

nuveen

A TIAA Company

Municipal market update

December 2025

As of 30 November 2025

NOT FDIC INSURED | NO BANK GUARANTEE | MAY LOSE VALUE
OPINION PIECE. PLEASE SEE IMPORTANT DISCLOSURES IN THE ENDNOTES.

Municipal market themes: what to know



Economy



Municipals

WHAT WE'RE WATCHING

OUR LATEST THINKING

Inflation	<i>Will not reach Fed's target</i>	Tariff-induced inflation, while modest so far, could present challenges to bring inflation down to the Fed's target.
Policy	<i>Rate cuts underway</i>	The Fed cut rates 75 bps total in 2025 and has signaled its intention for potential further easing as we enter 2026.
Economic growth	<i>OBBBA and federal policy impacts</i>	Recent labor softness has challenged a surprisingly resilient economy. OBBBA provides some certainty around policy.
Interest rates	<i>Higher-for-longer yields (for now)</i>	Recent economic softness could push longer rates lower, although worries about budgets could push rates higher. The result has been a range bound rate environment.
Credit fundamentals	<i>Credit resiliency</i>	States and cities have strong revenue collections and reserves. Municipal defaults are expected to remain low, rare and idiosyncratic.
Supply and demand	<i>Heavy supply, episodic demand</i>	While supply has recently moderated, we anticipate supply will exceed \$550 billion by year-end. Flows into funds and ETFs has recently accelerated.
Valuations	<i>Elevated income and attractive yields</i>	Despite a recent rally, municipals remain cheap to the broader fixed income market.

Source: Nuveen as of 30 Nov 2025. Certain statements may be deemed forward-looking statements. Please note that any such statements are not guarantees or intended to constitute a prediction of any future performance; actual results or developments may differ materially from those projected.

OPINION PIECE. PLEASE SEE IMPORTANT DISCLOSURES IN THE ENDNOTES.

Embracing challenge to create opportunity

The municipal bond market is at a compelling inflection point, presenting strategic opportunity for forward-thinking investors.

Muni performance set to improve once flows return

- Flows have historically been correlated with performance, and there is reason for optimism for inflows:
 - **\$172 billion outflows in 2022 & 2023**
 - **\$29 billion inflows in 2024**
 - **\$21 billion inflows in 2025 YTD**

Longer duration is starting to come back

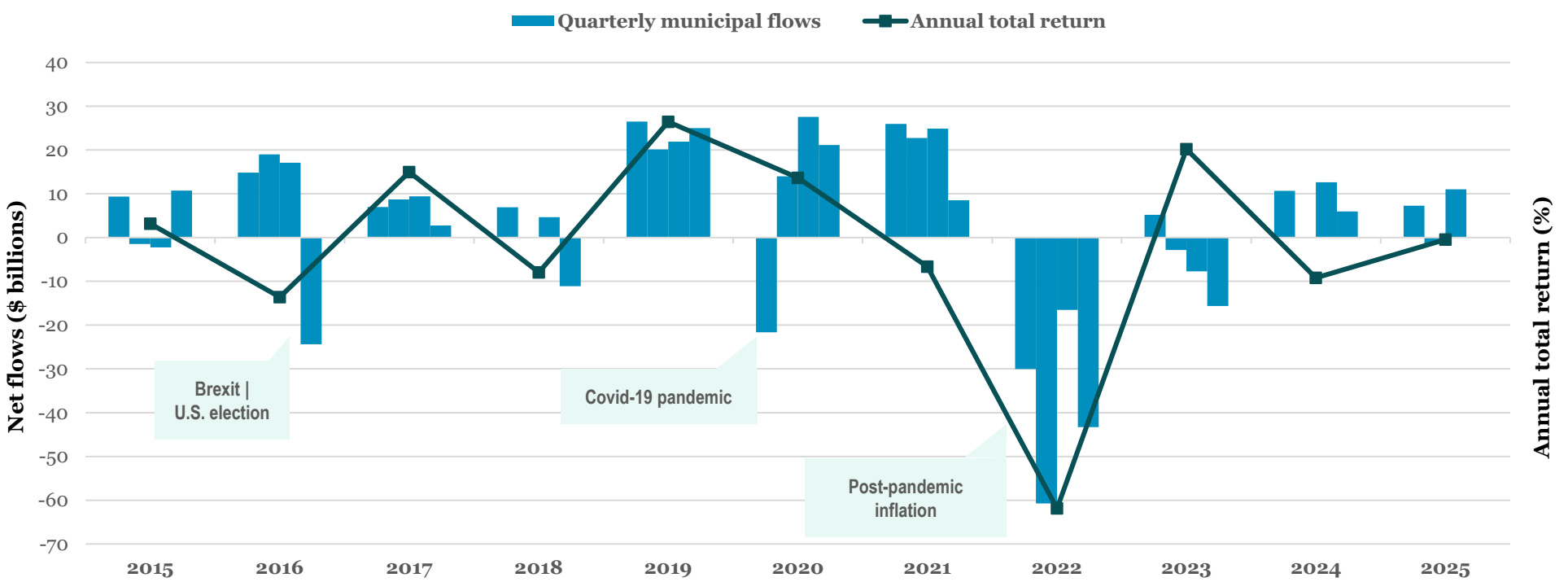
- The municipal yield curve's steep **172-basis-point spread** between 2- and 30-year bonds creates opportunities to lock in attractive yields, with the municipal curve being 2x the steepness of the UST curve.

Credit fundamentals remain strong, state and local reserves still high

- Municipal fundamentals remain strong with **no signs of credit deterioration**, as state and local governments **maintain historically strong reserves** and healthy tax collections.

OPINION PIECE. PLEASE SEE IMPORTANT DISCLOSURES IN THE ENDNOTES.

Municipal mutual fund flows have been strongly correlated with performance



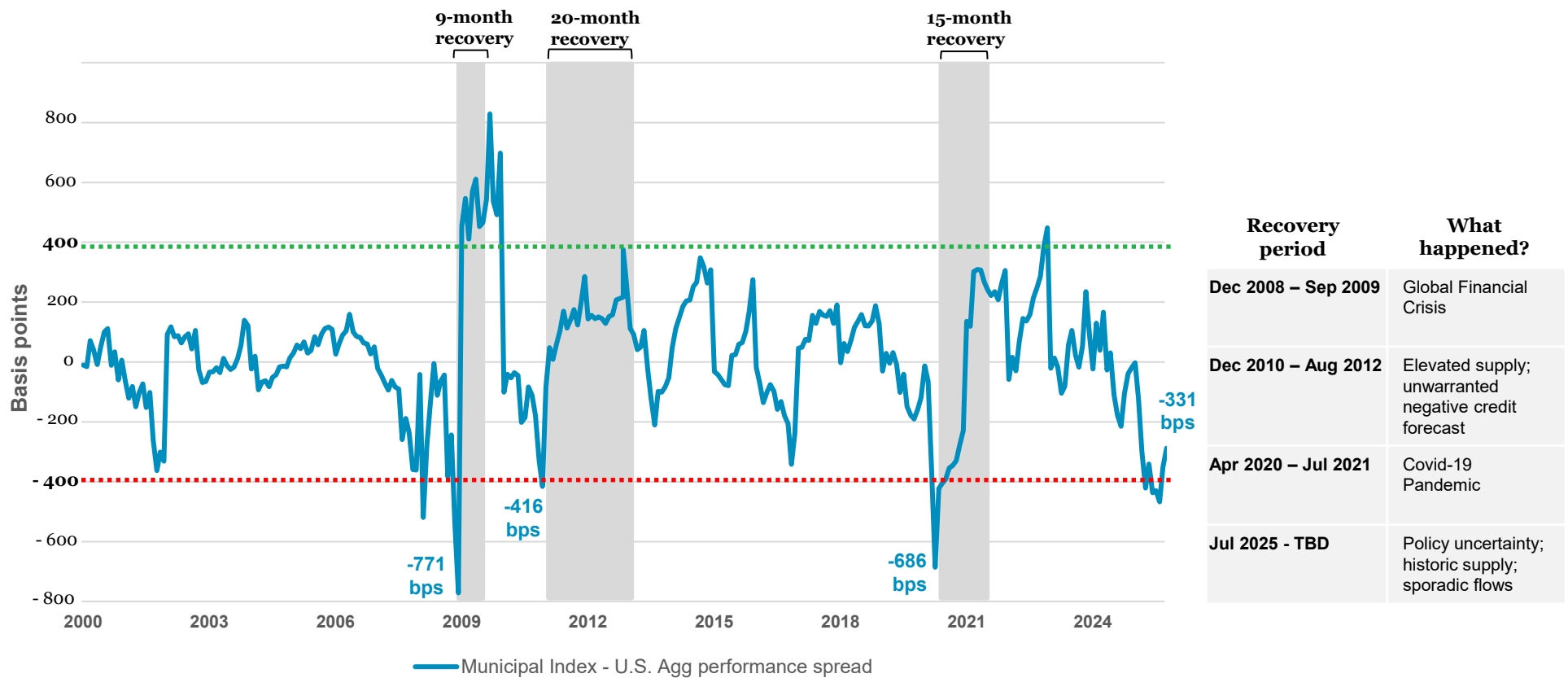
After massive outflows of \$151 billion in 2022 drove returns to -8.5%, the market has recovered with \$50 billion in combined inflows during 2024 and 2025 YTD, supporting improved performance.

Data source: Morningstar Direct, 01 Jan 2015 – 30 Sep 2025, fund flows shown quarterly and performance shown annually. Performance data shown represents past performance and does not predict or guarantee future results. Representative index: Bloomberg Municipal Bond Index. Municipals represent the total of all municipal bond open-end funds, including high yield, but excluding exchange-traded funds. Shading represents significant market events.

OPINION PIECE. PLEASE SEE IMPORTANT DISCLOSURES IN THE ENDNOTES.

Municipal underperformance has been notable, but a reversion to the mean could be starting

Over the last 25 years, when the performance spread for municipals vs. US Agg has fallen below -400 bps, municipals have recovered to 375+ bps.



