

Bond Market Review and Outlook

April 2023



Linda M. Beck, CFA Senior Vice President | Director, Fixed Income

Bailard

Bailard, Inc. by the Numbers as of December 31, 2022

1969

Year founded

100%

Independently owned (majority employee owned)

\$5.1B

Assets under management

72%

Broad employee equity ownership:
72% of current employees own stock

99%

5-year Bailard Wealth Management client retention rate, ending December 31, 2022*

52%

Women and minority owned

72

Employees

77%

Professionals hold advanced degrees and/or industry designations

42%

Employees are female

Bailard, Inc. is comprised of two divisions: Bailard Wealth Management and Bailard Institutional. * The Bailard Wealth Management client retention rate for the five-years ending December 31, 2022 was 99%. This number does not include terminations due to estate distributions, depleted accounts, accounts terminated by Bailard, or MY-FLEX® and MY-KIN® accounts.

Comprehensive Wealth Services Customized to Each Client

Customized, Tax-Aware Investment Portfolios

- Multi-asset class portfolios

In-house Investment Management

- Provides accountability, provides greater control over investments and affords clients the benefit of access and transparency

Financial Planning

- Initial consultation and ongoing review of client goals
- Education planning and retirement planning
- Legacy, wealth transition, and charitable planning
- 10 client service members holding a CFP®
- Social Security options evaluation

Estate Planning

- Proactive estate and legacy strategy planning via Bailard's estate planning strategist who holds JD, LLM, CFP® designations
- Coordination with outside estate planning attorney
- Review existing estate planning documents and provide flowchart analysis

Experienced Team Providing High-touch Personal Service

- We still believe in making house calls
- Client Appreciation Events

Income Tax Planning

- Proactive income tax planning and tax bracket management
- Coordination with outside tax counsel and review of tax return
- Ongoing tax-loss harvesting

Healthcare Planning

- Pre-retirement health care planning
- Health insurance and Medicare options evaluation; plan signup assistance

Life Insurance and Annuity Review

- Analyze existing life insurance policies and annuities
- Irrevocable Life Insurance Trusts (ILIT)

Executive Compensation

- Employee incentive stock options (ISOs), restricted stock units (RSUs); taxation, exercise plan, and concentration analysis
- 10b5-1 Plans

Real Estate Advisory

- Consultation on outside commercial real estate exposure

The above should not be construed as tax or legal advice. Neither Bailard, Inc. nor any employee of Bailard is a tax or legal professional and thus cannot and does not give tax or legal advice; our advice in these areas is holistic and conceptual. Please consult your tax or legal professional for any specific, personal tax or legal questions. All investments have the risk of loss. There is no guarantee Bailard will achieve its investment objectives. Statistics as of December 31, 2022.

Bailard, Inc.



Linda M. Beck, CFA | Senior Vice President | Director, Fixed Income

Linda joined the firm in 2012 and leads the firm's fixed income investment strategies in addition to working directly with a select number of its clients. Prior to joining Bailard, she worked as a Senior Portfolio Manager in RCM's Private Client Group and was responsible for managing all fixed income accounts in the San Francisco office. Linda joined RCM in 1994, serving RCM's institutional fixed income department where she was responsible for over \$2 billion in taxable institutional and high net worth fixed income portfolios. She received her Chartered Financial Analyst® designation in 1991 and is a member of the CFA Institute and the CFA Society of San Francisco. Linda's industry career began in 1986, having earned a BS in mathematical economics from Pomona College and an MBA in international finance from the University of Chicago. She enjoys living in Marin.

SENIOR MANAGEMENT

Sonya Thadhani Mughal, CFA | Chief Executive Officer†

Michael J. Faust, CFA | President, Wealth Management†

Peter M. Hill | Executive Chairman†

Eric P. Leve, CFA | Chief Investment Officer†

Preston R. Sargent | EVP, Real Estate†

Blaine Townsend, CIMA | EVP, Director, Sustainable, Responsible and Impact Investing†

CLIENT SERVICE & BUSINESS DEVELOPMENT

Wealth Management Clients

Michael J. Faust, CFA†

Kim M. Aquino, CFP®†

Stacy Pearl Dauber, CFP®†

Rick V. Fermin, CFP®, RICP®†

Andrea M. Gandolfo†

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Benjamin Lathrop†

Erin M. Randolph†

Debbie Tanguay†

ASSET MANAGEMENT

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Eric P. Leve, CFA†

Anthony R. Craddock†

Daniel McKellar, CFA†

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Thomas J. Mudge, III, CFA†

Osman Akgun, PhD, CFA†

Eric Greco†

Joanne Howard, CFA†

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Geoffrey Esmail†

Tess H. Gruenstein†

Jamil Harkness

James Pinkerton†

Daniel Merhi

Juan Rascon-Borgia

Alex Spotswood†

Sustainable, Responsible and Impact Investing

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Kit Lau

Tom Sikora

ADMINISTRATION, COMPLIANCE & OPERATIONS

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Mikhail Saliba

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Human Resources

Jennifer Pierre

Technology and Operations

Steven R. Hibshman†

Leon W. Vigdorich†

As of December 31, 2022

† Owner of BB&K Holdings, Inc. stock. Bailard, Inc. is a wholly-owned subsidiary of BB&K Holdings, Inc., a privately owned C-Corporation.

* Senior ESG Analyst, Annalise Durante, rejoined Bailard on 1/3/2023 after traveling extensively.

Table of Contents

Bond Basics	6
Why Invest in Bonds	10
Why Invest in Bonds Now	14
Bond Market Outlook Macro-Environment	17
Structuring Bond Portfolios	25
Appendix	31

What Is a Bond?

A bond is, in essence, a loan

What do you receive for investing in bonds?

- Interest on the amount of the loan (principal amount)

Bond Structure

- Most bonds are structured to pay $\frac{1}{2}$ their coupon payment two times a year and repay the full loan amount (face amount) at maturity.

Who issues bonds?

- Companies
- Federal government (Treasuries and Agencies)
- Local governments (municipalities)

Major Risks of Owning Bonds

Interest rate risk:	If yields go up, the price of your bond will decline
Reinvestment risk:	Risk that interest rates (your return) will be lower when you need to reinvest bond proceeds
Inflation risk:	Inflation erodes the purchasing power of your future cash flows
Credit or default risk:	Risk that the issuer will not be able to pay all the interest or principal payments
Ratings downgrade risk:	Risk that the bond issuer receives a rating downgrade, which typically causes the market yields of such bonds to rise and the trading prices to fall
Liquidity risk:	Most bonds are less liquid than stocks. There are fewer readily available buyers and sellers, and a more diverse universe of bonds. This means there is more risk that when you try to trade or sell a bond, its price could deviate more from its true value than for more liquid stocks

What Is the difference between coupon and yield?

If a bond pays out a higher coupon, investors must pay a premium to purchase the bond

	Par bond 5 years to maturity, Yield = 4.5% Coupon 4.5%, Price \$100			Premium bond* 5 years to maturity, Yield = 4.5% Coupon 6.0%, Price \$107.500		
Year	Principal	Coupon	Cumulative Income	Principal	Coupon	Cumulative Income
2023 Year 1	\$(100,000)	\$4,500	\$4,500	\$(107,500)	\$6,000	\$6,000
2024 Year 2		\$4,500	\$9,000		\$6,000	12,000
2025 Year 3		\$4,500	\$13,500		\$6,000	\$18,000
2026 Year 4		\$4,500	\$18,000		\$6,000	\$24,000
2027 Year 5	\$100,000	\$4,500	\$22,500	\$100,000	\$6,000	\$30,000
Total			\$122,500			\$122,500

* For illustrative purposes, for simplicity, the cash flow payments are not discounted for the time value of money.

How are Bond Prices Determined?

What determines the price of a bond?

$$\text{Bond Price} = \frac{\text{coupon payment 1}}{(1 + \text{yield})} + \frac{\text{coupon payment 2}}{(1 + \text{yield})^2} + \dots + \frac{\text{coupon payment n}}{(1 + \text{yield})^n} + \frac{\text{par value}}{(1 + \text{yield})^n}$$

where n = number of payments

- This relationship is why bond prices and yield move inversely.

Why Invest in Bonds?

Why Invest in Bonds?

In the long run, stocks typically outperform bonds, so why invest in bonds?

