



2023 OUTLOOK

# Observations in Fixed Income

TP965

*All data in this presentation is as of 31 December 2022 unless otherwise noted.*



## Observations in Global Fixed Income

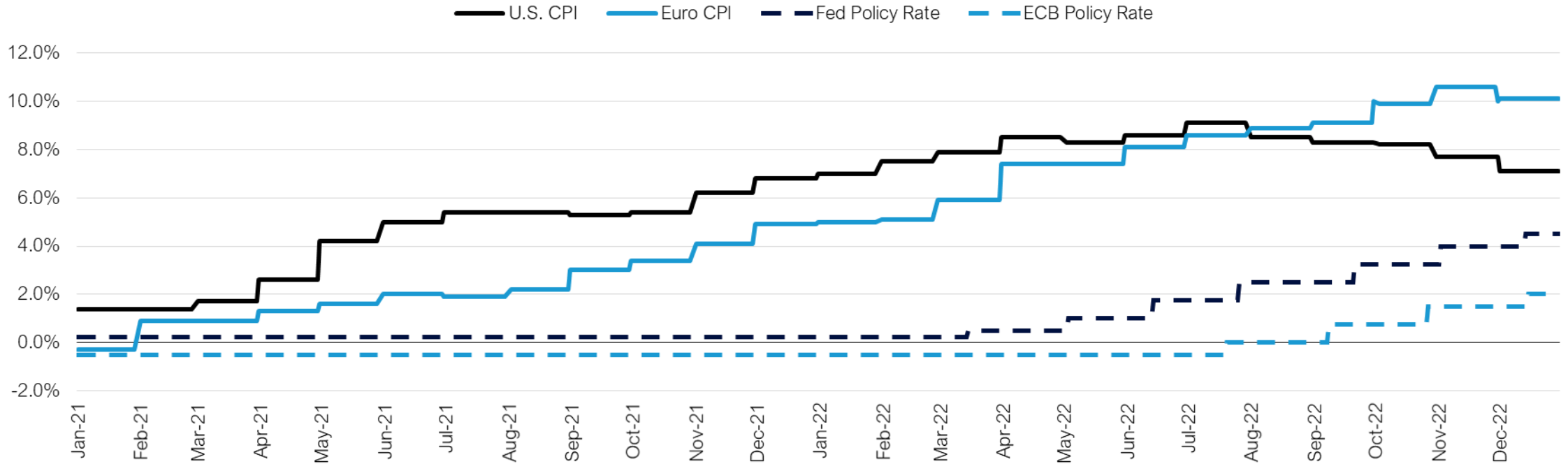
Rates  
& Inflation

Credit  
Valuations

Relative Value  
Assessment

# Central Bank Credibility Is Precious – And on the Line

Inflation vs. Central bank policy moves

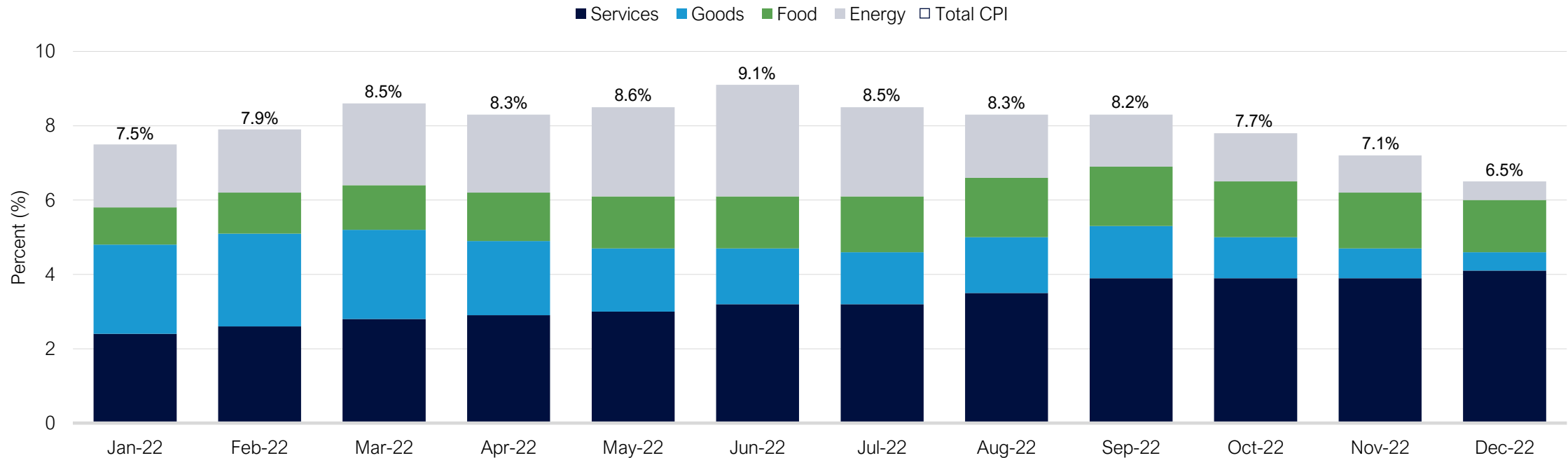


Past performance does not guarantee future results.

