CPI Inflation Watch

CPI revisions unlikely to impact Fed policy

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CPI revisions in the spotlight

On January 16 Federal Reserve Governor Christopher Waller brought CPI (Consumer Price Index) revisions into the spotlight when he said: "One piece of data I will be watching closely is the scheduled revisions to CPI inflation due next month. Recall that a year ago, when it looked like inflation was coming down quickly, the annual update to the seasonal factors erased those gains." Indeed, the 3-month annualized rate in December 2022 was revised up from 3.1% to 4.3%. This resulted in a shift in tone from the Fed and markets pricing in a firmer path for Fed funds. While revisions are still unknown, we do not expect a repeat of last year.

Standard operating procedure

Every February the Bureau of Labor Statistics (BLS) updates the seasonal factors used to calculate seasonally adjusted (SA) indices for price series included in the CPI. This process can result in revisions to the seasonally adjusted indices (NSA) for the previous five years. Importantly, the not-seasonally adjusted index is unaffected by these revisions. This year, the updated seasonal factors are set to be published on February 9.

Last year was an outlier

To determine whether revisions will be a significant story again this year, we look at revisions over the last ten years. We find that revisions are typically small in nature. Over our ten-year sample, the absolute average of the monthly revision was just 2.6bps. Meanwhile, last year's revisions to the monthly profile in 4Q 2022 were by far the largest in our sample. On average, 4Q 2022 was revised up by 9bps. The average revision to 4Q in the remaining nine years was -0.2bps. In our view, this suggests last year was an outlier. Moreover, the revisions were driven primarily to revisions to new and used autos, which were likely a result of methodology changes more than changing seasonal patterns.

Fed implications

Since we expect this year's revisions to be relatively benign, we do not think they will affect the outlook for monetary policy. We continue to think the Fed will start its cutting cycle with a 25bp cut in March owing in large part to progress on inflation. While revisions are unlikely to affect our outlook for monetary policy, the incoming data might. There are still two more CPI prints and employment reports before the Fed's March meeting.

Expect limited market response

Given the relatively muted seasonal factor adjustments we anticipate, the market response should also be limited. For inflation markets, what matters is NSA headline CPI, the index that TIPS and inflation swaps reference. We do not expect large changes in market expectations for NSA headline estimates from seasonal revisions. However, if there is a surprising message on inflation progress from the revisions, this should impact Fed pricing more so than inflation fixings.

A deeper dive into past revisions

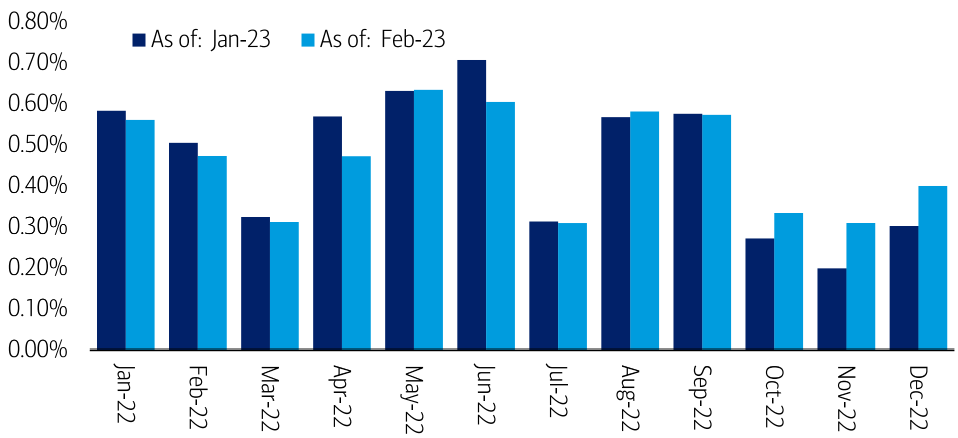
To determine what we should expect for the upcoming CPI revisions we looked at the past ten years of seasonal factor updates. For each year affected, we compare how the update altered the path of monthly CPI. We look at this data at the headline level, core level and for a few categories that played an outsized role last year (new vehicles and used vehicles).

We relied on data from ALFRED, Archival Federal Reserve Economic Data, maintained by the St. Louis Federal Reserve bank. For each year, we pulled two vintages of CPI seasonally adjusted data: the January release, and the February revision. Therefore, we have a total of 20 data series for each component of CPI we investigated.