Capital Preservation

- Unless a company (issuer) defaults, a bondholder generally receives back the amount originally invested if held to maturity

Predictable Income

- Provides a predictable level of income for investors
- Bonds can offer tax-free income
 - Municipal bonds are exempt from federal tax and often from state taxes*
 - Corporate bonds are subject to both federal and state tax
 - Treasury bonds are subject to federal taxes but exempt from state taxes
 - Agency bonds are subject to federal tax. Some agencies are subject to state tax, while others are exempt.

Diversification

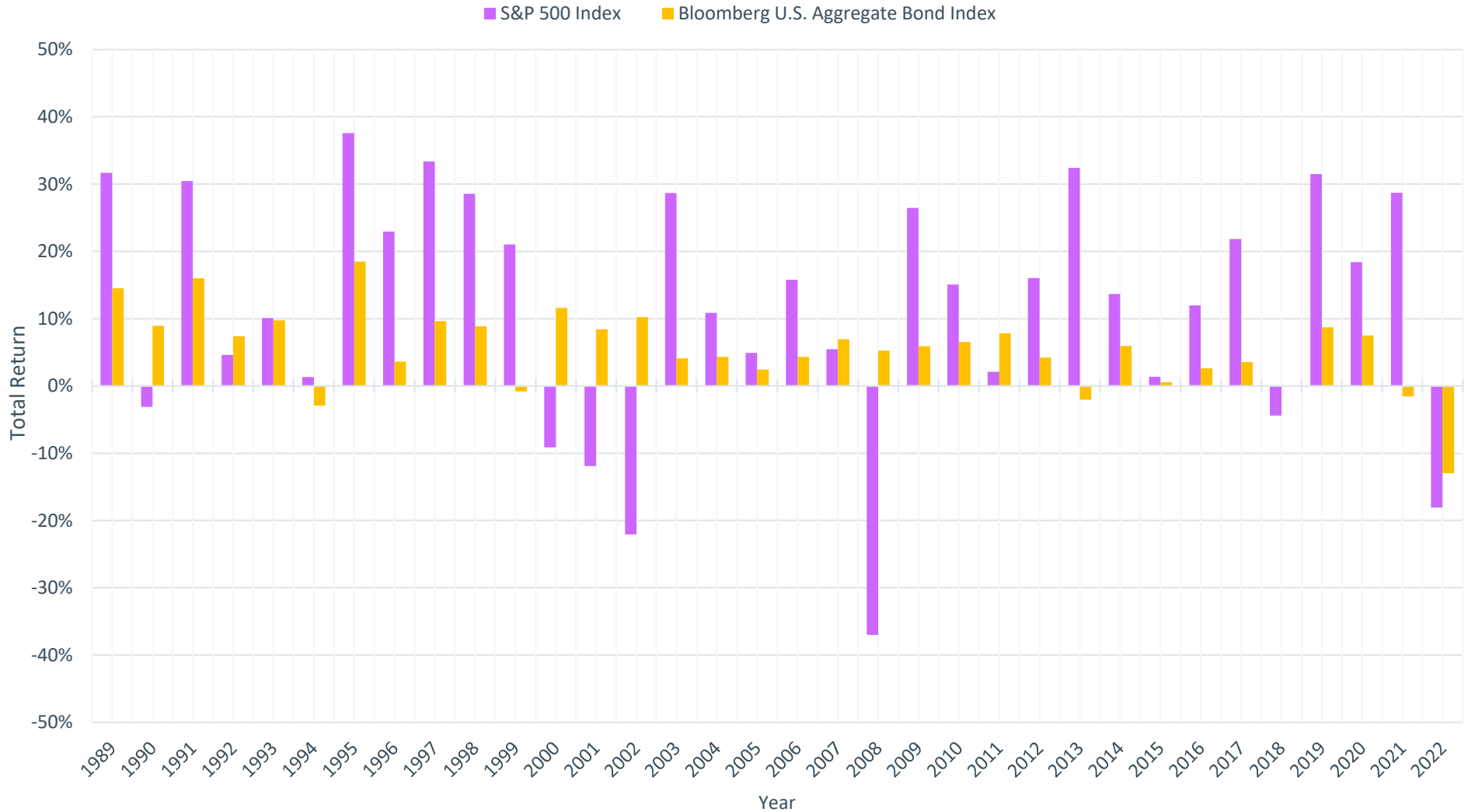
- Bond and stock prices often move in opposite directions
- Balanced portfolios (which include stocks and bonds) generally provide superior risk-adjusted returns than a single-asset portfolio
- Bond prices tend to be less volatile than stock prices

*Certain municipal bonds may be subject to the Alternative Minimum Tax (AMT).

Past performance is no indication of future results. All investments have risk of loss. There is no guarantee that a particular strategy will achieve its investment objectives.

Why Invest in Bonds?

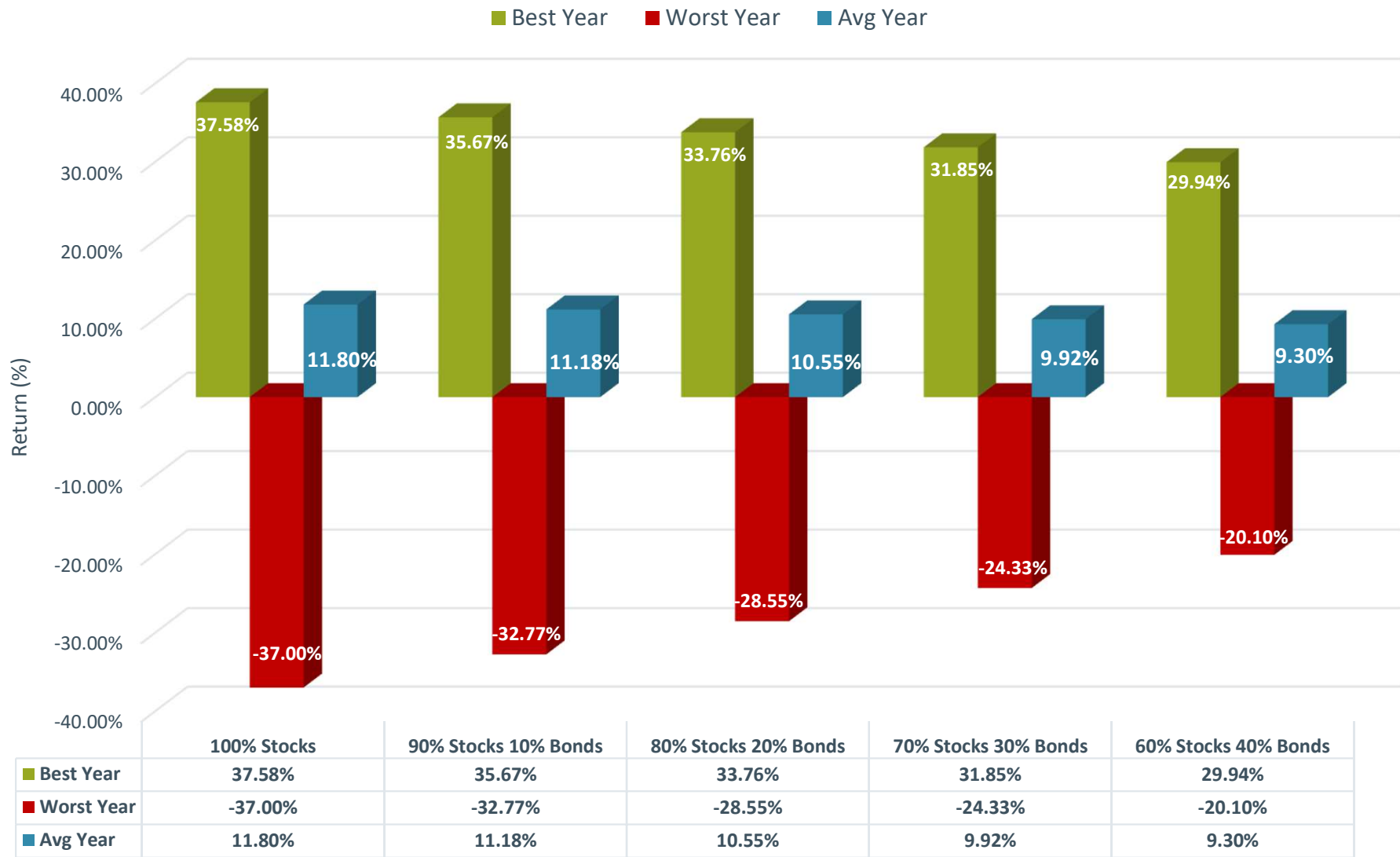
Annual Returns of the S&P 500 and Bloomberg US Aggregate Bond Index



Source: Bloomberg. Data as of December 31, 2022. Past performance is no indication of future results. All investments have risk of loss.