Source: Bloomberg

# Predicting Fed Policy Will Be Driven by What Contributes to Inflation

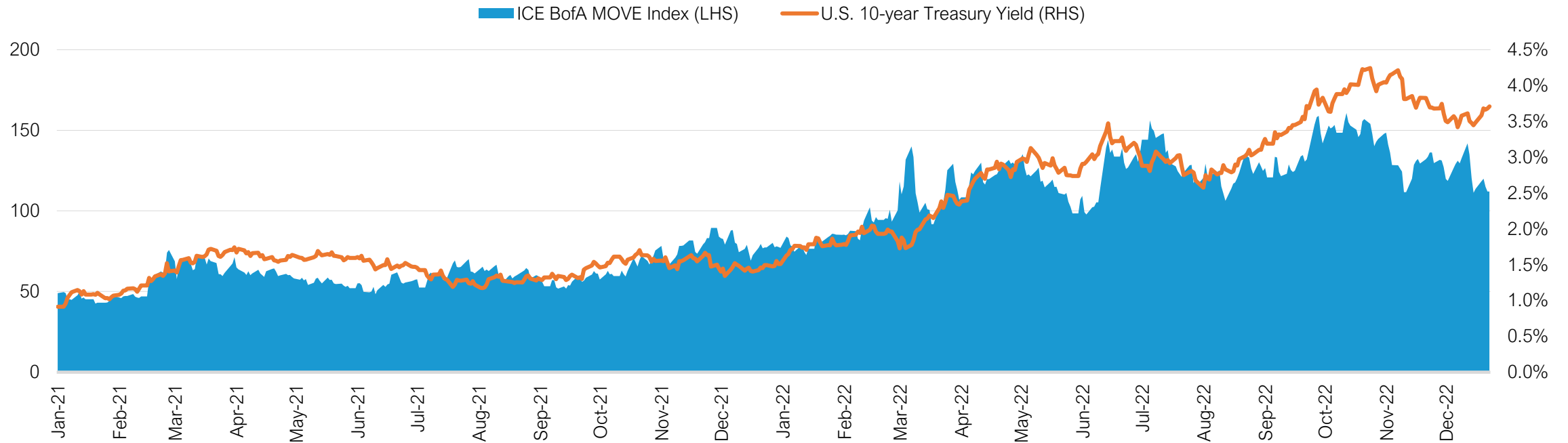
Service driven inflation may be seen as “good” inflation and could soften the Fed’s hawkish stance



Source: Bloomberg  
Data represents U.S. Consumer Price Index.

# Higher Treasury Yields Have Brought with It Higher Rate Volatility

ICE BofA MOVE Index represents a measure of Treasury market volatility

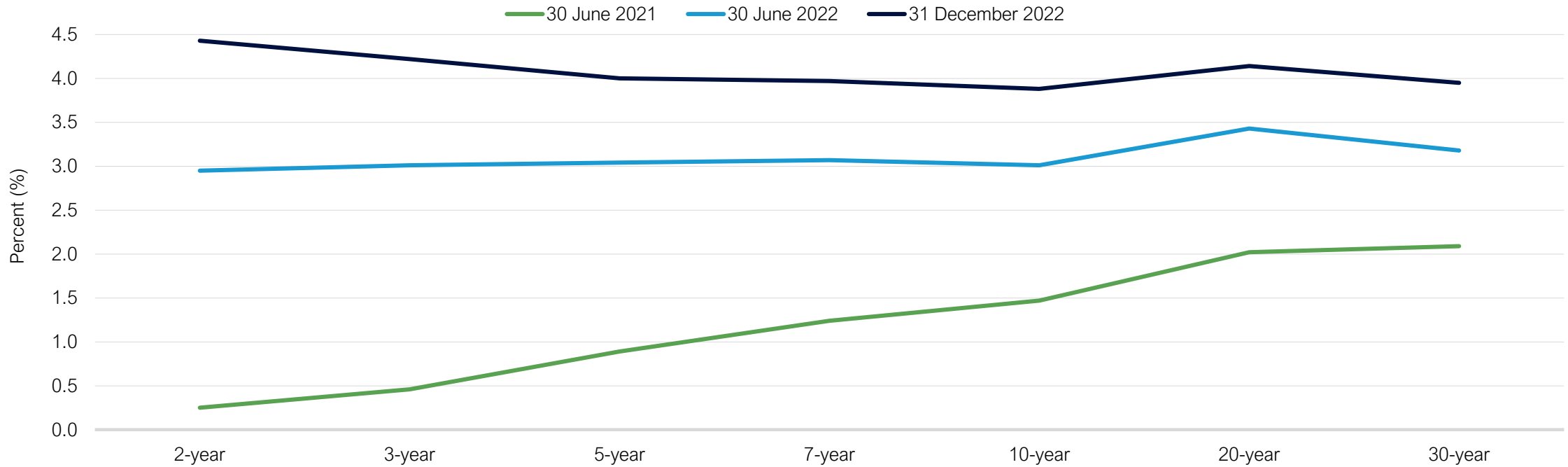


Past performance does not guarantee future results.