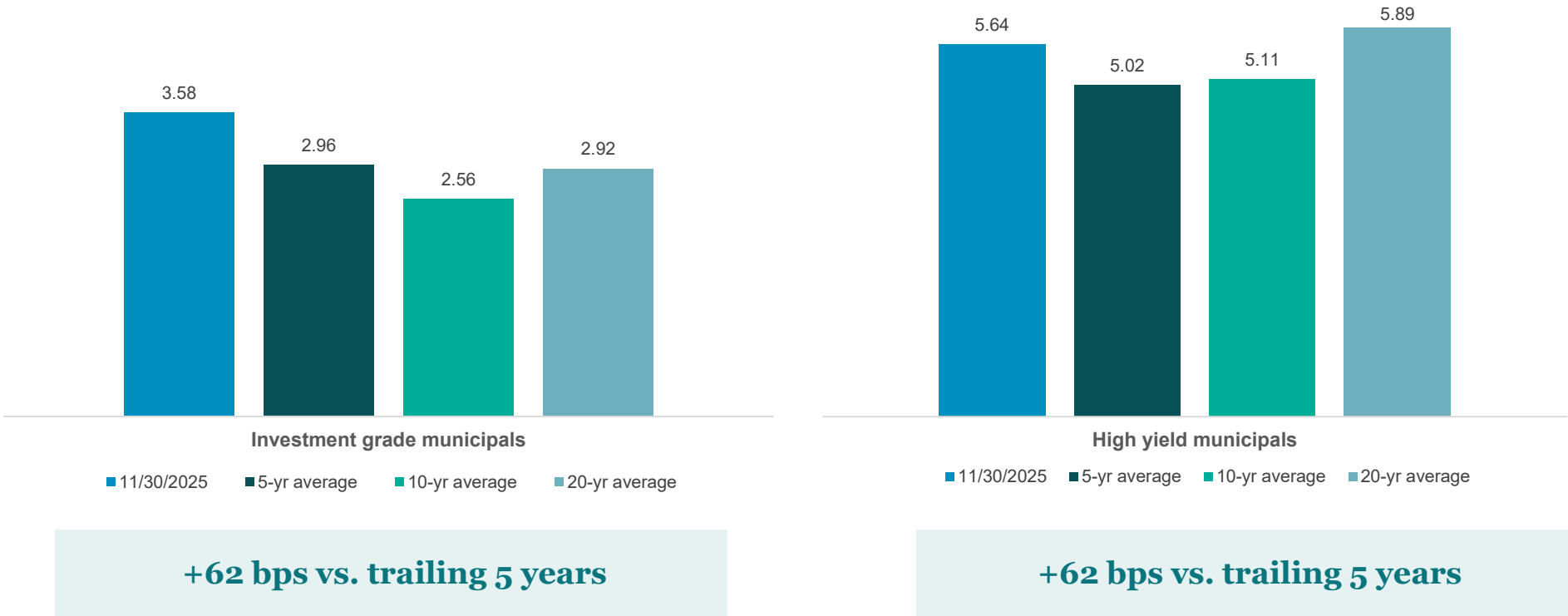
Data sources: Bloomberg, L.P., Refinitiv MMD, 31 Jan 2000 – 30 Nov 2025, shown monthly. Performance data shown represents past performance and does not predict or guarantee future results. The chart shows the performance of the Bloomberg Municipal Index vs Bloomberg U.S. Aggregate Index. Municipal bond performance represented by the Bloomberg Municipal Bond Index; U.S. Aggregate performance represented by Bloomberg U.S. Aggregate Index. Periods of municipal underperformance with -400 bps were identified, and the corresponding number of months to recovery were tracked, as shown by the shaded periods: 31 Dec 2008 – 30 Sep 2009, 31 Dec 2010 – 31 Aug 2012, and 30 Apr 2020 – 31 Jul 2021. Different benchmarks, economic periods, methodologies and market conditions will produce different results.

OPINION PIECE. PLEASE SEE IMPORTANT DISCLOSURES IN THE ENDNOTES.

Starting yield levels are elevated across investment grade and high yield municipals

Current municipal yields are attractive compared to history.

Yield to worst (%)















Data source: Bloomberg, L.P., 30 Nov 2025. Performance data shown represents past performance and does not predict or guarantee future results. Yields are yield to worst. Yield to worst is the lowest potential yield that can be received on a bond without the issuer defaulting. Representative indexes: Investment grade municipals: Bloomberg Municipal Bond Index; High yield municipals: Bloomberg High Yield Municipal Bond Index.

OPINION PIECE. PLEASE SEE IMPORTANT DISCLOSURES IN THE ENDNOTES.

Muni sector scorecard

 Positive  Neutral  Negative

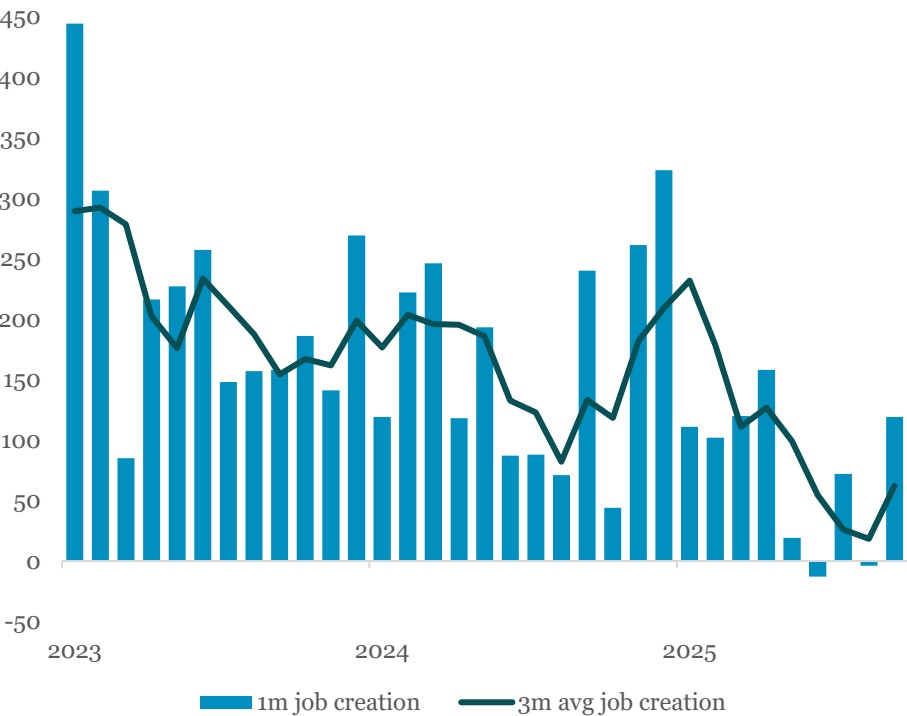
SECTOR	CREDIT FUNDAMENTALS	CREDIT MOMENTUM	KEY TAKEAWAY
State & local governments			Steady tax revenue growth and strong reserve periods provide cushion against possible economic slowdown and federal policy uncertainty.
Education			Pressure due to increased competition for students and affordability coupled with federal policy changes. Large universities will be able to navigate, smaller colleges likely to struggle.
Transportation			Airport cash balances are healthy and passenger demand remains well above pre-pandemic peak levels. Capital investment needed to expand capacity.
Housing			Need for affordable housing bolsters demand. Labor supply constraints due to immigration policy shifts may delay projects.
Water & sewer utilities			Essential service, monopolistic providers with robust liquidity will continue to require significant capital investment.
Health care			Elevated labor and supply costs are normalizing. Most hospitals will adapt to federal Medicaid policy changes coming in 2027. Smaller, rural hospitals may struggle.

Source: Nuveen as of 30 Nov 2025. Certain statements may be deemed forward-looking statements. Please note that any such statements are not guarantees or intended to constitute a prediction of any future performance; actual results or developments may differ materially from those projected.

OPINION PIECE. PLEASE SEE IMPORTANT DISCLOSURES IN THE ENDNOTES.

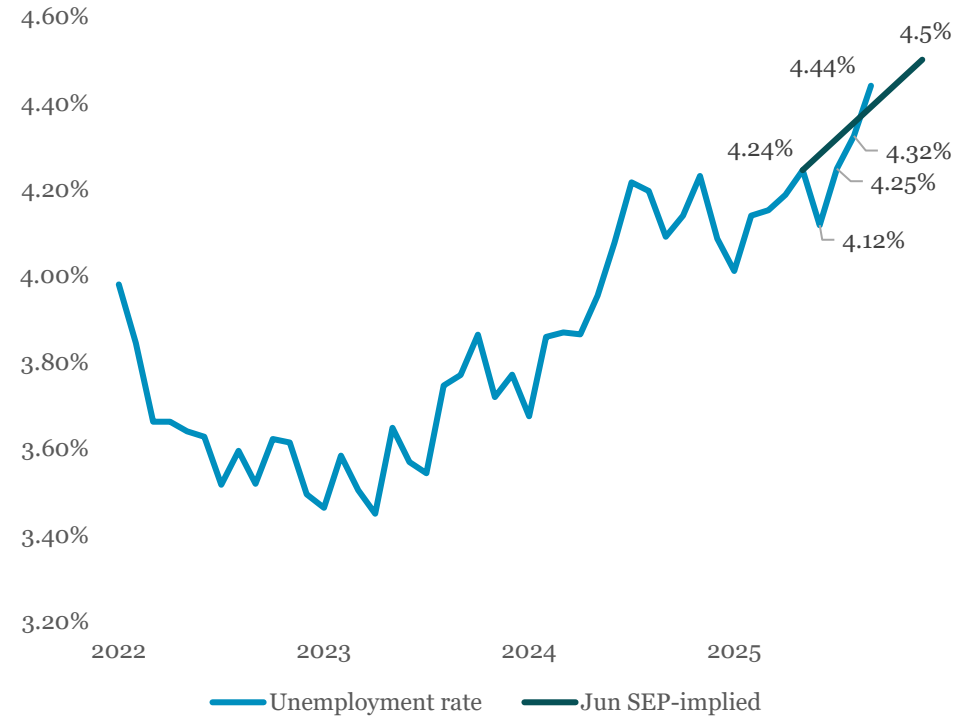
Job creation rebounded, but unemployment moved higher

Job creation rebounded in Sep after May-Aug soft patch



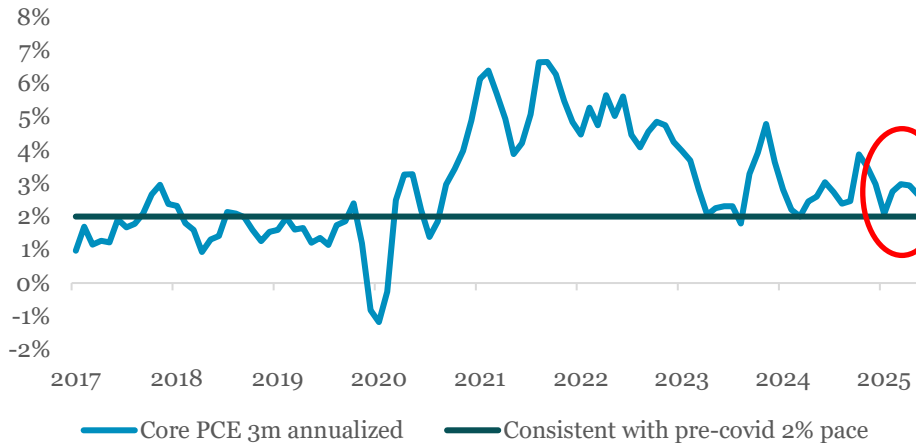
Source: Bloomberg, as of 31 Oct 2025.
OPINION PIECE. PLEASE SEE IMPORTANT DISCLOSURES IN THE ENDNOTES.