Why Invest in Bonds?

Portfolio diversification and cushion in periods of stock market weakness.
Range of Annual Returns (1989-2022)



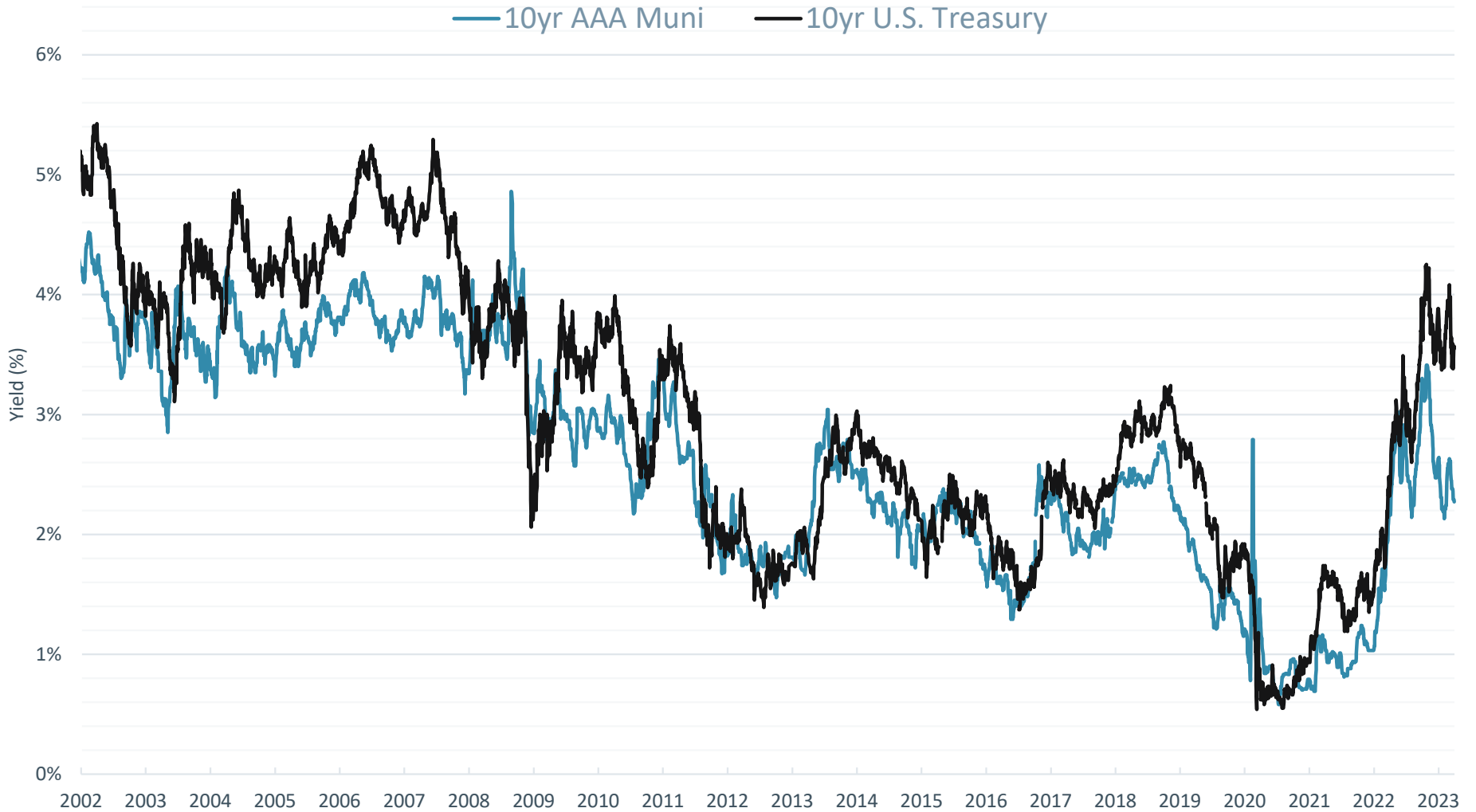
Source: Bloomberg. Data as of December 31, 2022. Past performance is no indication of future results. All investments have risk of loss.

Why Invest in Bonds Now?

U.S. Interest Rates

Interest rates have risen to their highest level since the Great Financial Recession. Historically, 80% of bond total returns come from income.

10-Year U.S. Treasury Yields and 10-Year AAA Municipal Yields

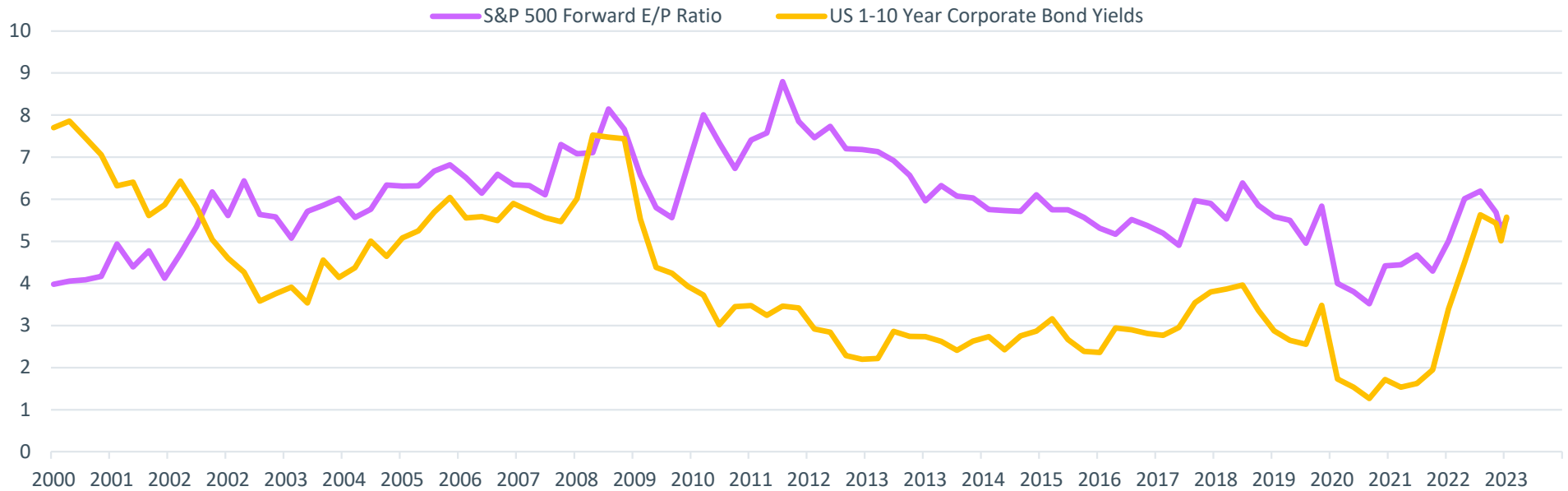


Source: Bloomberg. Data as of March 30, 2023.

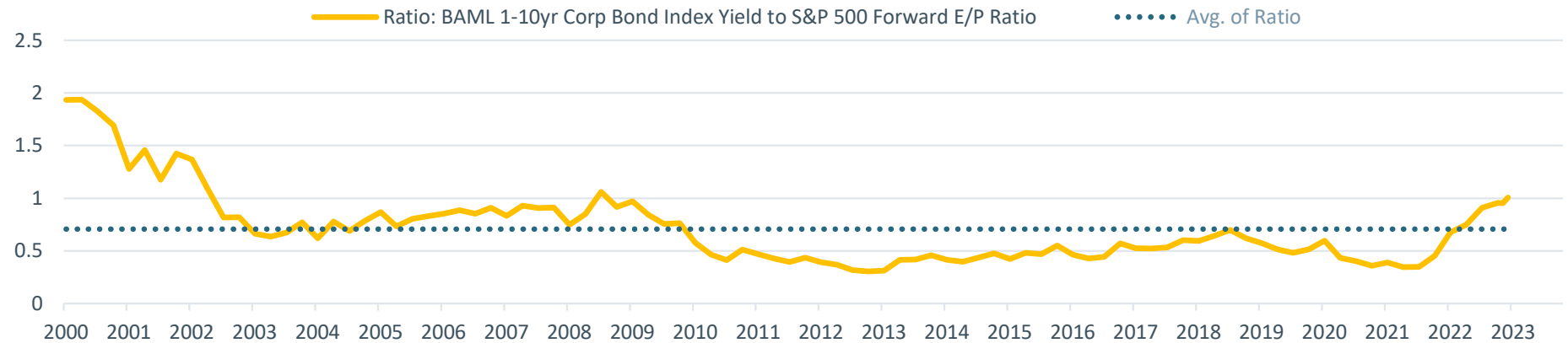
Bond Yields Look Attractive Relative to Stocks

Corporate yields relative to stock forward E/P levels are at their highest levels since 2008.