Source: Bloomberg

# Investing Out the Yield Curve Provides No Additional Compensation

U.S. Treasury yield curve

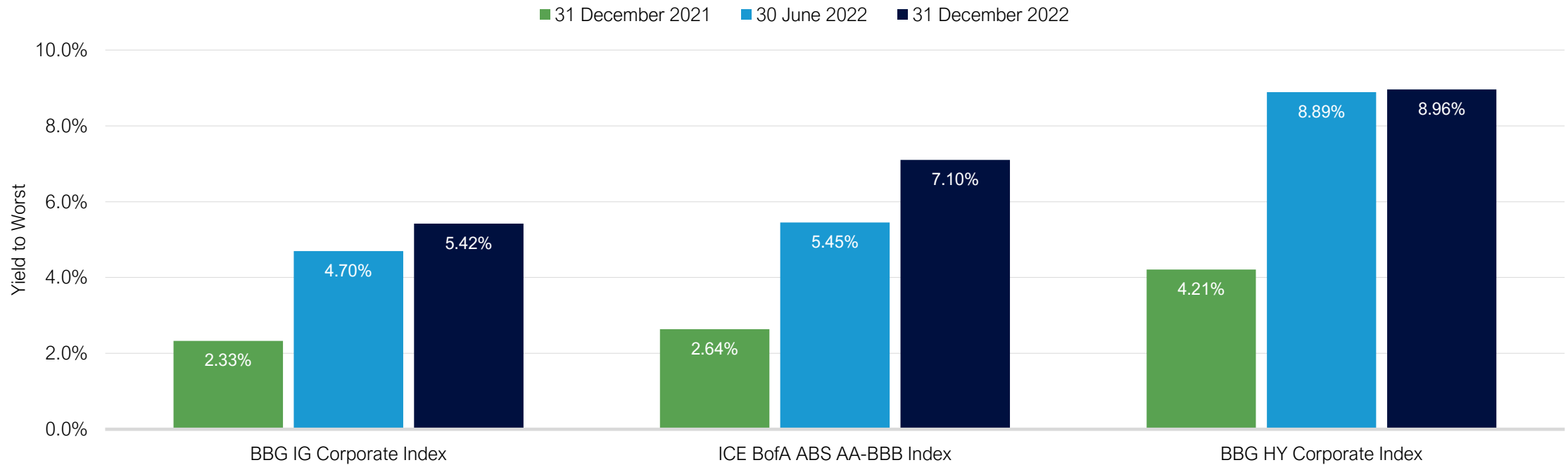


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Source: Bloomberg

# After a Tumultuous 2022, Yield Has Returned to the Marketplace

Yield for various market indices

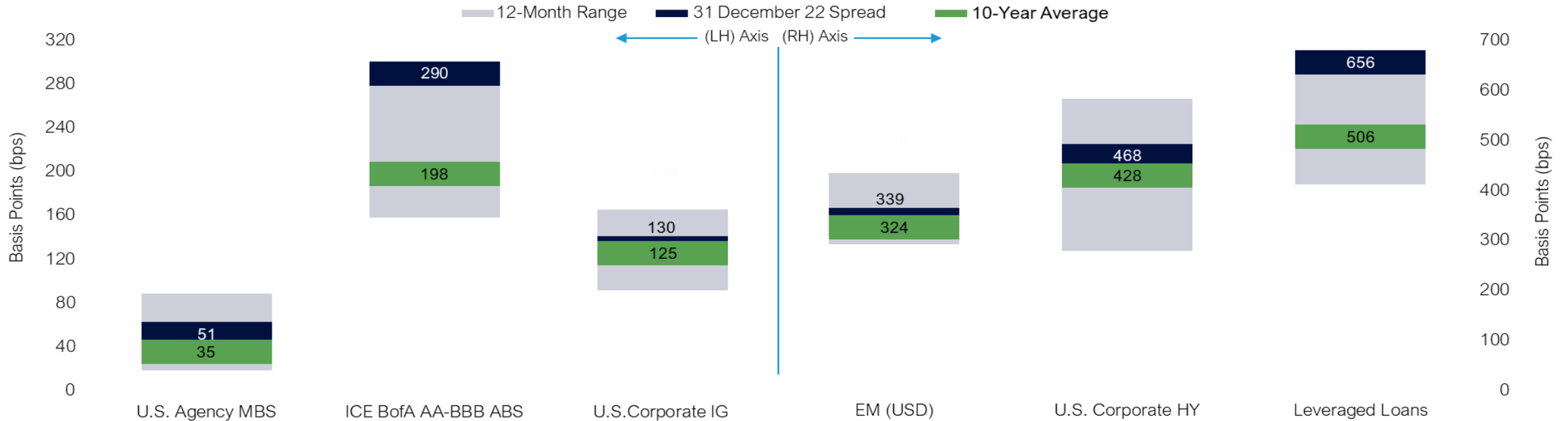


*Past performance does not guarantee future results.*

Source: Bloomberg

# Spreads Are More Compelling but Perhaps Not Fully Pricing in Market Risks

Option adjusted spreads for sub-indexes



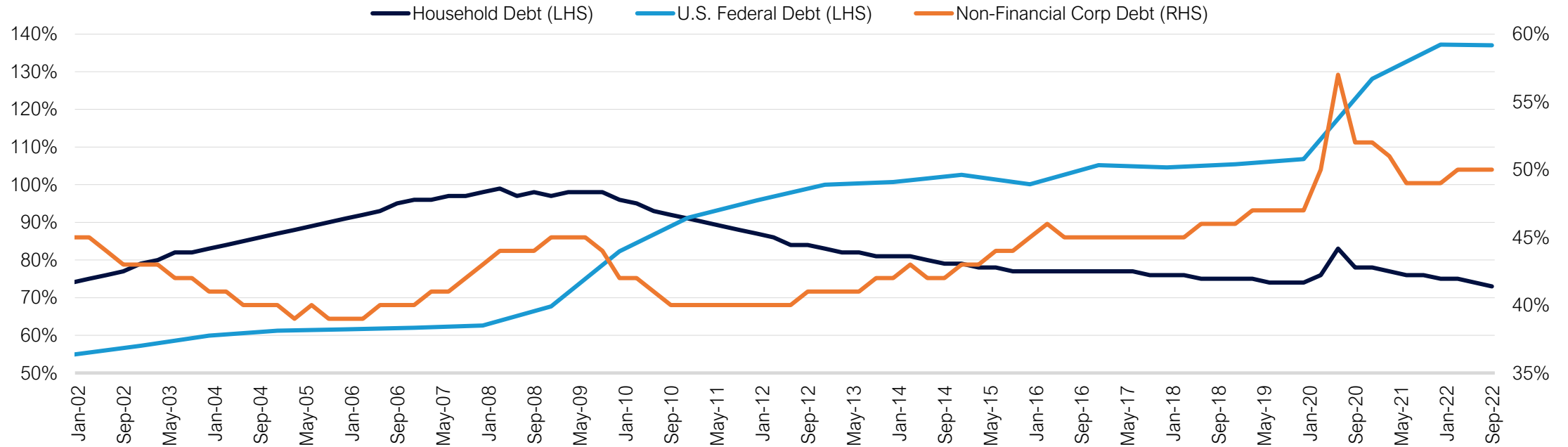
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Source: Bloomberg



