eight groups of expenditures included in each index, as the PCE tracks significantly more goods and services.[2] Furthermore, the additional items that the PCE tracks historically have led to smaller weightings in that index relative to the same goods and services included in the CPI. For example, housing costs account for

[1] According to the U.S. Department of Labor, Bureau of Labor Statistics.
[2] "The CPI–PCEPI Inflation Differential: Causes and Prospects." The Federal Reserve Bank of Cleveland. March 2020.

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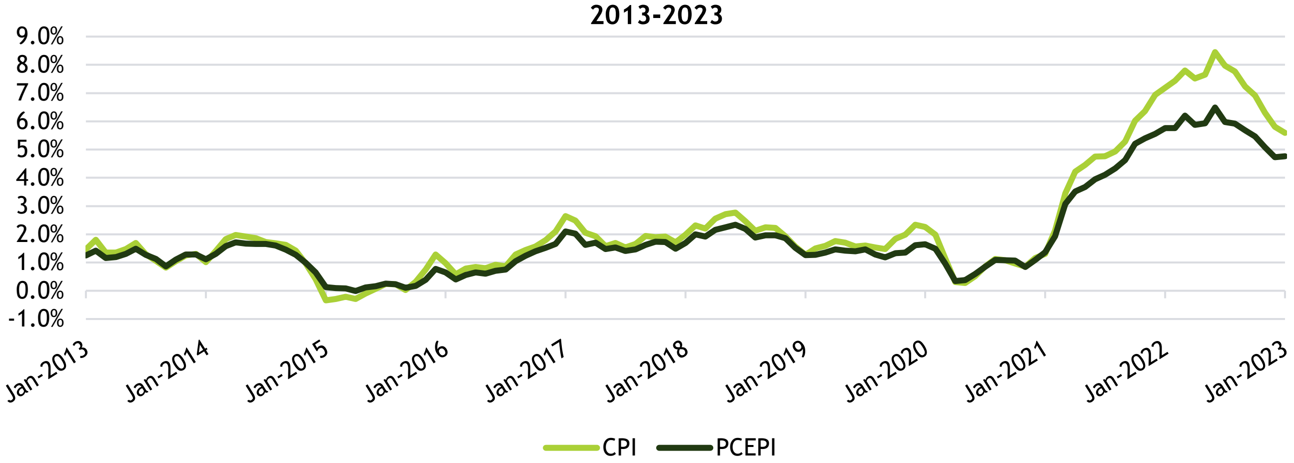
roughly 33% of the CPI, but just 16% of the PCE,[3] so the double-digit annualized gains in U.S. home prices over the past several years have had a much larger impact on the CPI than the PCE. Conversely, as medical expenses make up approximately 16% of the PCE compared to only 7% of the CPI, rising healthcare costs have contributed a greater proportion of the increase in PCE inflation.

The variations in the methodology for the calculation of the two indexes historically has resulted in a modest divergence in performance. For example, the CPI rose at an annualized rate of 2.3% over the 10-year period ending in January 2023, exceeding the 2.0% annualized increase in the PCE. Exhibit 1 below compares the year-over-year changes in the CPI and PCEPI for the rolling 12-month periods over the 10-year time frame.

Exhibit 1: Rolling 12-month changes in CPI vs. PCEPI 2013-2023

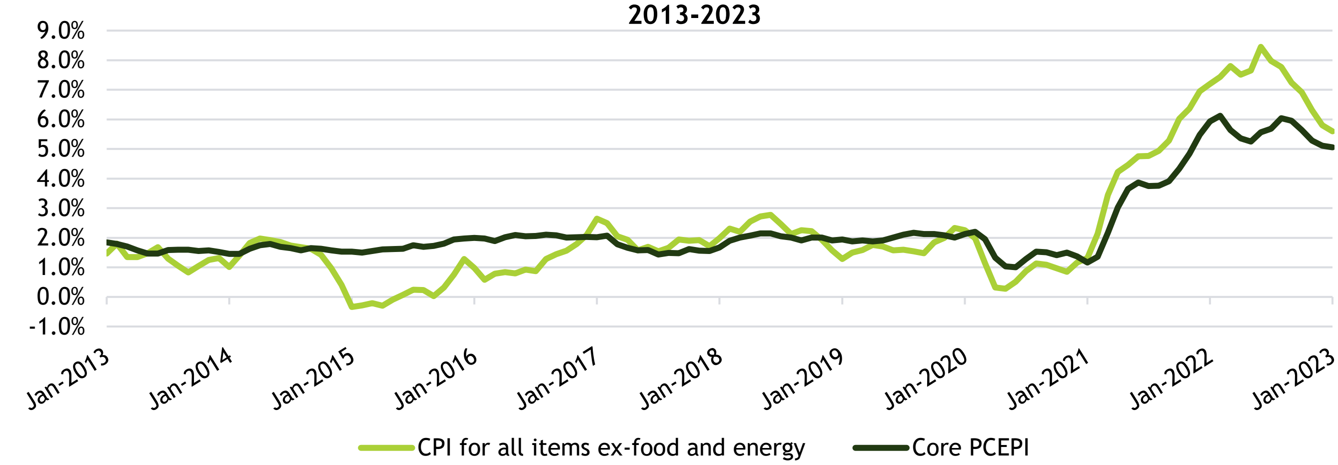


Sources: U.S. Department of Labor, U.S. Department of Commerce. Data as of March 2023.

What is “core” inflation?

Core inflation refers to the changes in prices for goods and services except food and energy, which are volatile and can skew inflation data. Core inflation does not include items that tend to significantly or frequently rise and fall in price. The U.S. government and economists use the CPI for all items less food and energy, as well as the core PCE price index, to track core inflation. While the two indexes historically have experienced divergent movements from month-to-month, the CPI for all items less food and energy and the core PCE price index each increased by an annualized rate of 2.3% over the 10-year period ending in January 2023.4 Exhibt 2 below compares the year-over-year changes in both indexes for the rolling 12-month periods over the 10-year time frame.

Exhibit 2: Rolling 12-month changes in core CPI vs. Core PCE 2013-2023



Sources: U.S. Department of Labor, U.S. Department of Commerce

[3] “Making Sense of Inflation Measures.” The Federal Reserve Bank of St; Louis. September 2022.
[4] According to the U.S. Department of Labor and the U.S. Department of Commerce. March 2023.

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Are the two main price indexes updated regularly?

The government periodically updates the weights within the eight groups of expenditures for the two price indexes. In 2023, the Department of Labor began to revise the CPI weights annually in January based on data from the previous calendar year. The CPI previously had been updated every two years. The Department of Commerce revises the PCE's expenditure weights on a quarterly basis as the index includes a larger set of goods and services, enabling the government to track inflation more consistently.[5]

[5] According to the U.S. Department of Labor and the U.S. Department of Commerce.

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