Unemployment is tracking “worse” than the Fed’s previous projections

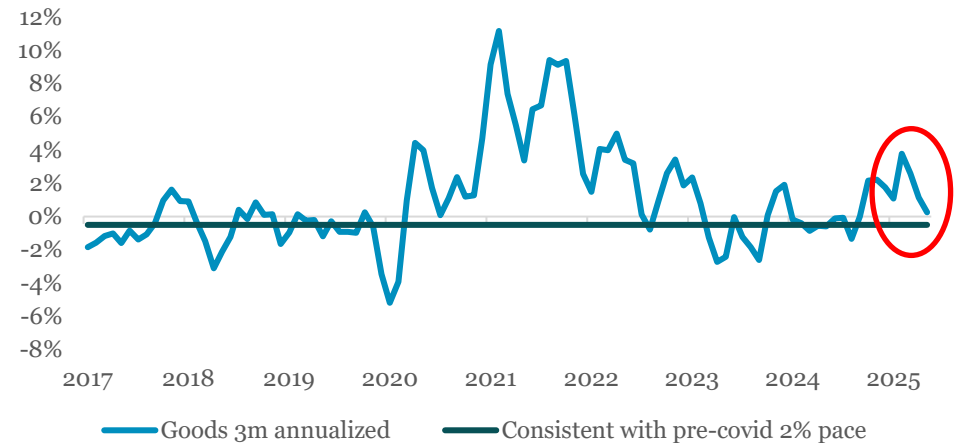


Core inflation has steadied on a three-month annualized basis, but tariff impact is starting to bite

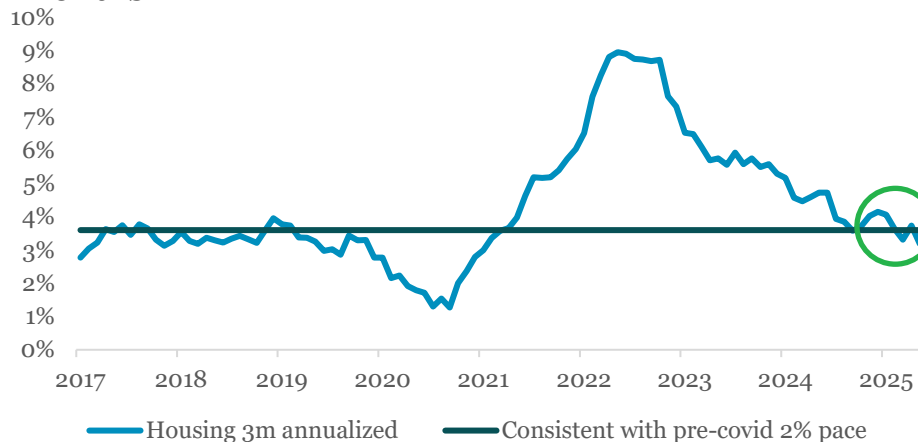
Core inflation has moderated from Q1, but **remains above target**



Goods inflation has **picked up** this year, increasingly reflecting the impact of tariffs



Housing inflation is **back to target** over last several months



Other core services are **slightly above target**



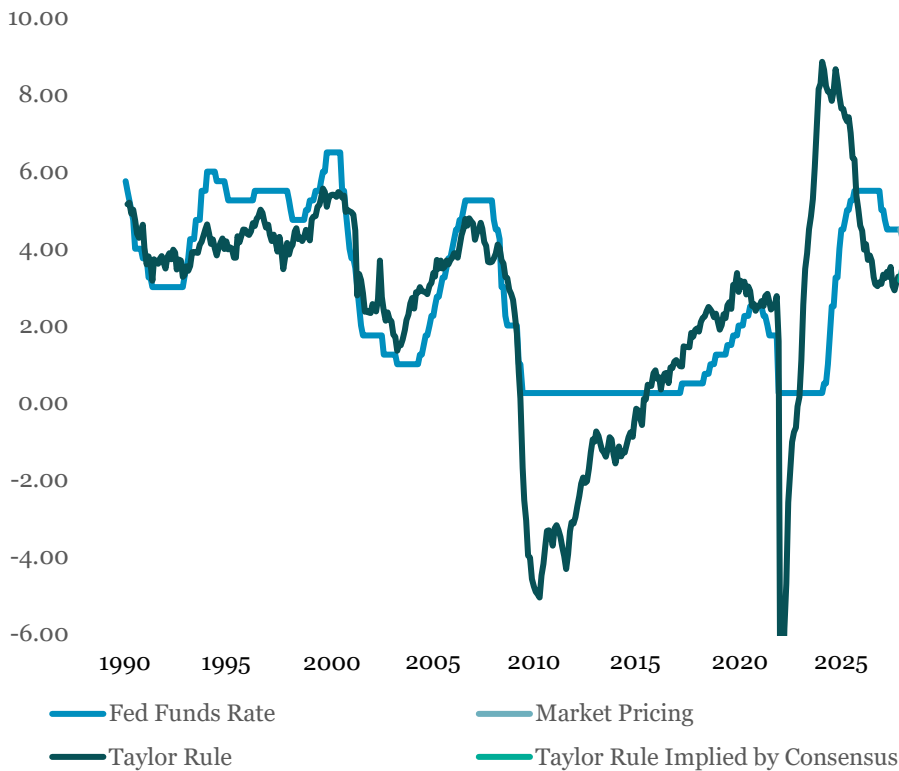
Sources: Bloomberg, BEA.

OPINION PIECE. PLEASE SEE IMPORTANT DISCLOSURES IN THE ENDNOTES.

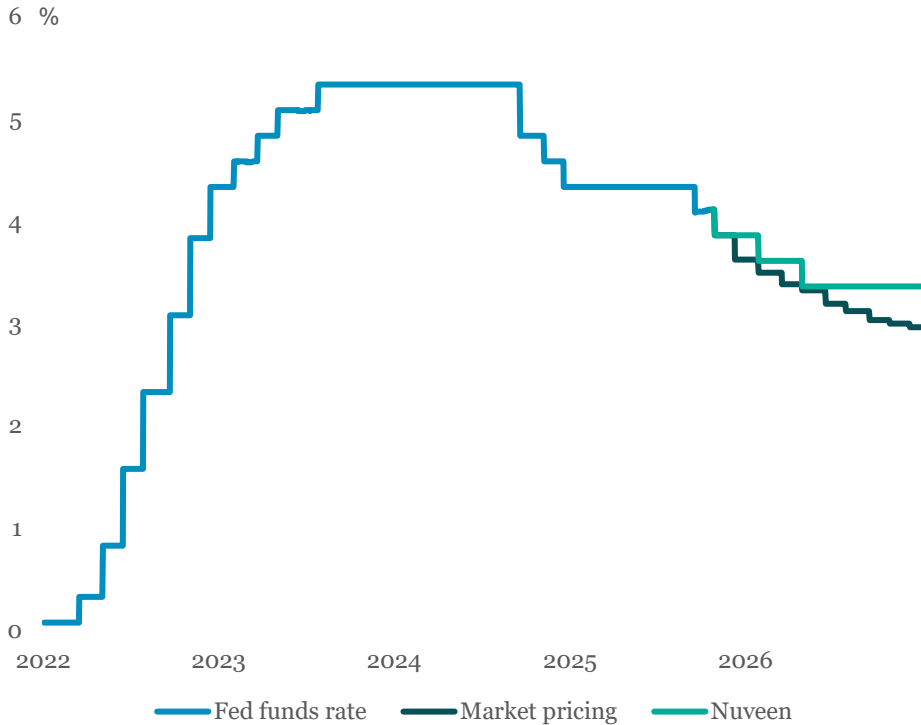
Fed Outlook: rate cuts started last fall, and are continuing at a slower pace this year

We expect two more 25bps rate cuts by Q2 2026.

Taylor Rule framework calls for 100bps of rate hikes this year, and more than 200bps of cuts in 2026



We anticipate a total of 50bps of rate cuts this year, followed by another 50bps in 2026



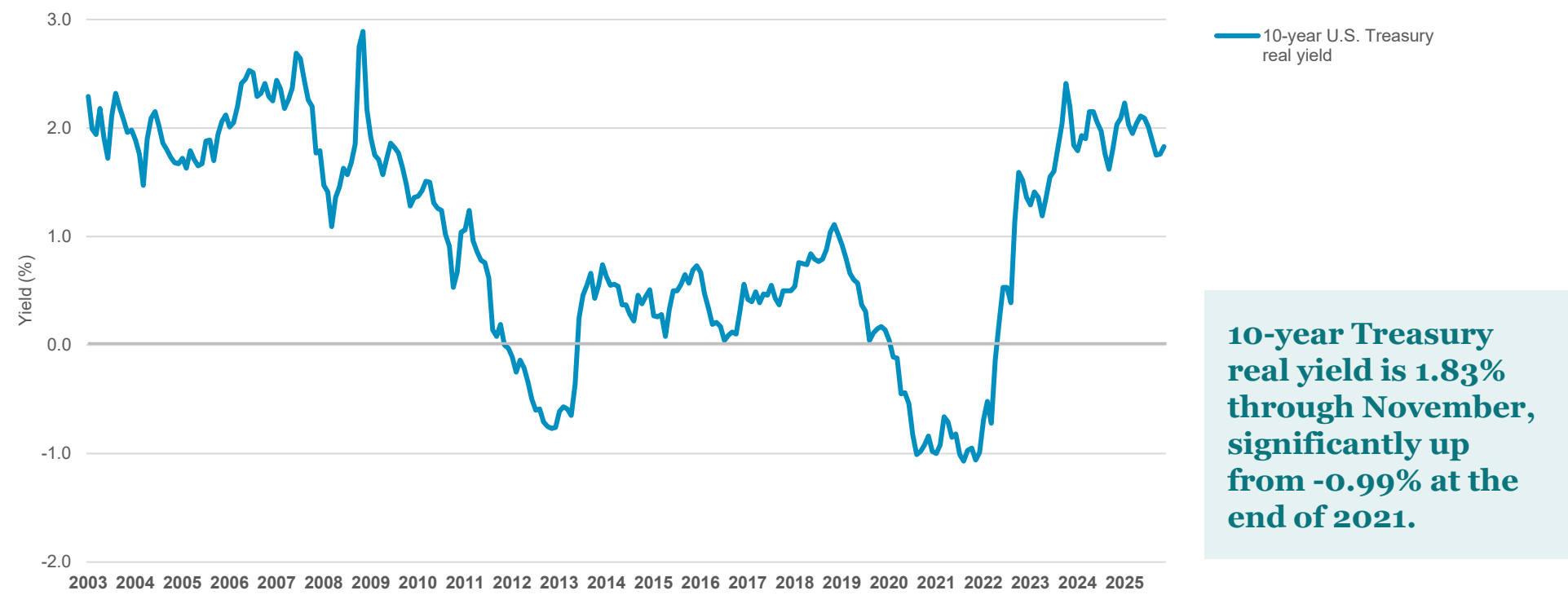
Source: Bloomberg, Federal Reserve, as of 31 Oct 2025.