S&P 500 Forward Earning/Price Ratio & U.S. 1-10yr Corporate Bond Yields



Ratio: BAML 1-10yr Corp Bond Index Yield to S&P 500 Forward E/P Ratio



Source: Bloomberg. Data as of February 28, 2023.

Bond Market Outlook Macro-Environment

Slowing Economic Growth Should Keep a Lid on Interest Rates

Slower economic growth should lessen inflationary pressures and demand for credit. Slower growth also impacts the Federal Reserve's monetary policies.

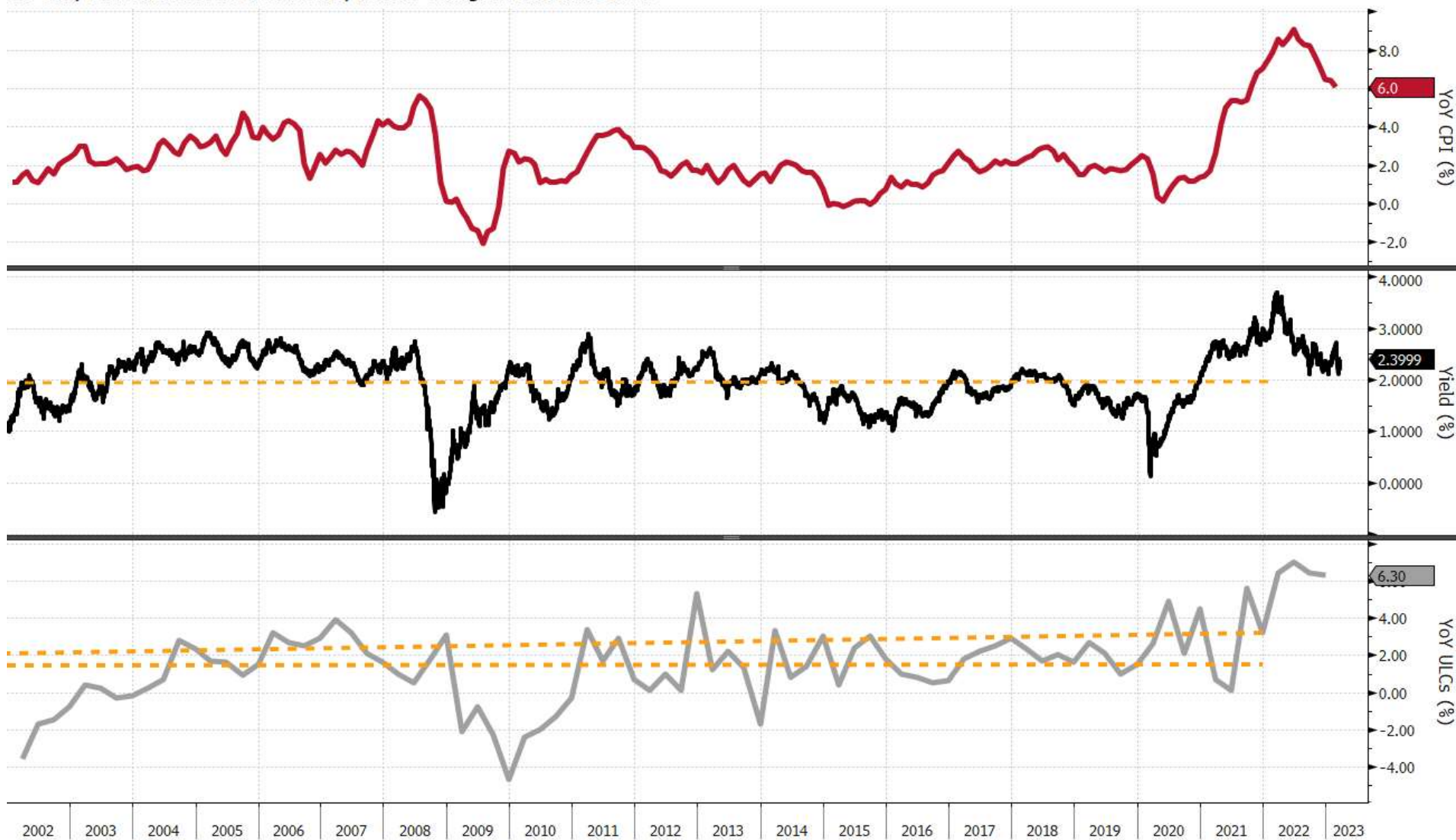


Source: Bloomberg, as of December 31, 2022.

Declining U.S. Inflation Reduces Pressure on Interest Rates

Inflation erodes the purchasing power of future bond coupon and maturity payments. We believe Inflation will decline over the next five years relative to current high levels.

YoY CPI, 5YR Inflation Priced into TIPS, and YoY Change in Unit Labor Costs



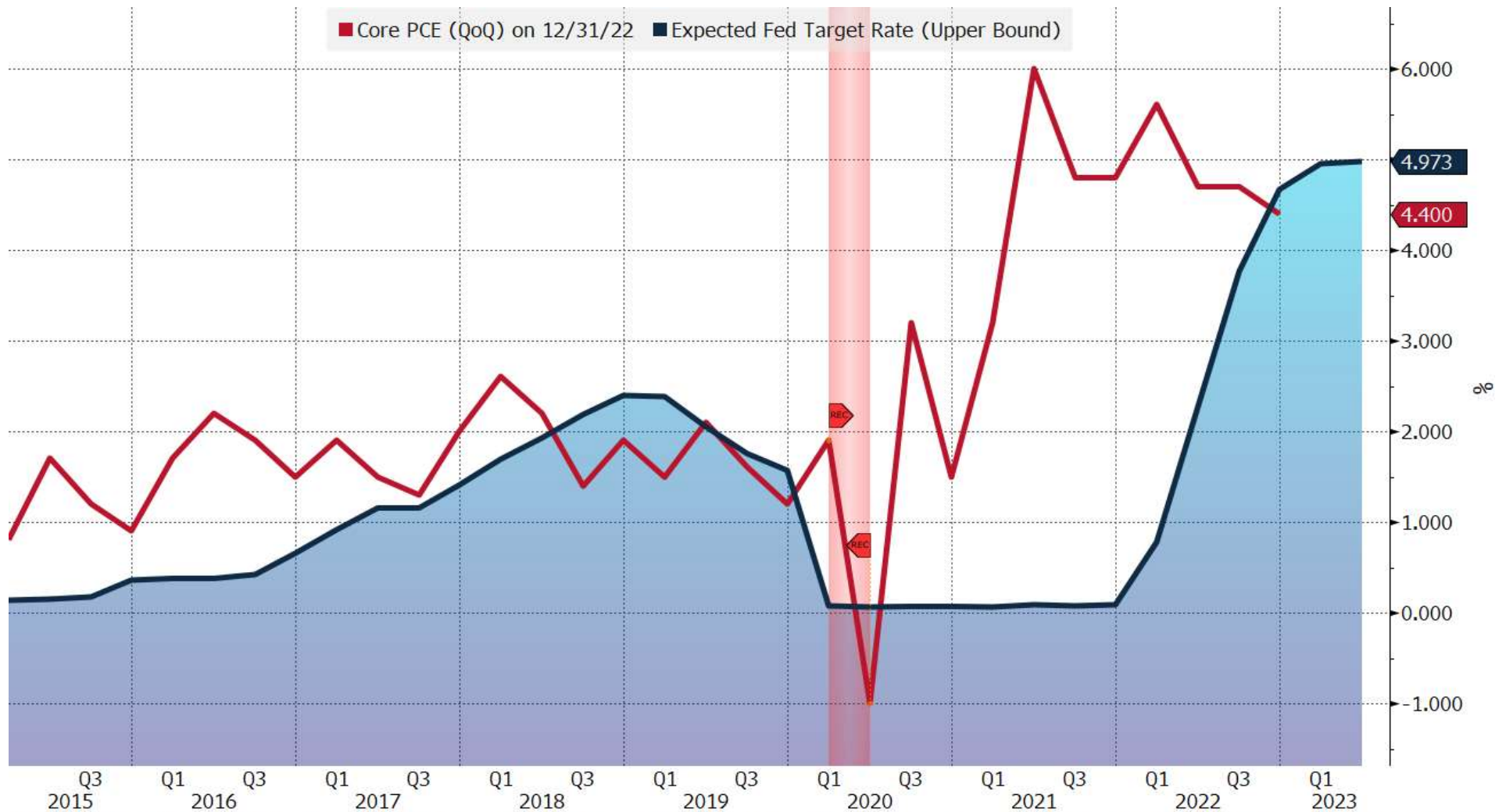
CPI YOY Index (US CPI Urban Consumers YoY NSA) 1) CPI 5yrTIP ULCs Daily 01JAN2002-03APR2023 Copyright© 2023 Bloomberg Finance L.P. 03-Apr-2023 14:01:50

Source: Bloomberg, as of March 31, 2023.

