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## Price disturbances vs inflation

13 July 2023

- June’s CPI shows that inflation is moving in the right direction, but the underlying level of price growth is likely still far too high. Headline and core CPI capture substantial relative price “noise” that may be clouding the inflation signal. The median CPI may be a better measure of underlying inflation.
- The Fed’s inflation battle rests on curbing demand in the US economy, but many discretionary spending categories continue to experience accelerating price growth. Lending rates are also not particularly relevant for most of these items, so rising interest rates will need to feed into the labor market for them to have an impact.

### The general price level

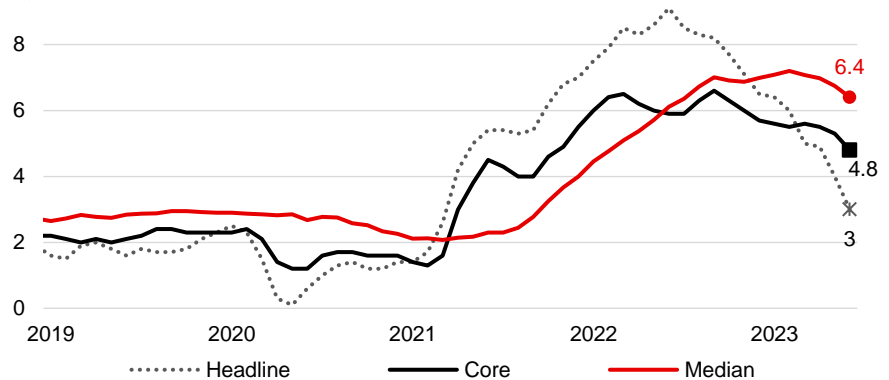
There are price movements that are often treated as outliers, and they are generally not viewed as inflation. Changes in food and energy prices are the most obvious examples because their price movements are mostly relative. They are largely driven by special circumstances, including disruptions in international trade, droughts, wars, and especially pandemics. Movements such as these are better characterized as price disturbances, rather than inflation. And in today’s environment, there are many more price disturbances that are clouding the inflation signal.

Inflation is a monetary phenomenon, and it is the general rise in the price level that underlies all price changes. Core CPI is used as a proxy for inflation since it excludes the most obvious cases of price disturbances. Lately, core CPI less shelter and used autos is also being used given their unique drivers. And while these are good attempts at separating price disturbances from the inflation signal, there are other issues with using the CPI in this way. Most notably, the CPI is fundamentally a cost-of-living indicator that uses category weights to represent the average American household’s spending.

A spending category’s weight is less relevant to inflation because as a monetary phenomenon, it should influence the price of all items equally. Excluding categories such as food, energy, shelter, and used autos from the CPI is not only an overly subjective way of distinguishing between price disturbances and inflation, but it also alters the index’s implied weights, making it a poor measure of both inflation and the cost-of-living.

### Median CPI signals stronger inflationary pressures

CPI, %Y/Y



Source: BLS, Cleveland Fed, MUFG Bank Economic Research

The median CPI may be a better measure of inflation than headline CPI, core CPI, and core CPI less shelter and used autos. In effect, the median CPI excludes all price changes that lie outside the middle of the field (making it less subjective), and it is independent of category weights since it is the order of the price changes that is calculated. Using this measure, annual inflation stands at 6.4% as of June 2023, down noticeably from 6.7% in May, but much higher than both headline and core CPI (3% and 4.8% respectively).

It is important to note that while the median CPI is signalling much stronger inflation, it is also historically greater than the Fed's 2% target. In the decade before the pandemic, the median CPI hovered mostly between 2.5-3% whereas core CPI was closer to 2%. It may not be the Fed's optimal target, but the median CPI is likely a better gauge of underlying price growth.

### **Discretionary inflation and interest rates**

The Fed is attempting to slow inflation by curbing demand in the economy, but they have only been mildly successful so far. Now yes, the housing sector has clearly been impacted by rising interest rates, but housing is both investment and consumption, and home prices alone largely reflect the investment component.