With those two series for each year, we simply compared the monthly profile from the most recent year of data. For example, we used the January and February 2023 vintages to see how the updated seasonal factors changed the monthly profile in 2022 (Exhibit 1). Since the not seasonally adjusted data does not get revised, the difference between the two is driven by the change in the seasonal factor.

Exhibit 1: Core CPI % m/m (SA)

Last year, the new seasonal factors revised up core CPI in 4Q



Source: ALFRED, St. Louis Federal Reserve Bank

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While the seasonal adjustment factors can affect the seasonally adjusted indices back five years, we focus on the revision to the most current year because we are interested in how 2023 may change post-revisions. In Exhibit 2, we show how the monthly profile changed with each annual revision. A few observations stand out:

1. On average, revised seasonal factors result in only modest changes to the monthly profile. Though revisions have been larger in recent years.

2. 4Q 2022 and 2Q 2022 is clearly an outlier relative to previous years. 4Q 2022 was revised up by an average of 9bps, while 2Q was revised down an average of 7bps (Exhibit 3)

3. January has been revised lower in seven out of the ten-years in our sample. This is likely due in part to residual seasonality that has been problematic in the data.

Exhibit 2: Change in core CPI % m/m SA prior to and after revisions to seasonal factors (bps)
Typically, seasonal adjustment updates result in relatively modest

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2022	-2.3	-3.3	-1.2	-9.7	0.3	-10.2	-0.4	1.4	-0.3	6.2	11.1	9.7
2021	1.7	5.0	-3.4	-6.1	1.0	-7.8	-1.5	8.2	1.1	0.4	-1.1	1.2
2020	0.4	-0.9	8.2	7.9	-1.5	0.8	-7.9	-3.7	-0.6	6.1	-4.5	-4.0
2019	-1.6	1.7	1.3	6.0	2.6	-1.7	-4.0	-3.2	5.8	-4.2	-3.6	1.1
2018	-4.6	-0.8	1.3	1.0	1.8	0.2	-3.0	0.0	4.2	0.3	2.5	-3.0
2017	-4.2	-3.5	4.8	1.7	2.0	2.4	2.9	-2.6	0.5	-1.1	0.4	-3.8
2016	-2.7	-3.3	1.9	-1.0	0.8	-1.7	3.8	0.1	0.6	-0.2	3.1	-1.0
2015	-0.5	0.5	-2.2	-0.9	-2.9	-0.7	2.3	4.5	-1.7	-0.6	0.0	2.7
2014	2.2	-1.3	-3.6	-3.8	-2.7	0.8	0.2	3.7	0.6	-2.1	0.6	5.6
2013	-2.6	0.3	1.0	0.9	-2.9	-1.1	1.2	1.1	0.9	0.1	2.0	-0.8
Average	-1.4	-0.5	0.8	-0.4	-0.2	-1.9	-0.6	0.9	1.1	0.5	1.1	0.8
Median	-2.0	-0.8	1.2	0.0	0.5	-0.9	-0.1	0.6	0.6	-0.1	0.5	0.2
25 pct	-2.6	-2.8	-2.0	-3.1	-2.4	-1.7	-2.6	-2.0	-0.1	-1.0	-0.8	-2.5
75 pct	0.2	0.5	1.8	1.5	1.6	0.6	2.0	3.1	1.1	0.3	2.4	2.3
Min	-4.6	-3.5	-3.6	-9.7	-2.9	-10.2	-7.9	-3.7	-1.7	-4.2	-4.5	-4.0
Max	2.2	5.0	8.2	7.9	2.6	2.4	3.8	8.2	5.8	6.2	11.1	9.7

Source: ALFRED, St. Louis Federal Reserve Bank

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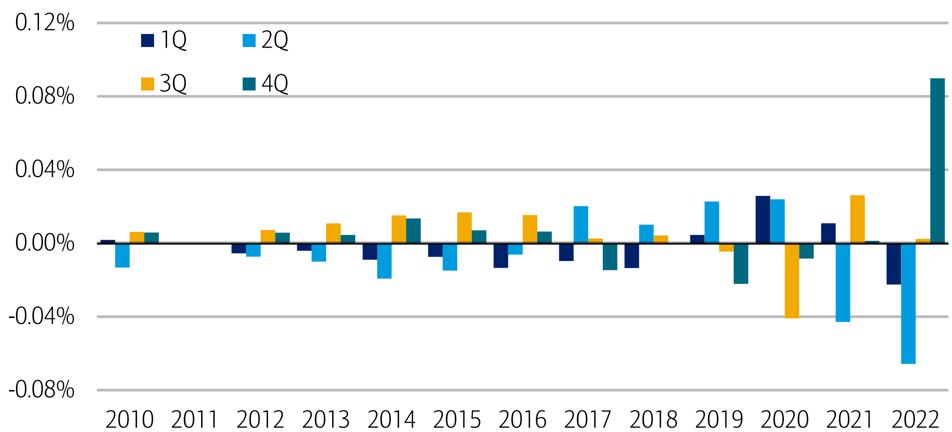
Last year's abnormally large revisions to 2Q and 4Q were largely due to revised estimates for new and used vehicles (See: CPI Inflation Watch: Slower disinflation 16 February 2023). This was likely due in part to a methodology update. If we exclude these two factors, then the average revision to 2Q and 4Q 2022 would be more modest at -2bp and 4bp respectively.

