



# Inflation: An X-Ray View of the Components

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Here is a table showing the annualized change in Headline and Core CPI, not seasonally adjusted, for each of the past six months. Also included are the eight components of Headline CPI and a separate entry for Energy, which is a collection of sub-indexes in Housing and Transportation.

We can make some inferences about how inflation is impacting our personal expenses depending on our relative exposure to the individual components. Some of us have higher transportation costs, others medical costs, etc.

A conspicuous feature in the year-over-year table is the volatility in energy, significantly a result of gasoline prices, which is also reflected in Transportation.

| Year-Over-Year CPI Rate of Change (Not Seasonally Adjusted) |              |              |              |              |              |              |
|---|--------------|--------------|--------------|--------------|--------------|--------------|
| Name and Weight   | May          | Jun          | Jul          | Aug          | Sep          | Oct          |
| Food & Beverages (14.6%)                                    | 0.88%        | 0.89%        | 1.08%        | 1.13%        | 1.25%        | 1.32%        |
| Housing (42.6%)   | 3.12%        | 3.01%        | 2.83%        | 2.91%        | 2.79%        | 2.79%        |
| Apparel (3.0%)  | -0.94%       | -0.67%       | -0.44%       | -0.58%       | -0.22%       | -0.58%       |
| Transportation (15.3%)                                      | 1.81%        | 0.50%        | 1.18%        | 2.79%        | 4.80%        | 3.20%        |
| Medical Care (8.5%)   | 2.66%        | 2.66%        | 2.58%        | 1.81%        | 1.56%        | 1.68%        |
| Recreation (5.7%)   | 0.91%        | 0.80%        | 1.28%        | 1.50%        | 1.65%        | 1.67%        |
| Education & Communication (7.0%)                            | -2.45%       | -2.45%       | -2.45%       | -2.59%       | -2.15%       | -1.78%       |
| Other Goods & Services (3.2%)                               | 2.38%        | 2.41%        | 2.50%        | 2.17%        | 2.01%        | 2.52%        |
| Energy  | 5.43%        | 2.31%        | 3.38%        | 6.39%        | 10.14%       | 6.42%        |
| <b>Headline CPI</b>   | <b>1.87%</b> | <b>1.63%</b> | <b>1.73%</b> | <b>1.94%</b> | <b>2.23%</b> | <b>2.04%</b> |
| <b>Core CPI</b>   | <b>1.73%</b> | <b>1.70%</b> | <b>1.69%</b> | <b>1.68%</b> | <b>1.69%</b> | <b>1.77%</b> |

Note: Energy is sub-components of Transportation & Housing. It is weighted at 8.0% of CPI, with gasoline at 3.9%.

