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FIXED INCOME

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INVESTMENT EXPERTISE

First Trust

INVESTMENT MANAGEMENT TEAMS

LEVERAGED FINANCE
William Housey, CFA, MBA, 28 years
Jeffrey Scott, CFA, MBA, 35 years
Scott D. Fries, CFA, MBA, 30 years
Gregory Olsen, CFA, MBA, 32 years
Henry Reukauf, CFA, MBA, 35 years
Brian Kessler, CFA, CMT, 20 years
Berk Kisal, MBA, 27 years
Andy Rybak, CFA, MBA, 25 years
Jeffrey Johnson, CFA, 10 years
Ryan Kommers, 28 years
Brian Buscher, 31 years
Daniel Nagode, CFA, 7 years
Daniel Waldron Jr., 7 years
Sam Cafi, MBA, 17 years
Brandon Nelson, 3 years
Nathan Barewin, 1 year
John Zimmermann, 1 year

GLOBAL BONDS
(First Trust Global Portfolios Limited)
Derek Fulton, 28 years
Leonardo DaCosta, CFA, 20 years
Anthony Beevers, CFA, 14 years

GOVERNMENT AND SECURITIZED PRODUCTS GROUP
Jim Snyder, MBA, 36 years
Jeremiah Charles, MS, 22 years
Jud Tigerman, MBA, 29 years
Austin Stockfisch, 13 years
Alex DeRochie, 7 years
Minhua Wu, MS, 7 years
Owen Aronson, 17 years
Samuel Cecil, MBA, 14 years
Jordan Pflum, MS, 4 years
Aiden Cremins, 1 year
Amrit Sandhu, 1 year
German Gaymer, 18 years

INVESTMENT GRADE
Todd Larson, CFA, 34 years
Eric Maisel, CFA, MS, 32 years
Scott Skowronski, CFA, 27 years
Zach Natale, 17 years
Ying Timmerman, CFA, CPA, 18 years
David Worniak, CFA, 18 years
Nathan Simons, CFA, 14 years
Charles Kovarik, 7 years
Lee Mizell, 2 year
Trevor King, < 1 year

CLOSED-END FUNDS
Ken Fincher, MBA, 33 years
Nick Grant, 2 year

MUNICIPAL SECURITIES
Tom Byron, 42 years
Johnathan Wilhelm, JD, 35 years
Nick Novosad, CFA, 13 years
Jeff Samuel, 32 years
Sarah Galpin, CFA, MPA, 20 years
Shari Sikes, MS, 31 years
Aaron Cook, 22 years
John Loch, MBA, 30 years
Andrew Folland, MBA, 31 years
Andrea McKeague, 33 years
Shawn O'Leary, MS, 21 years

PREFERRED SECURITIES
(Stonebridge Advisors LLC)
Scott Fleming, MBA, 43 years
Robert Wolf, MBA, 25 years
Eric Weaver, MS, 17 years
Angelo Graci, CFA, MBA, 29 years
Connor Fleming, CFA, CIPM, 13 years
Scott Hubbell, CFA, 16 years
Jeff Vinca, 20 years
Marie-Belle Mikue, 11 years
Jeff Bernstein, MBA, CPA, 36 years
Celeste Guerrero, 18 years

RESEARCH

David McGarel, CFA, CPA, 34 years
Jon Erickson, CFA, MBA, 34 years
Chris Peterson, CFA, MBA, 26 years

FIXED INCOME RESEARCH
Jim Vavrek, CFA, 25 years
Steve Collins, CFA, MBA, 19 years
Orlando Becerra, 12 years

PRODUCT SPECIALIST
Jeff Margolin, MBA, 29 years
Ryan O. Issakainen, CFA, MA, 24 years
Andrew Hull, 17 years
Bob Derochie, MBA, 36 years

STRATEGY RESEARCH
Chris Bush, CFA, 19 years
Bob Hensley, CFA, MS, 23 years
Omar Sepulveda, CFA, 27 years
Graham Homberg, CFA, 18 years
Elliott Papineau, 17 years
Brad Phillips, CFA, 14 years
Steve Rinn, CFA, 9 years
John Bria, 11 years
Simon Peterson, 4 years
Grayson Harris, 2 year
Reece Sparling, 1 year
Lilly Nikkel, 1 year
Robby Fatta, 20 years

EQUITY RESEARCH
John Sherren, CFA, MBA, 26 years
Jared Wollen, CFA, MS, 15 years
Eric Glombicki, 4 years
Jack Wagner, 5 years
Connor Fries, 1 year

QUANT TECH
Dan Godoy, CFA, MBA, 18 years
Jeff Sommars, PhD, CFA, MBA, 10 years
John Hagerson, CFA, 25 years
Landon Kavlie, PhD, CFA, 9 years
Matthew Goldsberry, 9 years
Nathan Bliss, PhD, CFA, 7 years
Jordan Freitag, 4 years
Matt Adomshick, 3 years
Natan Jara, 3 years
Joel Stapleton, PhD, 9 years
Matthew Milone, 2 years
Johannes Byle, 2 year
Josiah Elliott, 2 years
Matthew Erickson, 2 year
Stephen Lovett, PhD, 1 year
Stephen Kil, 1 year
Jonathan Barrett, 1 year
David Stapleton, PhD, < 1 year
Zakery Kates, 10 year
Jacob Book, < 1 year

MODEL INVESTMENT COMMITTEE

Daniel J. Lindquist, CFA, MBA
Chairman and Managing Director
32 years

David McGarel, CFA, CPA
CIO, COO and Managing Director
34 years

William Housey, CFA, MBA
Managing Director of Fixed-Income
28 years

Chris Peterson, CFA, MBA
SVP, Head of Strategy Research
26 years

Chris Fallow, CFA
SVP, Portfolio Oversight
24 years

Steve Collins, CFA, MBA
SVP, Senior Fixed-Income Analyst
18 years

ECONOMICS

Brian Wesbury, MBA, 41 years
Robert Stein, CFA, 28 years
Strider Elass, 16 years
Andrew Opdyke, CFA, MBA, 12 years
Bryce Gill, MBA, 10 years
Nate Gerze, 5 years
Mary Buchanan, 20 years

MARKET ANALYSIS

Bob Carey, CFA, 38 years
Peter Leonteos, 16 years

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MARKET DATA

LEADING INDICATORS

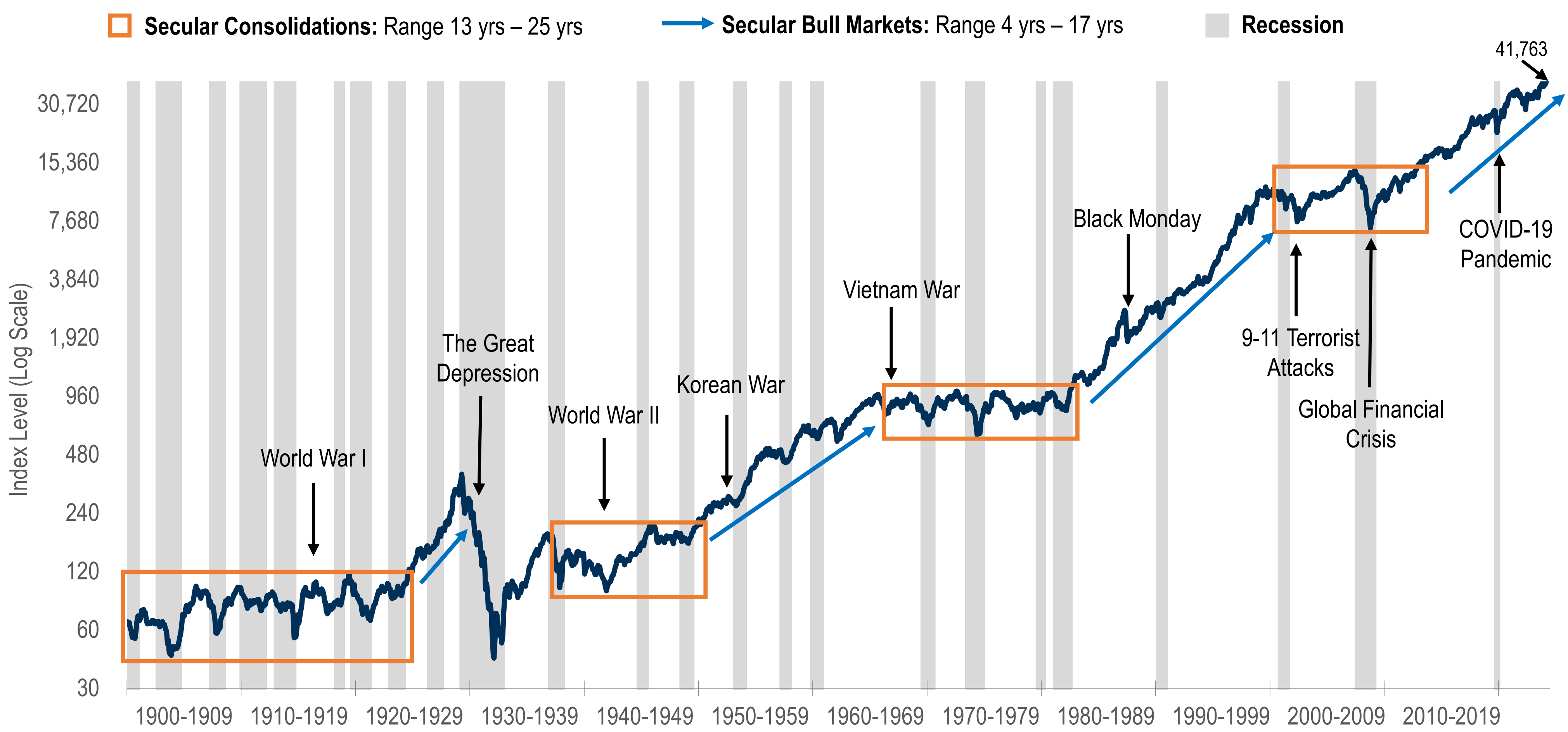
FIXED INCOME OPPORTUNITY SET

All index data shown herein is for illustrative purposes only and not indicative of any actual investment. Index returns do not reflect any fees, expenses, or sales charges. Investors cannot invest directly in an index. The information presented is not intended to constitute an investment recommendation for, or advice to, any specific person By providing this information, First Trust is not undertaking to give advice in any fiduciary capacity within the meaning of ERISA, the Internal Revenue Code or any other regulatory framework. Financial professionals are responsible for evaluating investment risks independently and for exercising independent judgment in determining whether investments are appropriate for their clients.

SECULAR BULL AND BEAR EQUITY MARKETS

Dow Jones Industrial Average (January 31, 1900 – Oct 31, 2024)

MARKET DATA



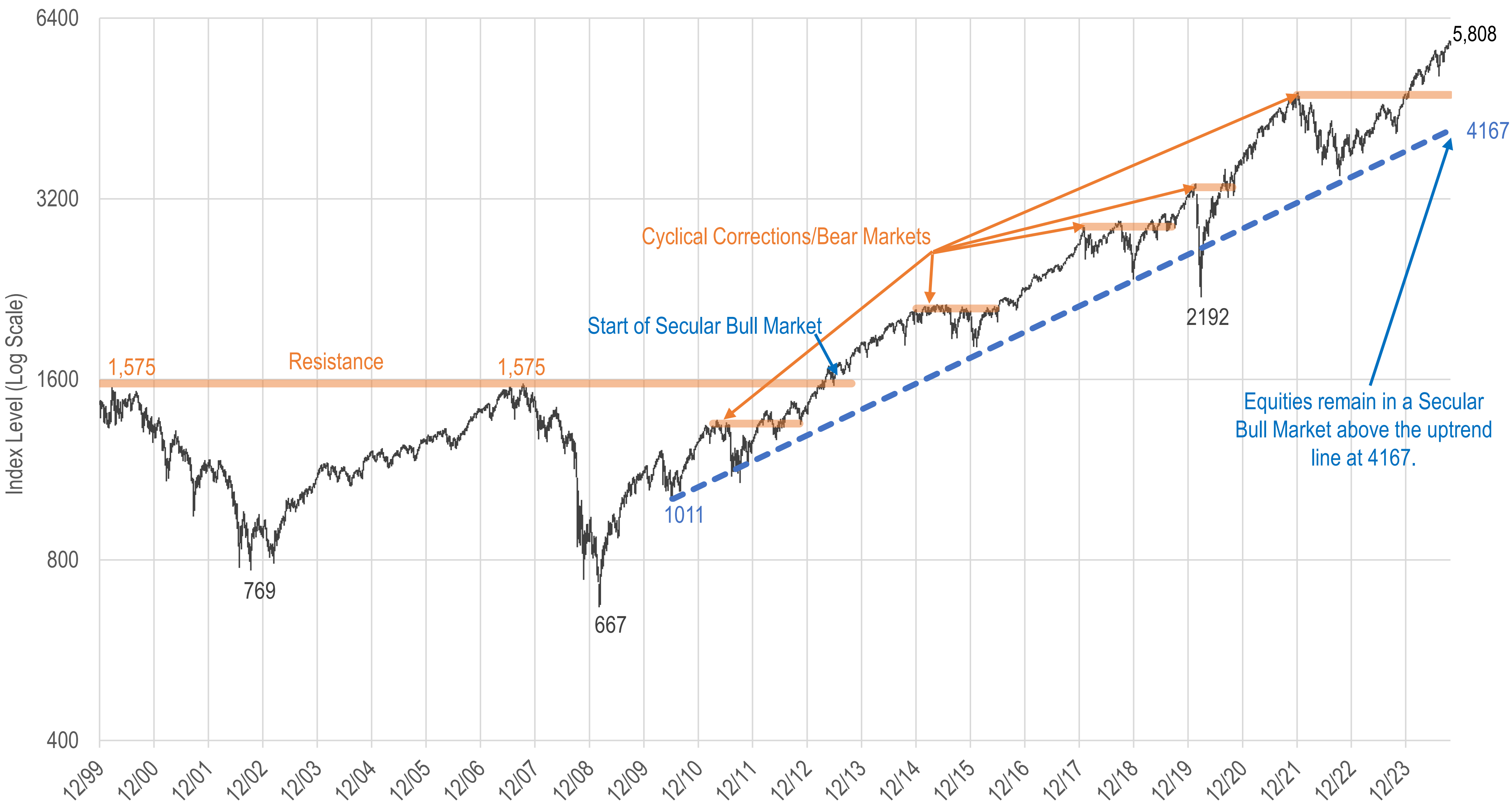
Source: Bloomberg. See Index Definitions.

Past performance is no guarantee of future results.

WEEKLY S&P 500 INDEX

December 31, 1999 – October 25, 2024

MARKET DATA



Source: Bloomberg. See Index Definitions.

Past performance is no guarantee of future results.

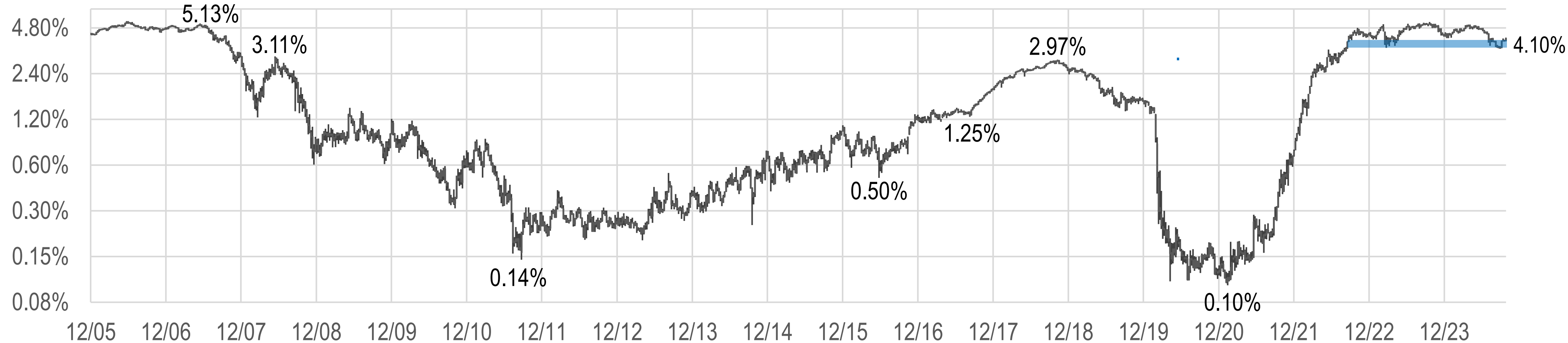
WEEKLY 2 YEAR AND 5 YEAR U.S. TREASURY YIELD

December 31, 2005 – October 25, 2024

MARKET DATA

Counter trend rally pushed through resistance of 3.78% and is now testing 4.12%. Next upside targets are 4.40% and 4.70%. Downside targets on resumption of downtrend are 3.78% and 3.00%.

2 YEAR U.S. TREASURY QTD 2024 RETURN: -0.65%



Counter trend rally pushed through resistance of 4.05%. Next upside targets are 4.35% and 4.50%. Downside targets are 4.05% and 3.10%.

5 YEAR U.S. TREASURY QTD 2024 RETURN: -2.30%

Source: Bloomberg. **Past performance is no guarantee of future results.** The 2 Year U.S. Treasury return is represented by the ICE BofA Current 2-Year U.S. Treasury Index. The 5 Year U.S. Treasury return is represented by the ICE BofA Current 5-Year U.S. Treasury Index. See Index Definitions.

WEEKLY 10 YEAR AND 30 YEAR U.S. TREASURY YIELD

December 31, 1999 – October 25, 2024

MARKET DATA

10 YEAR U.S. TREASURY QTD 2024 RETURN: -3.58%

Counter trend rally pushed through resistance of 4.07% and 4.34%. Overall trend remains lower below 4.40% with targets of 4.07% and 3.78%. Upside targets on a sustained break of 4.40% are 4.74%, then 5.02%

30 YEAR U.S. TREASURY QTD 2024 RETURN: -5.37%

Counter trend rally pushed through resistance of 4.34%. Next upside targets are 4.85% and 5.15%. Overall trend remains lower below 4.52% with downside targets of 4.34% and 4.00%.

Source: Bloomberg. **Past performance is no guarantee of future results.** The 10 Year U.S. Treasury return is represented by the ICE BofA Current 10-Year U.S. Treasury Index. The 30 Year U.S. Treasury return is represented by the ICE BofA Current 30-Year U.S. Treasury Index. See Index Definitions.

MONTHLY 10 YEAR U.S. TREASURY YIELD 1980 - PRESENT

January 31, 1980 – October 31, 2024

MARKET DATA

Source: Bloomberg. **Past performance is no guarantee of future results.** See Index Definitions.

WEEKLY 10 YEAR GOVERNMENT BOND YIELDS (GERMANY & JAPAN)

December 31, 2005 – October 25, 2024

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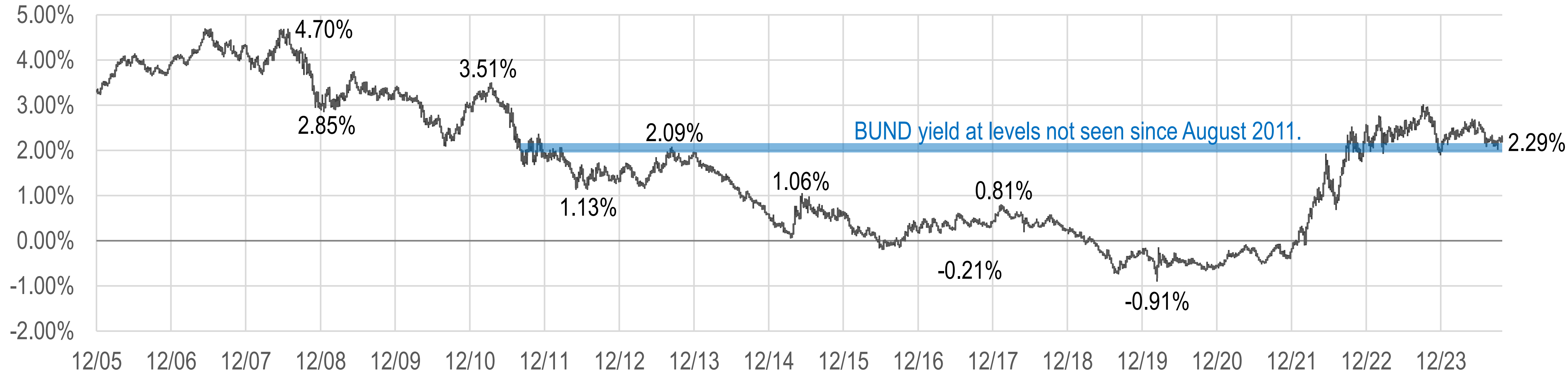
MARKET DATA

WEEKLY 10 YEAR GERMAN BUND YIELD



WEEKLY 10 YEAR JAPANESE GOVERNMENT BOND YIELD

Source: Bloomberg. **Past performance is no guarantee of future results.** See Index Definitions.