OPINION PIECE. PLEASE SEE IMPORTANT DISCLOSURES IN THE ENDNOTES.

Real yield levels are outpacing inflation

Treasury yield minus inflation remains at levels not seen in nearly two decades.

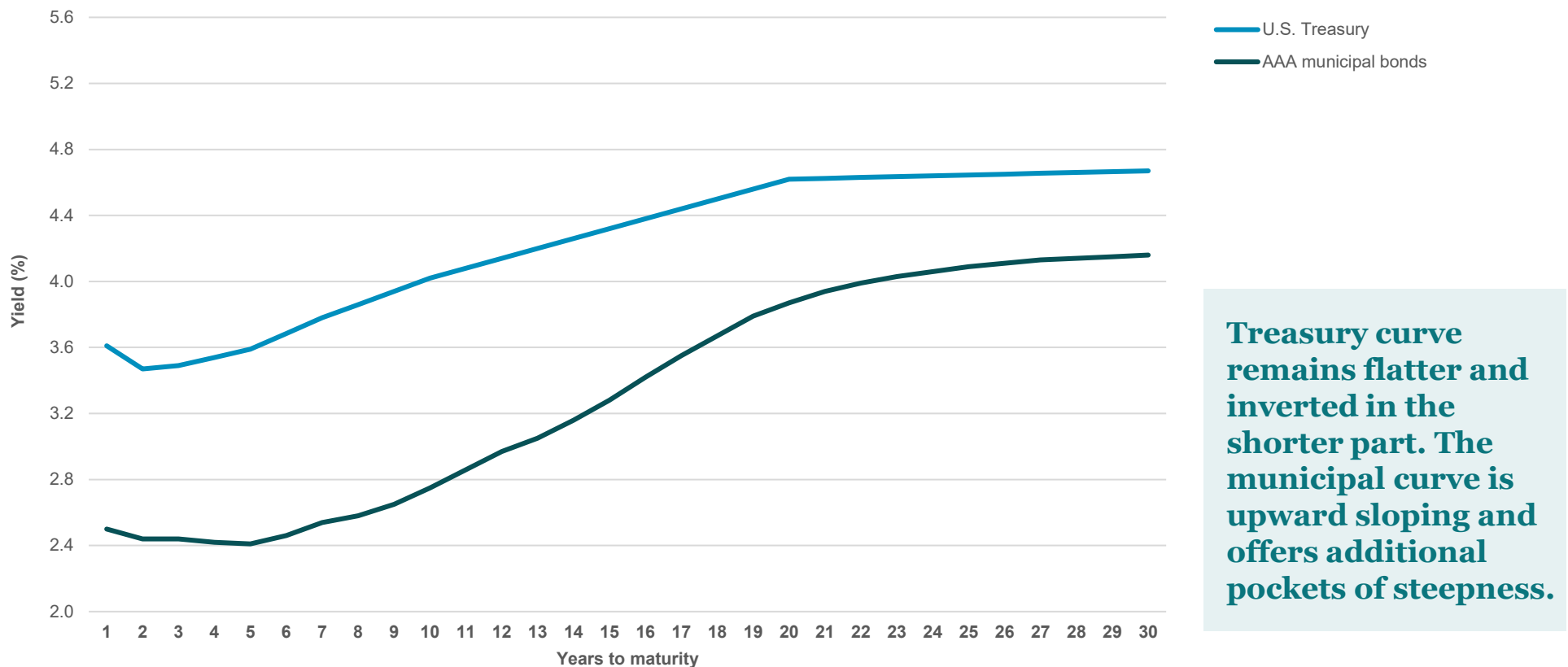
10-year U.S. Treasury real yield



Data source: FRED, 31 Jan 2003 – 30 Nov 2025, shown monthly. The real yield is a measure of the stated return on Treasury bonds, minus inflation, as of 30 Nov 2025.
OPINION PIECE. PLEASE SEE IMPORTANT DISCLOSURES IN THE ENDNOTES.

Municipal yield curve has more of a normal shape

U.S. Treasuries vs. AAA-rated G.O. municipal yield curve



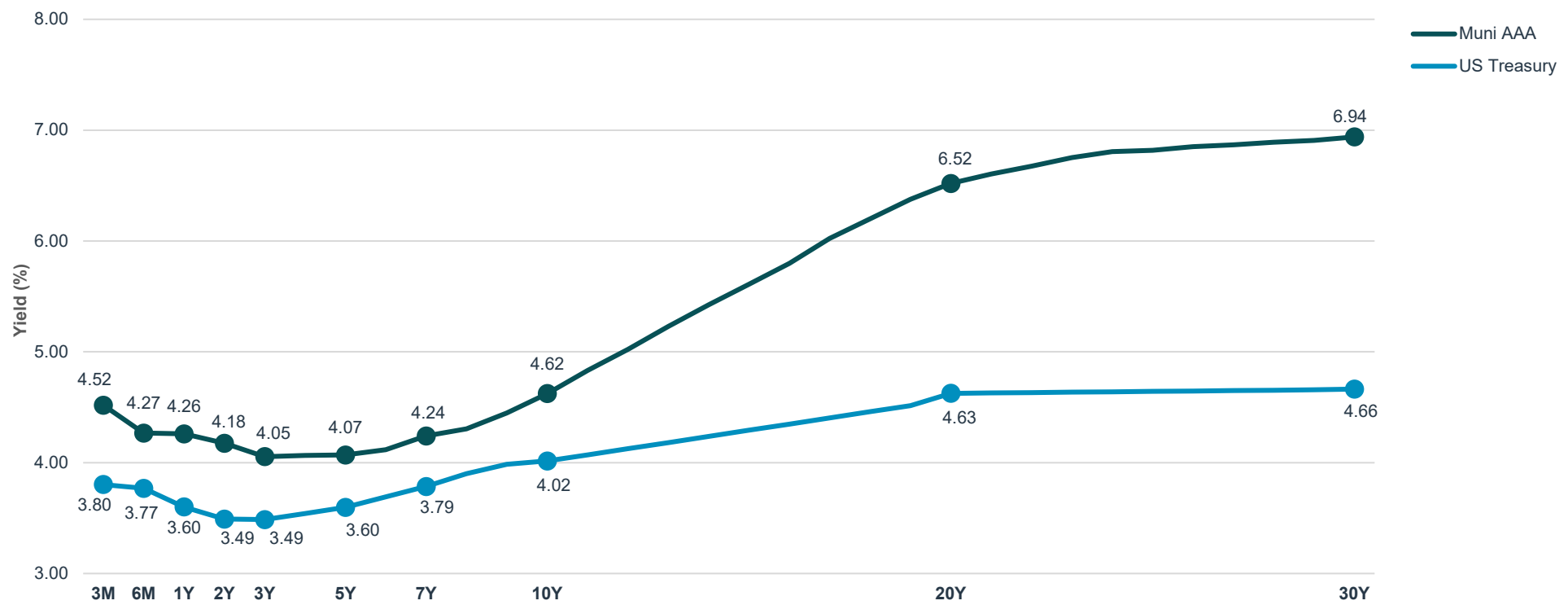
Data sources: U.S. Department of the Treasury; Refinitiv MMD, 30 Nov 2025. Performance data shown represents past performance and does not predict or guarantee future results. AAA municipals represented by Municipal Market Data (MMD) scale.

OPINION PIECE. PLEASE SEE IMPORTANT DISCLOSURES IN THE ENDNOTES.

Municipals remain attractive on an after-tax basis

The shape of the municipal curve offers meaningful opportunity to achieve higher tax-efficient yields by extending duration, as the curve has more of an upward slope.

U.S. Treasuries vs. AAA municipal yield curve (taxable equivalent yield)



Data source: Bloomberg; Nuveen Portfolio Strategy & Solutions, as of 30 Nov 2025. Taxable-equivalent yield (TEY) is the yield a taxable investment needs to possess (before taxes) for its yield to be equal to that of a tax-free municipal investment. The yields shown are based on the highest individual marginal federal tax rate of 37%, plus the 3.8% Medicare tax on investment income. Individual tax rates may vary. They do not take into account the effects of the federal alternative minimum tax (AMT) or capital gains taxes.

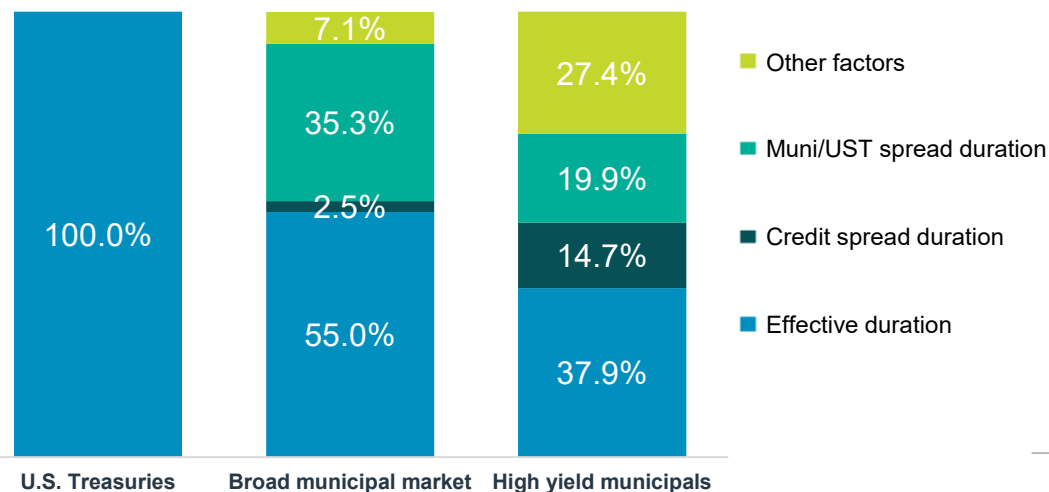
OPINION PIECE. PLEASE SEE IMPORTANT DISCLOSURES IN THE ENDNOTES.