Exhibit 3: Average revision to monthly % ch. in core CPI from updated seasonal factors by quarter
Revisions to 2022 were clearly an outlier compared to previous years



Source: ALFRED, St. Louis Federal Reserve Bank

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This year is unlikely to be a repeat of last year

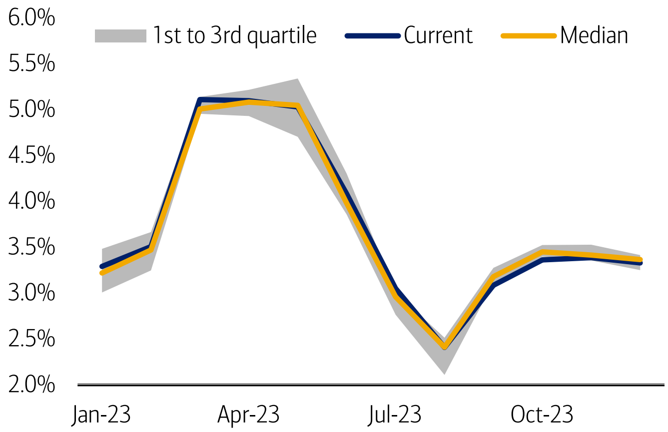
We will not know for certain how the seasonal factors will change the trajectory for inflation until they are released. However, based on history, we do not think we should see a repeat of last year. The BLS is updating its methodology around used cars, which is a wild card at this point. However, that may alter the NSA path as well as the SA path.

To assess how the revisions might change the 2023 trajectory, we adjust the current 2023 monthly profile by the changes seen in each of the last ten years. For example, we produce a revised 2023 profile based on the size of changes seen in 2013, 2014, 2015 and so on. This results in ten different potential outcomes. We then plot the 3-month annualized rate of the median, first, and third quartile of those ten series against the current 3-month annualized rate (Exhibit 4). We also use this approach to infer how seasonal factors may alter our forecast for 2024 (Exhibit 5).

Unless the revisions are a meaningful outlier like last year, then the historic and forward-looking profile is unlikely to change the narrative for the Fed. Inflation moderated significantly last year. The Fed's preferred measure, PCE inflation, is likely to remain at levels that would warrant starting the cutting cycle soon even after seasonal factors are revised. Therefore, we do not think that revisions will meaningfully alter the path for policy, and we maintain our call for the Fed to start its cutting cycle in March with a 25bp cut.

Exhibit 4: How revisions might affect 3-monht annualized core CPI % ch. in 2023

Based on historical revisions, the upcoming revisions are unlikely to significantly shift the sequential profile of Core CPI



Source: BofA Global Research, Bureau of Labor Statistics

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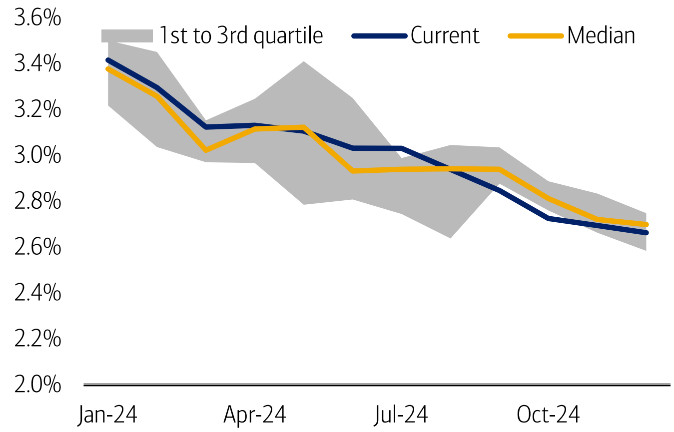
Exhibit 5: How new seasonal factors might affect our forecast for 3-month annualized core CPI % ch. in 2024