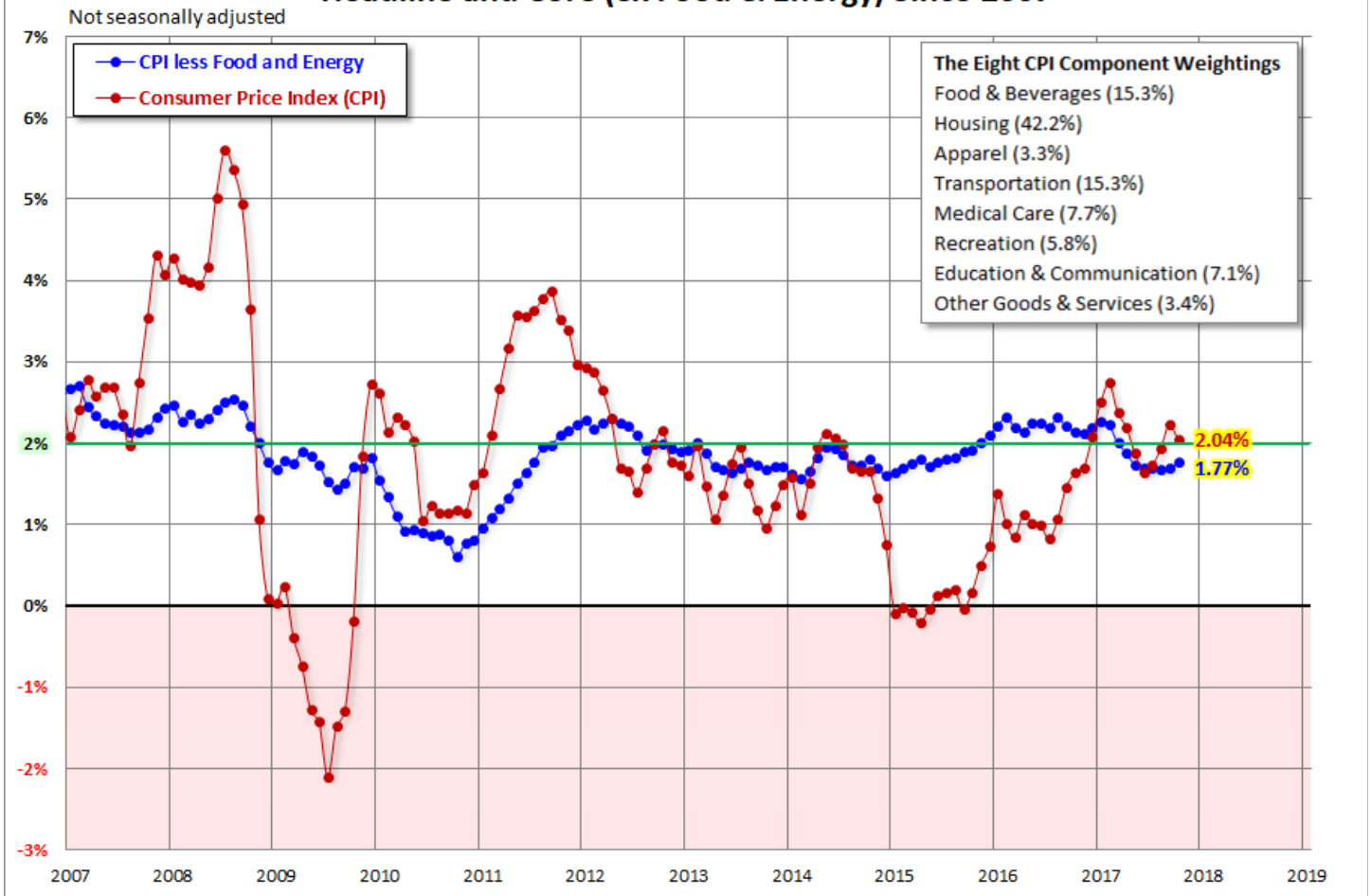
Here is the same table with month-over-month numbers (not seasonally adjusted).

| <b>Month-over-Month CPI Rate of Change (Not Seasonally Adjusted)</b> |              |              |               |              |              |               |
|--|--------------|--------------|---------------|--------------|--------------|---------------|
| <b>Name and Weight</b>   | <b>May</b>   | <b>Jun</b>   | <b>Jul</b>    | <b>Aug</b>   | <b>Sep</b>   | <b>Oct</b>    |
| Food & Beverages (14.6%)   | 0.1%         | -0.1%        | 0.2%          | 0.1%         | 0.2%         | 0.2%          |
| Housing (42.6%)  | 0.3%         | 0.5%         | 0.1%          | 0.3%         | 0.1%         | 0.1%          |
| Apparel (3.0%)   | -1.4%        | -1.5%        | -1.7%         | 1.4%         | 3.2%         | 1.1%          |
| Transportation (15.3%)   | -0.1%        | -0.5%        | -0.9%         | 0.6%         | 2.1%         | -1.1%         |
| Medical Care (8.5%)  | 0.0%         | 0.2%         | 0.4%          | 0.2%         | -0.1%        | 0.1%          |
| Recreation (5.7%)  | -0.1%        | 0.0%         | 0.3%          | 0.0%         | 0.0%         | -0.2%         |
| Education & Communication (7.0%)                                     | -0.2%        | 0.0%         | -0.1%         | 0.2%         | 0.4%         | 0.2%          |
| Other Goods & Services (3.2%)  | -0.1%        | 0.3%         | 0.2%          | -0.2%        | 0.2%         | 0.5%          |
| Energy   | 0.1%         | 0.7%         | -1.0%         | 1.6%         | 4.8%         | -3.9%         |
| <b>Headline CPI</b>  | <b>0.09%</b> | <b>0.09%</b> | <b>-0.07%</b> | <b>0.30%</b> | <b>0.53%</b> | <b>-0.06%</b> |
| <b>Core CPI</b>  | <b>0.08%</b> | <b>0.07%</b> | <b>-0.03%</b> | <b>0.21%</b> | <b>0.19%</b> | <b>0.28%</b>  |

### The Trends in Headline and Core CPI

The chart below shows Headline and Core CPI for urban consumers since 2007. Core CPI excludes the two most volatile components: food and energy. We've highlighted the 2% level that the Federal Reserve is targeting for inflation, although the Fed traditionally uses the Personal Consumption Expenditure (PCE) price index as their preferred inflation gauge.