# Consumer Debt as Percentage of GDP Shows No Sign of Weakening

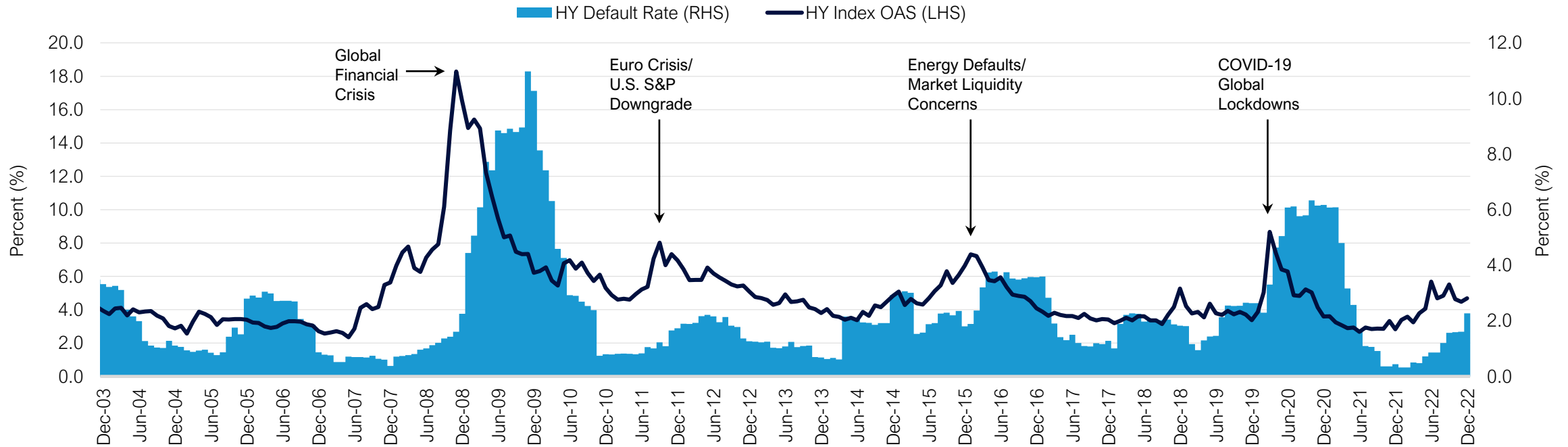
U.S. household, government, and corporate debt as % of GDP



Source: Bloomberg, as of 30 September 2022

# High Yield Valuations Currently Stress the Need to Be Selective

High Yield Index OAS and default rates



Source: Bloomberg, JPMorgan

# Relative Value Assessment

## Global fixed income markets - 2023 Outlook

Market	Outlook	Positioning
Rates	Central banks are laser focused on price stability and believe their aggressive policy will bring inflation directionally downward. However, the market believes this will also require weaker growth and some suppression of a so far resilient labor market.	Rates appear near fair value given the balance of growth and inflation risks. We continue to incrementally add or subtract duration opportunistically and in response to near-term rallies and back-ups.
U.S. Corporates	Overall yield levels now look reasonable, though high yield valuations are on the tighter side versus underlying risks and we are therefore cautious to add. Continue to surveil secondary market as the primary in high yield remains essentially shut down.	Focus on names with less cyclicalities, such as utilities, select technology issuers, high-quality financials, as well as bonds that can exhibit lower spread volatility in a risk-off environment.
Securitized (ABS/RMBS)	Consumer balance sheet remains vigilant through financial market volatility and rising costs. Continue to remain cautious on subprime given this cohort is under the most pressure in the current environment.	Favor prime consumer ABS and non-agency mortgage credit. Modest exposure to specified pools within Agency MBS provides fundamental hedge to our consumer credit position should downside growth be realized.
Emerging Markets	Remain cautious given still uncertain macro picture. We believe this environment will create security-level mispricing for which we will look to exploit. Timing will be based on domestic and global trends.	Continued focus in areas with high real rates, advanced policy cycles, and improving domestic demand. Prepared to be a bit more tactical should valuations temporarily under or overshoot.

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# Observations in Municipal Fixed Income

