Fourth Quarter 2022 Bond Market Review and Outlook

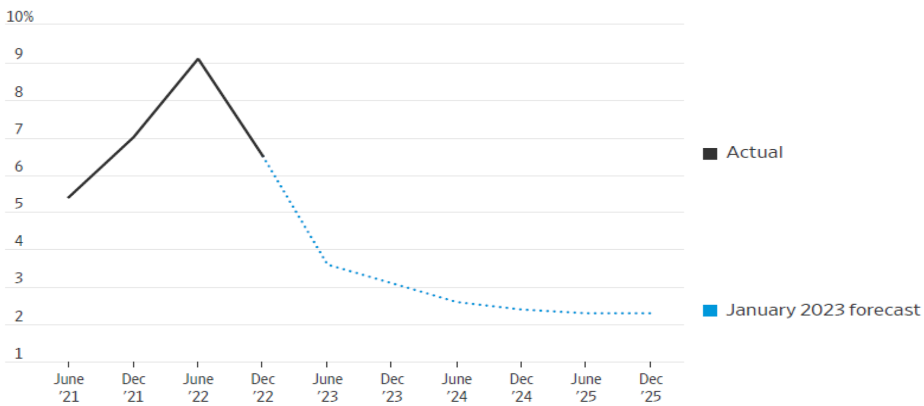
CAM
Cincinnati Asset Management, Inc.
Investment Grade & High Yield Bond Specialists

"It may be a mild recession. It may not be." (Jamie Dimon, JP Morgan Chase CEO on a call with reporters as reported in *The Wall Street Journal* 1/14/23)

Inflation Moderation

Economists expect annual inflation to ease to 3.1% by December.

Consumer-price index, year-over-year percentage change



Sources: Labor Department (actual); Wall Street Journal Economic Forecasting Survey of 71 economists, Jan. 6-10, 2023 (forecast)

The chart above goes a long way in explaining the rally in Treasury bonds since late 2022. The survey of economists forecasts CPI falling to 3.1% by December 2023 (source: *Wall Street Journal 1/15/23)*. More encouraging is the forecast of CPI falling further to 2.4% by the end of 2024 (source: ibid).

We can see a longer history of change in CPI in the chart on page three. So at 2.4% the inflation rate as measured by CPI will be back down into its recent, acceptable range, around the Federal Reserve's 2% target.

The impact on bonds has been significant. The 10-year Treasury yield has plummeted from 3.82% at the end of 2022 to 3.51% as of 1/17/23 (source: *Bloomberg* 1/17/23). The rally's inception was around 10/24/22, when the 10-year Treasury yield was 4.24%, the year's high point (source: ibid).

Baked into investor's outlooks and the bond market's behavior is the Federal Reserve's repeatedly communicated preference for raising rates too much to be certain it has lowered inflation and expectations of future inflation to its stated target of 2%.

Several recent reports have spurred more recent optimism for the continuing rally. A jobs report showed wages rose less than expected in December and were revised downward for the previous two months.

The CPI report showed services inflation (excluding energy services and home ownership/rental costs) falling from earlier in 2022 to 3%. This measure has been of particular concern to the Federal Reserve in their battle with inflation (source: *Wall Street Journal* 1/16/23).

More demand for longer dated bonds is gaining further support from the concerns of a recession. Bloomberg surveys of economists find a 67.5% probability of a recession in 2023 (source: *Bloomberg* 1/17/23). Recently, the four largest commercial banks have began to feel the impact of an economic slow down reserving $2.8 billion for loan losses as reported in their fourth quarter results on Friday, January 13 (source: *Wall Street Journal* 1/13/23).

(Continued on page 3)

Yields* on 12/31/2022	**Yield***
CAM Broad Market (corporate core plus) Strategy (6.8 year maturity; 5.7 duration)	**6.01%**
CAM Investment Grade (100% corporate bonds) Strategy (6.9 year maturity; 5.9 duration)	**5.30%**
CAM High-Yield Strategy (only BA & B rated purchased) (6.6 year maturity; 5.1 duration)	**7.62%**
CAM Short Duration Strategy (3.6 year maturity; 3.1 duration; 50% IG & 50% HY)	**6.61%**
CAM Short Duration Investment Grade Strategy (3.1 year maturity; 2.8 duration)	**5.05%**
U.S. Treasury** (10 year maturity)	**3.88%**
U.S. Treasury** (5 year maturity)	**4.01%**
U.S. Treasury** (2 year maturity)	**4.43%**

* The lower of yield to maturity or yield to worst call date ** Source: Bloomberg

CAM's Key Strategic Elements

- Bottom-up credit analysis determines value and risk.
- Primary objective is preservation of capital.
- Larger, more liquid issues preferred.
- Target is always intermediate maturity.
- No interest rate forecasting.
- All clients benefit from institutional trading platform and multi-firm competitive bids and offers.