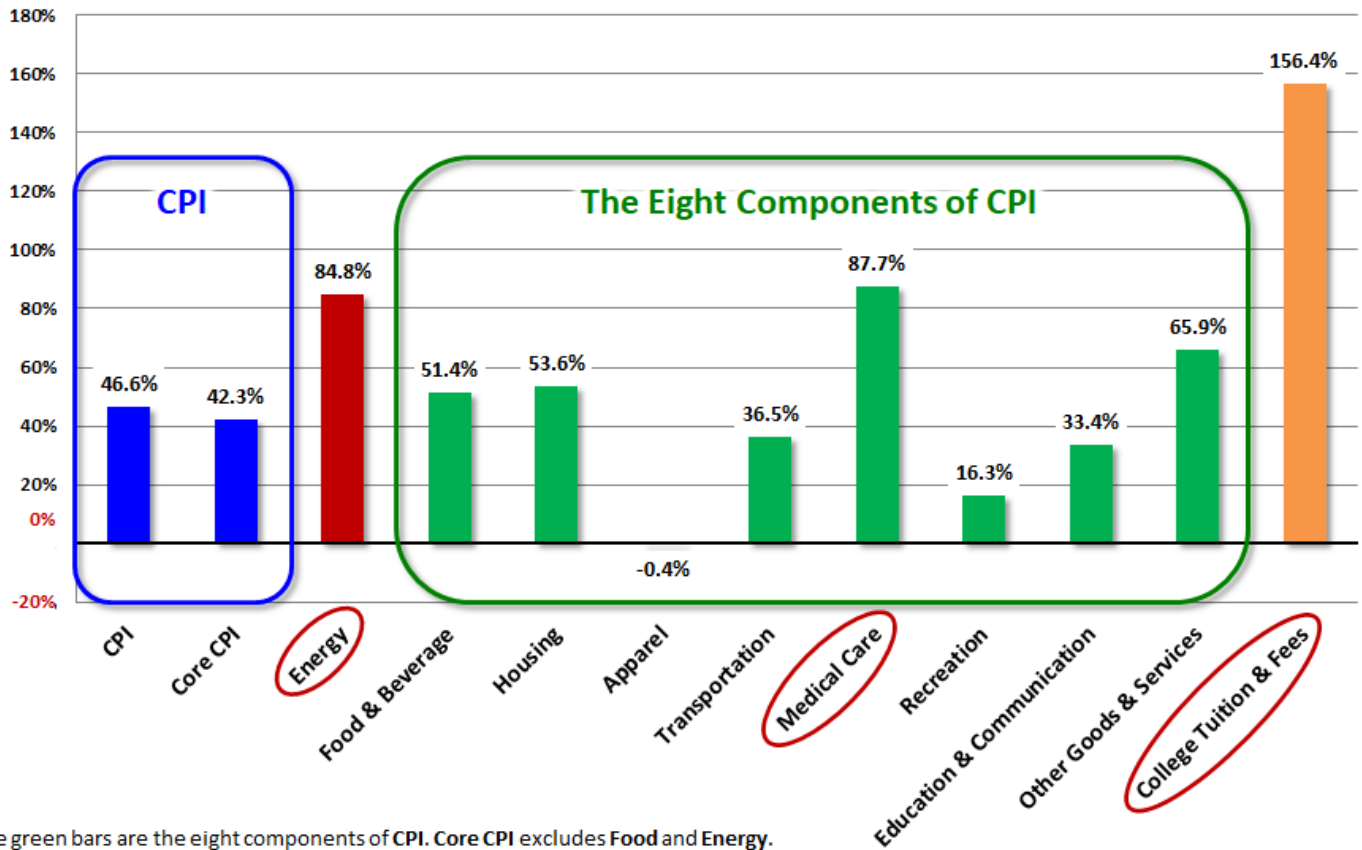
## Consumer Price Index for Urban Consumers Headline and Core (ex Food & Energy) Since 2007



Year-over-year Core CPI (the blue line) was above 2% from the end of 2015 through April and is now below that benchmark. The more volatile Headline CPI has spent most of the previous five years under the 2% lower benchmark, and much of the volatility in this metric has been the result of broad swings in gasoline prices (more on gasoline here).

For a longer-term perspective, here is a column-style breakdown of the inflation categories showing the change since 2000.

## Inflation Since 2000 Inside the Consumer Price Index



The green bars are the eight components of CPI. Core CPI excludes Food and Energy. Energy is a major subcomponent of Transportation and a minor subcomponent of Housing. College Tuition & Fees is a subcomponent of Education & Communication.

**Note:** For additional information on the component composition of the Consumer Price Index, see our Inside the Consumer Price Index.