WEEKLY 10 YEAR GOVERNMENT BOND YIELDS (U.K. & ITALY)

December 31, 2005 – October 25, 2024

First Trust

MARKET DATA

WEEKLY 10 YEAR U.K. GOVERNMENT BOND YIELD

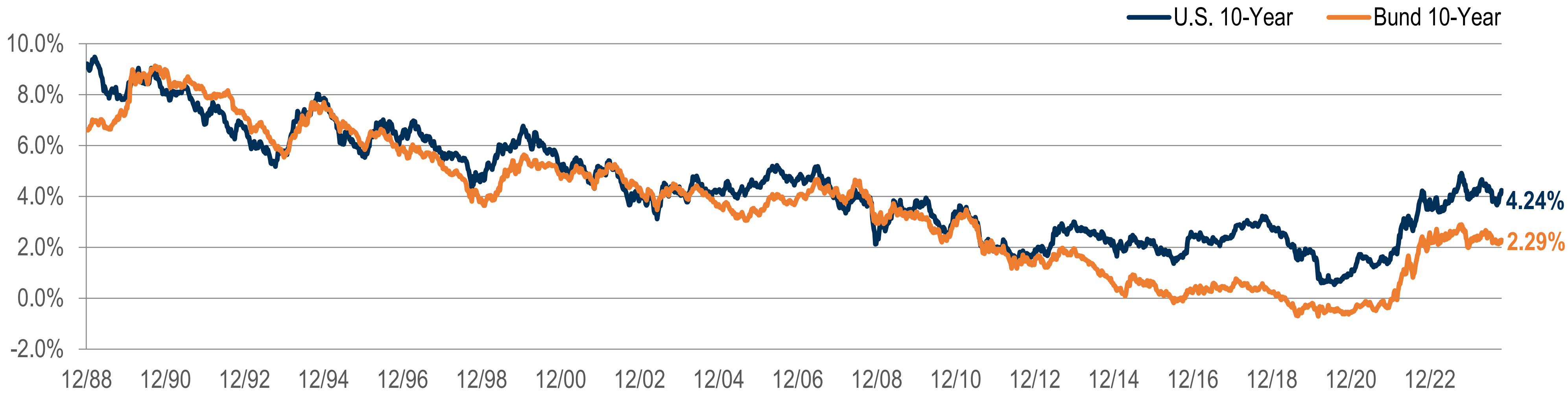
WEEKLY 10 YEAR ITALIAN GOVERNMENT BOND YIELD

Source: Bloomberg. **Past performance is no guarantee of future results.** See Index Definitions.

10 YEAR U.S. TREASURY YIELD AND 10 YEAR GERMAN BUND YIELD

December 31, 1988 – October 25, 2024

MARKET DATA



YIELD SPREAD BETWEEN THE 10 YEAR U.S. TREASURY YIELD AND THE 10 YEAR GERMAN BUND YIELD

Source: Bloomberg. **Past performance is no guarantee of future results.** See Index Definitions.

10 YEAR U.S. TREASURY REAL YIELD

August 3, 1998 – October 31, 2024

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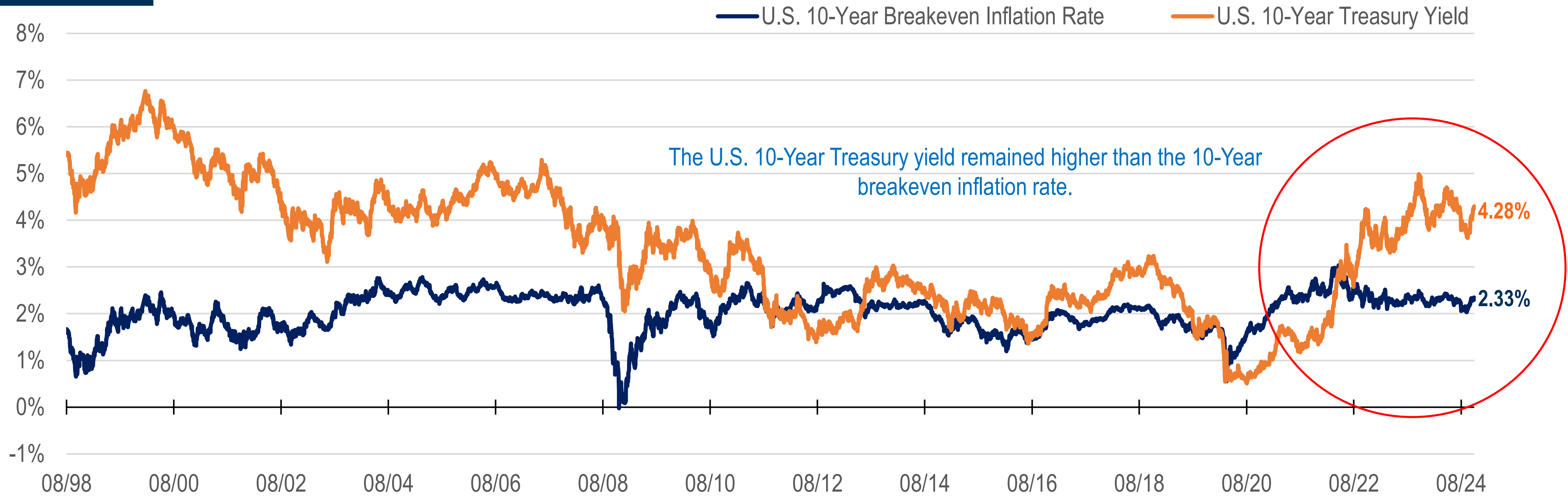
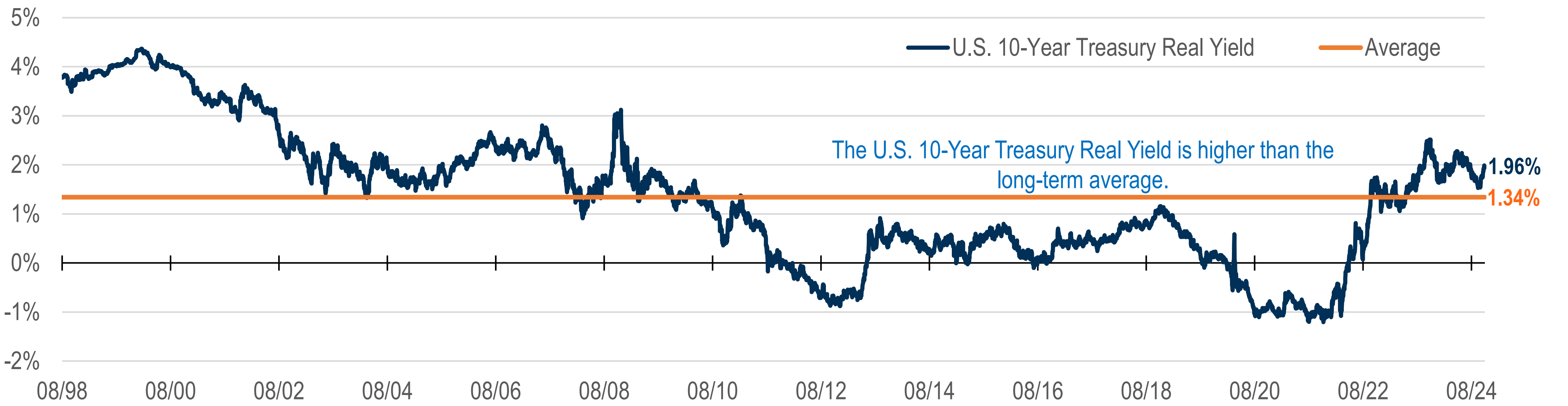
MARKET DATA





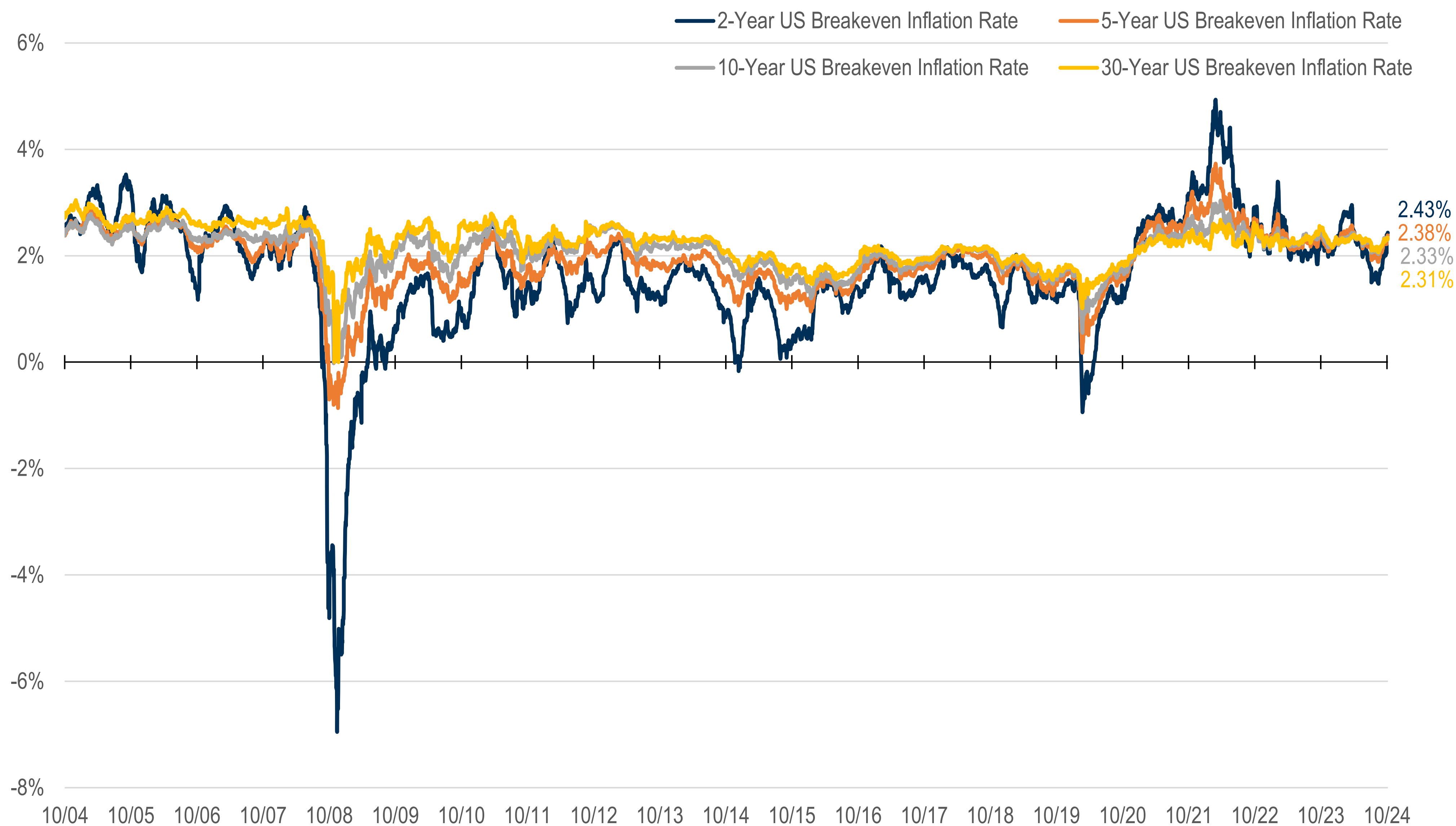
Real Yield is an interest rate that has been adjusted to remove the effects of inflation. Real Yield is calculated as the difference in yields between U.S Treasury bonds and Treasury Inflation-Protected Securities (TIPS). The breakeven rate is a market-based gauge for the expected annual inflation. See Index Definitions.

Source: Bloomberg. **Past performance is no guarantee of future results**.

INFLATION: BREAKEVENS

October 27, 2004 – October 31, 2024

MARKET DATA

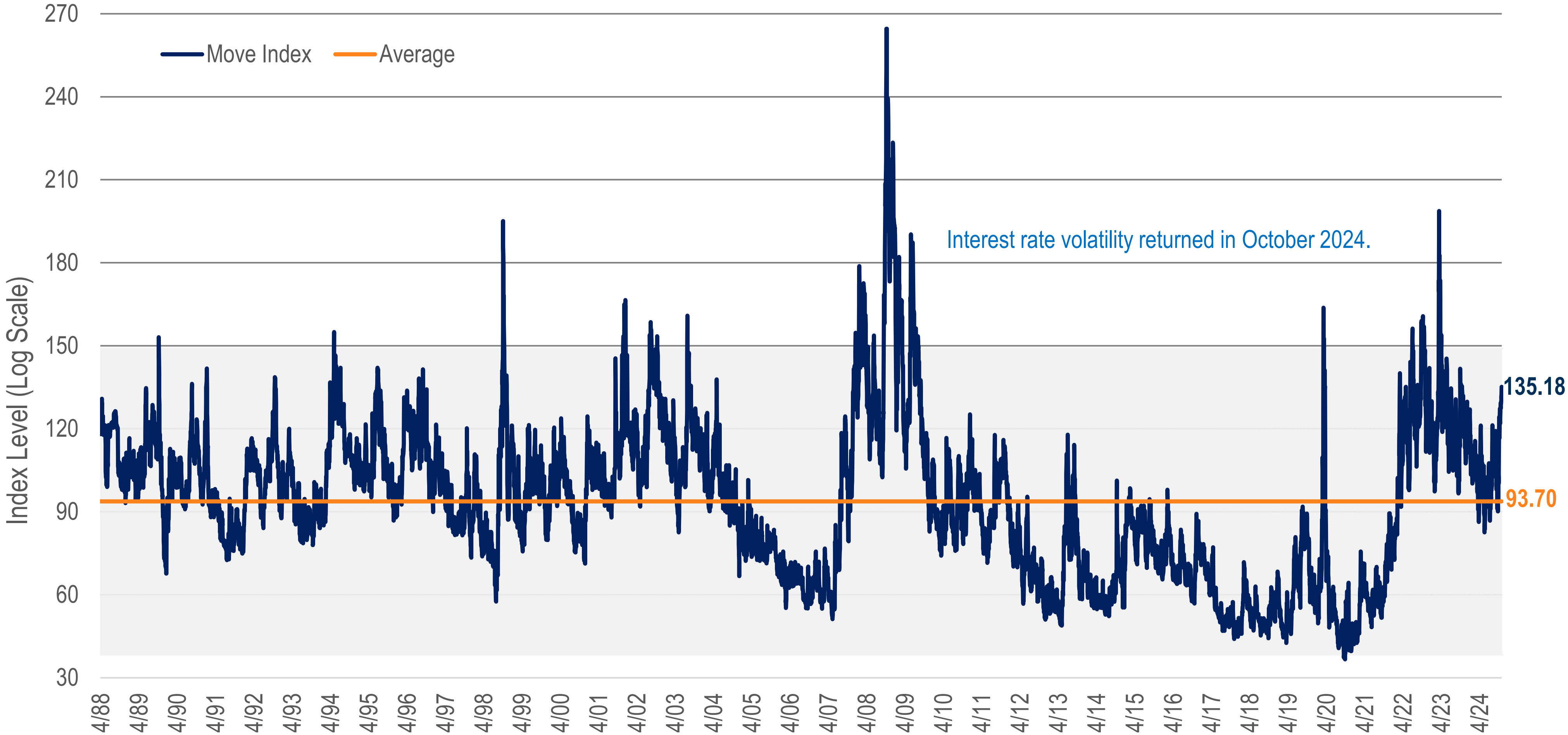


Source: Bloomberg. The breakeven rate is a market-based gauge for the expected annual inflation. **Past performance is no guarantee of future results**. See Index Definitions.

MOVE INDEX

As of October 31, 2024

MARKET DATA



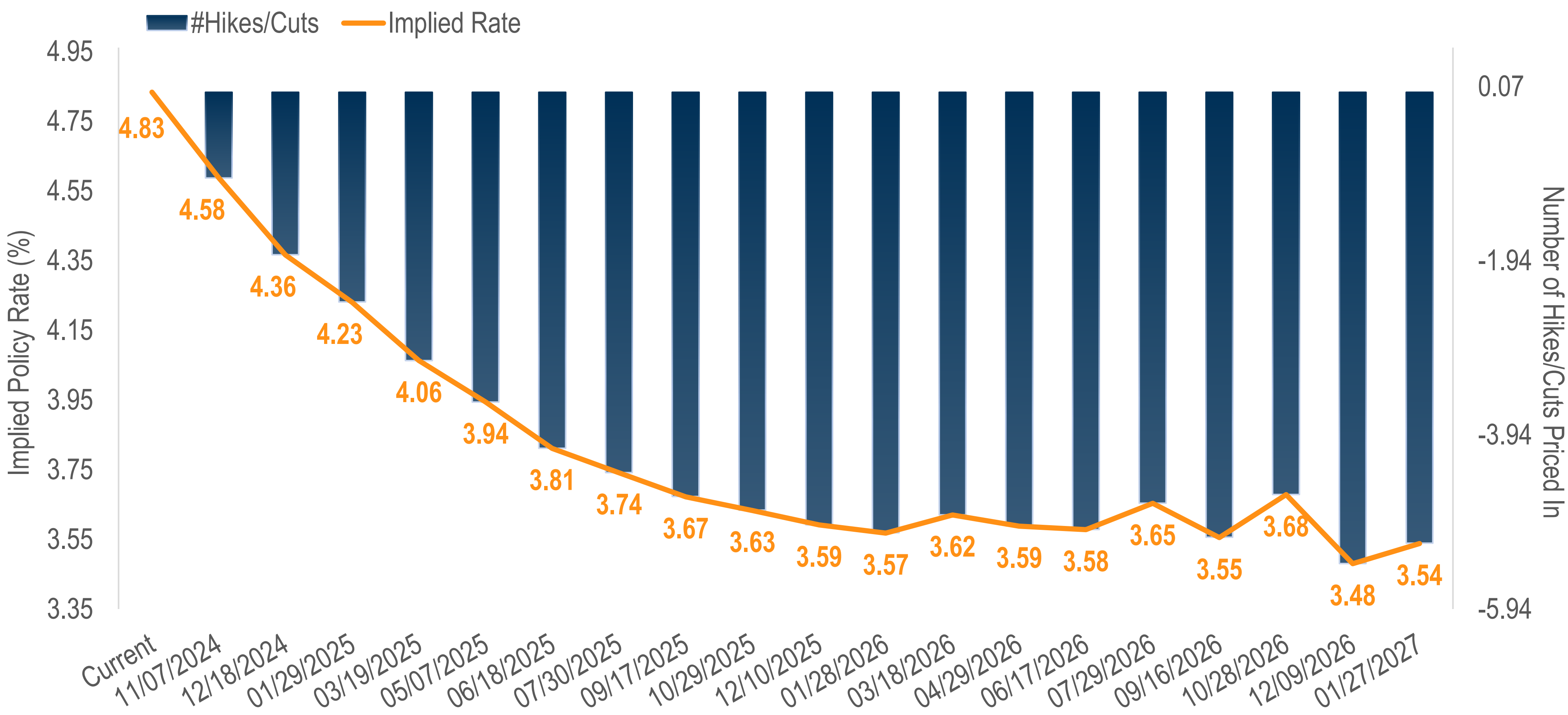
Source: Bloomberg. Data from 4/4/88 – 10/31/24. **Past performance is no guarantee of future results.** The ICE BofA MOVE Index is shown above. See Index Definitions. The area shaded in gray represents 2 standard deviations above and below the mean of the MOVE Index inception to date.

IMPLIED FEDERAL FUNDS RATE & NUMBER OF HIKES/CUTS

As of October 31, 2024

MARKET DATA

The current Effective Federal Funds Rate is 4.83% and the market is pricing in an additional 46bps of cuts by the end of 2024 and 124bps of cuts by the end of 2025.