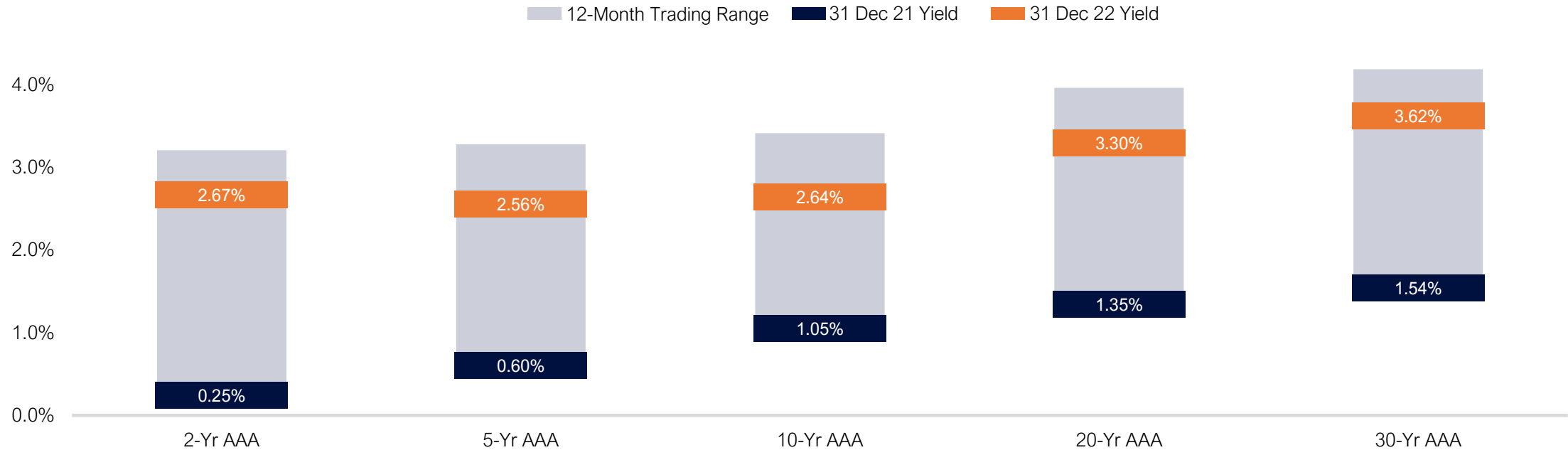
Fundamentals  
& Valuations

Market  
Dynamics

Relative Value  
Assessment

# Muni Yields off Highs for the Year but Still up Significantly

AAA muni yield: select maturities

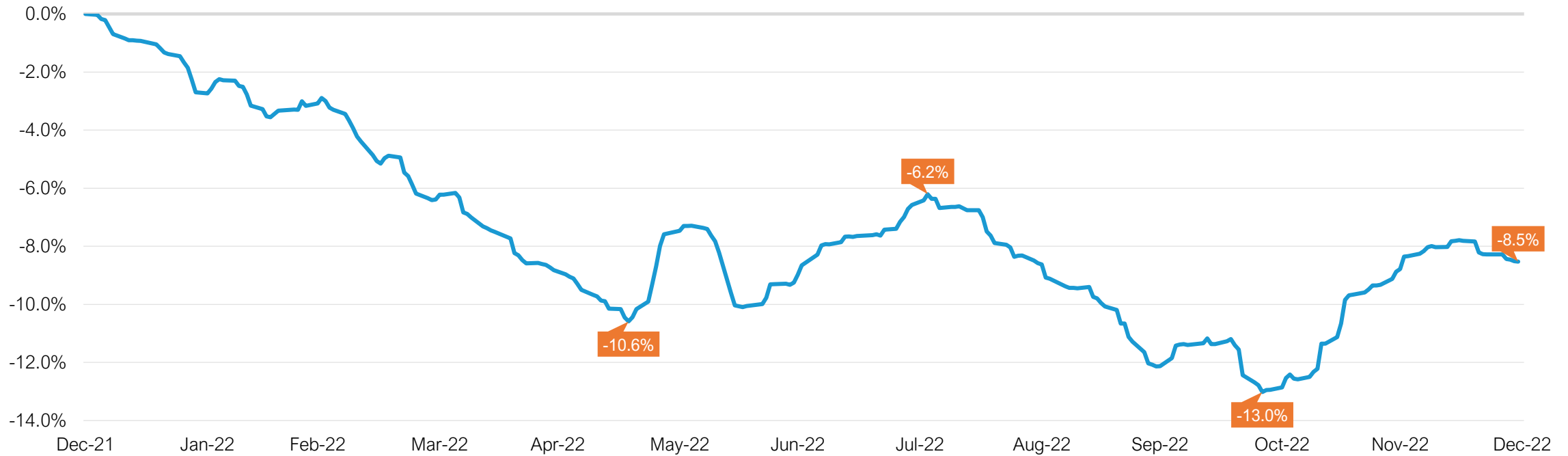


Past performance does not guarantee future results.

Source: Bloomberg

# Fourth Quarter Rally Recouped Losses on the Year

Bloomberg Municipal Bond Index YTD % return

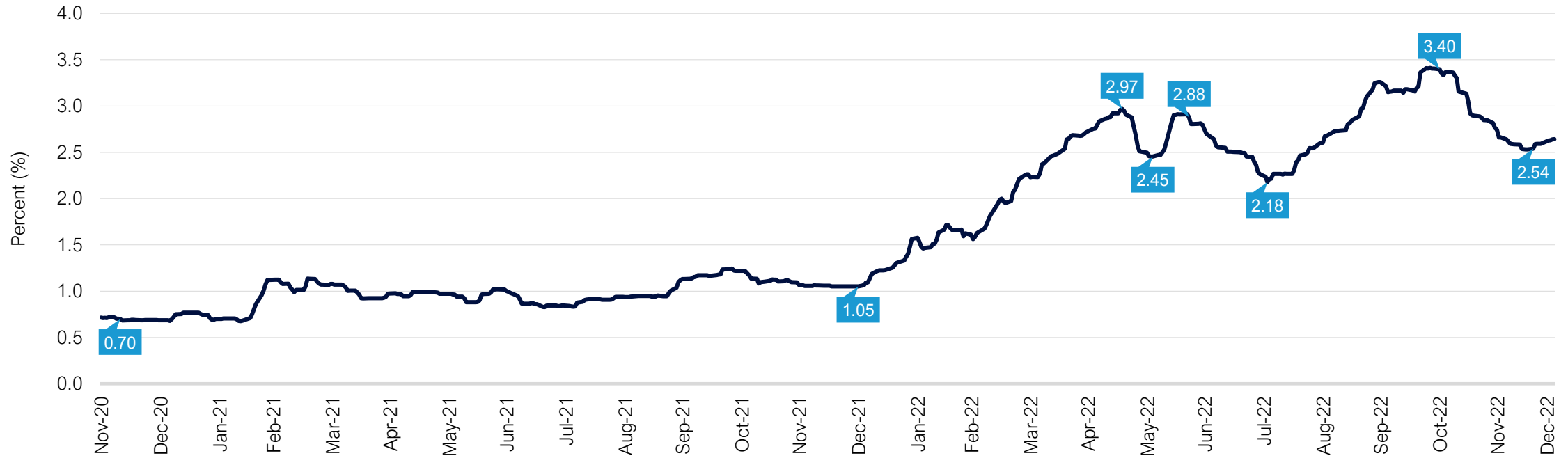


Past performance does not guarantee future results.

Source: Bloomberg

# High Yield Spread Widening May Present Opportunity in 2023

10-year AAA Muni yield



Past performance does not guarantee future results.