Key factors in municipal bond returns

Municipal bonds react differently to market conditions when compared to U.S. Treasuries, while income drives overall returns.

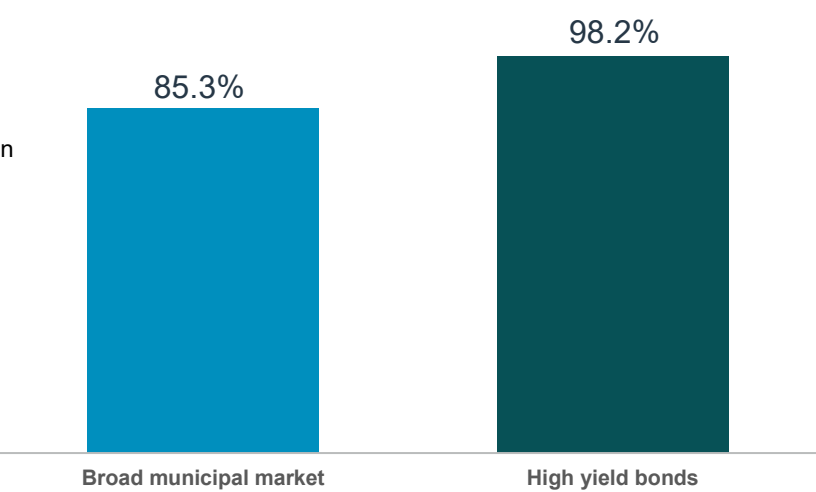
Drivers of risk¹

Municipal bonds tend to be influenced by duration and spreads, whereas high yield municipals are more driven by credit spreads



Income as a portion of total return (%)

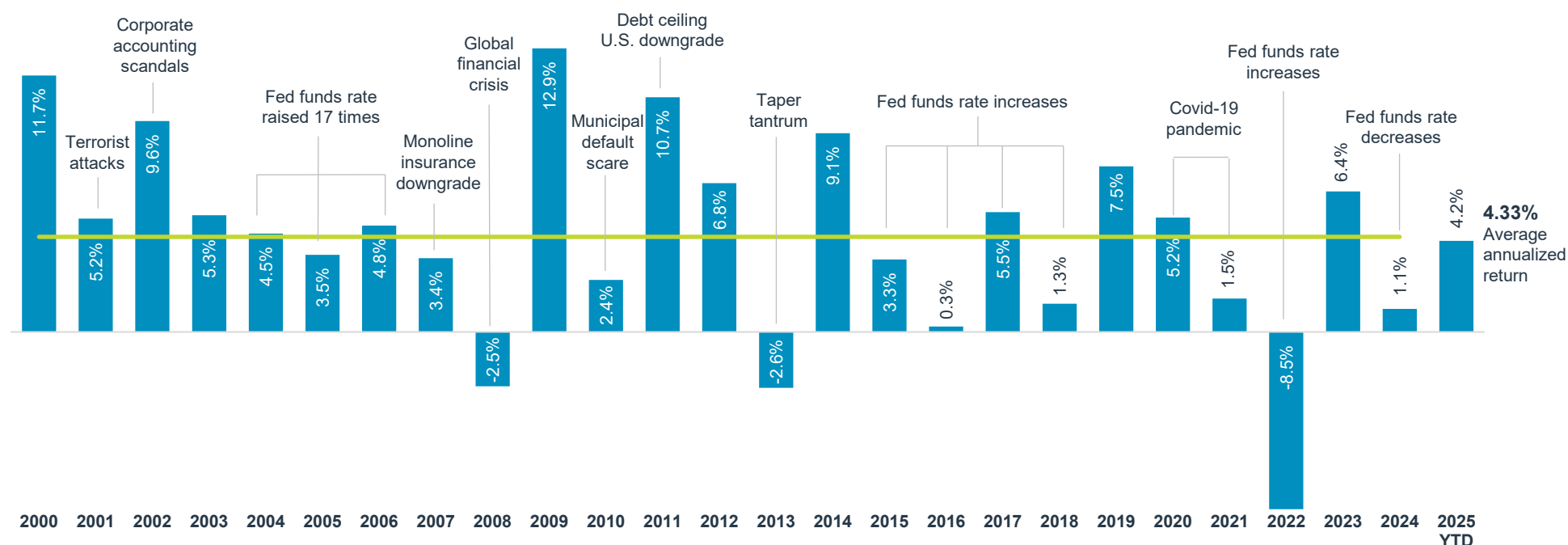
Income has dominated total return over time and can help offset any price declines due to rising rates



¹ Risk defined as volatility of returns. Data source: Nuveen, monthly returns 31 Dec 2009 – 31 Dec 2024. Broad municipal market defined as S&P Municipal Bond Index, and high yield market defined as S&P Municipal Yield TR Index. It is not possible to invest in an index. Other factors can be attributed to credit selection and individual security selection. **Past performance is no guarantee of future results.**
Data source: Bloomberg, L.P. As of 31 Dec 2024.
Chart shows the percent of annualized total return derived from coupon return (as opposed to price appreciation) since index inception. Investment grade bonds are represented by the S&P Municipal Bond Index, which has an inception date of 01 Jan 1976; returns from 31 Dec 2009 – 31 Dec 2024. High yield bonds are represented by the S&P Municipal Yield Index, which has an inception date of 31 Jan 1993; returns from 31 Dec 2009 – 31 Dec 2024. The index return presented is for illustration purposes only and does not represent or predict performance of any Nuveen product. It is not possible to invest directly in an index. **Performance data shown represents past performance and does not predict or guarantee future results.**
OPINION PIECE. PLEASE SEE IMPORTANT DISCLOSURES IN THE ENDNOTES.

Municipals have lagged so far in 2025, but historically we see resilience in the asset class

Bloomberg Municipal Bond Index Returns (%)



2025 YTD index performance has returned 4.15% through November.

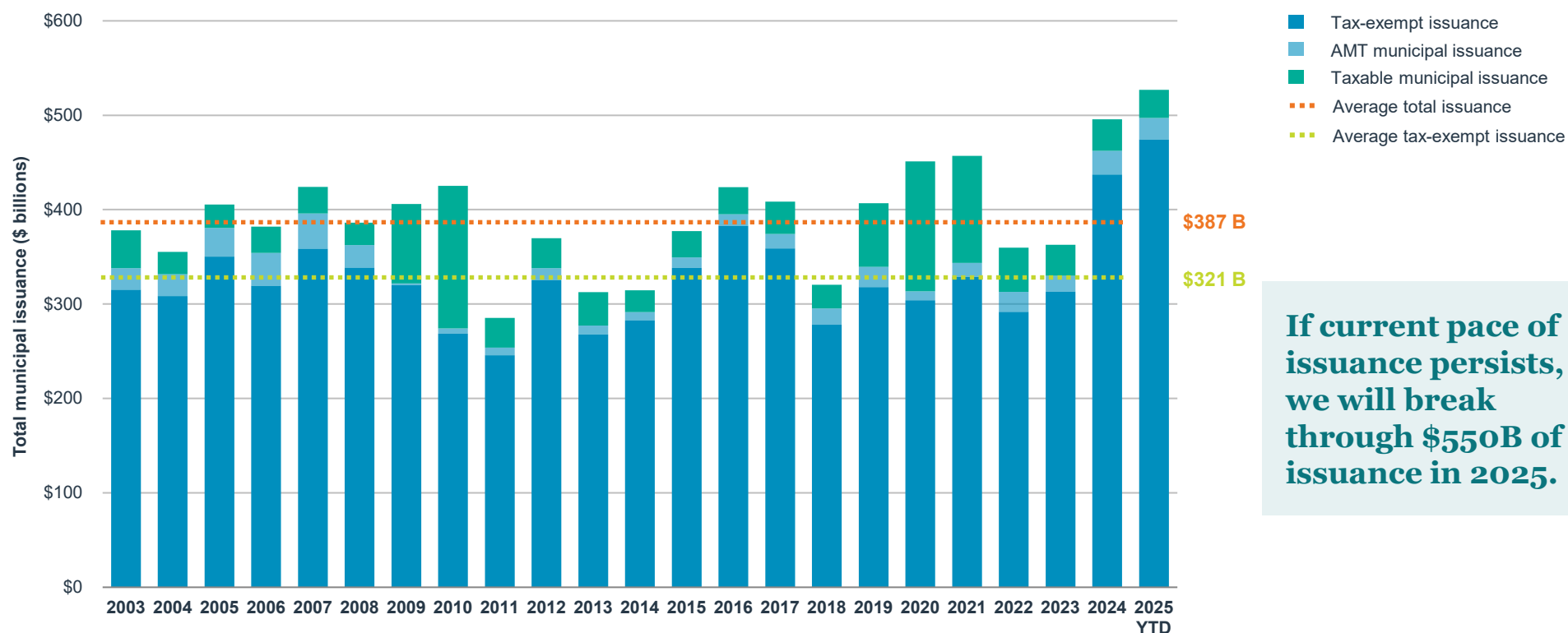
Data source: Bloomberg, L.P., 30 Nov 2025. The average annualized return shown is for the period 01 Jan 2000 – 31 Dec 2024. Performance data shown represents past performance and does not predict or guarantee future results. All investments carry a certain degree of risk, including possible loss of principal, and there is no assurance that an investment will provide positive performance over any period of time. Index returns include reinvestment of income and do not reflect investment professional and other fees that would reduce performance in an actual client account.

OPINION PIECE. PLEASE SEE IMPORTANT DISCLOSURES IN THE ENDNOTES.

Tax-exempt issuance in 2025 remains at elevated levels, but has slowed recently

Overall issuance through November was 13.3% higher than 2024 levels, placing pressure on YTD performance.