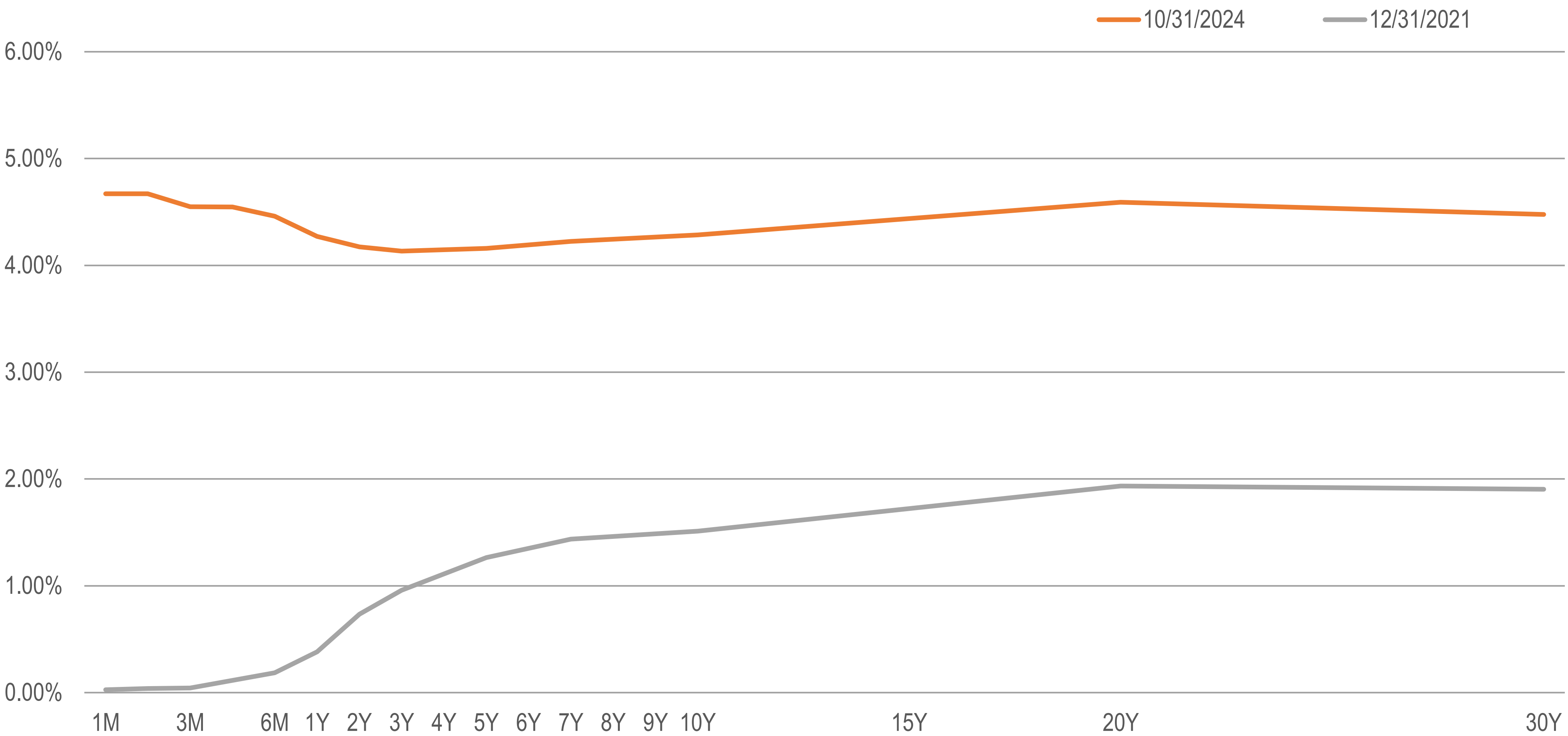


Source: Bloomberg.
The assumed rate movement for one rate hike or cut is equivalent to +/- 0.25%. There is no assurance forecasts will be achieved.
The Federal Funds Rate is the interbank overnight lending rate for commercial banks' excess reserves. The Implied Federal Funds Rate for the US is the estimated forward rate for the United States and is derived from Federal Funds Futures contracts to determine the probability of the Federal Reserve changing monetary policy at a particular meeting.

US TREASURY YIELD CURVE

As of October 31, 2024

MARKET DATA

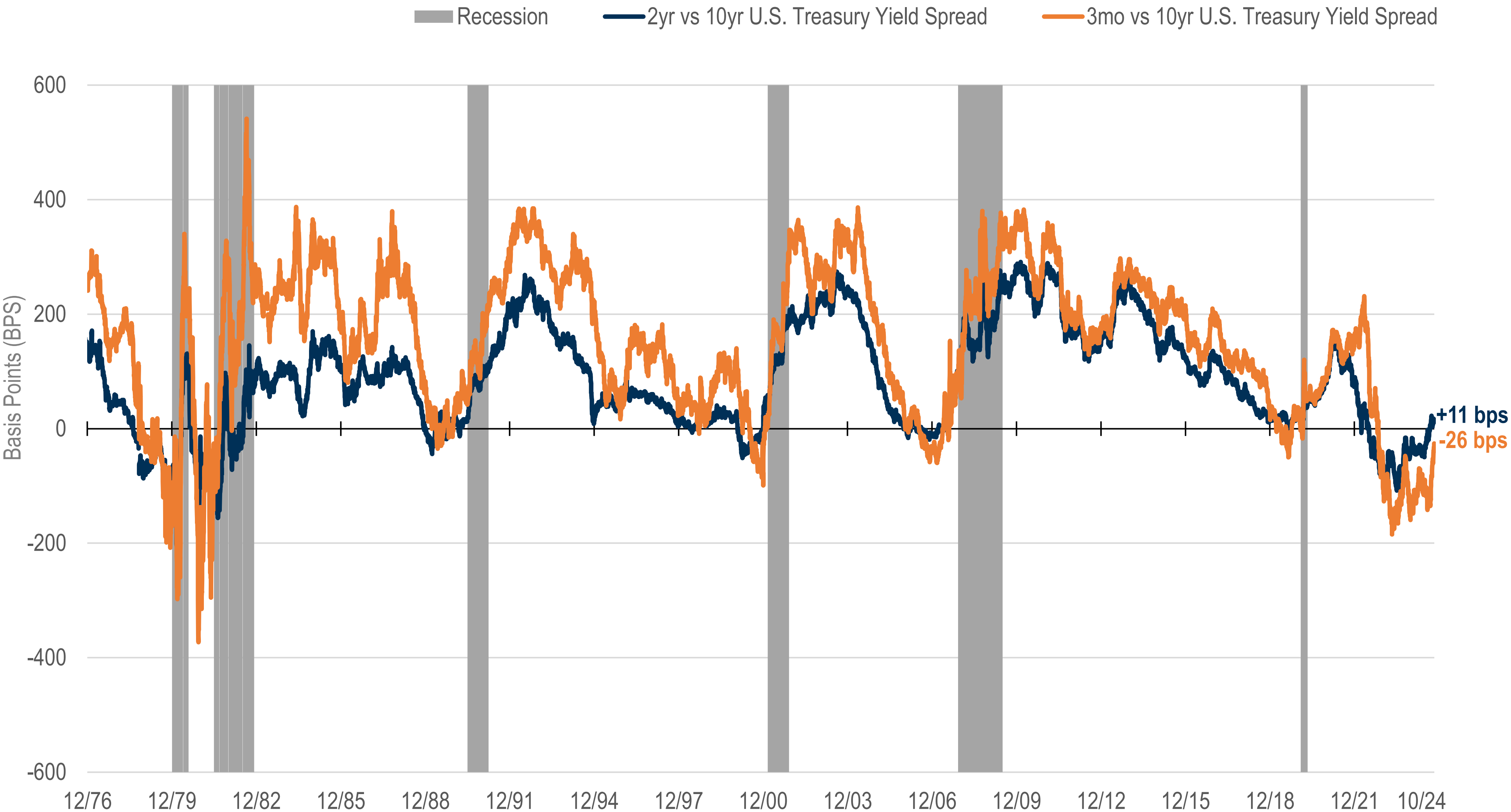


Source: Bloomberg. **Past performance is no guarantee of future results.**

2-YR/10-YR U.S YIELD CURVE & 3-MO/10-YR U.S YIELD CURVE

First Trust

MARKET DATA



Source: Bloomberg, as of 10/31/2024. **Past performance is no guarantee of future results.** The yield spread is the difference between yields on the varying Treasury maturities. A basis point is a common unit of measure for interest rates and is equal to 1/100th of 1% or 0.01%. A 1% change is equal to 100 basis points. See Index Definitions.

LONG AND VARIABLE POLICY LAGS

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MARKET DATA

2-yr/10-yr US Yield Curve Inversion Date	3-mo/10-yr US Yield Curve Inversion Date	Recession following Inversion	Days Since 2-yr/10-yr US Yield Curve Inversion	Days Since 3-mo/10-yr US Yield Curve Inversion	S&P 500 All Time High After Curve Inversion
8/17/1978	12/15/1978	Jan 1980 - Jul 1980	502	382	N/A
9/11/1980	10/27/1980	Jul 1981 - Nov 1982	293	247	11/28/1980
1/5/1989	5/24/1989	Jul 1990 - Mar 1991	542	403	6/4/1990
2/11/2000	7/18/2000	Mar 2001 - Nov 2001	384	226	3/24/2000
1/31/2006	7/19/2006	Dec 2007 - Jun 2009	669	500	10/9/2007
7/5/2022	***11/8/2022***	***TBD***	***849****	***723****	***10/18/2024***
		Mean	**478**	**352**	
		Median	**502**	**382**	

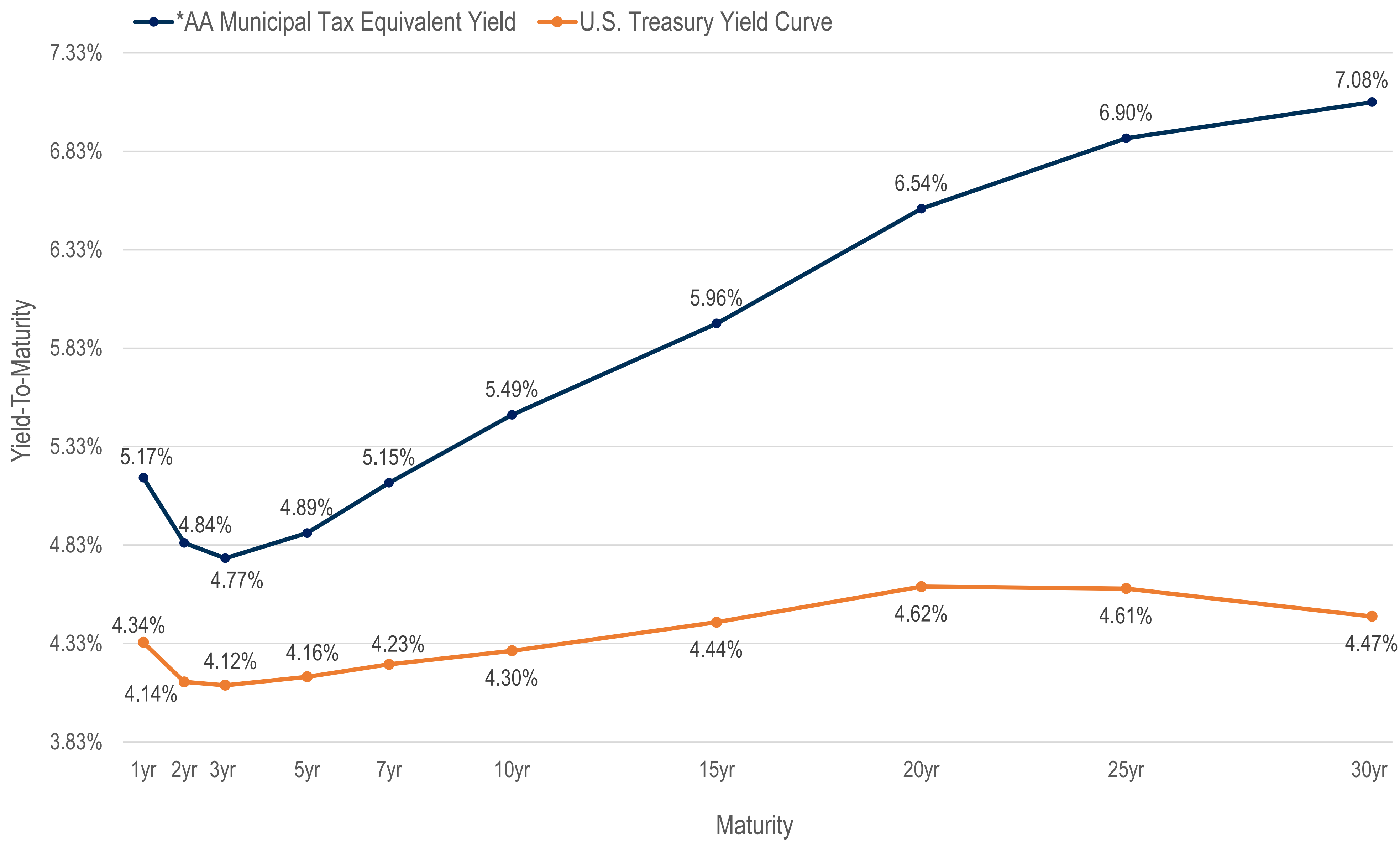
*Measures the time since inversion.

Source: Bloomberg. Data from 12/1/1976 – 10/31/2024. **Past performance is no guarantee of future results.** The yield curve spread is the difference between yields on the varying Treasury maturities. When longer dated maturities are yielding less than shorter dated maturities the yield curve spread is negative or "inverted". The inversion dates were determined as the start date of the first period prior to a recession that the 2-Year US Treasury Yield and 3-Month US Treasury Yield were greater than the 10-Year US Treasury Yield for at least 30 consecutive days. Only recession periods that experienced at least one inversion (as defined previously) for both the 2-Year/10-Year yield curve and 3-Month/10-year yield curve since the end of the last recessionary period were considered. The 2-yr/10-yr US yield curve measurement periods are 8/17/1978-1/1/1980, 9/11/1980-7/1/1981, 1/5/1989-7/1/1990, 2/11/2000-3/1/2001, 1/31/2006-12/1/2007, and 7/5/2022-10/31/2024. The 3-mo/10-yr US yield curve measurement periods are 12/15/1978-1/1/1980, 10/27/1980-7/1/1981, 5/24/1989-7/1/1990, 7/18/2000-3/1/2001, 7/19/2006-12/1/2007, and 11/8/2022-10/31/2024. Recessionary periods are determined by the National Bureau of Economic Research (NBER). Measurement will continue for the current inversion periods until the next recessionary period begins.

MUNICIPAL YIELD CURVE

As of October 31, 2024

MARKET DATA



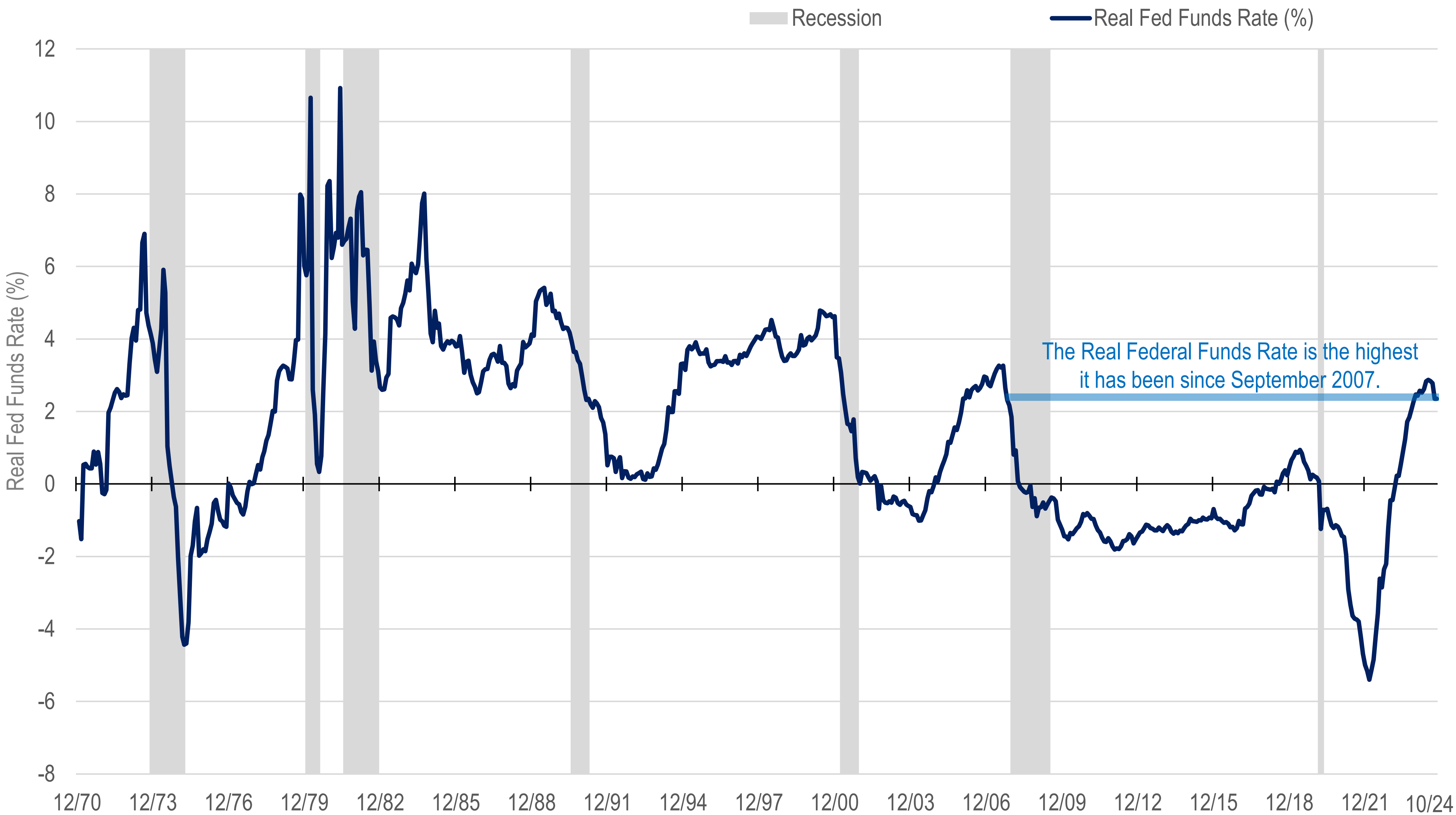
Source: Bloomberg. **Past performance is no guarantee of future results.**

*YTM represents the Tax-Equivalent Yield (TEY) for the highest tax bracket of 37% plus a Medicare tax rate of 3.8% for a total tax rate of 40.8%.

REAL FEDERAL FUNDS RATE

December 31, 1970 – October 31, 2024

MARKET DATA

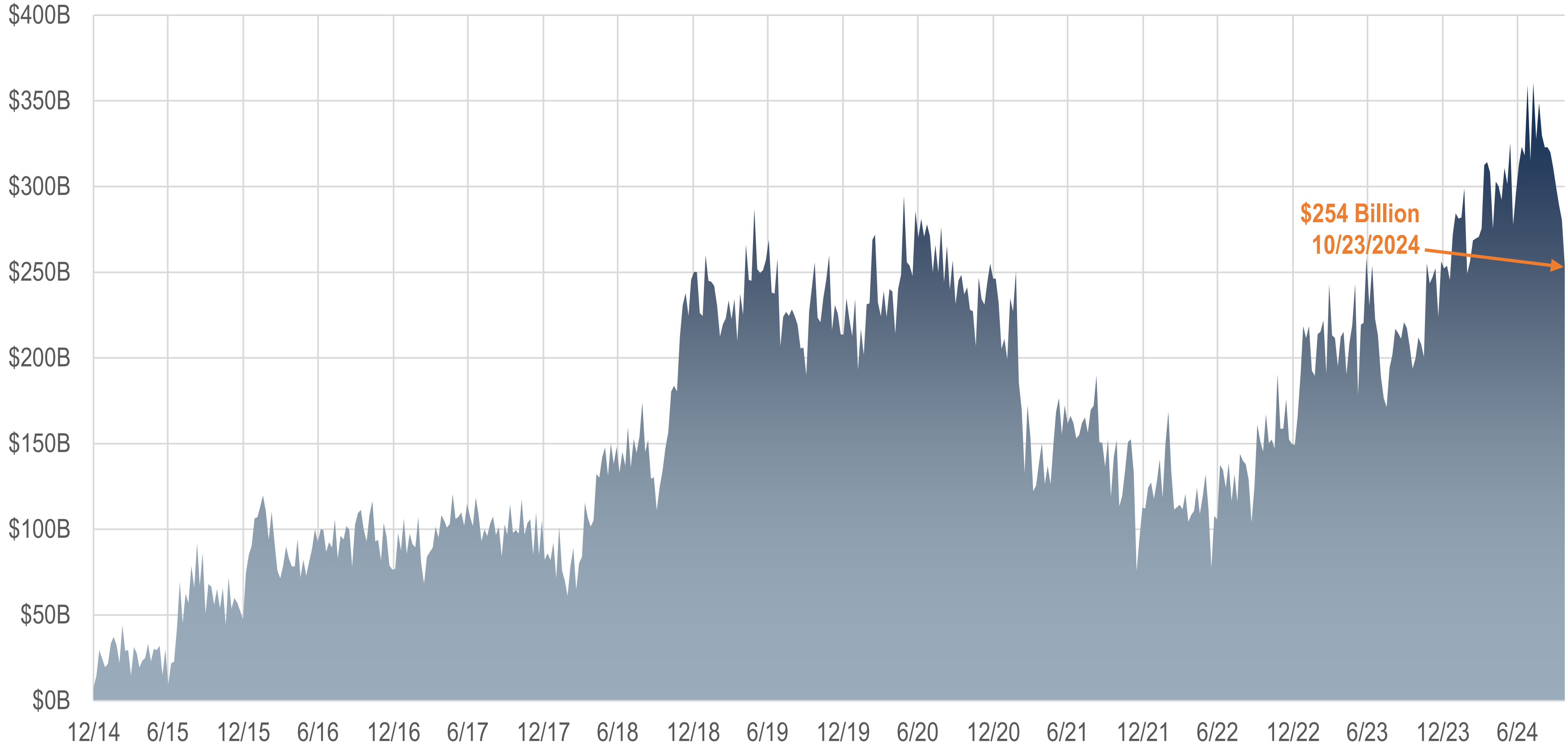


Source: Bloomberg, FRED. The Real Federal Funds Rate is the effective Federal Funds Rate minus 12-month core PCE inflation. The Effective Federal Funds Rate is the interest rate banks charge each other for overnight lending. See Index Definitions.