Inflation is viewed through the lens of consumer prices (i.e., consumption), and the CPI attempts to isolate the consumption portion of housing through its measure of owner's equivalent rent. From this perspective, the Fed has been unsuccessful so far with owner's equivalent rent continuing to grow. However, in this case, the long and variable lags of monetary policy will eventually feed into the consumption aspect of housing.

For other spending categories, the link with monetary policy is much less clear. For starters, non-discretionary spending categories, such as medical care, have inelastic demand where consumption is much less sensitive to the price. Rising interest rates will have little effect on consumption. Given that monetary policy operates through the lens of aggregate demand, it would be a stretch to attribute inflation, disinflation, or deflation in most non-discretionary spending categories to monetary policy and the Fed.

Shown on page 3, annual CPI growth in medical care services has fallen to -0.8% in June, but annual growth in medical care commodities is trending upward, growing by 4.2% in June. Price growth in medical care in the CPI is likely being driven by price disturbances rather than underlying inflation, and it is another reason why the median CPI may be more useful indicator. It also reflects how limited we are at assessing the success of this tightening cycle and how difficult it is to determine the optimal terminal rate that will achieve a soft landing.

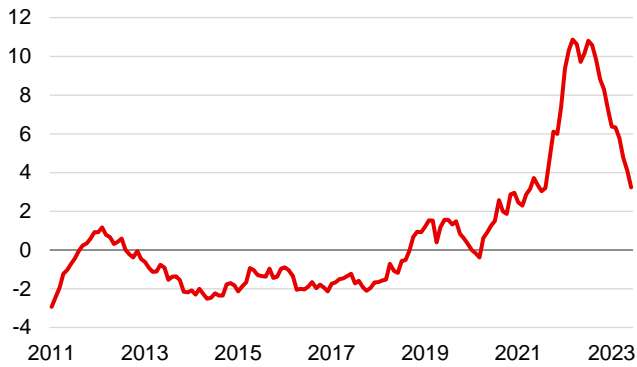
The Fed has much greater influence, in theory, on discretionary spending categories where demand is elastic, and it fluctuates. Spending on goods and services including household furnishings, apparel, airline fares, food and beverages away from home, and recreation are mostly non-essential. Consumption is therefore more sensitive to prices, but not necessarily by interest rates directly. These items are largely paid for in cash or through revolving credit such as credit cards. And although interest rates influence credit card rates, it's not clear how high credit card rates need to be to for their usages to shrink.

Shown on page 3, annual CPI growth is either accelerating or remains elevated by historical standards for most of these discretionary spending categories. The exception is airline fares, which is showing noticeable annual deflation (-18.9%), but this is likely driven by base effects and special circumstances.

The Fed will likely need monetary policy tightening to feed into the labor market through a rise in unemployment. This would be the most potent method of decreasing demand, and subsequently prices, especially for discretionary items. And with the unemployment rate still below 4% and not trending upward, we can expect the Fed to stay hawkish.