Municipal issuance



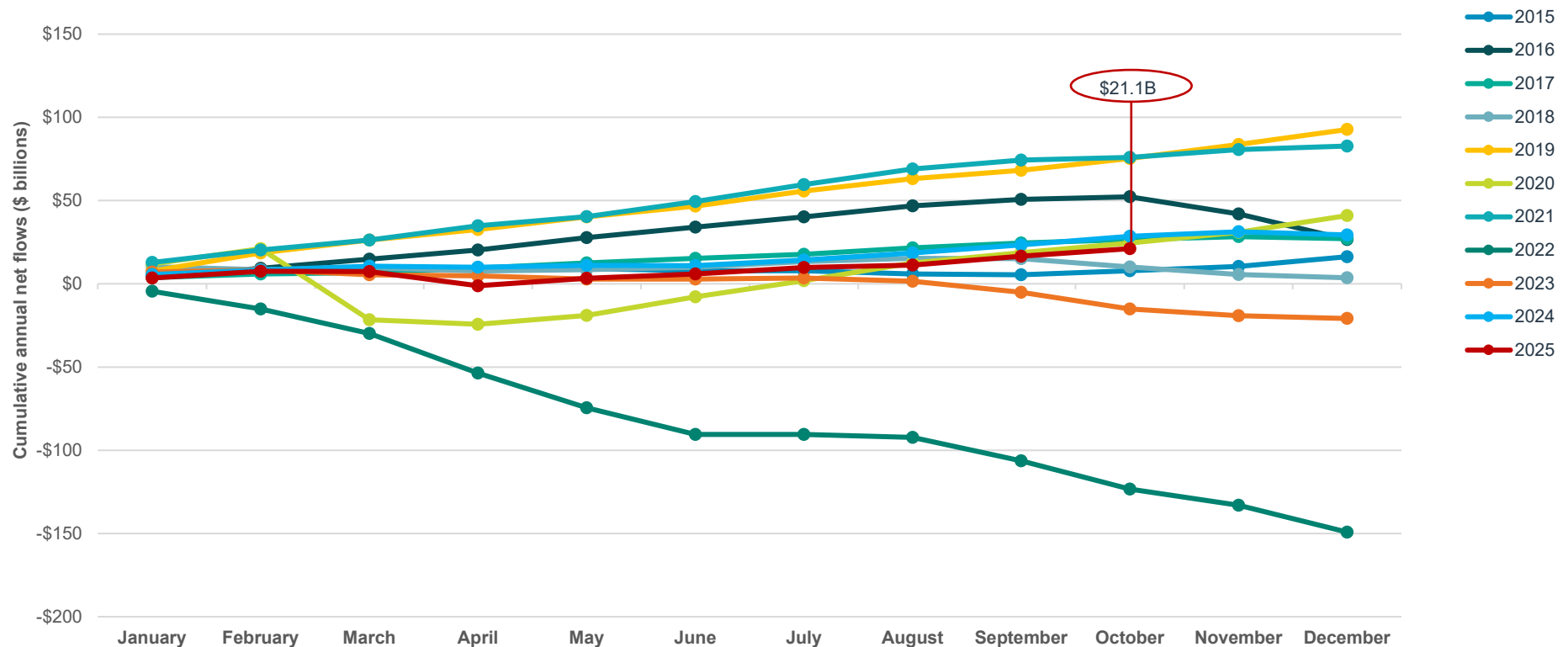
Data source: Securities Industry and Financial Markets Association (SIFMA.org), *U.S. Bond Market Issuance and Outstanding*, 02 Dec 2025 for period ending 30 Nov 2025. The average total issuance and average tax-exempt issuance shown are for the period 01 Jan 2003 – 31 Dec 2024. AMT municipal issuance is part of the tax-exempt municipal market.

OPINION PIECE. PLEASE SEE IMPORTANT DISCLOSURES IN THE ENDNOTES.

Fund flows, while still modest, have been trending in the right direction recently

Municipal open-end fund net inflows were \$21.14 billion through October 2025.

Annual municipal bond fund flows by month 2015 – 2025 YTD



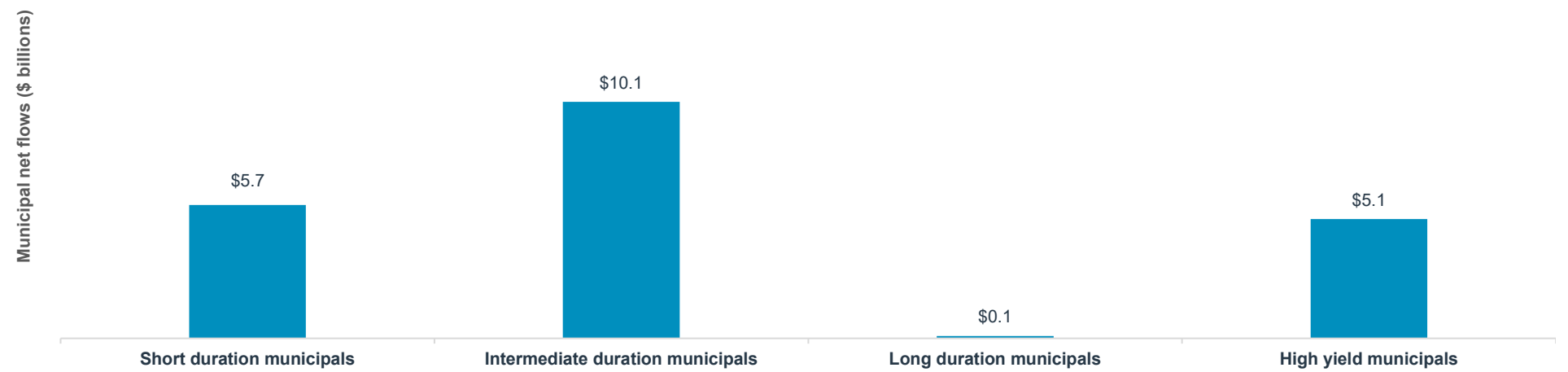
Data source: Morningstar Direct, 01 Jan 2015 – 31 Oct 2025, cumulative flows for each calendar year, shown monthly. Net flows represent the total of all municipal bond open-end funds.

OPINION PIECE. PLEASE SEE IMPORTANT DISCLOSURES IN THE ENDNOTES.

Investor flows felt pressure amidst federal policy uncertainty, but continue to favor credit risk

Fund flows favor short-intermediate duration and high yield municipals

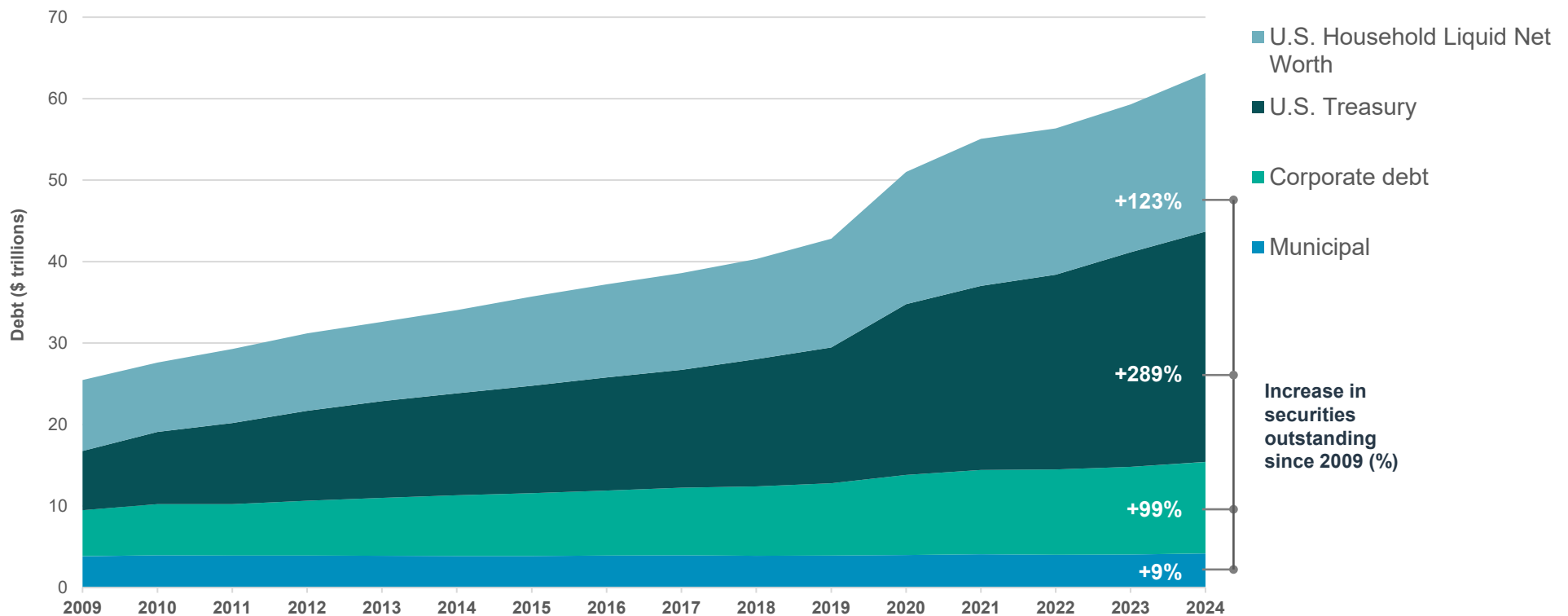
2025 YTD inflow or outflow by municipal bond category



Data source: Morningstar Direct, 01 Jan 2025 – 31 Oct 2025. Net flows represent the total of all municipal bond open-end funds. Respective Morningstar categories: Short duration municipals: Muni National Short; Intermediate duration municipals: Muni National Interm; Long duration municipals: Muni National Long; High yield municipals: High Yield Muni.
OPINION PIECE. PLEASE SEE IMPORTANT DISCLOSURES IN THE ENDNOTES.

Municipal securities outstanding are not growing as quickly as other fixed income markets

The municipal market has experienced slower growth than other markets, and U.S. household wealth has grown over time, supporting demand for the asset class.