NET DEALER TREASURY HOLDINGS

December 31, 2014 – October 23, 2024

MARKET DATA

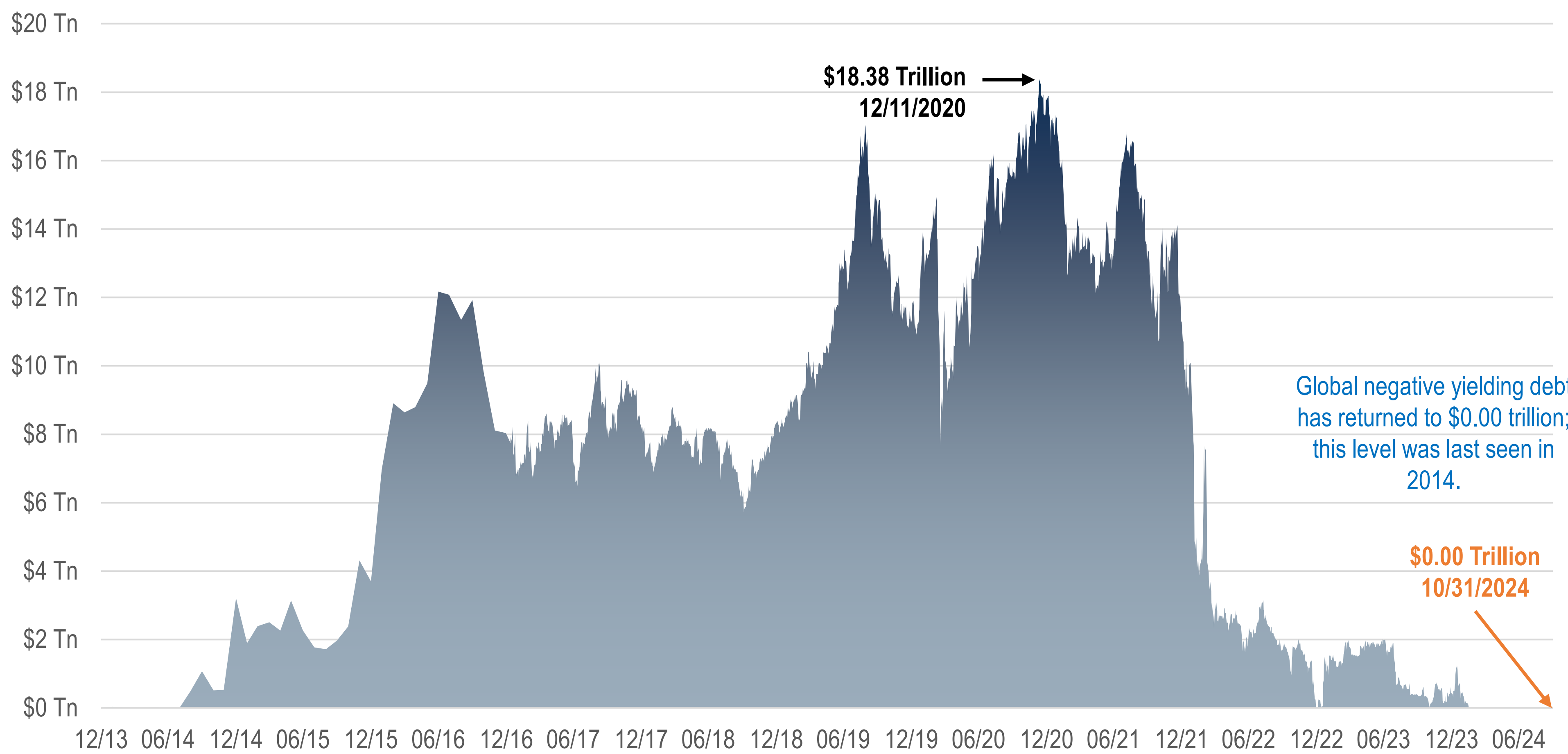


Source: Bloomberg, Federal Reserve. See Index Definitions.

GLOBAL NEGATIVE YIELDING DEBT

December 31, 2013 – October 31, 2024

MARKET DATA

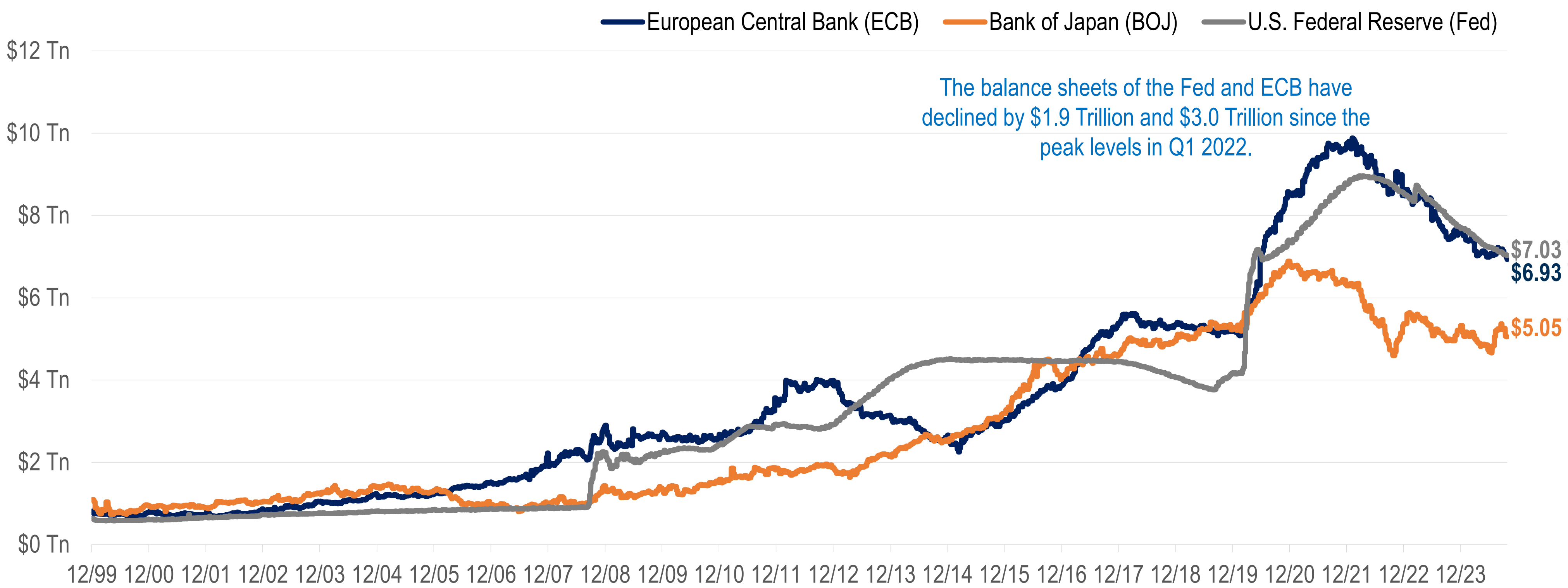


Source: Bloomberg. Global negative yielding debt is comprised by summing the negative yielding debt within the Bloomberg Global Aggregate Index. See Index Definitions.

CENTRAL BANK BALANCE SHEETS

December 31, 1999 – October 25, 2024

MARKET DATA



Source: Bloomberg. See Index Definitions.

WEEKLY U.S. DOLLAR INDEX (DXY)

December 31, 2010 – October 25, 2024

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MARKET DATA

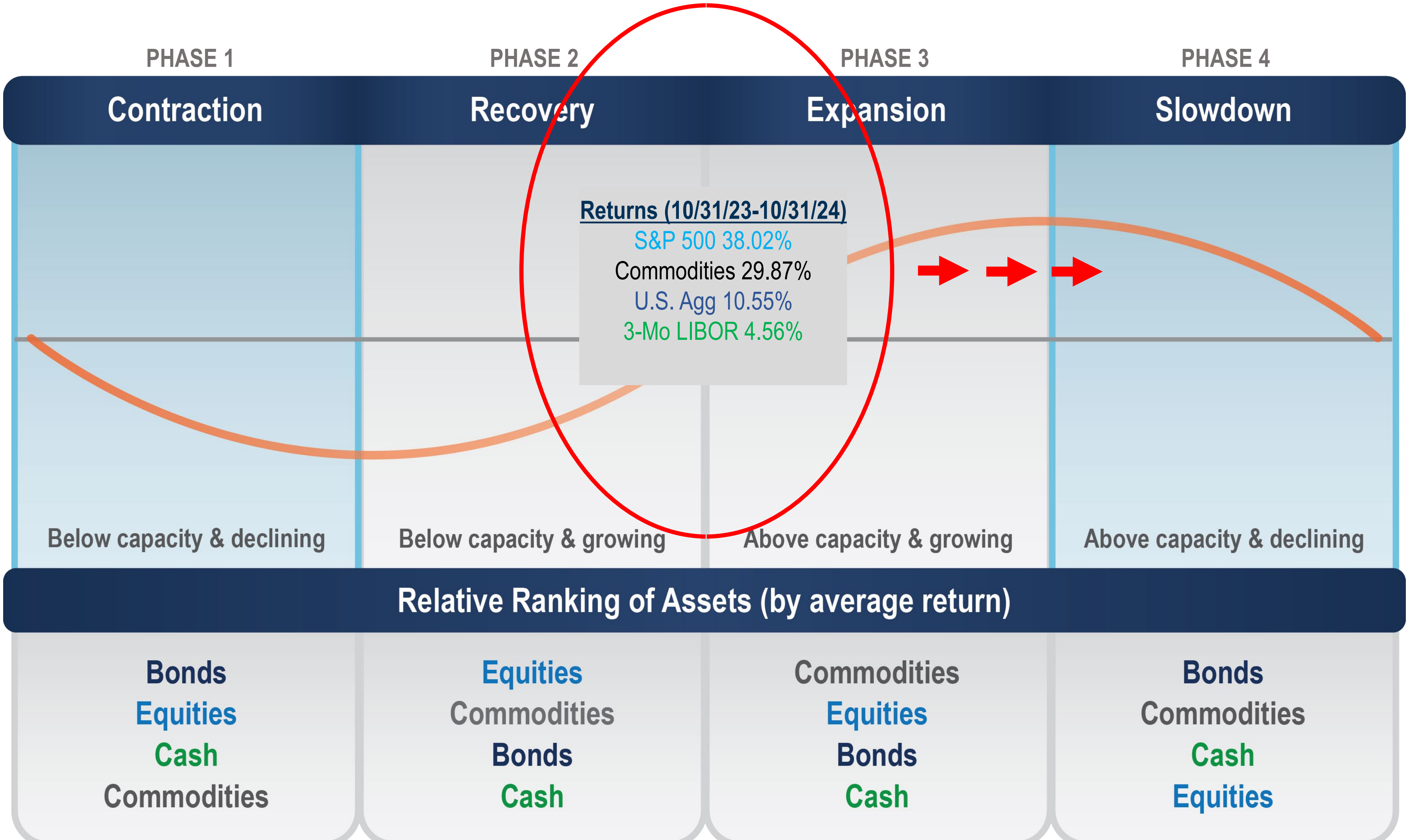
DXY is a measure of the U.S dollar's value relative to the following currencies:

- Euro: 57.6%
- Japanese Yen: 13.6%
- British Pound: 11.9%
- Canadian Dollar: 9.1%
- Swedish Krona: 4.2%
- Swiss Franc: 3.6%

Source: Bloomberg. **Past performance is no guarantee of future results.** See Index Definitions.

THE BUSINESS CYCLE

LEADING INDICATORS

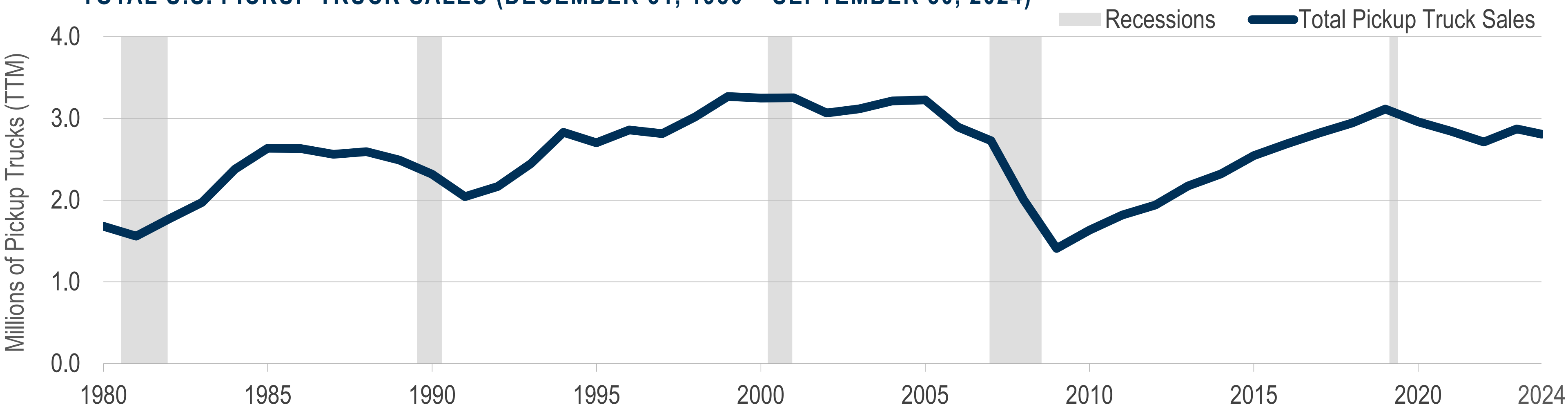


Source: Goldman Sachs Global Investment Research. **Past performance is no guarantee of future results.** This chart is for illustrative purposes only and not indicative of any actual investment. See Index Definitions.

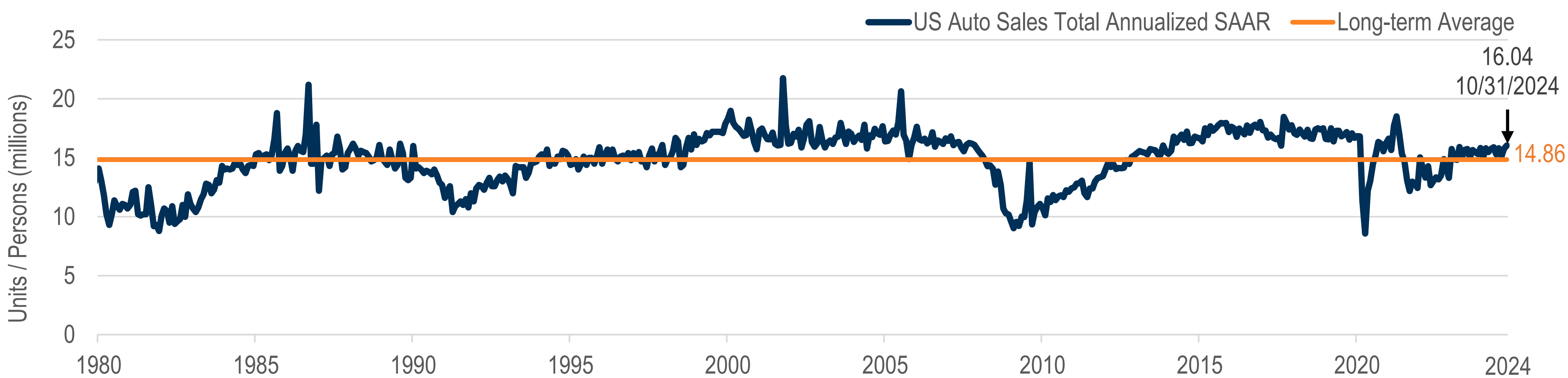
U.S. PICKUP TRUCK AND MOTOR VEHICLE SALES

LEADING INDICATORS

TOTAL U.S. PICKUP TRUCK SALES (DECEMBER 31, 1980 – SEPTEMBER 30, 2024)



TOTAL U.S. MOTOR VEHICLE SALES (JANUARY 1, 1980 – OCTOBER 31, 2024)



Source: Bloomberg, Citigroup Global Markets Inc., Motor Intelligence, GoodCarBadCar. Pickup Truck sales as of 9/30/24 (Most recent available data).
U.S. Motor Vehicle Sales reflect the seasonally adjusted annual rate (SAAR) where data has been adjusted for the effects of seasonal patterns.

CONSUMER CREDIT

March 31, 2003 – June 28, 2024

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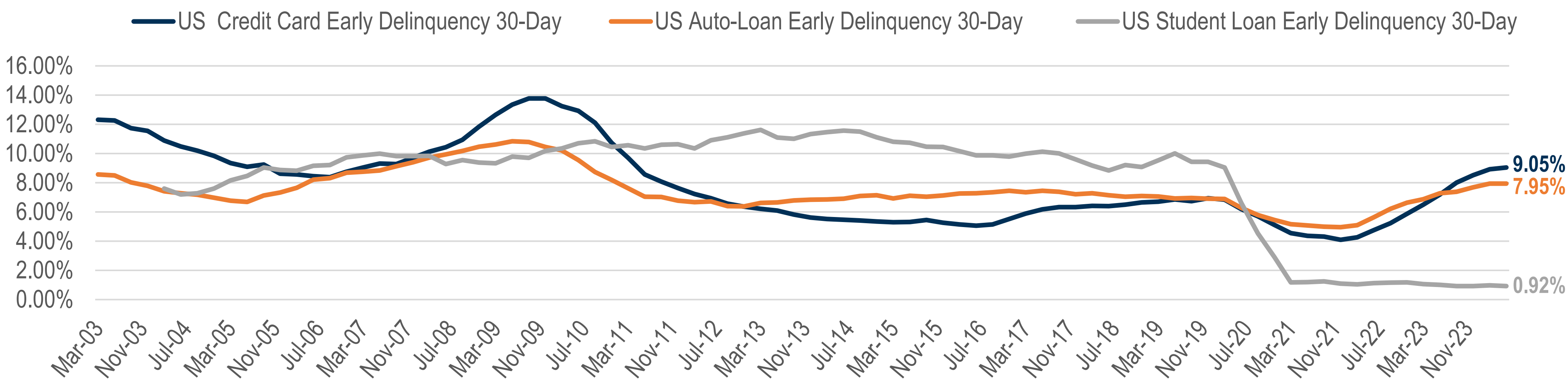
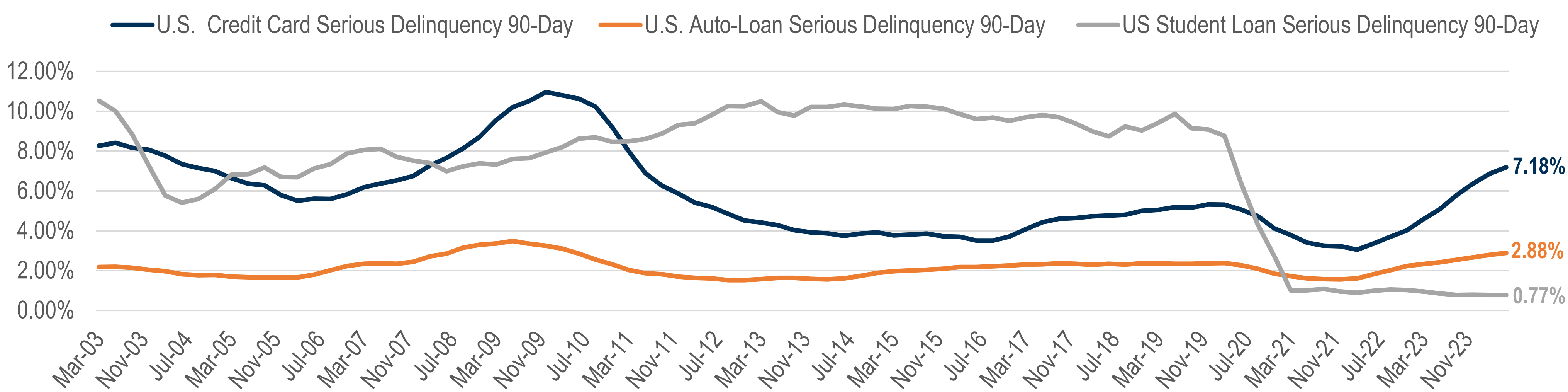
LEADING INDICATORS





Source: Bloomberg. The Federal Reserve Bank of New York's Center for Microeconomic Data: Quarterly Report on Household Debt and Credit. Data as of 6/28/24 (Most recent available data).

