Thoughts on Inflation and the Bond Market

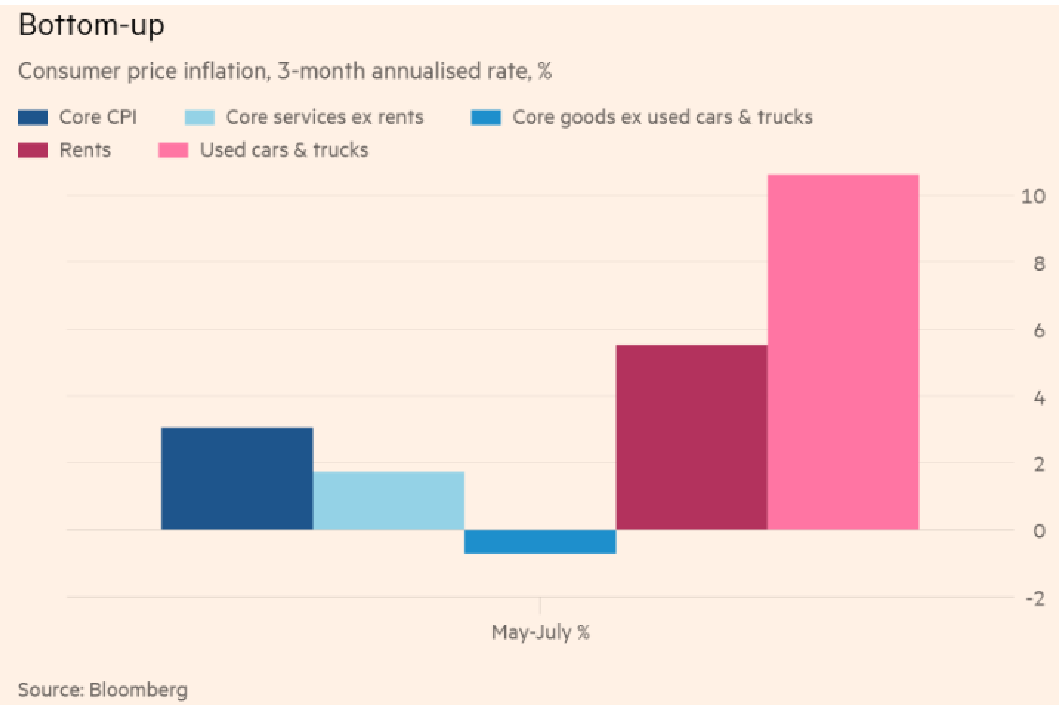
We have received several questions recently about the outlook for inflation and the bond market and wanted to share some thoughts with you on the topic. Please let us know if you have any questions about the commentary below or would like to schedule a time to review the impact it may have on your portfolio.

Highlights:

- The trend for inflation has been lower over the past year and there is good evidence to believe it may continue to trend lower.
- With the Fed having increased interest rates by 5.25%, the valuation and outlook for future returns in the bond market have improved substantially.

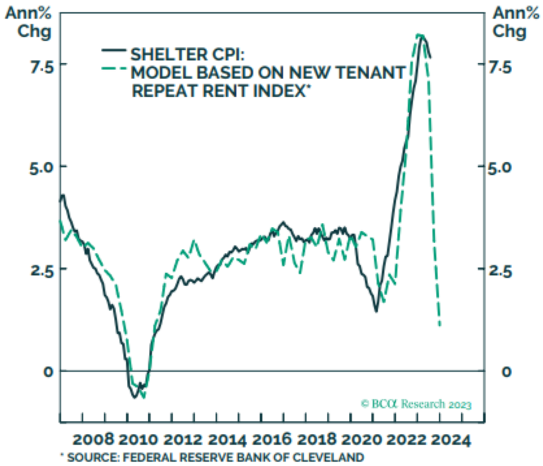
Thoughts on Inflation:

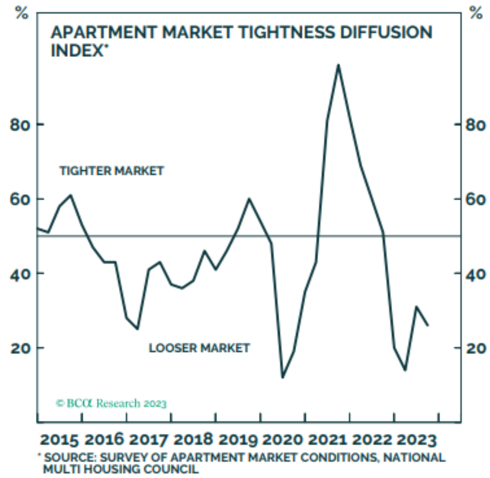
The trend in inflation has been lower over the past year and has shown more significant drops over the past few months. The most recent consumer price index (CPI) came in at 3.2% on an annual basis. Not yet at the Federal Reserve's target of 2%, but getting closer. However, if you look below the headline numbers the core CPI number was sharply lower with two exceptions, the price of used cars and the cost of shelter (rents). While the price of used cars has started to drop significantly of late, the cost of rents has been relatively sticks. Although, there is evidence this is likely to turn lower as well, which we discuss below.



The chart below on the left-hand side (LHS) shows a model that projects the trend of shelter costs based on what new tenants are willing to pay in rent (green dotted line). The model has done a good job of forecasting shelter costs and is projecting a sharp drop in shelter costs over the next year. Should this be the case, core CPI should follow lower as well. We will be watching this trend closely and will follow up if we see any significant changes.

Shelter Inflation





Thoughts on the Bond Market

The Federal Reserve has raised interest rates a whopping 525 basis points (5.25%) over the past 16 months. This led to a tough year for core bonds in 2022, down over 13%, and so far in 2023 bonds are relatively flat. However, there is light at the end of the tunnel with interest rates at higher levels, bonds are more attractively valued. History has shown that bond returns tend to be strong after periods of rising interest rates. The chart below shows previous periods of rising rates the returns generated during the period of rising rates and the subsequent one-year returns going back to the mid-1970s. In all cases, the one-year subsequent returns were up strongly and led to positive returns over the cumulative period. We expect bond returns to improve in the year(s) ahead.

Bonds Have Tended to Recover Strongly After Rate Increases

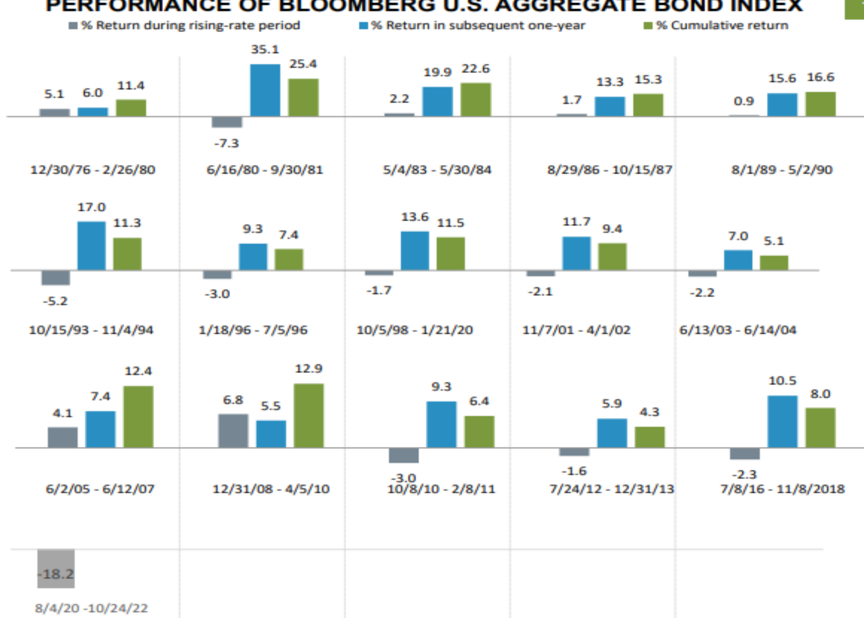
Interest Rates

The year that followed a period of rising rates brought improved returns for the bond index. In all instances below, returns were positive in both the subsequent one year and cumulative periods.