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CAM returns are after CAM's average management fee & all transaction costs but before any broker, custody or consulting fees. **The indices are unmanaged and do not take into account fees, expenses, and transaction costs.**	Total Return (%)	Annualized Returns (%)				
	4Q '22	YTD	1-YEAR	3-YEARS	5-YEARS	10-YEARS
CAM Broad Market Strategy—Net 1/3 high yield, 2/3 investment grade	3.55	-13.37	-13.37	-2.08	0.81	1.78
CAM High Yield "Upper Tier" Strategy—Net only purchase BB and B; no purchases of CCC & lower	4.71	-13.16	-13.16	-1.10	1.55	1.99
Bloomberg US Corporate High Yield Index	4.17	-11.19	-11.19	0.05	2.31	4.03
CAM Investment Grade Strategy—Net 100% corporate bonds	2.93	-13.52	-13.52	-2.56	0.47	1.65
Bloomberg US Corporate Index	3.64	-15.76	-15.76	-2.88	0.45	1.96
CAM Short Duration Strategy—Net 1/2 investment grade, 1/2 high yield	2.78	-7.27	-7.27	0.15	1.76	1.58
CAM Short Duration Investment Grade Strategy—Net 100% corporate bonds	1.66	-6.99	-6.99	-0.94	0.79	1.29

Relative Performance Review 12/31/2022

CAM's **Investment Grade Strategy** ("**IG**") produced a gross total return of 2.99% in the quarter ended December 31, 2022, compared to 3.64% for the Bloomberg U.S. Corporate Index. CAM always positions a majority of the portfolio within intermediate maturities of 5-10 years. Longer dated securities (10+ years) returned 5.39% for the period, outperforming the broader index. CAM's zero weighting in this duration bucket produced a -53 basis point contribution to excess return. The YTD return for the CAM IG strategy was -13.31% compared to the Index return of -15.76%. Over this period longer-dated securities returned -26.55%, widely underperforming the broader index. CAM's zero weight within that duration bucket produced a 369 basis point contribution to excess return.

The **High Yield Strategy ("HY")** delivered a gross total return of 4.78% in Q4 while the Bloomberg US Corporate High Yield Index returned 4.17%. CAM's overweight in Home Construction had the biggest positive impact on performance relative to the index with a +36 basis point contribution to excess return during the quarter. The next biggest contributors were CAM's security selection within both the Leisure and Cable & Satellite sectors with +31 and +27 basis point contributions, respectively. Conversely, CAM's exposure to Retailers, Wirelines, and the Food and Beverage industry groups produced a -26, -23, and -23 basis point contribution to excess return, respectively. The HY YTD return was -12.90% while the Bloomberg US Corporate High Yield Index returned -11.19%. At 12/31/2022 the modified duration of CAM's portfolio was 5.1 while the modified duration of the index was 3.9. In this period, the allocation effect of CAM's intermediate maturity profile was a -294 basis point contribution to excess return.

Our **Broad Market Strategy ("BM")** – a 67%-33% blend of IG-HY bonds – produced a gross total return of 3.62% for the quarter compared to 3.84% for the Bloomberg blended Index. Our BM strategy invests in intermediate maturities between 5-10 years. The allocation effect of not investing in longer dated maturities (10+ years) was a -33 basis point contribution to excess return. The YTD return for the CAM Broad Market strategy was -13.14% compared to a blended Index return -14.21%. For this period, the allocation effect of not investing in longer dated maturities was a +283 basis point contribution to excess return.

The CAM **Short Duration Strategy** ("**SD**") blends equal weights of IG and HY bonds with a target duration of 3 years. The strategy's gross total return for the quarter was 2.84% while the Index, a similar blend of the intermediate components of Bloomberg IG and HY corporates, returned 3.06%. CAM's duration profile is very similar to that of the blended index, with a modest overweight of the 3-5yr bucket, and underweights in the 1-3 year and 5+ year maturity buckets. Overall, the duration allocation effect was -13 basis points. The YTD gross total return was -7.03% compared to the blended Index return of -8.03%. Longer dated paper (5+ years) dramatically underperformed the broader index during the period, and CAM's underweight of those duration buckets generated a +102 basis point contribution to excess return.