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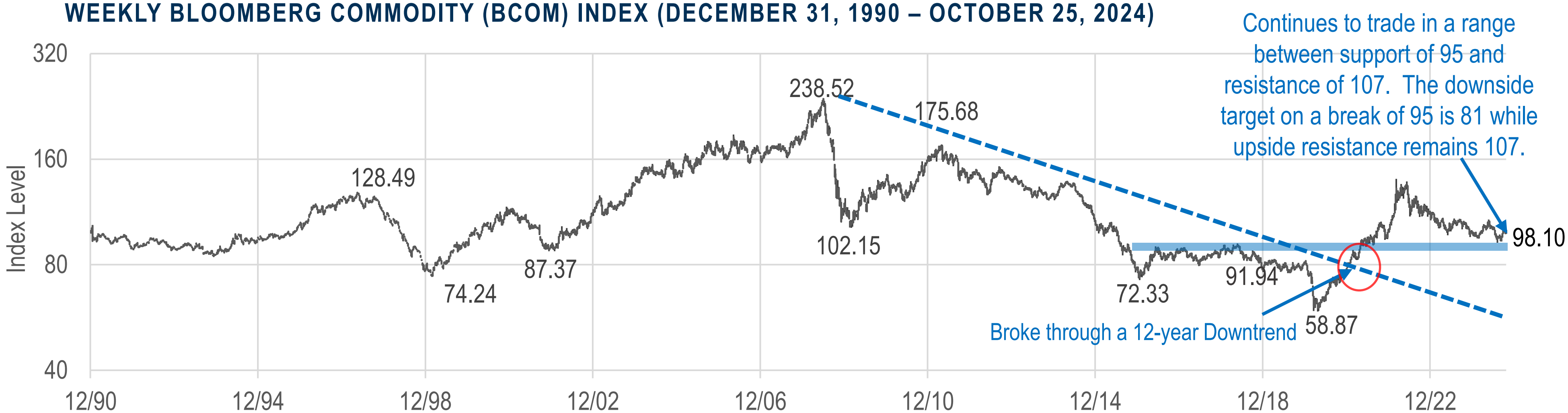
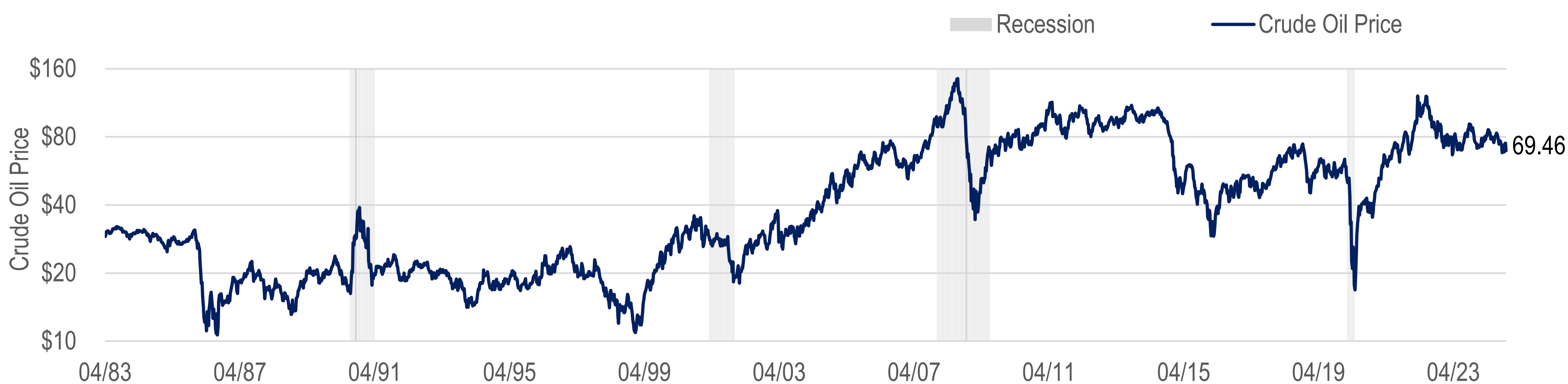
LEADING INDICATORS

WEEKLY BLOOMBERG COMMODITY (BCOM) INDEX (DECEMBER 31, 1990 – OCTOBER 25, 2024)



WEEKLY CRUDE OIL PRICE (APRIL 1, 1983 – OCTOBER 25, 2024)



Source: Bloomberg. **Past performance is no guarantee of future results.** See Index Definitions.

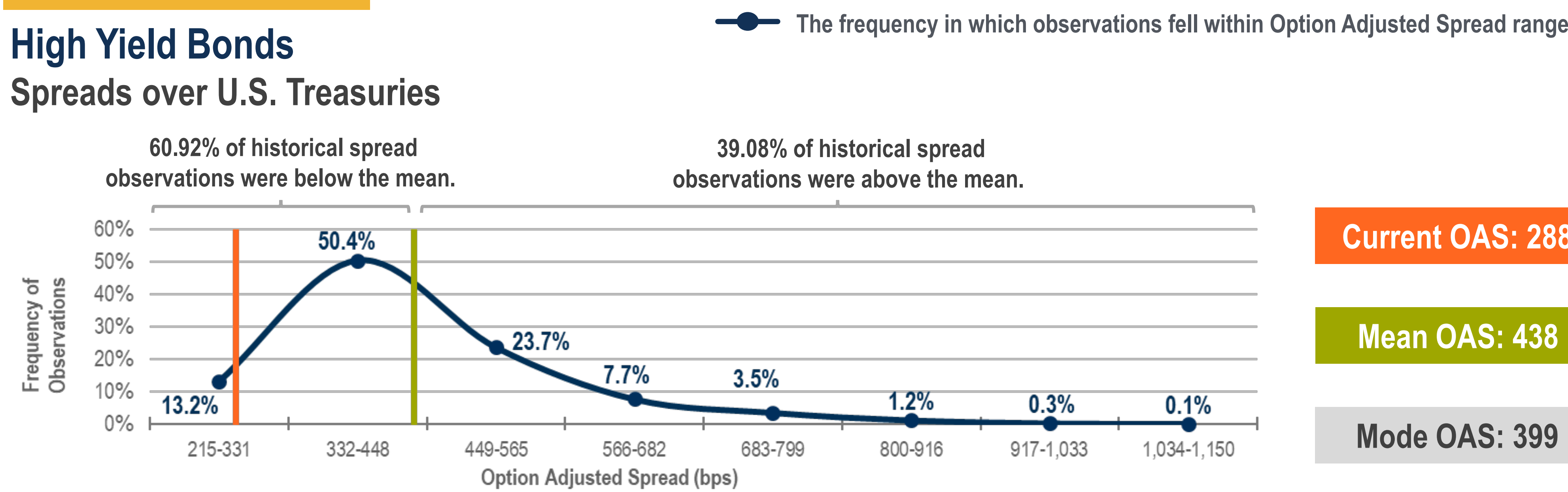
FIXED INCOME DASHBOARD

10-year daily historical spread distribution

FIXED INCOME OPPORTUNITY SET

High Yield Bonds

Spreads over U.S. Treasuries



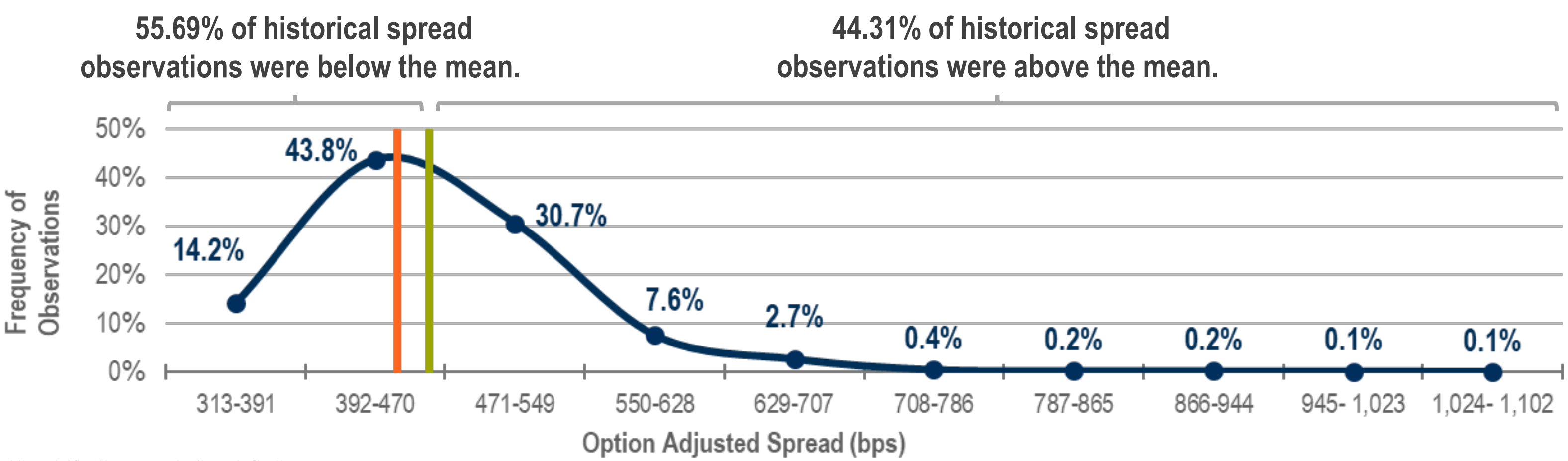
Current OAS: 288

Mean OAS: 438

Mode OAS: 399

Senior Loans

Spreads over the Secured Overnight Financing Rate (SOFR)



Discounted OAS*: 444

Mean OAS: 462

Mode OAS: 399

*3-Year Life. Data excludes defaults.

Source: Bloomberg, Standard & Poor's Leveraged Loan Commentary and Data. Data is from 10/31/2014 through 10/31/2024. For illustrative purposes only and not indicative of any actual investment. See index definitions at the end of the presentation. **Past performance is no guarantee of future results.**

FIXED INCOME OPPORTUNITY SET

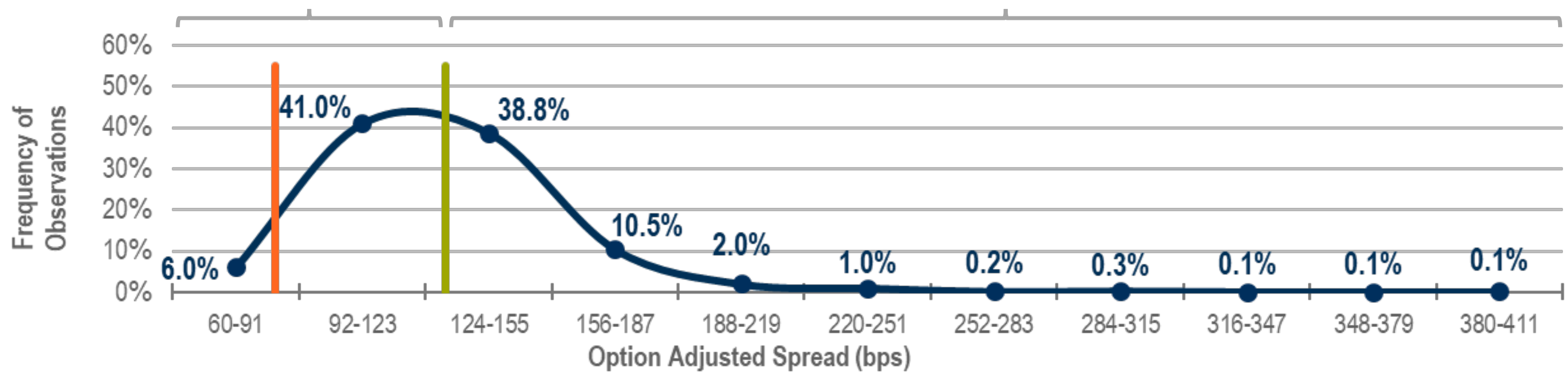
The frequency in which observations fell within Option Adjusted Spread range.

Investment-Grade Corporate Bonds

Spreads over U.S. Treasuries

54.65% of historical spread observations were below the mean.

45.35% of historical spread observations were above the mean.



Current OAS: 86

Mean OAS: 129

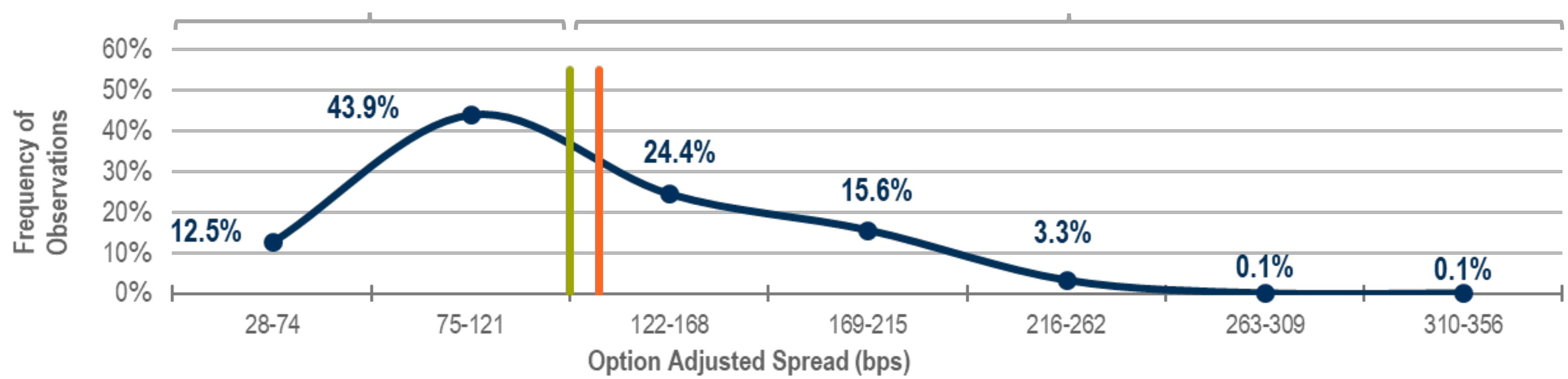
Mode OAS: 138

Fixed Rate CMBS Bonds

Spreads over U.S. Treasuries

56.41% of historical spread observations were below the mean.

43.59% of historical spread observations were above the mean.



Current OAS: 129

Mean OAS: 122

Mode OAS: 77

Source: Bloomberg. Data is from 10/31/2014 through 10/31/2024. For illustrative purposes only and not indicative of any actual investment. See index definitions at the end of the presentation.

Past performance is no guarantee of future results.

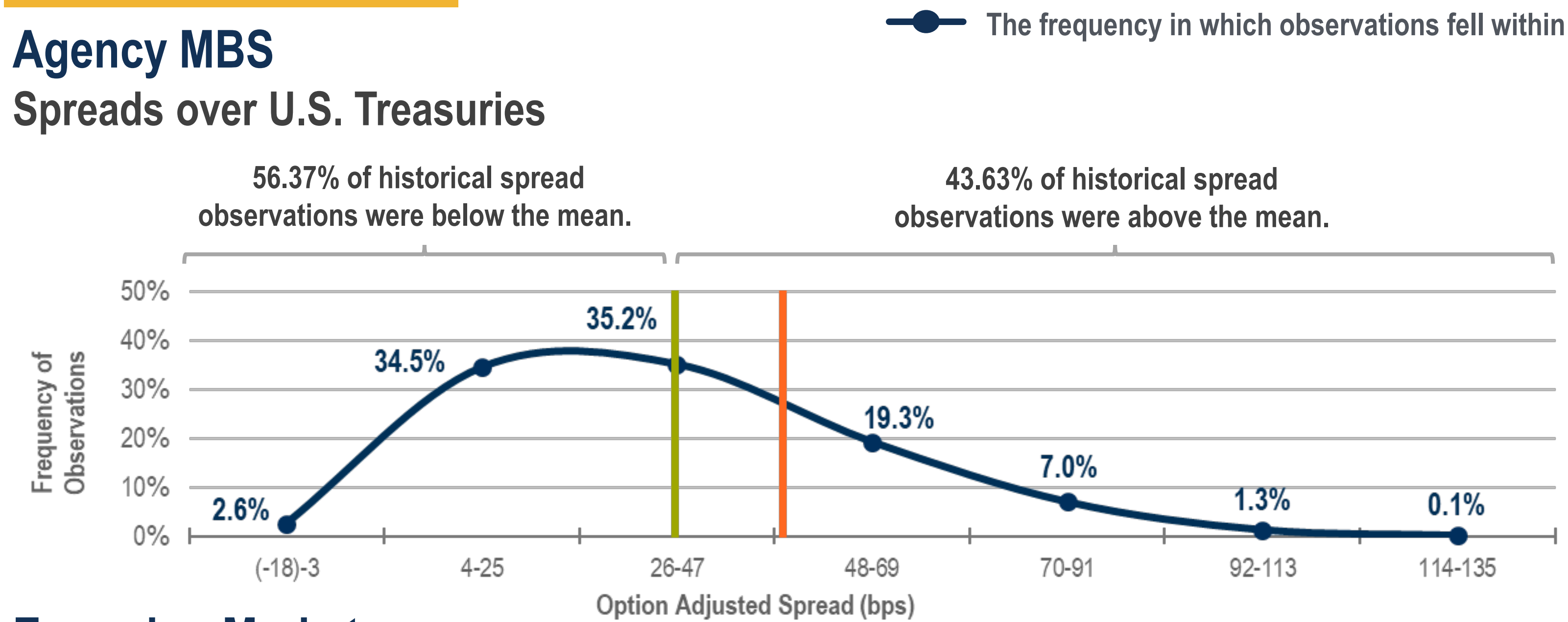
FIXED INCOME DASHBOARD

10-year daily historical spread distribution

FIXED INCOME OPPORTUNITY SET

Agency MBS

Spreads over U.S. Treasuries



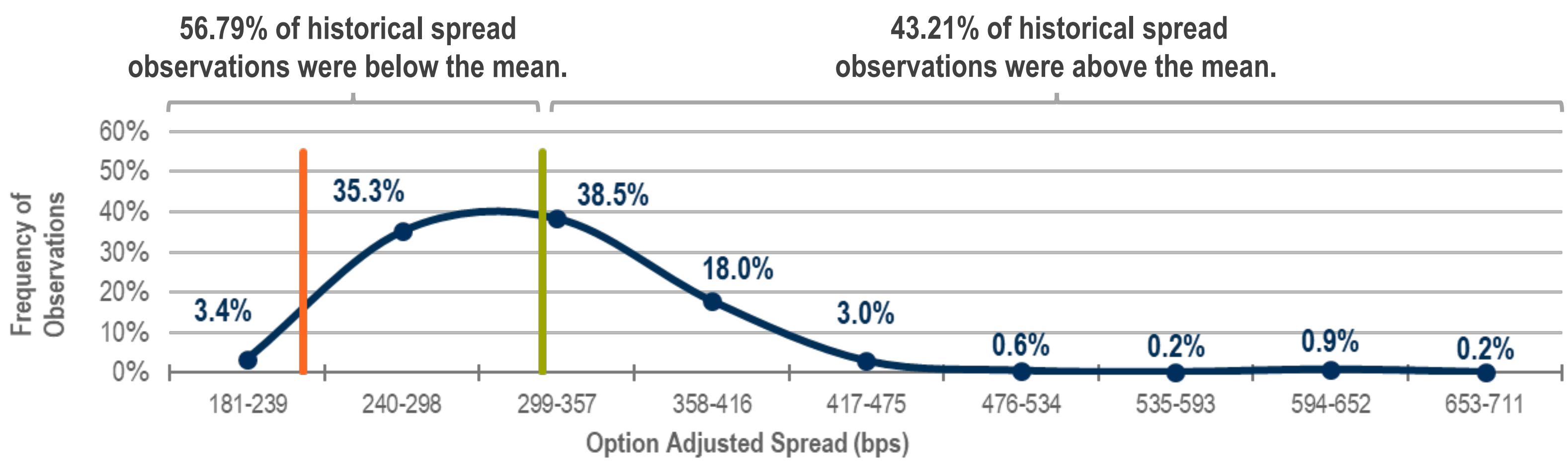
Current OAS: 49

Mean OAS: 37

Mode OAS: 24

Emerging Markets

Spreads over U.S. Treasuries



Current OAS: 232

Mean OAS: 323

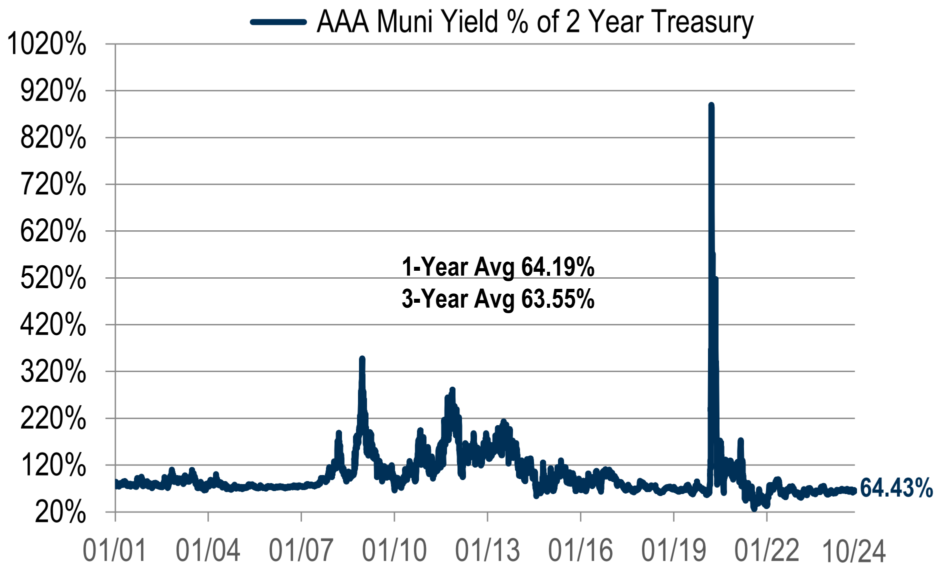
Mode OAS: 290

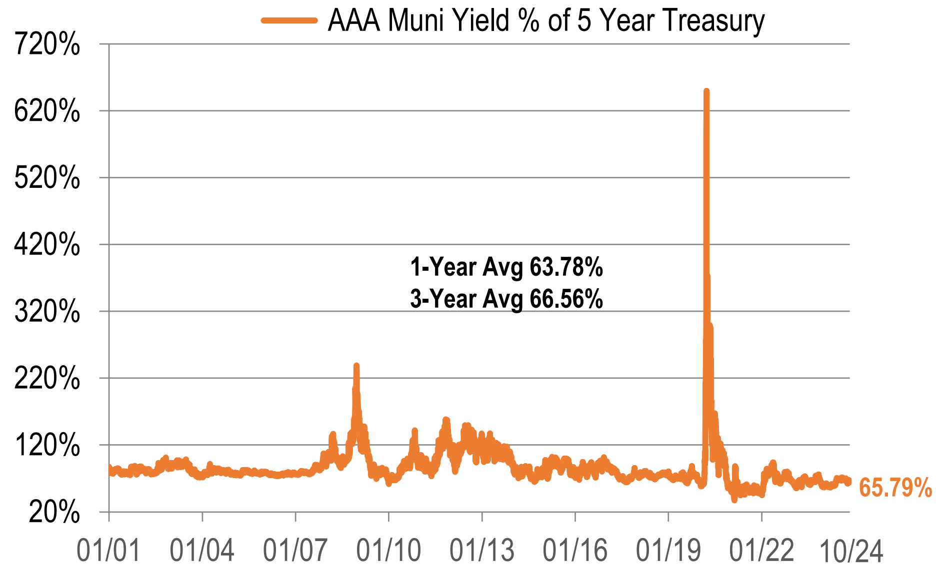
Source: Bloomberg. Data is from 10/31/2014 through 10/31/2024. For illustrative purposes only and not indicative of any actual investment. See index definitions at the end of the presentation.
Past performance is no guarantee of future results.