The Federal Reserve May Have Completed its Tightening Cycle

Dual mandate of full employment and price stability

Core Producer Consumption Expenditures Index versus Expected Federal Funds Rate



GDPCPCEC Index (US GDP Personal Consumption Core Price Index QoQ % SAAR) Core PCE-Fed Futs QoQ Quarterly 31MAR2015-03APR2023

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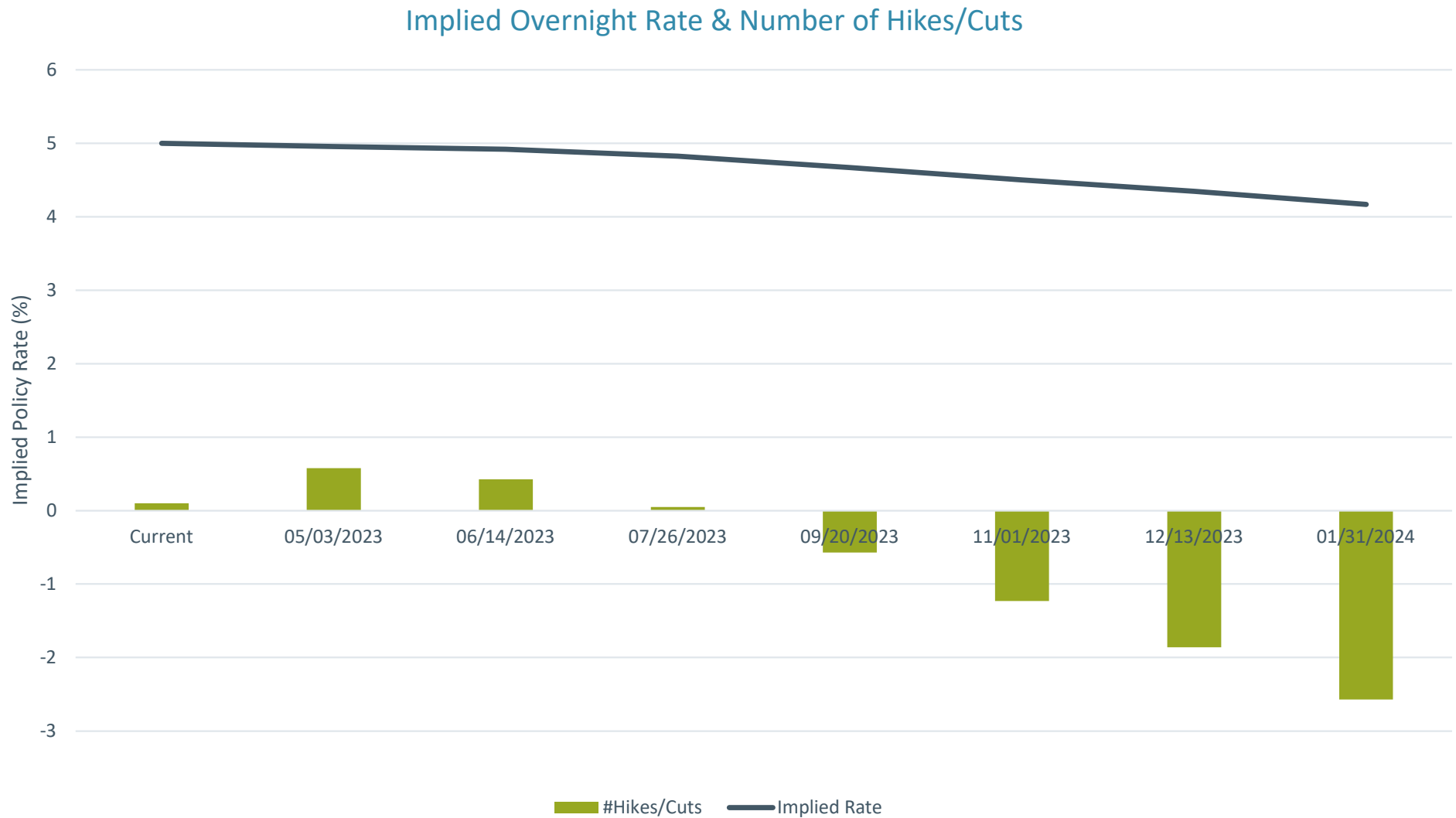
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REC = Recession as defined by NBER

Source: Bloomberg, as of April 3, 2023.

The Federal Reserve – closer to the end of tightening cycle

After some of the most aggressive rate hikes on record - raising rates by 4.75% since January 2022, the market is predicting an end to the Fed's tightening cycle.



Source: Bloomberg, Data as of March 31, 2023.

Treasury Forward Rate Curve

Lower rates are priced into the bond market as seen in forward rates

Tenors	Current	1 Year	5 Year
1Mo	4.5319	3.4291	3.3994
2Mo	4.6428		
3Mo	4.7487	3.4390	3.4089
4Mo	4.9429		
6Mo	4.8827	3.4729	3.4419
1Yr	4.6195	3.4629	3.4329
2Yr	4.0273	3.3705	3.4328
3Yr	3.7893	3.3319	3.3848
5Yr	3.5758	3.3369	3.3702
7Yr	3.5360	3.3428	3.6083
10Yr	3.4695	3.4242	3.7845
20Yr	3.7964	3.7302	3.7727
30Yr	3.6512	3.6015	3.6319

Source: Bloomberg. Data as of March 31, 2023.

Corporate Credit Spreads



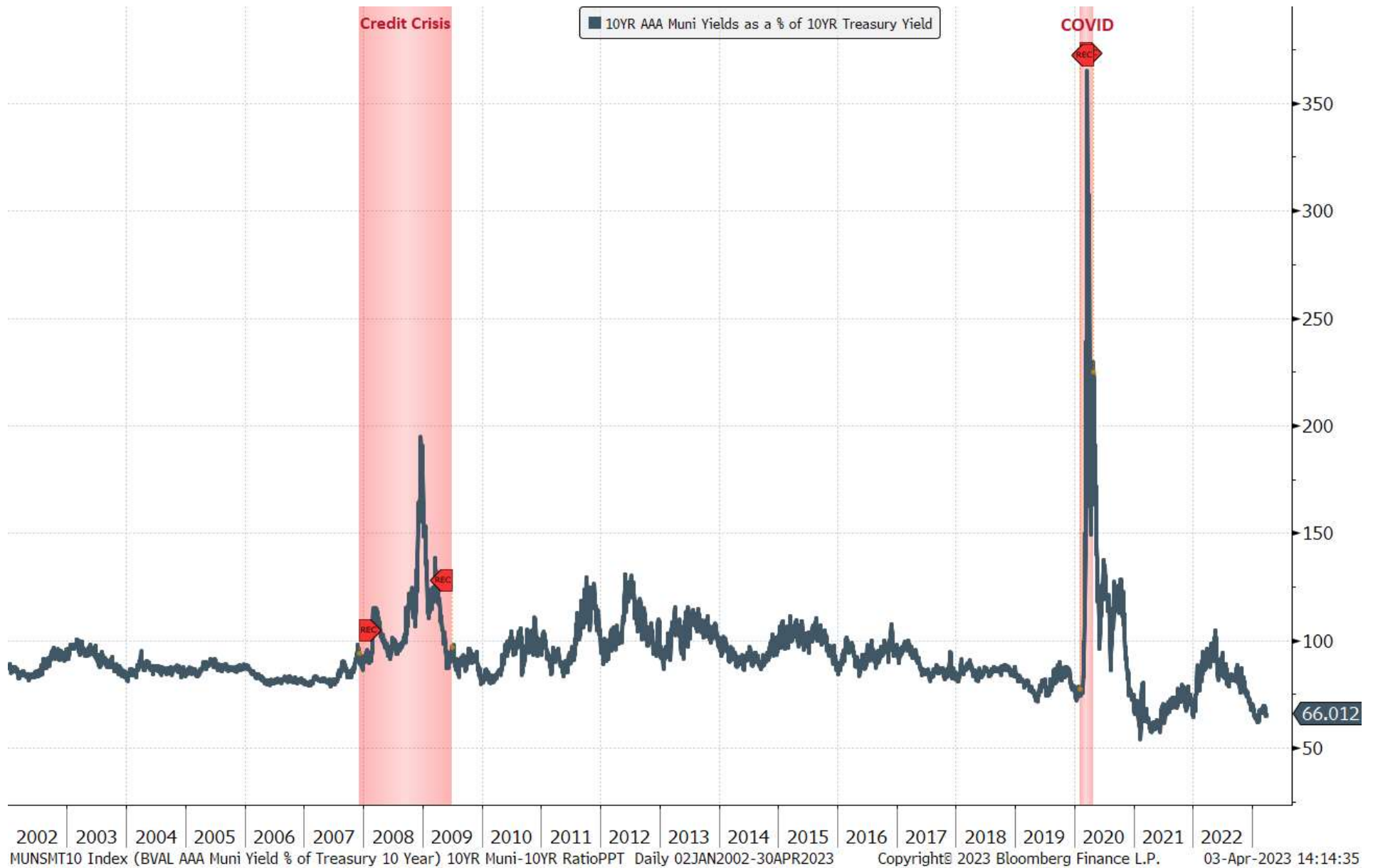
LD06TRUU Index (Bloomberg Intermediate Corporate Total Return Index Value Unhedged USD) 7-10 Corp OAS to Tsy Daily 01OCT2002-03APR2023 Copyright© 2023 Bloomberg Finance L.P. 03-Apr-2023 14:01:47