The **Short Duration Investment Grade Strategy** ("**SD-IG**") delivered a gross total return of 1.73% for Q4 while the Bloomberg U.S. Corporate 1-5 Index returned 1.95%. CAM's selection and weighting within the Wireless and Chemicals industry groups provided +4 and +3 basis point contributions to excess return, respectively. Conversely, our exposures to Banking and Technology produced -14 and -3 basis point contributions, respectively. Over the YTD period, SD-IG underperformed the Index, by delivering -6.75% gross total return versus an Index return of -5.62%. Given the move in interest rates, longer duration credit underperformed during the period, and CAM's positioning within the 3-5 year and 5-7 year duration buckets produced a -38 basis point contribution to excess return versus the index.

Bloomberg Bond Indices Returns vs. CAM Gross (annualized %)

Periods ended 12/31/2022	10-yrs	20-yrs
U.S. Aggregate	**1.06**	**3.10**
U.S. Corporate	**1.96**	**4.12**
CAM Investment Grade Strategy (gross)	**1.90**	**4.11**
CAM Investment Grade Strategy (net)	**1.65**	**3.87**

Better Asset Allocation Might Result from More Exacting Analysis

CAM looks to minimize the overall volatility of our High Yield strategy by focusing on the upper tier of High Yield credit (BA-B), as well as the conservative portion of a firm's capital structure. The chart to the right indicates that CAA rated securities outperformed B rated and BA rated bonds over a 20-year period, modestly outperformed over 10-years, but underperformed over the past 5-years. Not shown in the table is the pronounced volatility that has characterized the CAA subsector. For example, during 2008, when the High Yield Index was down 26%, CAA rated bonds were down 44%, and during 2009, the Index was up 58% while CAA bonds were up 91%.

The chart to the right also shows that the BA and B rated subsectors returned approximately 70% of the S&P 500 for the 20-year period, even inclusive of the annualized double digit S&P 500 returns over the past 10-years. Notably, they have done so with about half the volatility of that Index (10-year standard deviation, Ibbotson). Further, BA and B rated bonds have outperformed the Bloomberg US Aggregate Index (the "Agg") for all periods shown. Interestingly, the Agg printed a flat 5-year annualized return, largely a function of 2022's rising rate environment. This connotes that BA and B rated credit quality stripes have kept better pace with inflation than the Agg for all periods shown.

These points in aggregate suggest that better credit quality high yield bonds deserve consideration as a core holding in an investor's portfolio allocation over a complete market cycle.

Total Return of High-Yield Bonds by Credit Quality

(periods ended 12/31/2022) Source: Credit Suisse First Boston

(annualized %)

High-Yield Bond Sectors	5-years	10-years	20-years
BA-rated bonds	**2.63**	**4.07**	**6.73**
B-rated bonds	**2.32**	**3.62**	**6.42**
CAA-rated bonds	**1.93**	**4.16**	**7.98**
CA & D-rated bonds	**-12.68**	**-9.96**	**-2.95**

Performance of Other Asset Classes

(periods ended 12/31/2022) Source: Bloomberg & Lipper

S & P 500 Stocks	**9.42**	**12.56**	**9.76**
Bloomberg U.S. Aggregate	**0.02**	**1.06**	**3.10**

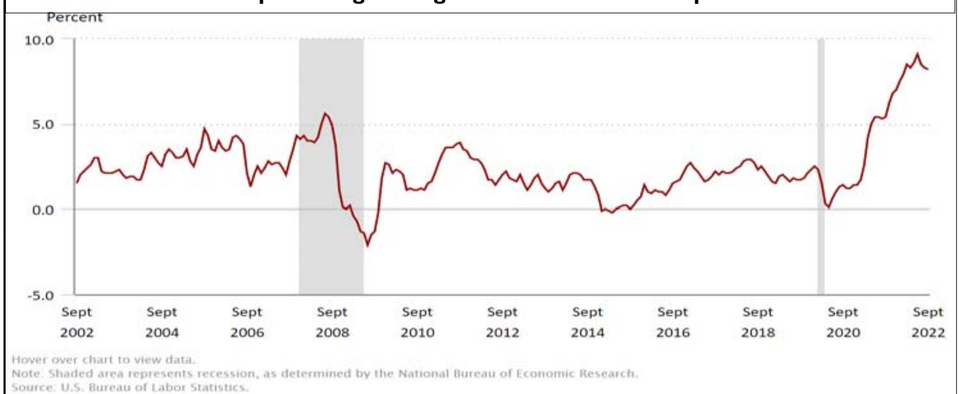
Yield Spreads Over U.S. Treasuries:

The December 31 spread levels (shown at the right) enhance the value of corporate bonds versus U.S. Treasuries. As of 12/31/2022 spreads widened for all credit quality stripes reflecting investors' uncertainty about growth and inflation. The 10-year U.S. Treasury ended Q4 2022 at 3.88% compared to 3.83% at Q3 2022, roughly where it began. For context, the 10-year yield's low point was 0.52% on August 4, 2020.