Source: Bloomberg

# Tight High Yield Spreads Limit its Appeal

BVAL High Yield Muni Index YTW spread over BBB Muni Index YTW



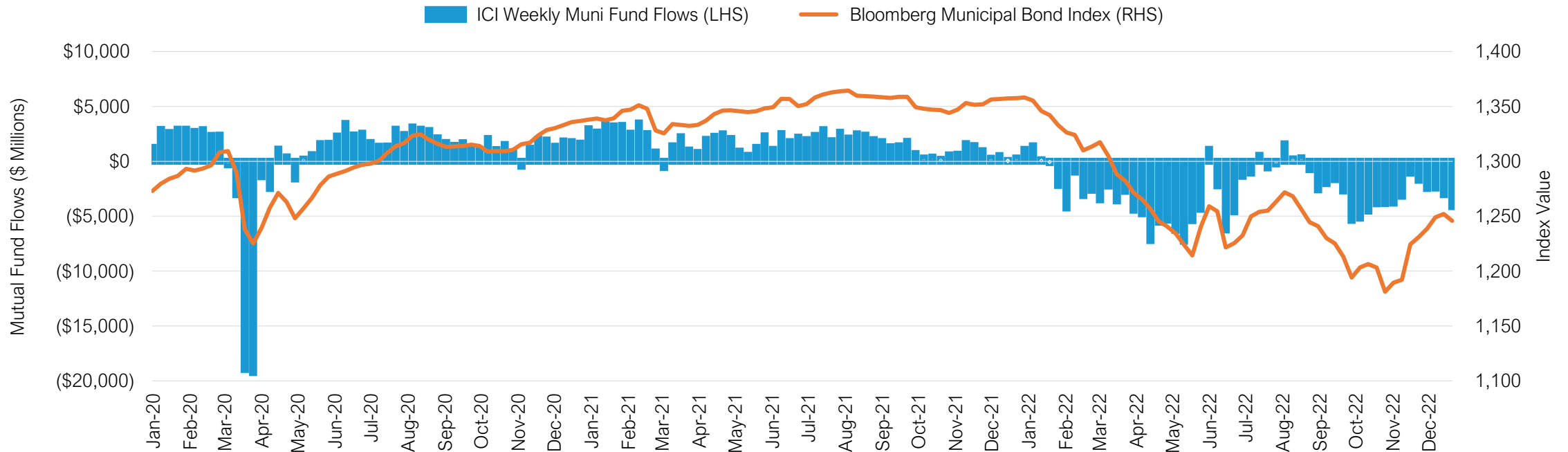
Past performance does not guarantee future results.

Source: Bloomberg



# Muni Fund Flows Remain Dominate Technical Factor

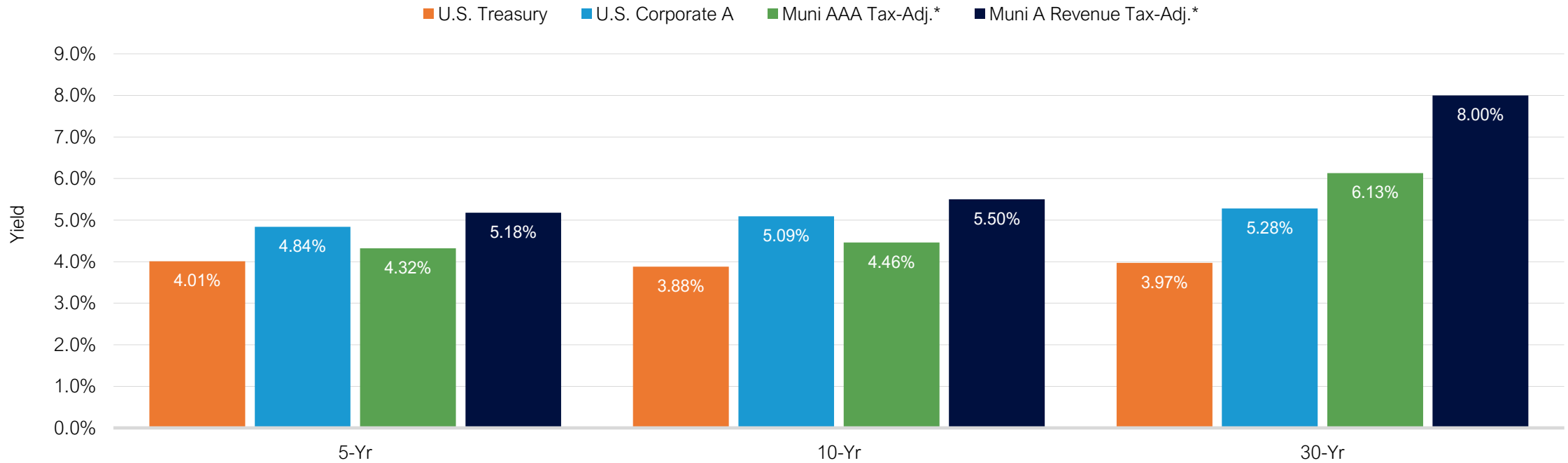
ICI Weekly Muni Mutual Fund flows and Bloomberg Municipal Index value



Past performance does not guarantee future results.

Source: ICI, Bloomberg  
 ICI Municipal Bond Estimated Weekly Net New Cash Flows. Estimated long-term mutual fund weekly cash flows in millions of dollars over a week.  
 Weekly cash flows are estimates that are adjusted to represent industry totals, based on reporting covering 95% of industry assets.