REC = Recession as defined by NBER

*Basis points, are a unit of measure used to describe the percentage change value or rate of a financial instrument. One basis point is equivalent to 0.01% (1/100th of a percent) or 0.0001 in decimal form.

Source: Bloomberg, as of March 31, 2023.

10yr AAA Municipal Yields as % of 10yr U.S. Treasury Yields



REC = Recession as defined by NBER

Source: Bloomberg, as of March 30, 2023

Structuring Bond Portfolios

Structuring Bond Portfolios

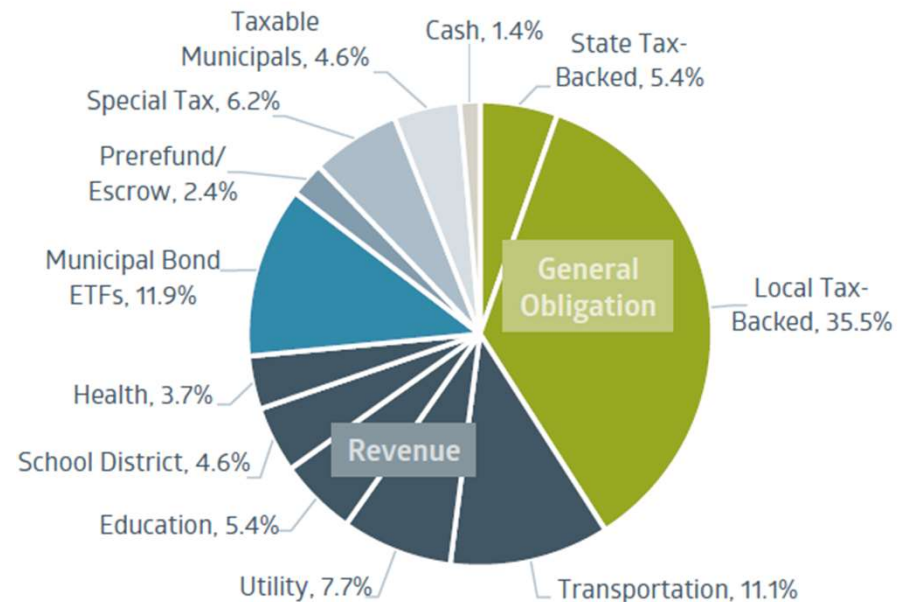
Bailard's fixed income process is driven by a top-down analysis of the interest rate cycle in conjunction with sector valuations and trends.

- Actively manage risk from interest rate, sector, credit quality, issuer and liquidity as part of the portfolio process.
- Relative values between bond sectors vary over time in response to macro-economic and market technical conditions.
- Trade in the institutional market when appropriate in an effort to obtain advantageous prices and lower transaction costs.

Structuring Bond Portfolios: Taxable Accounts and Trusts

- Portfolios should reflect individual's risk tolerances and Federal and state tax circumstances
- Individuals subject to high taxes should have a portfolio concentrated in tax-exempt municipal bonds. However, at times, taxable bonds may offer higher after-tax returns.
- Focus on intermediate maturity bonds to moderate interest rate risk.
- Purchase predominately high-quality bonds to reduce credit risk.
- For individuals striving to balance their environmental and social values with their financial goals, an environmental and socially responsible objectives can be reflected in the portfolio.

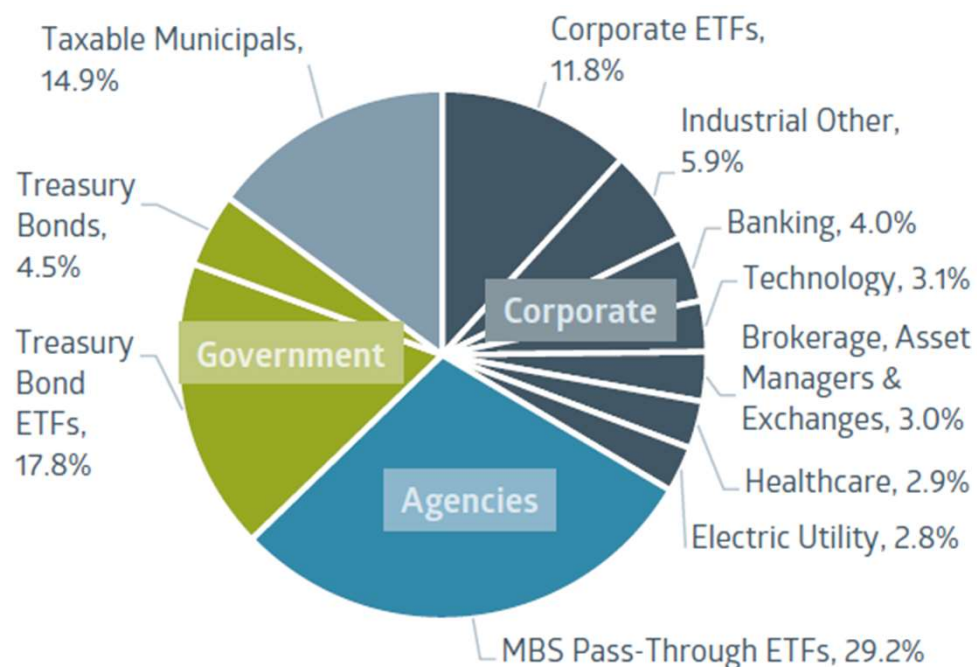
Sample Total After-tax Portfolio




Structuring Bond Portfolios: Tax-Exempt Accounts (e.g., IRAs)

- Diversify among sectors
- Focus on intermediate maturity bonds to moderate interest rate risk
- Invest in predominately high-quality bonds to moderate credit risk
- For individuals striving to balance their environmental and social values with their financial goals, an environmental and socially responsible objectives can be reflected in the portfolio.

Sample Aggregate Bond Portfolio



Any Questions?



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Bailard

Risks and Disclosures

Investing in bonds is subject to risk, including market, interest rate, issuer, inflation, credit and liquidity risk. Liquidity risk and price validity will be heightened when market makers hold less inventory and are less willing to transact. Investments in fixed income can lose value due to sudden or unexpected changes in interest rates. The value of fixed income investments is inversely proportional to interest rates, meaning they will lose value in a rising interest rate environment. Longer duration bonds tend to be more volatile than lower duration bonds. If an issuer defaults, investors could lose both interest and principal. Bond investments may be worth less or more than original cost when sold. **Past performance is no indication of future results. All investments have risk of loss.** There is no guarantee that a particular strategy will achieve its investment objectives.