### Household furnishings & supplies

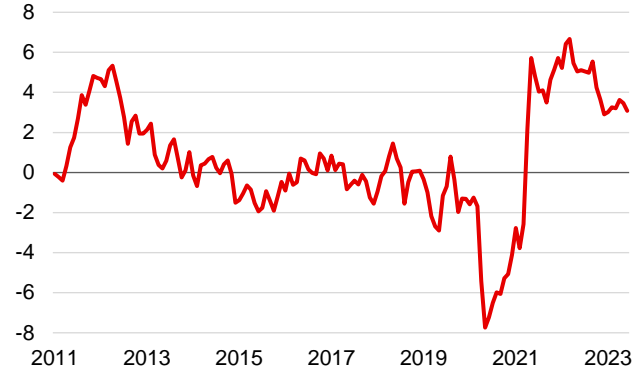
CPI, % Y/Y



Source: BLS, MUFG Bank Economic Research

### Apparel

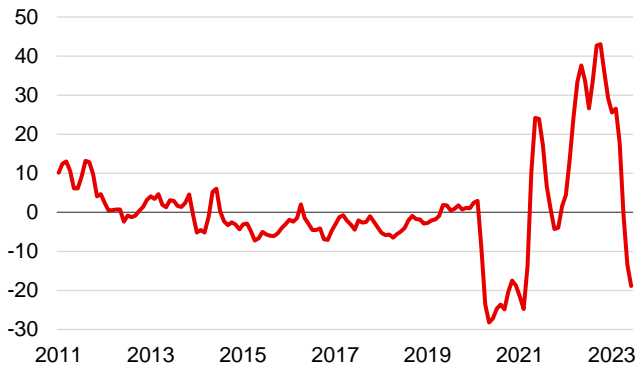
CPI, % Y/Y



Source: BLS, MUFG Bank Economic Research

### Airline fare

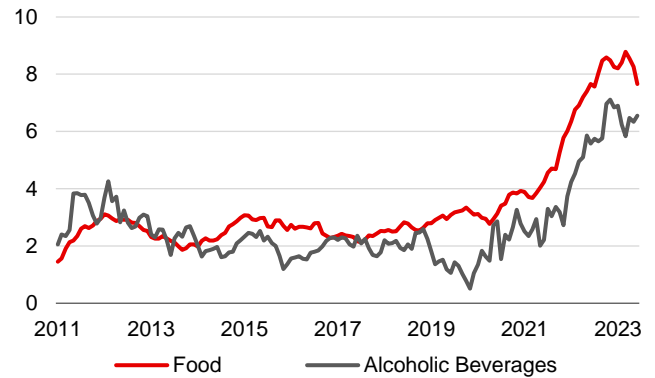
CPI, % Y/Y



Source: BLS, MUFG Bank Economic Research

### Food & beverages away from home

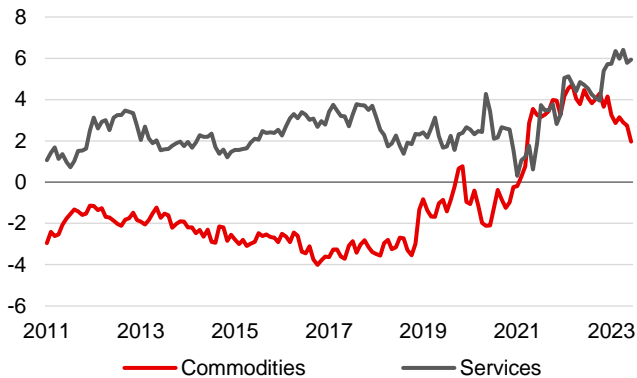
CPI, % Y/Y



Source: BLS, MUFG Bank Economic Research

### Recreation

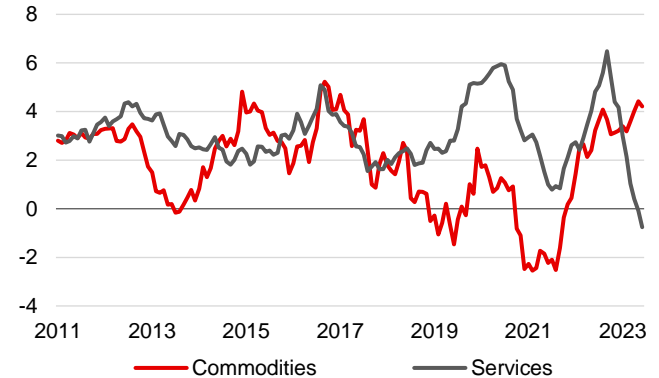
CPI, % Y/Y



Source: BLS, MUFG Bank Economic Research

### Medical care

CPI, % Y/Y



Source: BLS, MUFG Bank Economic Research

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