# Tax-Adjusted Muni Yields Appealing to Income Investors



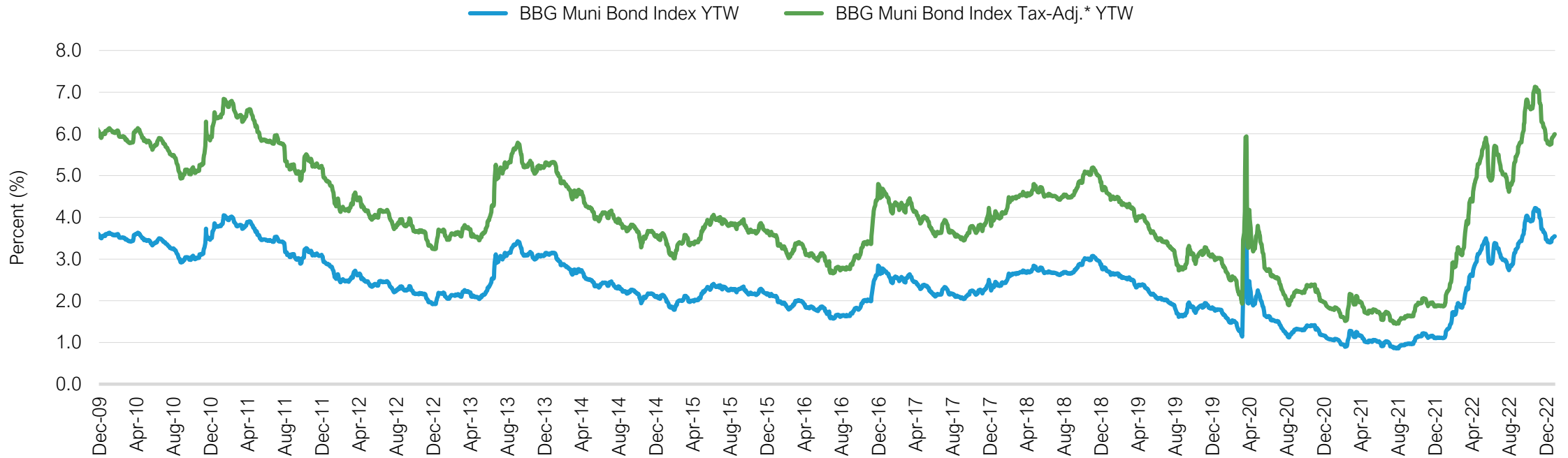
Past performance does not guarantee future results.

Source: Bloomberg

\* Top Federal marginal rate of 37% plus 3.8% Medicare surcharge.

# Broad Market Index Yield Highest since 2009

Bloomberg Municipal Bond Index YTW



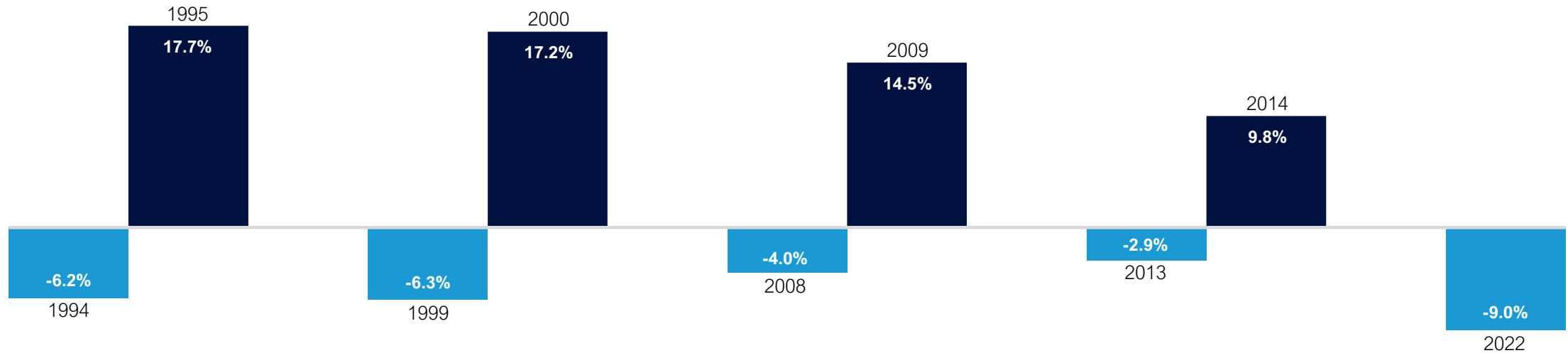
Past performance does not guarantee future results.

Source: Bloomberg

\* Top Federal marginal rate of 37% plus 3.8% Medicare surcharge.

# Negative Years in Munis Have Been Followed by Strong up Years

ICE BofA Municipal Master Index calendar year returns



*Past performance does not guarantee future results.*

Source: ICE BofA, Bloomberg

# Relative Value Assessment

## Municipal fixed income markets - 2023 Outlook

Market	Outlook	Positioning
Rates	The spike in rates, while painful for bond prices, allows investors to once again earn an attractive level of tax-exempt income. The Fed remains committed to more rate hikes in 2023 however; the inversion in the Treasury curve is signaling the market believes the Fed will overshoot and be forced to cut rates sooner than expected.	The municipal curve has remained very flat inside of 10 years and beyond 20 years with most of the yield pick-up between 10 and 20 years. Despite the flatness of the long end of the curve, long maturity muni yields look attractive on a relative basis to Treasuries.
Spreads	Differentiation across state, sectors and credit quality should re-emerge as investors become more discerning about the bonds they own. A central bank induced recession could spark more spread widening as could an end to Federal stimulus dollars.	Areas that historically offered attractive spread opportunities in the revenue space are areas of focus. However, should heightened price volatility continue, the price paid for a bond will be as important as the credit research conducted in selecting it.
Sectors	The municipal market is not immune to inflationary pressures, but there are areas that offer some protection. Sectors that finance long-run, hard assets such as education and healthcare or municipal utilities that operate government monopolies with inelastic demand offer desirable traits.	City, state and county G.O. debt is attractive based on the issuer's financial flexibility at this part of the cycle, as are essential service revenue bonds for large metropolitan areas. Pockets of opportunity exist in other sectors that offer attractive relative value and incremental income opportunities.
Defaults	Municipal defaults will remain low but are likely to increase from 2022. Economically sensitive areas will come under pressure if the U.S. enters a recession. Areas such as healthcare, senior living facilities and project finance deals are already feeling inflationary pressures.	Absolute yield levels no longer require adding credit risk to earn an acceptable level of income. We will look to add credit on market weakness, but selectivity is paramount as is the financial flexibility of an issuer and its ability to control revenue and expenses.

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## Appendix

Important  
Information

Important  
Information:  
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Teams

# Important Information



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Investments carry risks, including possible loss of principal.