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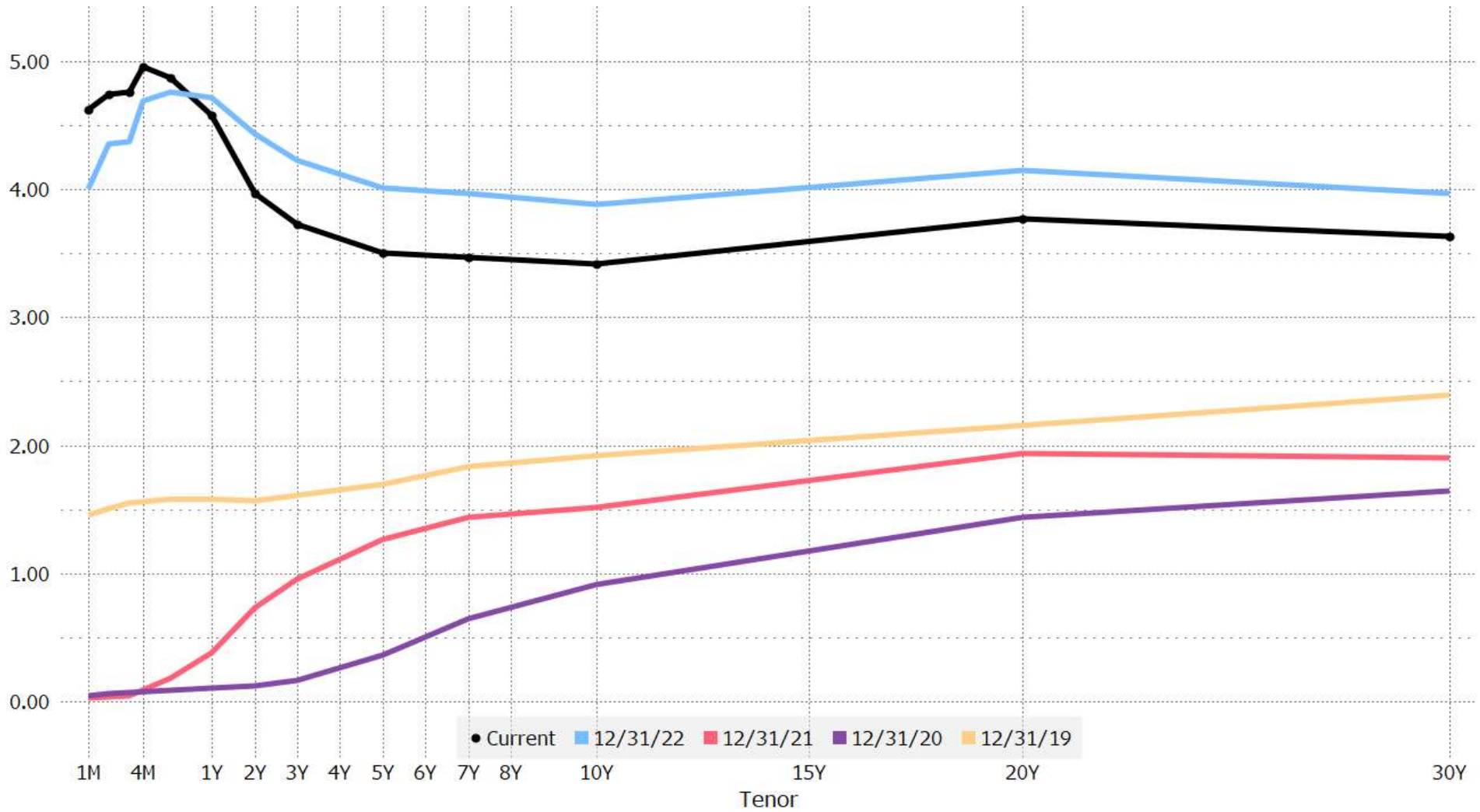
Any indices and other financial benchmarks shown are provided for illustrative purposes only, are unmanaged, reflect reinvestment of income and dividends and do not reflect the impact of advisory fees. Investors cannot invest directly in an index. Comparisons to indexes have limitations because indexes have volatility and other material characteristics that may differ from a particular hedge fund. For example, a hedge fund may typically hold substantially fewer securities than are contained in an index. Any references to specific securities are included solely as general market commentary and were selected based on criteria unrelated to Bailard's portfolio recommendations or the past performance of any security held in any Bailard account.

Certain information contained herein constitutes "forward-looking statements," which can be identified by the use of forward-looking terminology such as "may," "will," "should," "expect," "anticipate," "project," "estimate," "intend," "continue," or "believe," or the negatives thereof or other variations thereon or comparable terminology. Due to various risks and uncertainties, actual events, results or actual performance may differ materially from those reflected or contemplated in such forward-looking statements. Nothing contained herein may be relied upon as a guarantee, promise, assurance or a representation as to the future.

Appendix

Treasury Historical Yield Curve Comparison

The Treasury yield curve is inverted, we believe it reflects the Fed's Federal Funds rate and the market's expectation that a slowing economy and declining inflation may enable lower rates in the future.



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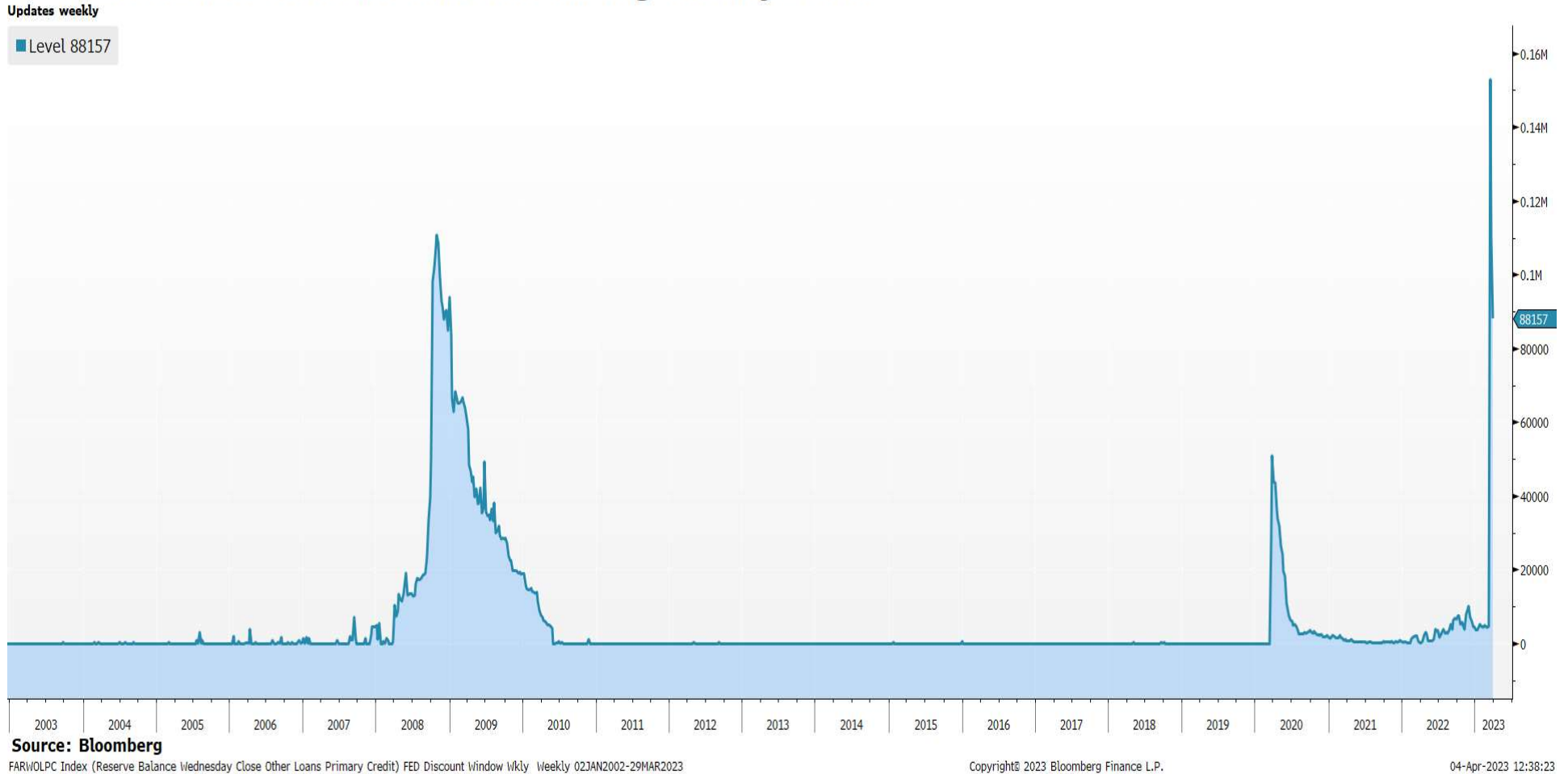
Source: Bloomberg. Data as of April 3, 2023.