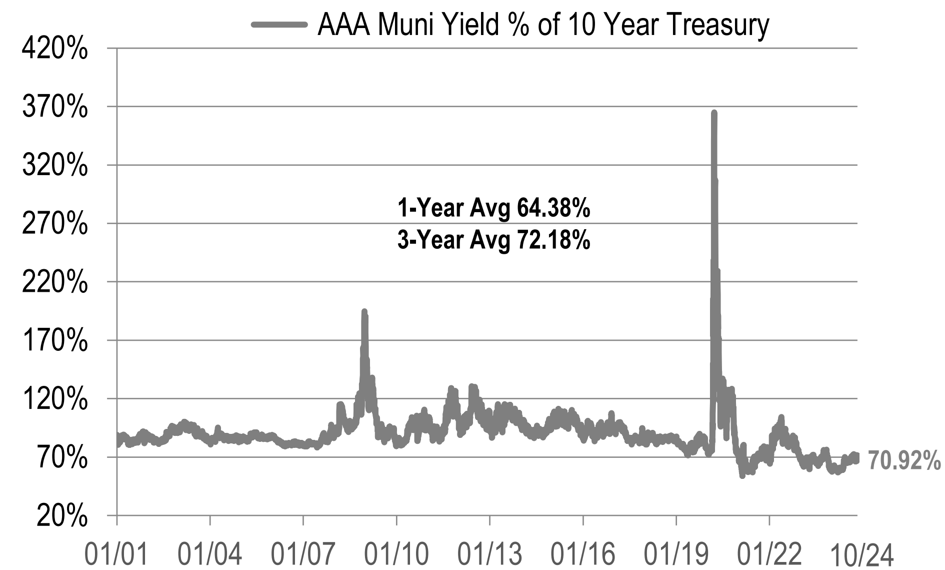
MUNICIPAL / TREASURY YIELD RATIO

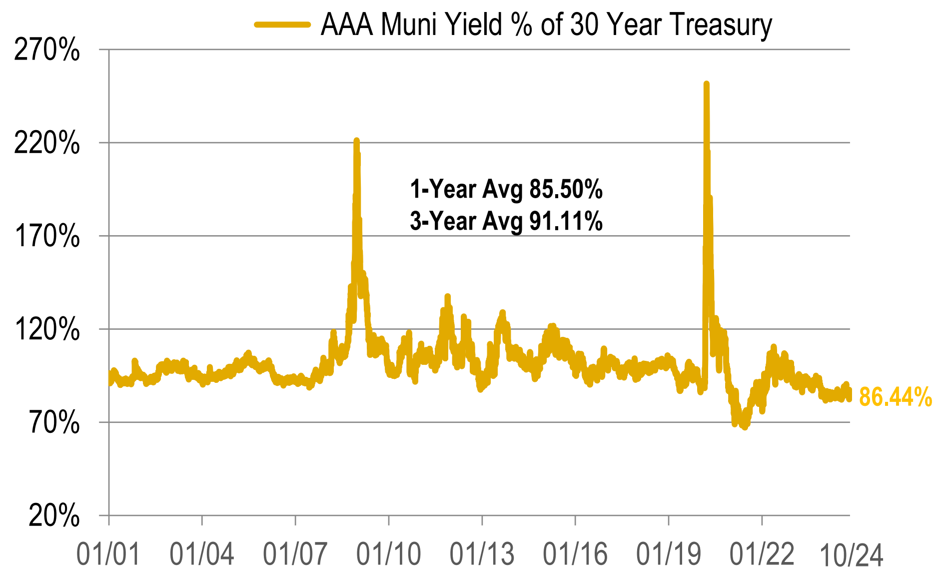
January 2, 2001 – October 31, 2024

FIXED INCOME OPPORTUNITY SET







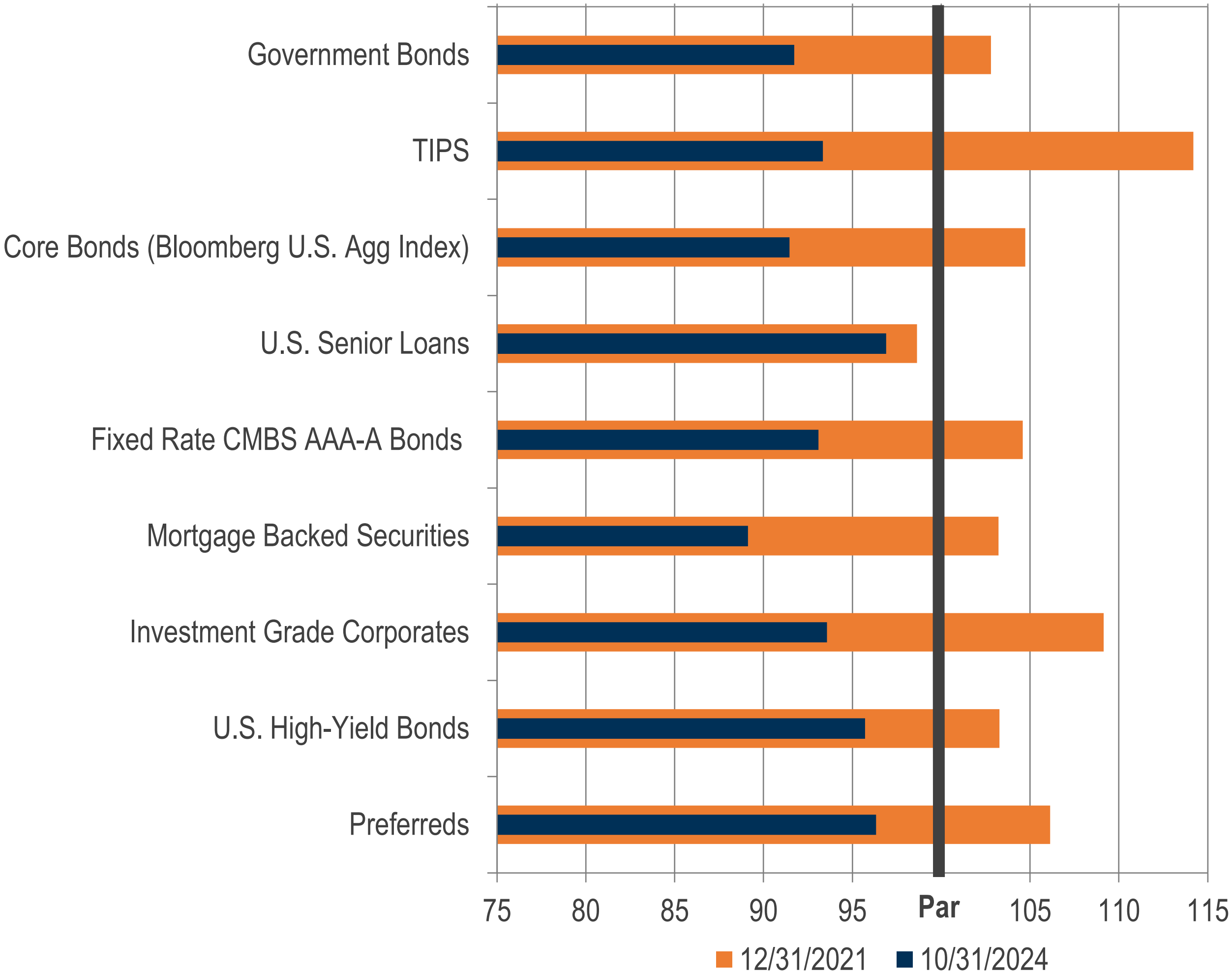


Source: Bloomberg. **Past performance is no guarantee of future results.** The Municipal/Treasury ratio is a percentage of municipal yields against equivalent Treasury yields.

FIXED INCOME ASSET CLASS PRICE ANALYSIS

As of October 31, 2024

FIXED INCOME OPPORTUNITY SET



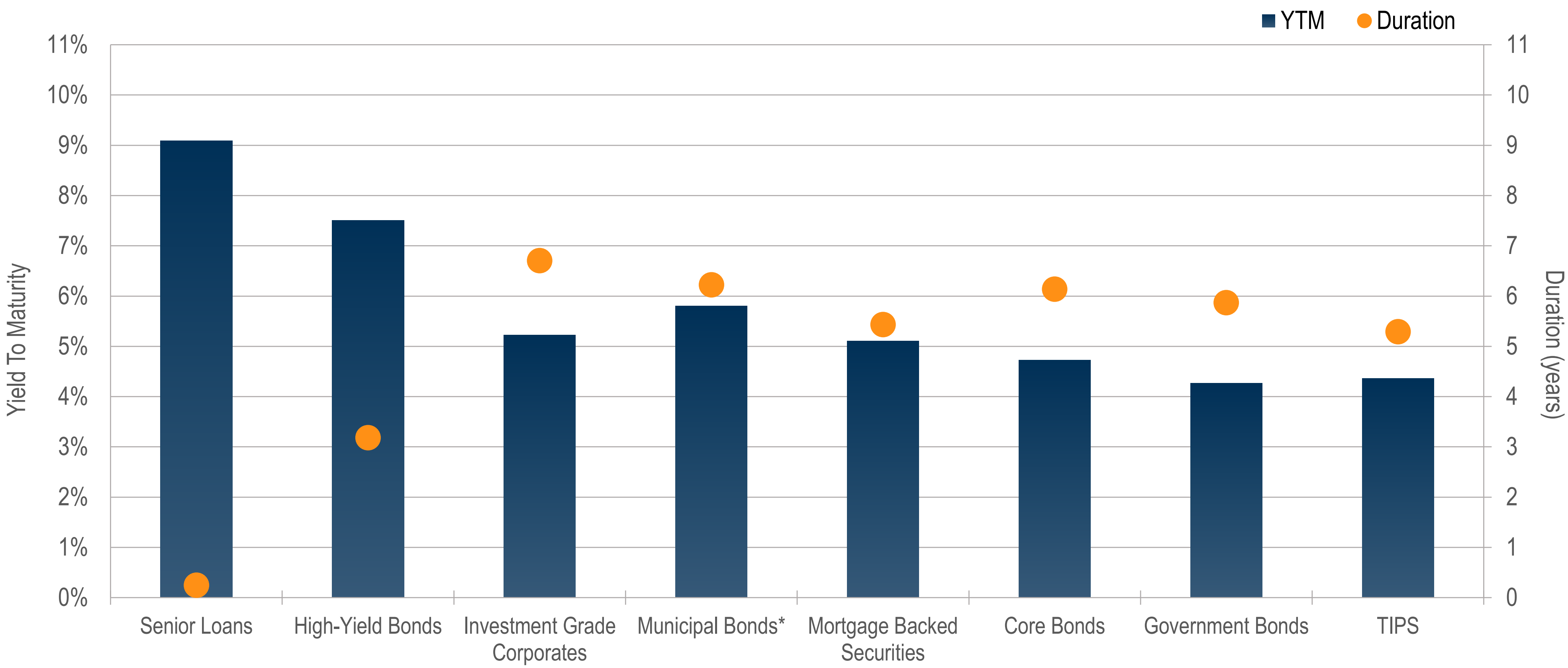
	LTM Returns
Government Bonds	8.37%
TIPS	8.61%
Core Bonds (Bloomberg U.S. Agg Index)	10.55%
U.S. Senior Loans	10.56%
Fixed Rate CMBS AAA-A Bonds	10.76%
Mortgage Backed Securities	11.35%
Investment Grade Corporates	13.63%
U.S. High-Yield Bonds	16.49%
Preferreds	20.53%

Source: S&P LCD and Bloomberg**. Past performance is no guarantee of future results**. U.S. High-Yield Bonds are represented by the ICE BofA U.S. High Yield Constrained Index. Preferred Securities are represented by a blended benchmark consisting of 30% ICE BofA Core Plus Fixed Rate Preferred Securities Index (P0P4) / 30% ICE BofA U.S. Investment Grade Institutional Capital Securities Index (CIPS) / 30% ICE BofA USD Contingent Capital Index (CDLR) / 10% ICE BofA U.S. High Yield Institutional Capital Securities Index (HIPS). U.S. Senior Loans are represented by the Morningstar® LSTA® US Leveraged Loan Index. Investment Grade Corporates are represented by the ICE BofA U.S. Corporate Index. Core Bonds are represented by the Bloomberg U.S. Aggregate Bond Index. Government Bonds are represented by the Bloomberg U.S. Government Index. TIPS are represented by the Bloomberg US Treasury Inflation-Linked Bond Index. Mortgage Backed Securities are represented by the ICE BofA U.S. Mortgage Backed Securities Index. CMBS is represented by ICE BofA AAA-A US Fixed Rate CMBS Index. See Index Definitions.

FIXED INCOME OPPORTUNITY SET – DURATION VS YTM

As of October 31, 2024

FIXED INCOME OPPORTUNITY SET



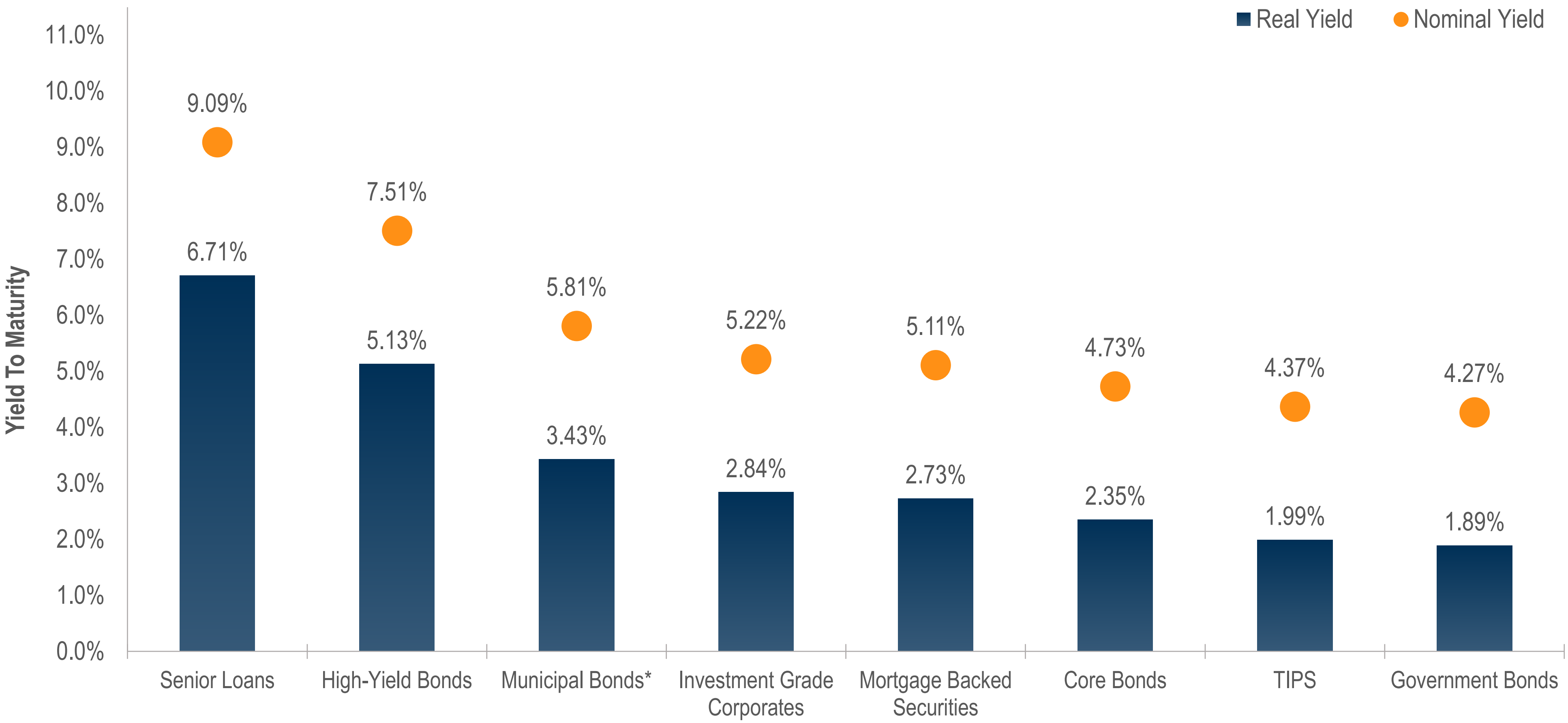
Source: S&P LCD, and Bloomberg. **Past performance is no guarantee of future results.** *YTM represents the Tax-Equivalent Yield (TEY) for the highest tax bracket of 37% plus a Medicare tax rate of 3.8% for a total tax rate of 40.8%. U.S. Senior Loans are represented by the Morningstar® LSTA® US Leveraged Loan Index. High-Yield Bonds are represented by the ICE BofA U.S. High Yield Constrained Index. Investment Grade Corporates are represented by the ICE BofA U.S. Corporate Index. Municipal Bonds are represented by the Bloomberg U.S. Municipal Index. Mortgage Backed Securities are represented by the ICE BofA U.S. Mortgage Backed Securities Index. Core Bonds are represented by the Bloomberg U.S. Aggregate Bond Index. Government Bonds are represented by the Bloomberg U.S. Government Index. TIPS are represented by the Bloomberg US Treasury Inflation-Linked Bond Index. See Index Definitions.

FIXED INCOME OPPORTUNITY SET – NOMINAL & REAL YIELDS

As of October 31, 2024

First Trust

FIXED INCOME OPPORTUNITY SET

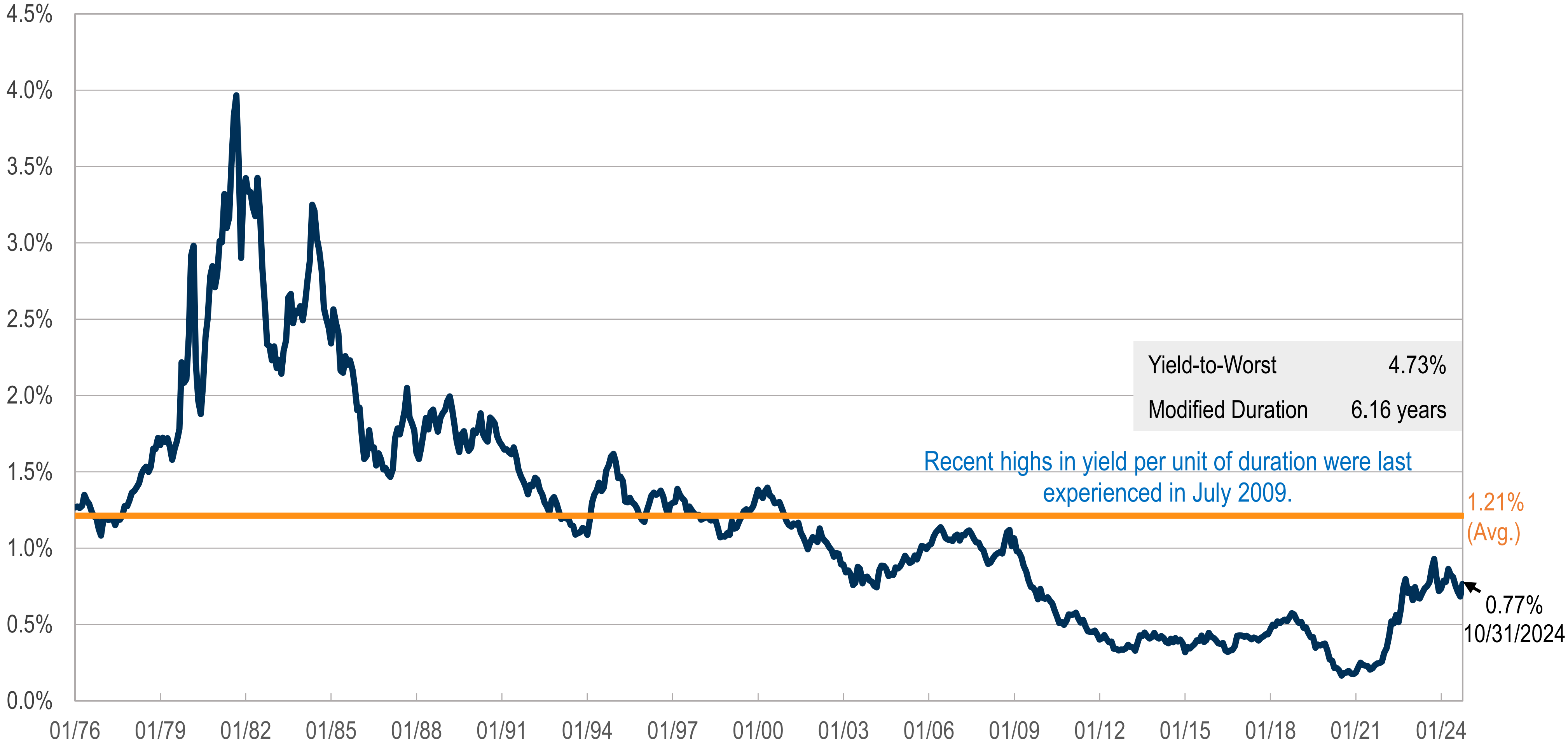


Source: S&P LCD, and Bloomberg. **Past performance is no guarantee of future results**. *YTM represents the Tax-Equivalent Yield (TEY) for the highest tax bracket of 37% plus a Medicare tax rate of 3.8% for a total tax rate of 40.8%. Real yield is represented by nominal yield-to-maturity minus the 5-yr inflation breakeven rate of 2.91%, which is calculated as the difference in yields between U.S Treasury bonds and Treasury Inflation-Protected Securities (TIPS). Senior Loans are represented by the Morningstar® LSTA® US Leveraged Loan Index. High-Yield Bonds are represented by the ICE BofA U.S. High Yield Constrained Index. Investment Grade Corporates are represented by the ICE BofA U.S. Corporate Index. Municipal Bonds are represented by the Bloomberg U.S. Municipal Index. Mortgage Backed Securities are represented by the ICE BofA U.S. Mortgage Backed Securities Index. Core Bonds are represented by the Bloomberg U.S. Aggregate Bond Index. Government Bonds are represented by the Bloomberg U.S. Government Index. TIPS are represented by the Bloomberg US Treasury Inflation-Linked Bond Index. See Index Definitions.