While CPI trends lower, wider corporate spreads and higher Treasury yields provide a more compelling outlook for corporate bonds than has existed since the spring of 2019.

Credit Rating	20-Year Average Spread	12/31/22	12/31/21	12/31/20	12/31/19	12/31/18	Tightest This Decade
A	1.20%	1.09%	0.74%	0.73%	0.70%	1.18%	0.63%
BAA	1.84%	1.59%	1.13%	1.21%	1.20%	1.97%	1.00%
BA	3.53%	2.95%	1.94%	2.64%	1.82%	3.54%	1.82%
B	4.91%	4.89%	3.13%	3.79%	3.24%	5.31%	2.94%
CAA	8.75%	11.54%	5.96%	7.15%	9.20%	9.89%	4.91%

12-month percentage change in the U.S. consumer price index



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So, the Federal Reserve's interest rate policies are having the desired effect. One particularly interest rate sensitive sector of the economy is housing. The most recent data published in December showed existing home sales falling 37% from their recent peak in January 2022 (source: *Wall Street Journal* 12/21/22). November's 7.7% decline marks the tenth consecutive month of declines, the longest streak on record from data dating to 1999, according to the National Association of Realtors (source: *ibid). Driving the decline are surging mortgage rates that peaked at over 7% in November from 3.1% at the end of 2021 (source: ibid).* In step with Treasuries, mortgage rates have fallen to 6.33% as of January 12, 2023, according to Freddie Mac (source: *Bloomberg* 1/12/23).

The latest manufacturing data shows weakness. The Empire Manufacturing Survey released January 17, 2023 reported significant contraction through the sharp decline in current business conditions to –32.9 (negative numbers designate a decline). Forecasts underestimated as the reported decline was twice as weak as the most pessimistic estimate in the *Bloomberg* consensus survey (source: *Bloomberg* 1/17/23).

The survey also reported employment falling. The index of the number of employees fell 11.2 points to 2.8, the weakest reading in over two years (source: ibid). Another indicator pointing to weakness was the hours worked index, declining to –10.4 (source: ibid). Broader jobs data will be released in February, but all indications point to similar negative trends.

These are trends that are important to the Federal Reserve. Wage inflation is one of its most important concerns. Slowing wage growth and rising unemployment may allow the Federal Reserve to reverse direction, lowering interest rates.

The *Wall Street Journal* Economic Forecasting Survey conducted in January 2023 showed 51% of economists expect the Federal Reserve to initiate interest rate cuts in 2023. The chart on page four provides more details, showing a large majority expect the Federal Reserve to reverse course no later than the first quarter of 2024 (source: *Wall Street Journal* 1/15/23). The data provides more support to a continuation of the bond market rally.

The rally will be choppy, but we feel the direction over the year and into 2024 will be to lower interest rates of longer dated maturities.

Footnotes and Disclosure

A number of professionals are recommending that investors commit funds to investment grade bonds, given the substantial rise in yields (chart below) and the outlook for yields (source: *Wall Street Journal* 1/17/23).

We also find higher rated high yield bonds very attractive. Yields have risen from 4.26% at the start of 2022 to 8.10%, on January 17, 2023, off of its October 5, 2022 recent high of 9.88% (source: *Bloomber Corporate High Yield Bond Index* 1/17/23).