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Discount Window Borrowing

With the collapse of Silicon Valley Bank and pressure on regional banks, primary dealer borrowing from the Federal Reserve spiked.

Federal Reserve Discount Window Lending Facility Level

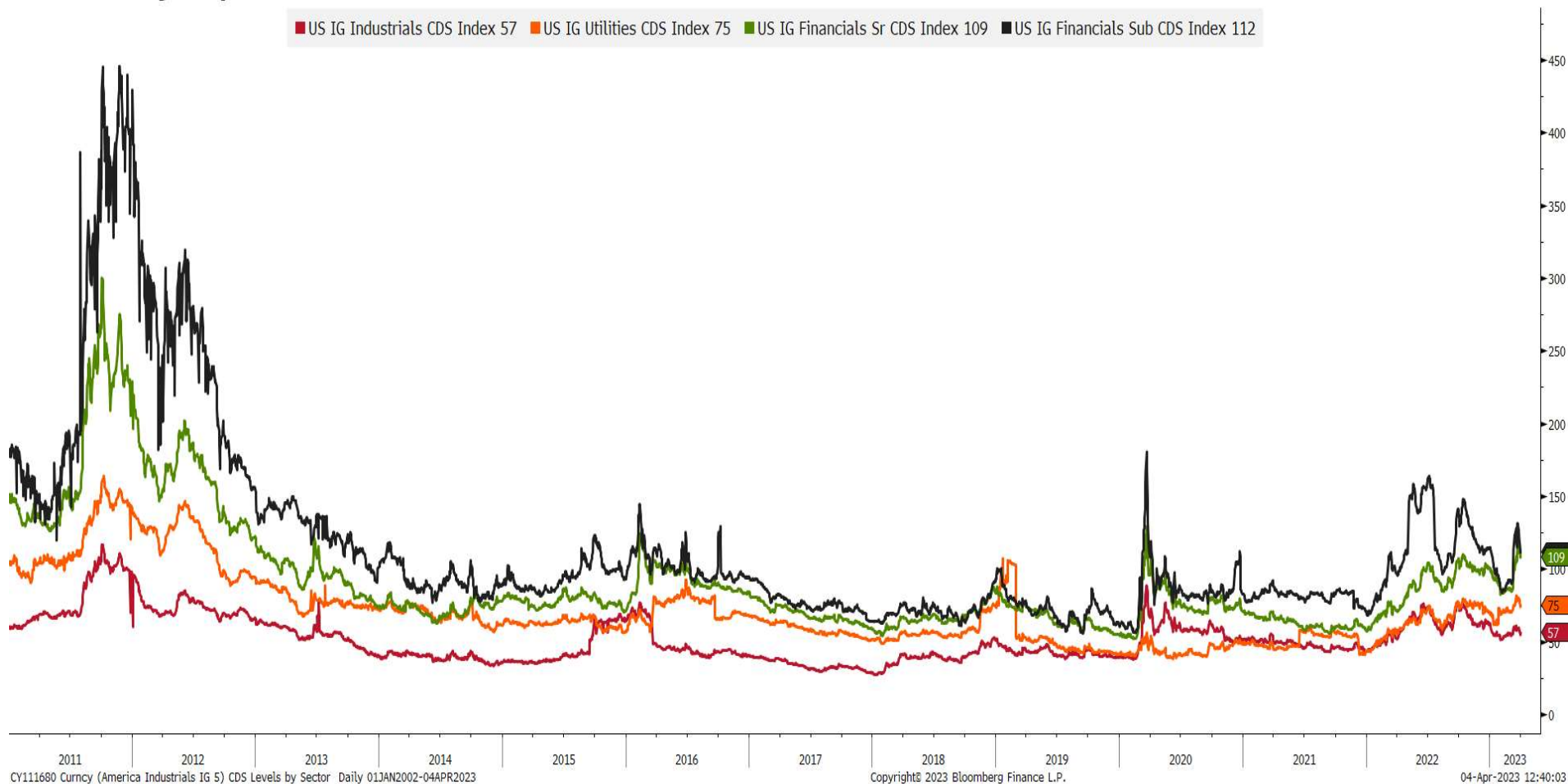


Source: Bloomberg. Data as of March 29, 2023.

Credit Default Swaps

With the collapse of Silicon Valley Bank, default concerns for financials, particularly regional banks, increased significantly.

CDS Levels by Corporate Sector

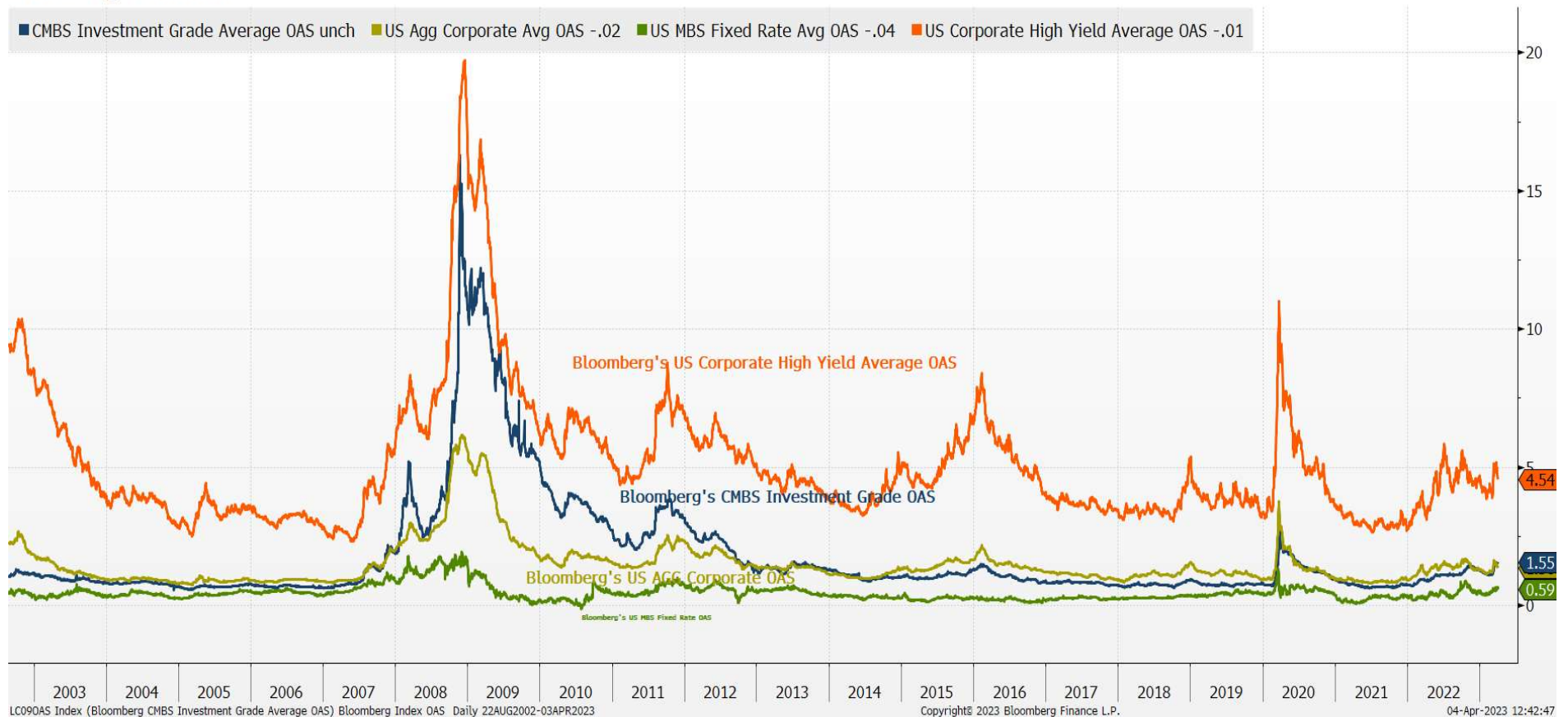


Source: Bloomberg. Data as of April 3, 2023.

Taxable Bond Credit Spreads

With a higher probability of a recession and concerns with regional bank liquidity, option-adjusted spreads (OAS) to Treasuries for lower-rated corporate bonds have increased.

OAS by Sector



Source: Bloomberg. Data as of April 3, 2023.