YIELD PER UNIT OF DURATION

Bloomberg U.S. Aggregate Bond Index (January 30, 1976 – October 31, 2024)

FIXED INCOME OPPORTUNITY SET



Source: Bloomberg. **Past performance is no guarantee of future results.** Duration is a measure of a bond's sensitivity to interest rate changes that reflects the change in a bond's price given a change in yield. See Index Definitions.

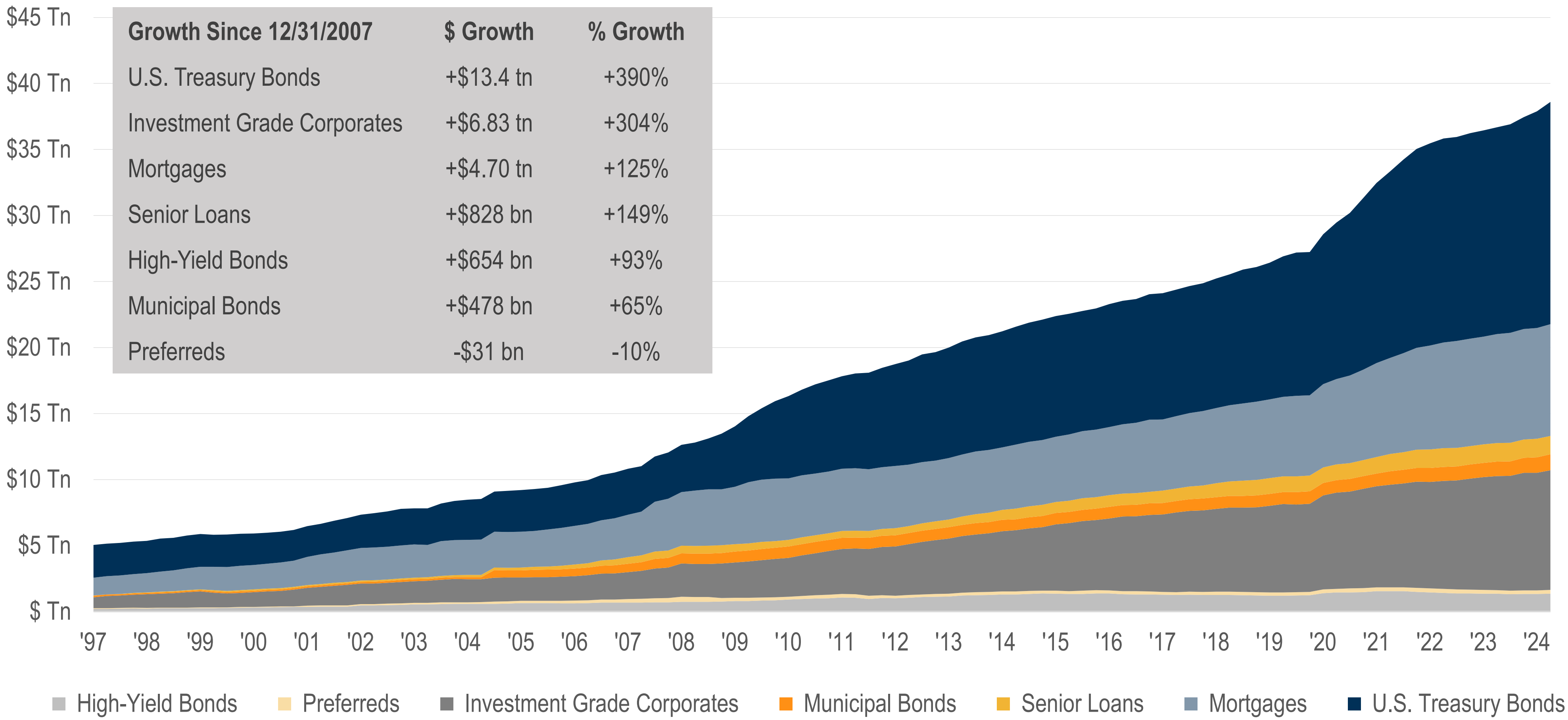
SIZE AND GROWTH OF THE U.S. DEBT MARKET

March 31, 1997 – September 30, 2024

First Trust

FIXED INCOME OPPORTUNITY SET

Growth Since 12/31/2007	$ Growth	% Growth
U.S. Treasury Bonds	+$13.4 tn	+390%
Investment Grade Corporates	+$6.83 tn	+304%
Mortgages	+$4.70 tn	+125%
Senior Loans	+$828 bn	+149%
High-Yield Bonds	+$654 bn	+93%
Municipal Bonds	+$478 bn	+65%
Preferreds	-$31 bn	-10%

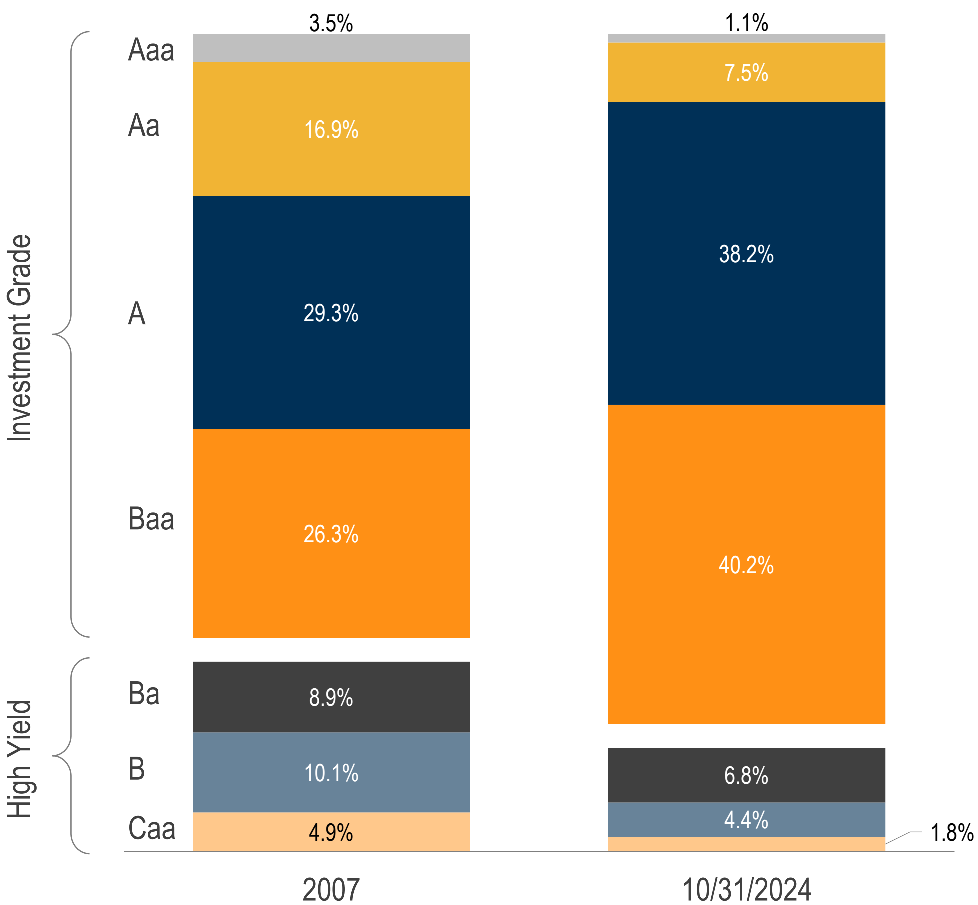


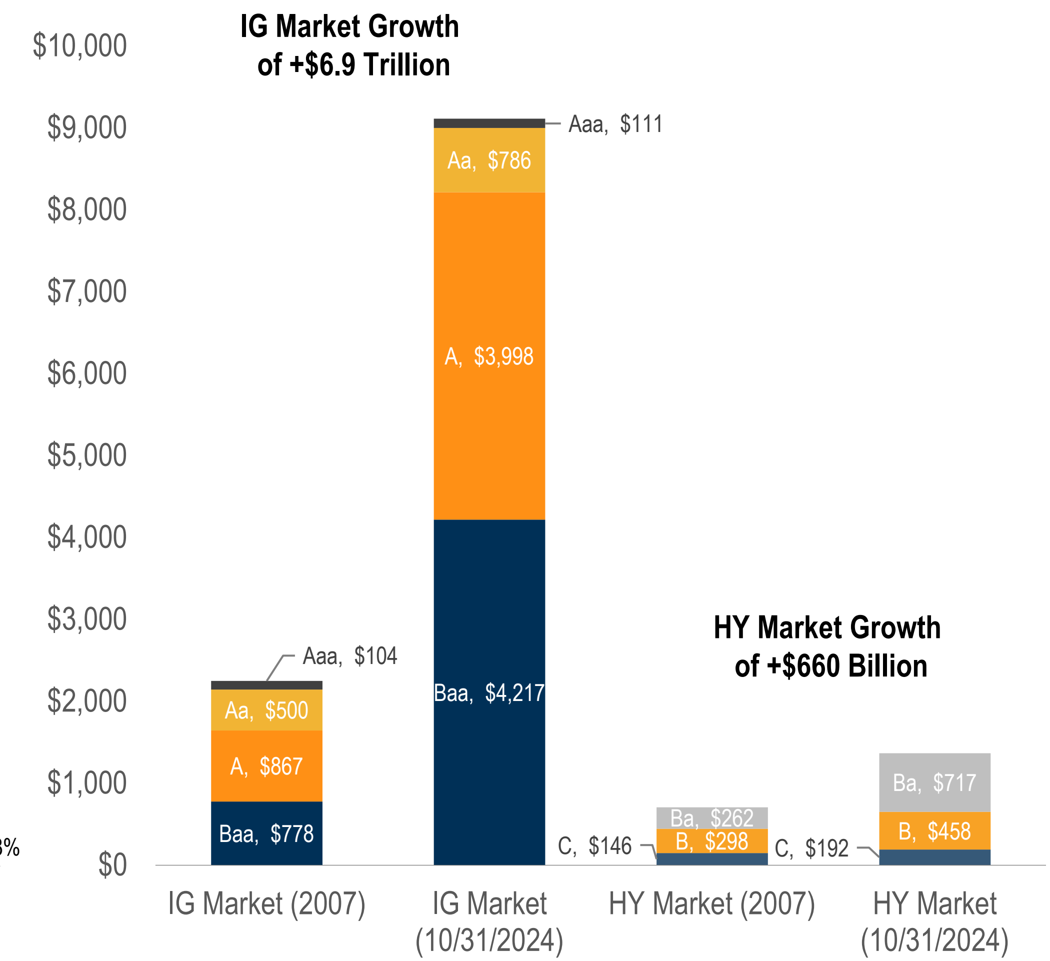
Source: ICE and Standard & Poor's Leveraged Loan Commentary and Data. Data as of 9/30/24 (Most recent available data). U.S. High-Yield Bonds are represented by the ICE BofA U.S. High Yield Constrained Index. Preferreds are represented by the sum of ICE BofA Fixed Rate Preferred Securities Index and the ICE BofA Investment Grade Institutional Capital Securities Index. Investment Grade Corporates are represented are represented by the ICE BofA U.S. Corporate Index. Municipal Bonds are represented by the Bloomberg U.S. Municipal Index. Senior Loans are represented by the Morningstar® LSTA® US Leveraged Loan Index. Mortgages are represented by the ICE BofA U.S. Mortgage Backed Securities Index. U.S. Treasury Bonds are represented by the ICE BofA U.S. Treasury & Agency Index. See Index Definitions.

SIZE AND CREDIT QUALITY OF THE U.S. CORPORATE DEBT MARKET

December 31, 2007 vs. October 31, 2024

FIXED INCOME OPPORTUNITY SET





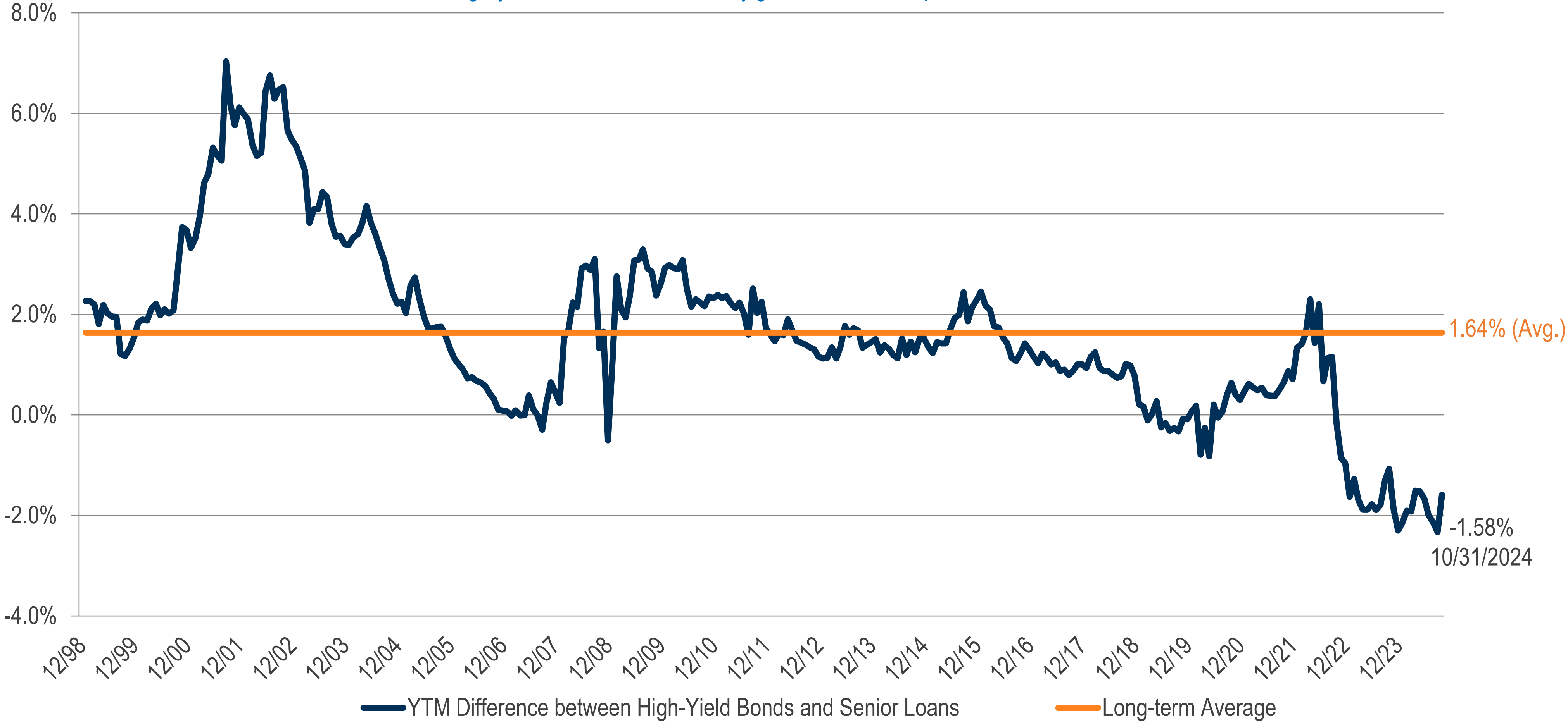
Source: Bloomberg. Investment Grade represented by the ICE BofA U.S. Corporate Index. High Yield represented by the ICE BofA U.S. High Yield Constrained Index. The Index composite rating is a derived value that is used to classify bonds by credit quality in Bloomberg Indices. It is set as the middle rating of Moody's, S&P and Fitch; when a rating from only two agencies is available, the lower is used; if only one agency rates a bond, that rating is taken. Investment grade bonds have a rating of at least Baa3 from Moody's or BBB- from S&P and Fitch. High-yield bonds have a rating below Baa3 from Moody's or BBB- from S&P and Fitch. Credit ratings are subject to change. See Index Definitions.

YTM DIFFERENCE OF HIGH-YIELD BONDS VS LOANS

December 31, 1998 – October 31, 2024

FIXED INCOME OPPORTUNITY SET

High-yield bonds are yielding 1.58% less than senior loans, which represents an inversion of the long-term average relationship where high-yield bonds have historically garnered a 1.64% premium to own.

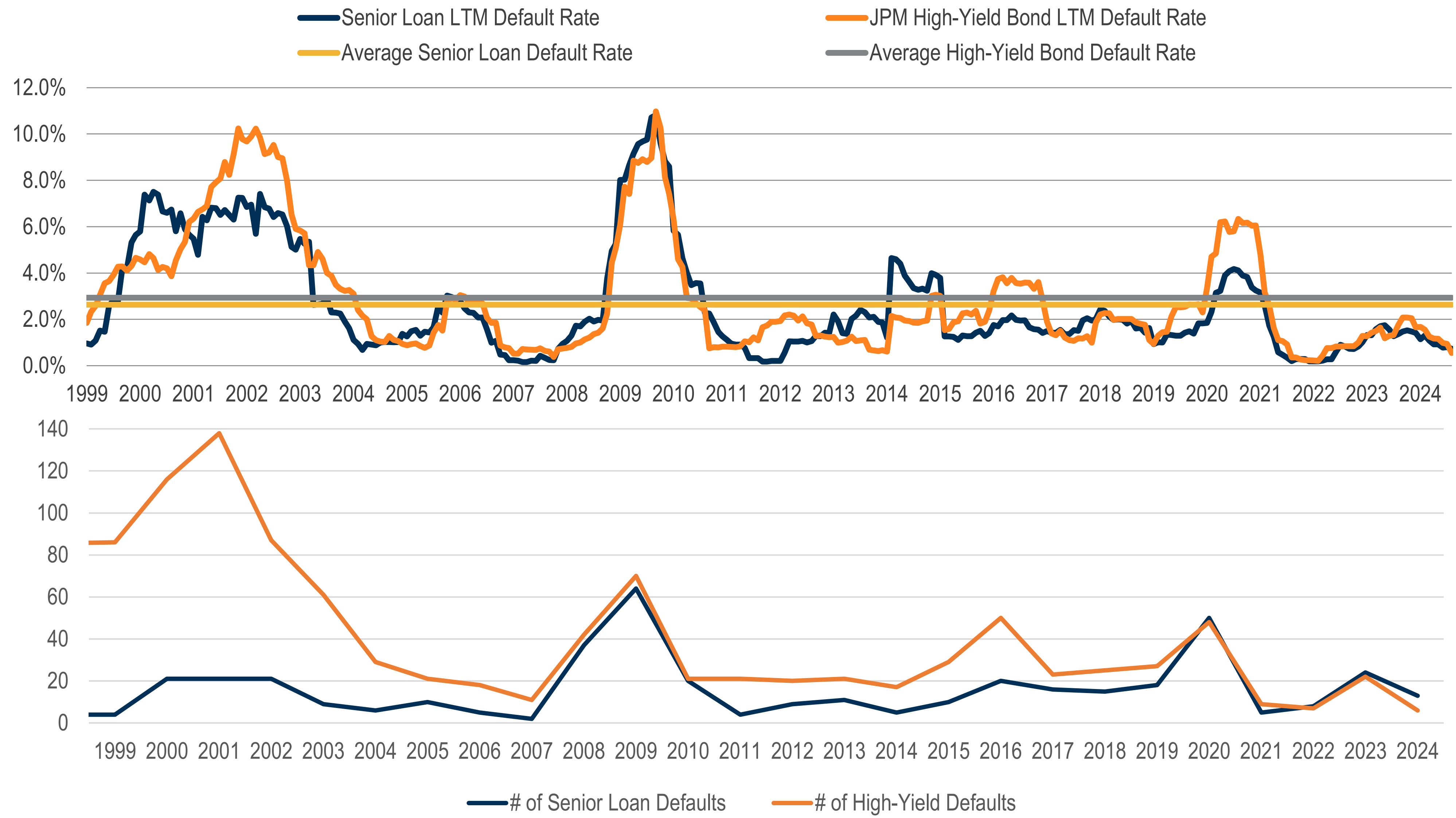


Source: Bloomberg, Standard & Poor's Leveraged Loan Commentary and Data. **Past performance is no guarantee of future results**. High-yield bonds are represented by the ICE BofA U.S. High-Yield Constrained Index (HUC0). Senior loans are represented by the Morningstar® LSTA® US Leveraged Loan Index (LLI). See Index Definitions.