PERIODS OF RISING RATE*

Period of rising rates	Length of period (In Months)	Starting 10-year UST yield (%)	Change in 10-year UST yield (bps)
12/30/76–2/26/80	37	6.80	685
6/16/80–9/30/81	15	9.47	637
5/4/83–5/30/84	12	10.12	387
8/29/86–10/15/87	13	6.95	332
8/01/89–5/2/90	9	7.74	134
10/15/93–11/4/94	12	5.19	286
1/18/96–7/5/96	5	5.53	154
10/05/98–1/21/00	15	4.16	263
11/07/01–4/1/02	4	4.22	122
6/13/03–6/14/04	12	3.13	176
6/2/05–6/12/07	24	3.89	141
12/31/08–4/5/10	15	2.06	193
10/8/10–2/8/11	4	2.38	134
7/24/12–12/31/13	17	1.39	164
7/8/16–11/8/18	28	1.36	187
8/4/20–10/24/22	26	0.51	372
Average	**16**		**273**
Median	**14**		**190**
Minimum	**4**		**122**
Maximum	**37**		**685**

PERFORMANCE OF BLOOMBERG U.S. AGGREGATE BOND INDEX



* Defined as 10-year U.S. Treasury yield rising by at least 100 bps.

Past performance is no guarantee of future results.

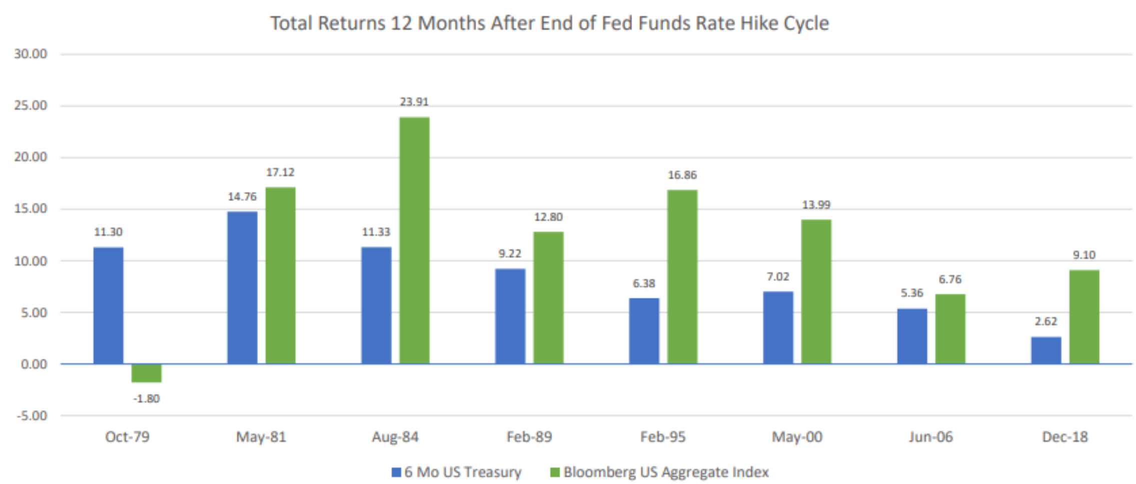
Source: Factset, as of 10/24/22; Monthly returns for Aggregate Bond Index from 1976 to 1988; Daily returns from 1989 onwards.

Given the higher short-term rates available, there may be a tendency to want to put all of your bond allocations into money market funds or very short-maturity bonds, which are now yielding around 5%. However, we would suggest taking a more balanced approach to your bond allocations to both improve returns and manage risk in portfolios. The chart below shows that in 7 of 8 instances, the returns of core bonds substantially outperformed the return on cash once the Federal Reserve stopped hiking interest rates, by an average of 380 basis points! We don't know exactly when the Fed will stop raising rates, but we suspect we are close to the end of this cycle and think a balanced approach to your bond positioning makes sense and will improve returns.

Bonds Have Tended to Outperform Cash After the Federal Reserve Stops Hiking Interest Rates

Interest Rates

The year that followed a period of rising rates brought improved returns for the bonds relative to cash. In 7 of 8 instances below, bond returns outperformed cash over the 12-month period following the end of the Federal Funds rate hike cycle by an average of 380 bps



Past performance is no guarantee of future results.
Source: Morningstar Direct, as of 12/31/22

Please let us know if you have any questions on the above commentary or would like to discuss your bond holdings in more detail.

Best regards,

Steve