Sharpe Ratios (risk & reward relative value) Inception-Q4 2022

CAM Investment Grade Strategy 0.35
Bloomberg U.S. Corp Bonds 0.31

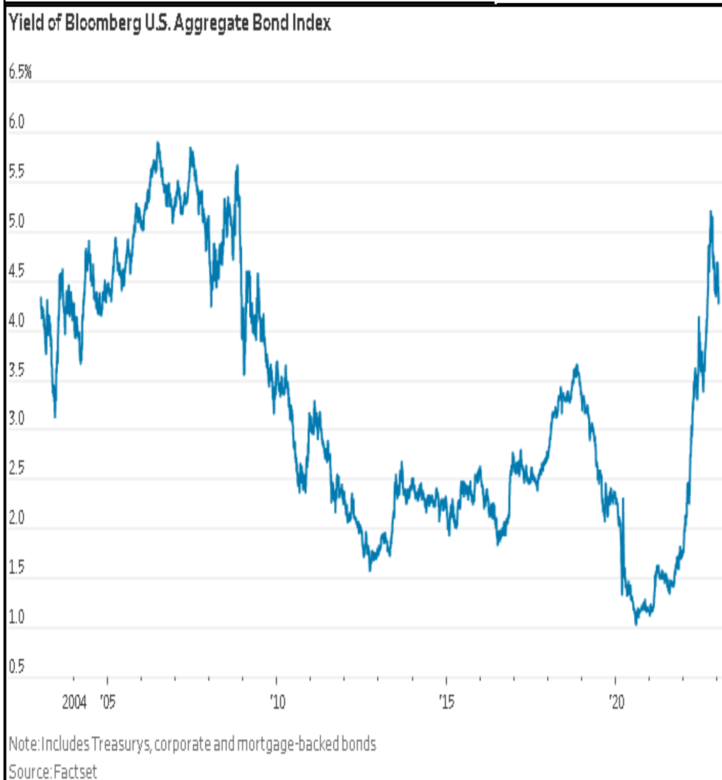
CAM High Yield Strategy 0.46
Bloomberg High Yield Corp Bonds 0.45

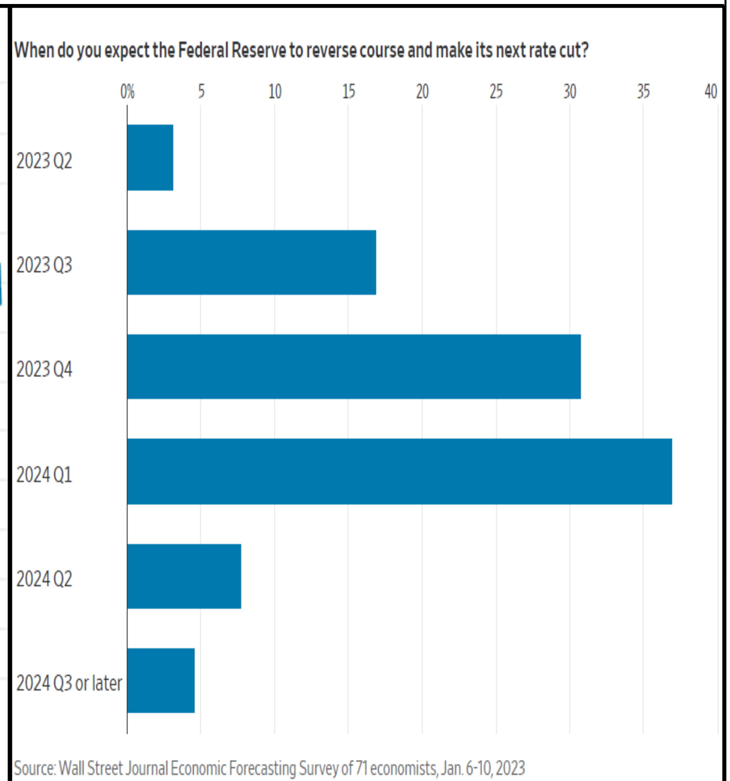
CAM Short Duration 0.42
Bloomberg Weighted Benchmark
(1/2 Interm. HY & 1/2 U.S. Corporate 1-5) 0.50

CAM Short Duration IG Strategy 0.81
Bloomberg U.S. Corporate 1-5 Yr 0.81

CAM Broad Market Strategy 0.55
Bloomberg Weighted Benchmark
(2/3 Corporate and 1/3 High Yield) 0.56

An important objective for all Cincinnati Asset Management investment strategies is to deliver superior risk-weighted returns. A quantitative indication of our success is the Sharpe Ratio that calculates total return per unit of risk. The data on the left indicates we have largely been successful. The Sharpe Ratio of the Investment Grade Strategy exceeded its respective benchmark by approximately 13%. The High Yield, Short Duration Investment Grade, and Broad Market strategies approximated their benchmarks. The Short Duration Strategy's Sharpe Ratio trailed the benchmark primarily due to total return underperformance in the 5-year and older periods.





Rating	BA	B	CAA
Avg Spread	362	520	950
Std. Dev.	167	223	421
12/31/2022	**295**	**489**	**1154**
Lowest Spread	151	228	378

Spreads to Treasuries by Credit Rating show significantly lower risk of BA and B rated bonds. Source: Bloomberg, Barclays Research (12/31/99 to 12/31/22)