*The performance data quoted represents past performance; it does not guarantee future results. Returns will fluctuate and current performance may be either lower or higher than data shown.*

Consumer Price Index (CPI) - Index that measures prices of a fixed basket of goods bought by a typical consumer, including food, transportation, shelter, utilities, clothing, medical care, entertainment and other items. The CPI, published by the Bureau of Labor Statistics in the Department of Labor, is based at 100 in 1982 and is released monthly. It is widely used as a cost-of-living benchmark to adjust Social Security payments and other payment schedules, union contracts and tax brackets. Also known as the cost-of-living index.

The European Central Bank (ECB) is the central bank of the Eurozone, a collective of European countries that use the euro as their sole official currency.

Gross Domestic Product (GDP) - A country's income minus foreign investments: the total value of all goods and services produced within a country in a year, minus net income from investments in other countries.

U.S. Treasury securities, such as bills, notes and bonds, are negotiable debt obligations of the U.S. government. These debt obligations are backed by the "full faith and credit" of the government and issued at various schedules and maturities. Income from Treasury securities is exempt from state and local, but not federal, taxes.

The ICE BofA MOVE Index is a well-recognized measure of U.S. interest rate volatility that tracks the movement in U.S. Treasury yield volatility implied by current prices of one-month over-the-counter options on 2-year, 5-year, 10-year and 30-year Treasuries.

Yield Curve - A line that plots the interest rates, at a set point in time, of bonds having equal credit quality, but differing maturity dates.

Yield to Worst (YTW) - The lowest potential yield that can be received on a bond without the issuer actually defaulting.

OAS (Option Adjusted Spread) - The difference between the yield of a fixed income instrument and the duration-matched Treasury yield assuming the instrument had no embedded options (such as an issuer's option to call a bond at a future date). Option-adjusted spreads enable investors to separate out embedded options and better judge the degree to which an instrument's yield compensates them for credit risk, liquidity risk, or other such factors.

Mortgage-backed Security - A type of asset-backed security that is secured by a mortgage or collection of mortgages. These securities must be grouped in one of the top two ratings as determined by a accredited credit rating agency and usually pay periodic payments that are similar to coupon payments. The mortgage must have originated from a regulated and authorized financial institution.

Asset-backed Security (ABS) - A security whose value and income payments are derived from and collateralized (or "backed") by a specified pool of underlying assets. The pool of assets is typically a group of small and illiquid assets that are unable to be sold individually. Pooling the assets into financial instruments allows them to be sold to general investors, a process called securitization, and allows the risk of investing in the underlying assets to be diversified because each security will represent a fraction of the total value of the diverse pool of underlying assets.

Additional risks may be associated with investments in emerging markets, including currency fluctuations, illiquidity, volatility, and political and economic risks.

High yield bonds may offer higher yields in return for more risk exposure.

The potential long-term impacts of the pandemic remain uncertain and difficult to assess, and there is no assurance that a particular business strategy or product will limit potential investment losses.

# Important Information



A bond credit rating assesses the financial ability of a debt issuer to make timely payments of principal and interest. Ratings of AAA (the highest), AA, A, and BBB are investment-grade quality. Ratings of BB, B, CCC, CC, C and D (the lowest) are considered below investment grade, speculative grade, or junk bonds.

Maturity is the length of time during which interest is paid on a bond. When it reaches maturity, its owner is repaid the principal.

Source: Bloomberg Index Services Limited. "Bloomberg®" and the Bloomberg index(es) mentioned in this piece are service marks of Bloomberg Finance L.P. and its affiliates, including Bloomberg Index Services Limited ("BISL"), the administrator of the index (collectively, "Bloomberg") and have been licensed for use for certain purposes by Thornburg Investment Management. Bloomberg is not affiliated with Thornburg, and Bloomberg does not approve, endorse, review, or recommend Thornburg. Bloomberg does not guarantee the timeliness, accurateness, or completeness of any data or information relating to Thornburg.

The Bloomberg Municipal Index covers the USD-denominated, investment-grade, long-term, tax-exempt bond market. The index has four main sectors: state and local general obligation bonds, revenue bonds, insured bonds, and prerefunded bonds.

The Bloomberg US Corporate High Yield Total Return Index Value Unhedged USD measures the market of USD-denominated, non-investment grade, fixed-rate, taxable corporate bonds. Securities are classified as high yield if the middle rating of Moody's, Fitch, and S&P is Ba1/BB+/BB+ or below. The index excludes emerging market debt.

The Bloomberg Asset-backed Securities (ABS) Index is the ABS component of the U.S. Aggregate index.

The Bloomberg U.S. Treasury Index includes public obligations of the U.S. Treasury. Treasury bills are excluded by the maturity constraint but are part of a separate Short Treasury Index. In addition, certain special issues, such as state and local government series bonds (SLGs), as well as U.S. Treasury TIPS, are excluded. STRIPS are excluded from the index because their inclusion would result in double-counting.

The Bloomberg Agency Mortgage-backed Securities (MBS) Index is the U.S. MBS component of the U.S. Aggregate Index.

The Bloomberg High Yield Municipal Bond Index is a rules-based, market-value-weighted index that measures the non-investment grade and non-rated U.S. tax-exempt bond market.

The Bloomberg U.S. Corporate Index is a broad-based benchmark that measures the investment grade, U.S. dollar-denominated, fixed-rate, taxable corporate bond market. It includes USD-denominated securities publicly issued by U.S. and non-U.S. industrial, utility, and financial issuers that meet specified maturity, liquidity, and quality requirements.

The Bloomberg U.S. High Yield Bond Index covers the universe of fixed-rate, non-investment grade debt.

The ICE BofA U.S. Municipal Securities Index tracks the performance of the investment-grade U.S. tax-exempt bond market. Qualifying bonds must have at least one year remaining term to maturity, a fixed coupon schedule, and an investment grade rating (based on average of Moody's, S&P, and Fitch).



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