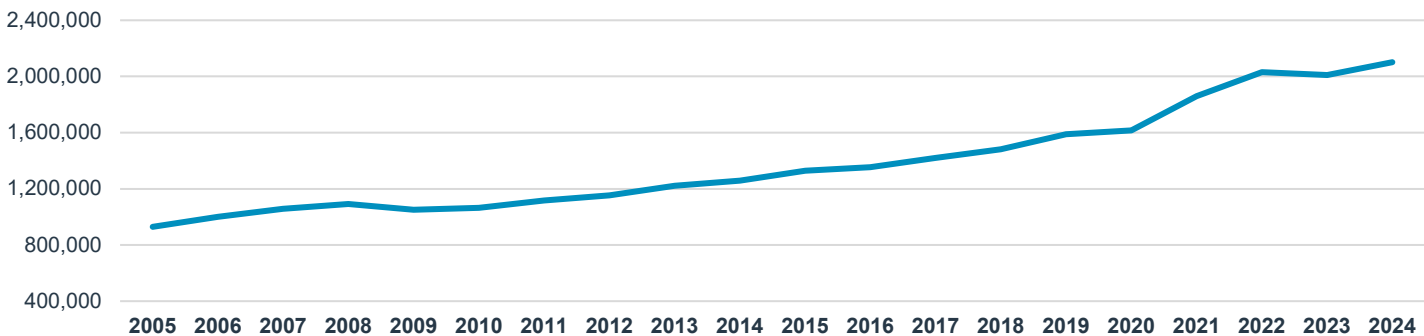
Data sources: SIFMA, Bloomberg, Federal Reserve, U.S. Treasury, 31 Mar 2025 for period ending 31 Dec 2024.

OPINION PIECE. PLEASE SEE IMPORTANT DISCLOSURES IN THE ENDNOTES.

Municipalities are in a strong financial position

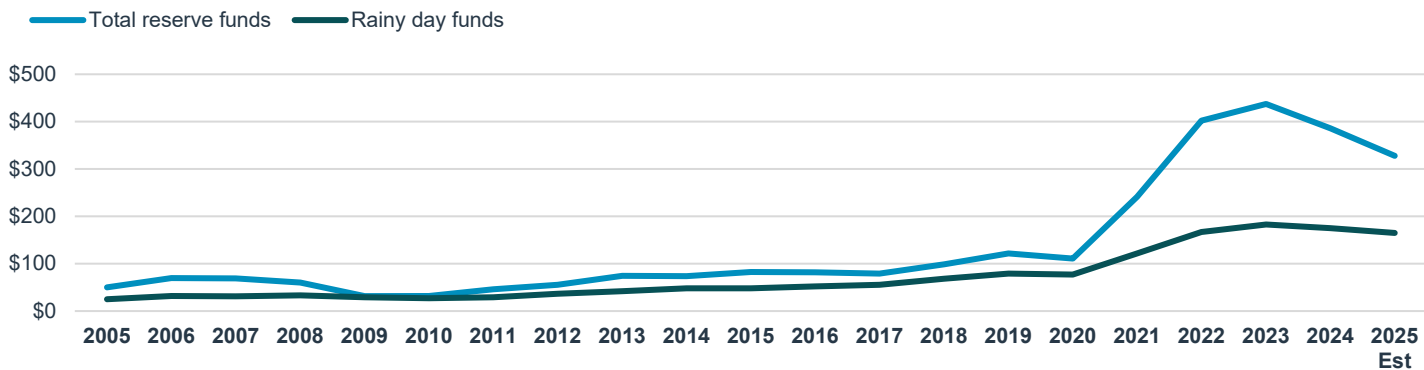
Revenue collections and reserves are near the highest levels in more than 40 years.

State & local government tax revenue collections (\$ millions)¹



Total tax collections increased in the first half of 2025.

State government funds (\$ billions)²



While excess reserves are being spent down, reserves remain near all-time-high levels.

1 Data source: census.gov, 31 Dec 2024; updated annually.

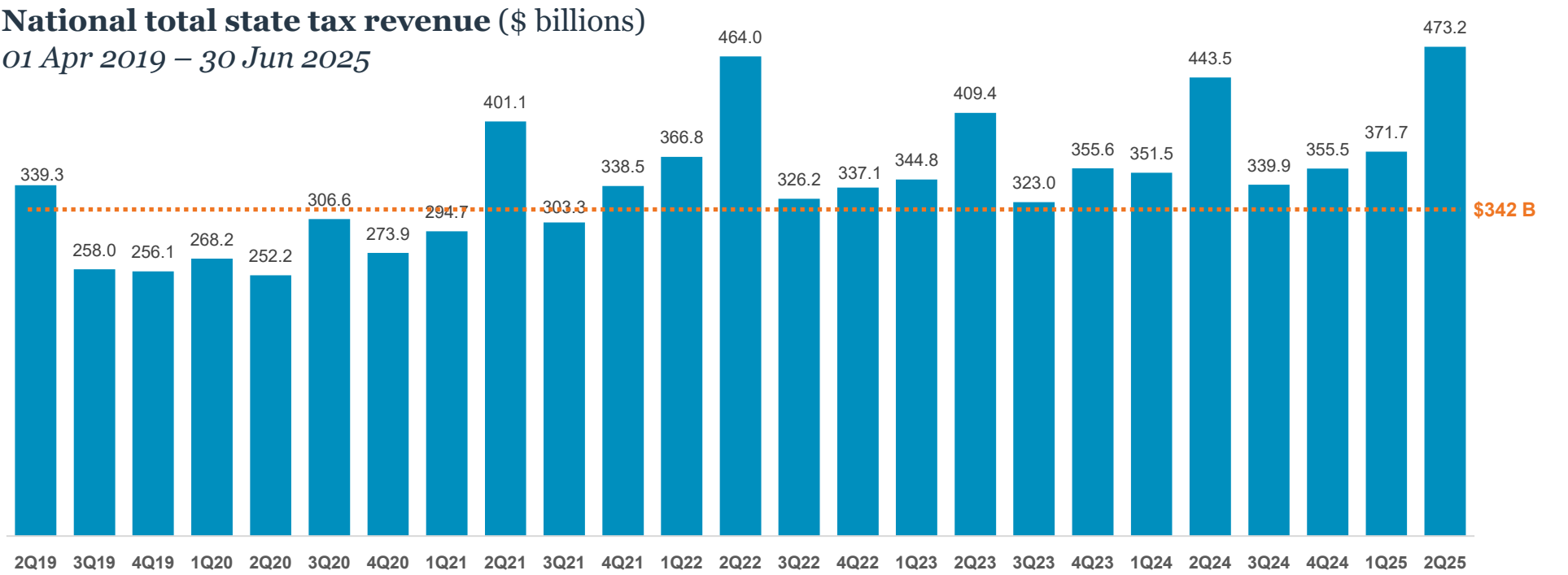
2 Data sources: National Association of State Budget Officers (NASBO), *The Fiscal Survey of States*, Spring 2022. Pew Charitable Trust, *States Build Their Reserves Amid Growing Uncertainties*, 31 Aug 2025.

OPINION PIECE. PLEASE SEE IMPORTANT DISCLOSURES IN THE ENDNOTES.

Post-pandemic revenue growth collection remains strong

Credit research can be an important driver of investment success, despite expectation of near-term fiscal stability.

National total state tax revenue (\$ billions)
01 Apr 2019 – 30 Jun 2025



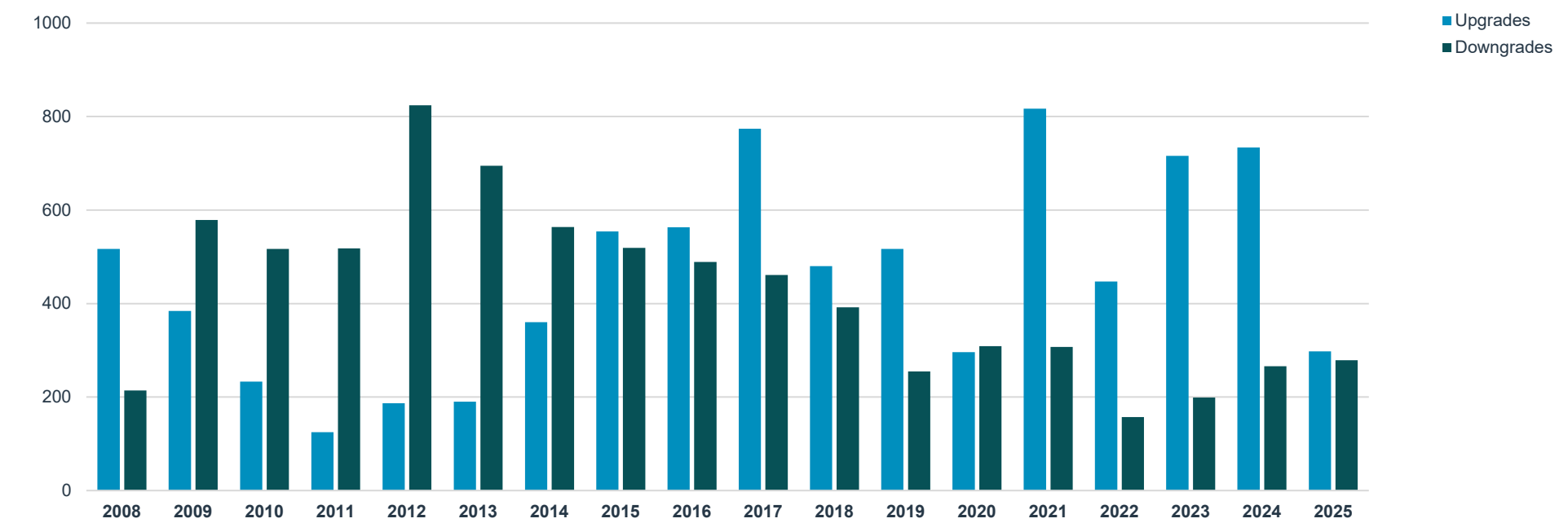
Average tax collections have remained strong, averaging \$342 billion per quarter from 2Q19 to 2Q25.

Data source: Nuveen; census.gov, as of 30 Sept 2025, with data as of 30 Jun 2025.
OPINION PIECE. PLEASE SEE IMPORTANT DISCLOSURES IN THE ENDNOTES.

Rating upgrades have continued to exceed downgrades in recent history

Upgrades marginally outpaced downgrades over the first three quarters of 2025.