SENIOR LOAN AND HIGH-YIELD BOND DEFAULT RATE

March 31, 1999 – October 31, 2024

FIXED INCOME OPPORTUNITY SET

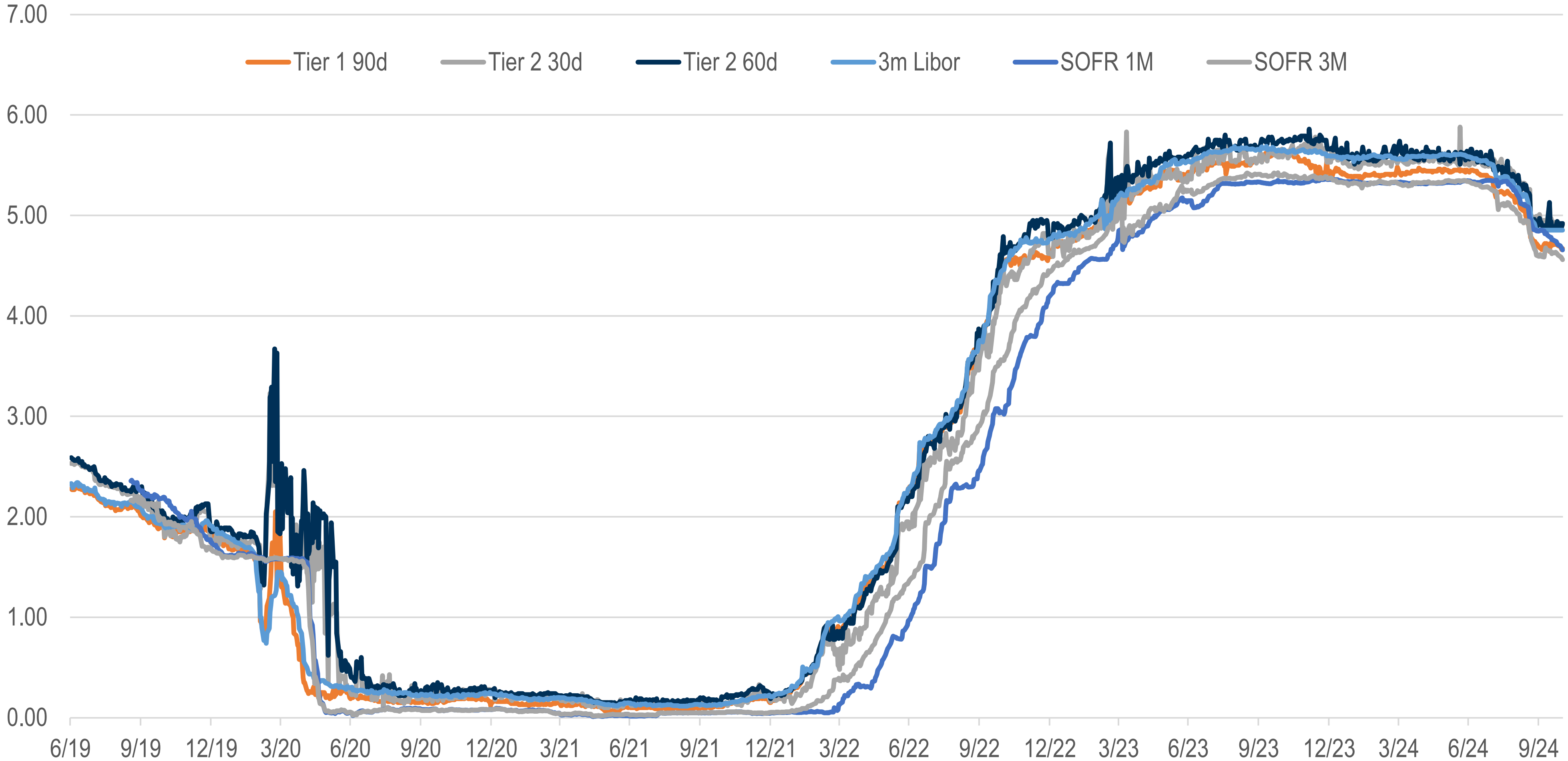


Source: Standard & Poor's LCD and JP Morgan high-yield research. **Past performance is no guarantee of future results.** High-yield bonds are represented by J.P. Morgan's high-yield bond universe based on the last twelve months (LTM). Senior loans are represented by the Morningstar® LSTA® US Leveraged Loan Index (LLI) and based on the LTM. See Index Definitions.

MONEY MARKET RATES

June 30, 2019 – October 31, 2024

FIXED INCOME OPPORTUNITY SET



Source: Bloomberg. **Past performance is no guarantee of future results.** Tier 1 90d - U.S. Commercial Paper Placed Top 90 Day Yield (DCPB090Y Index), Tier 2 30d - U.S. Commercial Paper Dealer Placed Second 30 Day Yield (DCPD030Y Index), Tier 2 60d- U.S. Commercial Paper Dealer Placed Second 60 Day Yield (DCPD060Y Index), 3m Libor- ICE LIBOR USD 3 Month (US0003M Index), 1m SOFR- CME Term SOFR 1 Month (TSFR1M Index), 3m SOFR- CME Term SOFR 3 Month (TSFR3M Index). For illustrative purposes only.

FIXED INCOME ASSET CLASS RETURNS (%)

2001 – October 31, 2024

First Trust

FIXED INCOME OPPORTUNITY SET

2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Oct. '24
12.16	19.59	28.97	11.13	6.50	11.85	10.57	24.03	58.21	15.12	29.93	15.81	7.44	25.07	7.58	17.13	12.21	1.41	23.26	18.10	5.40	-1.06	13.44	9.18
9.84	16.79	14.78	10.33	5.69	8.10	9.81	11.35	44.87	13.66	17.13	13.59	6.15	16.39	3.30	10.22	10.58	1.40	17.71	13.32	5.28	-4.11	13.04	7.51
9.77	11.92	11.01	9.38	3.76	7.33	8.83	10.23	20.07	10.69	10.70	12.73	0.30	15.44	1.39	9.88	8.53	1.28	15.11	9.50	2.24	-7.77	10.73	7.42
8.22	10.14	10.43	7.70	3.51	6.44	7.41	7.87	16.80	9.97	7.90	9.43	-0.17	9.05	1.18	3.68	7.50	1.14	14.32	7.47	1.52	-8.53	10.21	4.08
8.16	9.60	9.43	5.60	3.20	4.84	6.98	7.62	15.93	9.38	6.57	8.10	-1.34	5.97	0.90	2.32	7.29	1.02	10.14	7.11	-0.57	-9.40	7.29	3.33
8.15	9.28	6.91	5.11	2.74	4.61	5.60	-2.47	12.91	7.76	6.33	6.78	-2.12	4.16	0.41	1.65	5.45	0.01	8.17	6.95	-1.00	-10.77	6.40	2.48
5.28	8.69	5.31	4.48	1.56	4.49	3.60	-2.76	5.37	6.67	5.37	3.56	-2.55	2.57	-0.38	1.56	4.25	-0.38	7.54	5.77	-1.18	-11.19	5.40	1.18
5.13	7.66	2.85	4.35	1.42	3.71	3.36	-3.92	2.63	5.90	4.98	2.42	-3.65	2.45	-1.21	1.33	3.67	-1.84	5.86	5.21	-1.46	-14.60	4.28	0.81
4.21	6.46	2.48	4.08	1.36	3.51	1.88	-25.24	1.29	5.29	4.11	1.83	-4.30	2.06	-3.29	1.06	1.86	-2.08	5.59	3.68	-1.72	-17.47	4.18	0.16
2.65	1.12	2.20	2.02	0.96	3.47	1.87	-26.16	-1.41	2.38	1.82	1.71	-6.62	0.66	-4.47	0.64	1.14	-4.34	5.22	3.07	-4.37	-25.29	3.65	-1.41
-1.37	-1.41	2.11	0.89	-6.66	1.85	-11.31	-28.75	-12.92	2.35	1.53	0.31	-12.66	-0.79	-4.56	0.25	0.25	-6.76	3.31	2.78	-6.60	-31.09	2.66	-3.92

Floating Rate · Global Treasury · GNMA · High Yield · Intermediate Corporate · Intermediate Treasury · Long Corporate · Long Treasury · Municipal · Preferred · Short Treasury

Source: Bloomberg**. Past performance is no guarantee of future results.** An index does not charge management fees or brokerage expenses, and no such fees or expenses were deducted from the performance shown. The asset classes shown here offer different characteristics in terms of income, tax treatment, capital appreciation and risk. High-yield securities, or "junk" bonds, are subject to greater market fluctuations and risk of loss than securities with higher ratings, and therefore, may be highly speculative. Fixed rate investment grade (IG) bonds are subject to fluctuations due to higher interest rates, economic recession, deterioration of the bond market or investors' perception thereof, possible downgrades and defaults of interest and/or principal. Diversification does not guarantee a profit or protect against loss. Asset classes are represented by the following indices: **High Yield** - Bloomberg U.S. Corporate High-Yield Bond Index. **Intermediate Corporate** - Bloomberg U.S. Intermediate Credit Index. **Municipal** - Bloomberg U.S. Municipal Index. **Long Corporate** - Bloomberg U.S. Long Credit Index. **Intermediate Treasury** - Bloomberg U.S. Intermediate Treasury Index. **Long Treasury** - Bloomberg U.S. Long Treasury Index. **Global Treasury** - Bloomberg Global Treasury Index. **Floating Rate** - Credit Suisse Leveraged Loan Index **GNMA** - Bloomberg GNMA Index. **Short Treasury** - Bloomberg 2-Yr U.S. Treasury Bellwethers Index. **Preferred** - ICE BofA Fixed Rate Preferred Securities Index. See Index Definitions.

ASSET CLASS CORRELATION

October 31, 2014 – October 31, 2024

First Trust

FIXED INCOME OPPORTUNITY SET

	Equities	Core Bonds	Senior Loans	High-Yield Bonds	Preferreds	EM	U.S. Convertibles	U.S. MBS	Municipals	IG Corporates	Government Bonds	MLPs	Commodities	Ann. Volatility
Equities	1.00													15.20
Core Bonds	0.37	1.00												4.98
Senior Loans	0.60	0.15	1.00											5.43
High-Yield Bonds	0.80	0.48	0.80	1.00										7.64
Preferreds	0.67	0.65	0.54	0.75	1.00									7.87
EM	0.66	0.69	0.63	0.83	0.74	1.00								8.72
U.S. Convertibles	0.86	0.36	0.71	0.81	0.64	0.67	1.00							12.62
U.S. MBS	0.36	0.94	0.06	0.42	0.62	0.61	0.31	1.00						4.91
Municipals	0.39	0.85	0.28	0.55	0.66	0.76	0.38	0.81	1.00					5.14
IG Corporates	0.57	0.90	0.51	0.73	0.78	0.86	0.59	0.78	0.83	1.00				6.71
Government Bonds	0.12	0.94	-0.13	0.21	0.44	0.46	0.11	0.88	0.74	0.72	1.00			4.80
MLPs	0.64	0.07	0.72	0.68	0.47	0.45	0.63	0.02	0.12	0.38	-0.17	1.00		30.57
Commodities	0.40	-0.07	0.50	0.50	0.19	0.32	0.41	-0.05	0.03	0.11	-0.25	0.53	1.00	14.04

Source: Morningstar. **Past performance is no guarantee of future results.** Annual (Ann) Volatility is based on standard deviation which is a measure of price variability (risk). Equities are represented by the S&P 500 Index. Core Bonds are represented by the Bloomberg U.S. Aggregate Bond Index. Senior Loans are represented by the Morningstar® LSTA® US Leveraged Loan Index. High-Yield Bonds are represented by the ICE BofA U.S. High Yield Constrained Index. Preferreds are represented by the ICE BofA Fixed Rate Preferred Securities Index. EM is represented by the ICE BofA U.S. Emerging Markets External Sovereign Index. U.S. Convertibles are represented by the ICE BofA U.S. Convertible Index. U.S. MBS is represented by the ICE BofA U.S. Mortgage Backed Securities Index. Municipals are represented by the Bloomberg U.S. Municipal Index. IG Corporates are represented by the ICE BofA U.S. Investment Grade Corporate Index. Government Bonds are represented by the Bloomberg US Government Index. MLPs are represented by the Alerian MLP Index. Commodities are represented by the Bloomberg Commodity Index. See Index Definitions.

DEFINITIONS

Bloomberg Commodity Index (BCOM) - A highly liquid and diversified benchmark for commodity investments including but not limited to energy, grains, industrial metals, precious metals, softs and livestock.

Bloomberg GNMA Index - Consists of 30-yr and 15-yr pass-through GNMAs and GNMA Graduated Payment Mortgages.

Bloomberg Global Aggregate Index - Measures the global investment grade debt from 24 local currency markets which includes treasury, government-related, corporate and securitized fixed-rate bonds from both developed and emerging market issuers.

Bloomberg Global Treasury Index - Tracks fixed-rate, local currency government debt of IG countries, including both developed and emerging markets.

Bloomberg High Yield Municipal Bond Index - Measures the performance of U.S. dollar-denominated high-yield municipal bonds.

Bloomberg Municipal Bond Index - Tracks the performance of the tax-exempt bond market.

Bloomberg Muni High Yield Index – A flagship measure of the non-investment grade and non-rated USD-denominated tax exempt bond market.

Bloomberg U.S. Aggregate Bond Index - Measures the investment grade, U.S. dollar-denominated, fixed-rate taxable bond market, including Treasuries, government-related and corporate securities, MBS, ABS and CMBS.

Bloomberg U.S. Corporate Bond Index - Measures the investment grade, 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.

Bloomberg U.S. Corporate High Yield Index - Measures the USD-denominated, high yield, fixed-rate corporate bond market.

Bloomberg U.S. Corporate Investment Grade Index - Tracks publicly issued, SEC-registered, U.S. corporate and specified foreign debentures and secured notes that have a maturity greater than one year, at least $250 M outstanding par balance, and rated Baa3/BBB- or higher.

Bloomberg U.S. Government Index - Consists of securities issued by the U.S. Government.

Bloomberg U.S. Intermediate Credit Index - Measures the Investment Grade (IG), U.S. dollar (USD)-denominated, fixed-rate, taxable corporate and gov't-related bond markets with a maturity greater than 1 yr. and less than 10 yrs.

Bloomberg U.S. Intermediate Treasury Index - Consists of public obligations of the U.S. Treasury with maturities from 1 and up to 10 yrs.

Bloomberg U.S. Long Credit Index - Measures the IG, USD-denominated, fixed-rate, taxable corporate and gov't-related bond markets with 10 or more years to maturity.

Bloomberg U.S. Long Treasury Index - Consists of public obligations of the U.S. Treasury with 10 or more years to maturity.

Bloomberg U.S. MBS Index - Tracks agency mortgage backed pass-through securities (both fixed-rate and hybrid ARM) guaranteed by Ginnie Mae, Fannie Mae, and Freddie Mac.

Bloomberg U.S. Municipal Index - Covers the USD-denominated long-term tax exempt bond market.

Bloomberg U.S. Treasury Index - Measures U.S. dollar-denominated, fixed-rate, nominal debt issued by the U.S. Treasury.

Bloomberg US Treasury Inflation-Linked Bond Index - Measures the performance of the US Treasury Inflation Protected Securities (TIPS) market.

Bloomberg 2-Yr U.S. Treasury Bellwethers Index - Consists of U.S. Treasury bonds with an average maturity of 2 years.

Credit Suisse Leveraged Loan Index - Tracks the investable market of the USD-denominated leveraged loan market. All loans are funded term loans with a maturity of at least 1 year and are made by issuers domiciled in developed.

Dow Jones Industrial Average® (The Dow®) - A price-weighted measure of 30 U.S. blue-chip companies. The index covers all industries except transportation and utilities.

Economic Surprise Index - Measures data surprises relative to market expectations and has historically exhibited a positive correlation with 10-Year U.S. Treasury Yields.

DEFINITIONS

ICE BofA AAA-A US Fixed Rate CMBS Index - Tracks the performance of fixed rate commercial mortgage backed securities (CMBS) that are publicly issued in the U.S.

ICE BofA Current 2-Year U.S. Treasury Index - A one-security index comprised of the most recently issued 2-year U.S. Treasury note.

ICE BofA Current 5-Year U.S. Treasury Index - A one-security index comprised of the most recently issued 5-year U.S. Treasury note.

ICE BofA Current 10-Year U.S. Treasury Index - A one-security index comprised of the most recently issued 10-year U.S. Treasury note.

ICE BofA Current 30-Year U.S. Treasury Index - A one-security index comprised of the most recently issued 30-year U.S. Treasury note.

ICE BofA Fixed Rate Preferred Securities Index (POP1) - Tracks the performance of fixed rate USD-denominated preferred securities issued in the domestic market.

ICE BofA MOVE Index - A yield curve weighted index of the normalized implied volatility on 1-month Treasury options. It is the weighted average of volatilities on the CT2, CT5, CT10, and CT30 (weighted average of 1m2y, 1m5y, 1m10y, 1m30y Treasury implied vols with weights 0.2/0.2/0.4/0.2, respectively).

ICE BofA U.S. Convertible Index - Tracks the performance of publicly issued U.S. dollar denominated convertible securities of U.S. companies.

ICE BofA U.S. Corporate Index - Tracks the performance of U.S. dollar denominated investment grade (BBB/Baa-rated or better) corporate debt publicly issued in the U.S. domestic market.

ICE BofA U.S. Emerging Markets External Sovereign Index - Tracks the performance of U.S. dollar emerging markets sovereign debt publicly issued in the U.S. and Eurobond markets.

ICE BofA U.S. High Yield Constrained Index - Tracks the performance of U.S. dollar denominated below investment grade corporate debt publicly issued in the U.S. domestic market but caps issuer exposure at 2%.

ICE BofA U.S. Investment Grade Institutional Capital Securities Index (CIPS) - Tracks the performance of U.S. dollar denominated investment grade hybrid capital corporate and preferred securities publicly issued in the U.S. domestic market.

ICE BofA U.S. Mortgage Backed Securities Index - Tracks the performance of U.S. dollar denominated fixed rate and hybrid residential mortgage pass-through securities publicly issued by U.S. agencies in the U.S. domestic market.

ICE BofA U.S. Municipal Securities Index - Tracks the performance of U.S. dollar denominated investment grade tax-exempt debt publicly issued by U.S. states and territories, and their political subdivisions, in the U.S. domestic market.

ICE BofA U.S. Treasury & Agency Index - Tracks the performance of U.S. dollar denominated U.S. Treasury and non-subordinated U.S. agency debt issued in the U.S. domestic market.

ICE LIBOR - A benchmark designed to produce an average rate that is representative of the rates at which large, leading, internationally active banks with access to the wholesale, unsecured funding market could fund themselves in the market in particular currencies for certain tenors.

J.P. Morgan's High-yield Bond Universe - Consists of fixed income securities of domestic and foreign issuers with a maximum credit rating of BB+ or Ba1.

Morningstar® LSTA® US Leveraged Loan Index - The Index, formerly the S&P/LSTA Leveraged Loan Index, is a leveraged loan index which covers the U.S. Loan market. The Index reflects the market-weighted performance of institutional leveraged loans in the U.S. loan market based upon real-time market weightings, spreads and interest payments.

Option Adjusted Spread (OAS) - The difference between the yield of a fixed income security and a US Treasury security of similar tenor.

S&P 500 Index - An unmanaged index of 500 companies used to measure large-cap U.S. stock market performance.

Secured Overnight Financing Rate (SOFR) - Is a broad measure of the cost of borrowing cash overnight collateralized by Treasury securities.

U.S. Dollar Index (DXY) - Indicates the general international value of the U.S. Dollar (USD). The index calculates this by averaging the exchange rates between the USD and major world currencies.

Indices are unmanaged and investors cannot invest directly in an index.

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