Revisions to seasonal factors are unlikely to meaningfully change our expectations for inflation this year



Source: BofA Global Research

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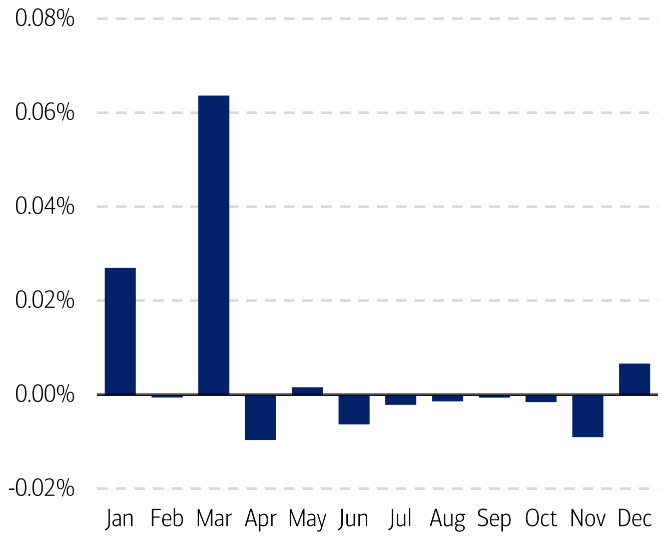
Expect limited market impact of revisions

Given the relatively muted seasonal factor adjustments we anticipate, the market response should also be limited. For inflation markets, what matters is NSA headline CPI, the index that TIPS and inflation swaps reference. We do not expect large changes in market expectations for NSA headline estimates from seasonal revisions.

Many forecasters, including BofA economics, forecast inflation in NSA terms. Therefore, seasonal factor revisions have a larger impact on SA inflation expectations than NSA inflation expectations. In simple terms: SA % MoM = NSA % MoM + seasonal factor. While some forecasters may have expectations for SA inflation and build up to NSA inflation, a look at CPI fixings following last year's historically large revisions show on net a modest response. As shown in Exhibit 6, the largest mover was the March 2023 fixing which may have been supported by the large factor adjustments. However, it is hard to isolate the impact and, volatility in fixings was largely below what was observed on CPI dates around that time.

Following last year's release there was a more tangible impact on market pricing of Fed policy, with early '24 OIS moving up around 10bps (Exhibit 7). This is consistent with the upward revisions to Q4 '22 inflation, implying that the Fed was making less progress on its inflation goals than previously thought. As we do not expect revisions to send a different message on the extent of disinflation last year, we would not expect nominal rates to move to the same extent. However, if there is a surprising message in the revisions, this should impact Fed pricing more so than inflation fixings.

Exhibit 6: Change in MoM CPI fixings NSA headline on revisions (PPTS)
March showed a modest bump, but changes within normal volatility around CPI dates



Source: BofA Global Research, Bloomberg

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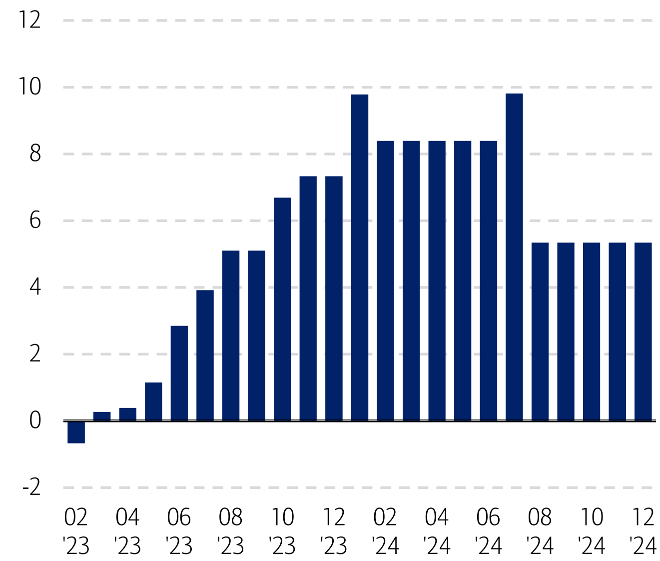
Exhibit 7: Change in 1m OIS forwards on revisions (bps)
Market pricing for Fed path moved as much as 10bps higher in early '24



Source: BofA Global Research, Bloomberg

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