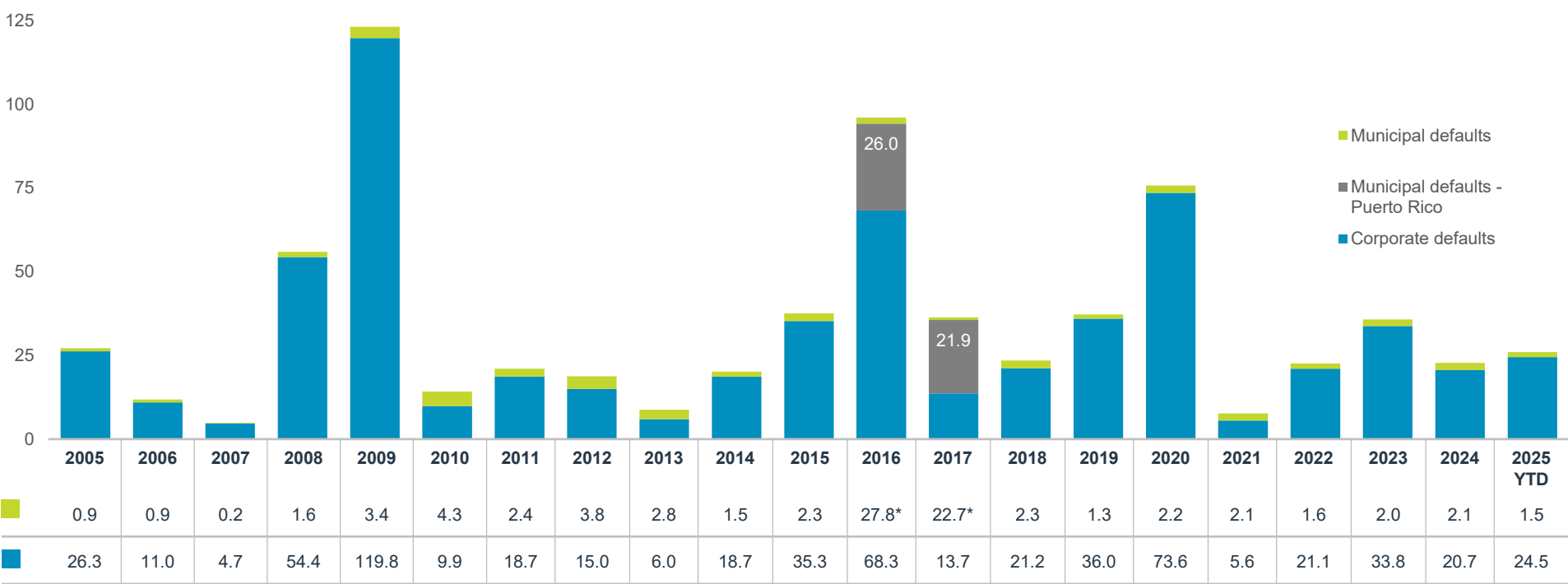
Number of rating changes for public finance



Data sources: Moody's Ratings, *Quarterly and Annual Municipal Rating Revisions*, 14 Nov 2025, data as of 30 Sept 2025; most recent data available.
OPINION PIECE. PLEASE SEE IMPORTANT DISCLOSURES IN THE ENDNOTES.

Defaults remain in line with historical trends

Municipal and corporate payment defaults (\$ billions)



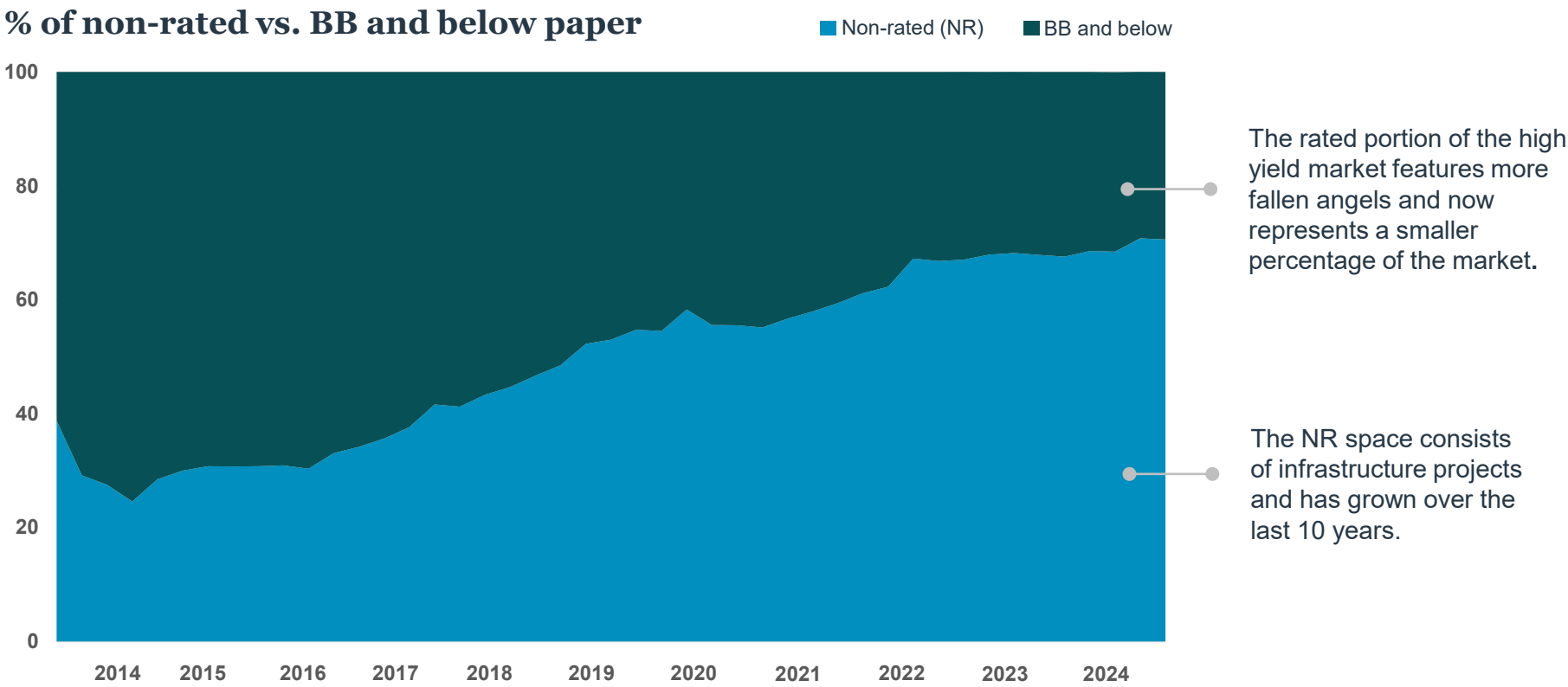
Municipal defaults remain rare, isolated and idiosyncratic through November 2025.

Data sources: Bloomberg municipal default data as of 30 Nov 2025. Bank of America/Merrill Lynch Research, 05 Dec 2025, municipal default data as of 30 Nov 2025. Bank of America/Merrill Lynch Research HY Credit Chart book, corporate default data as of 30 Nov 2025. Data represents defaults on the entire universe of bonds, both rated and unrated, and includes Puerto Rico defaults. *For 2016 and 2017, the figures shown for municipal defaults were primarily from Puerto Rico defaults; \$26.0B (2016) and \$21.9B (2017).

OPINION PIECE. PLEASE SEE IMPORTANT DISCLOSURES IN THE ENDNOTES.

High yield market increasingly moving toward non-rated bonds

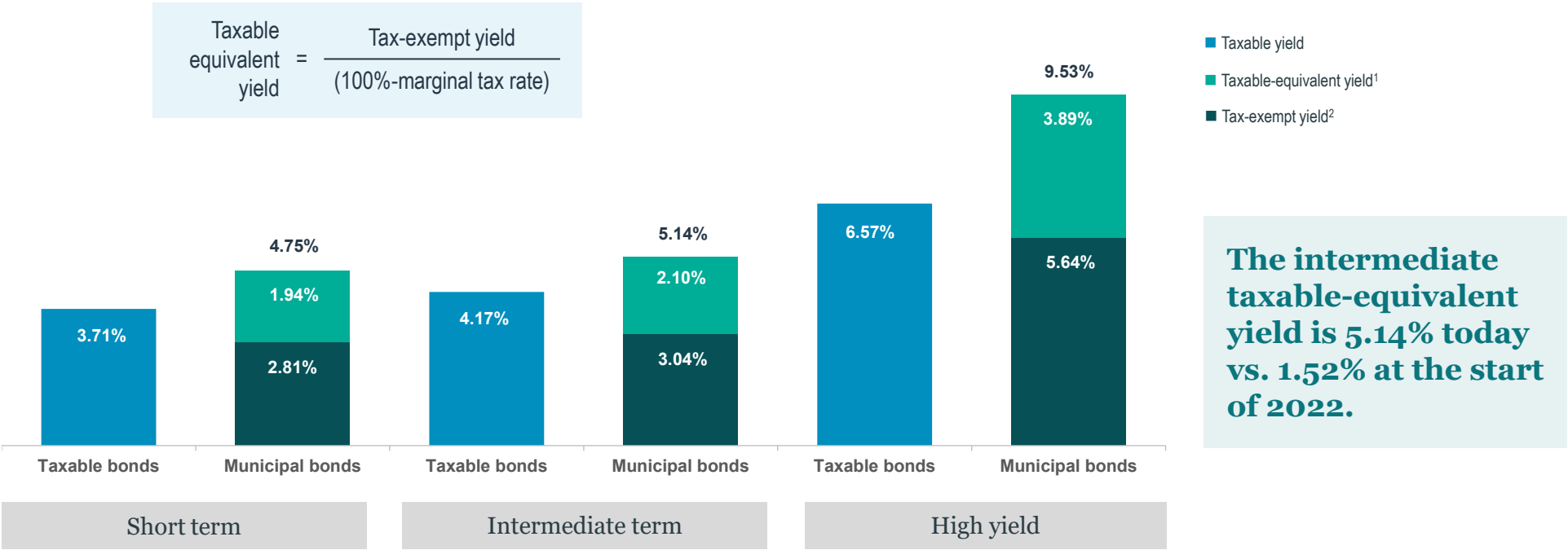
Fundamental credit research at the sector and issuer level guides our selective participation in deals that can help drive performance.



Data source: Bloomberg, 01 Jan 2014 – 31 Dec 2024. Represented by the Bloomberg Municipal Bond High Yield Index.
OPINION PIECE. PLEASE SEE IMPORTANT DISCLOSURES IN THE ENDNOTES.

Municipals remain attractive on an after-tax basis

Yield comparison



1 The taxable-equivalent yield is based on the highest individual marginal federal tax rate of 37.0%, plus the 3.8% Medicare tax on investment income (the Net Investment Income Tax). Individual tax rates may vary.

2 Some income may be subject to state and local taxes and the federal alternative minimum tax.

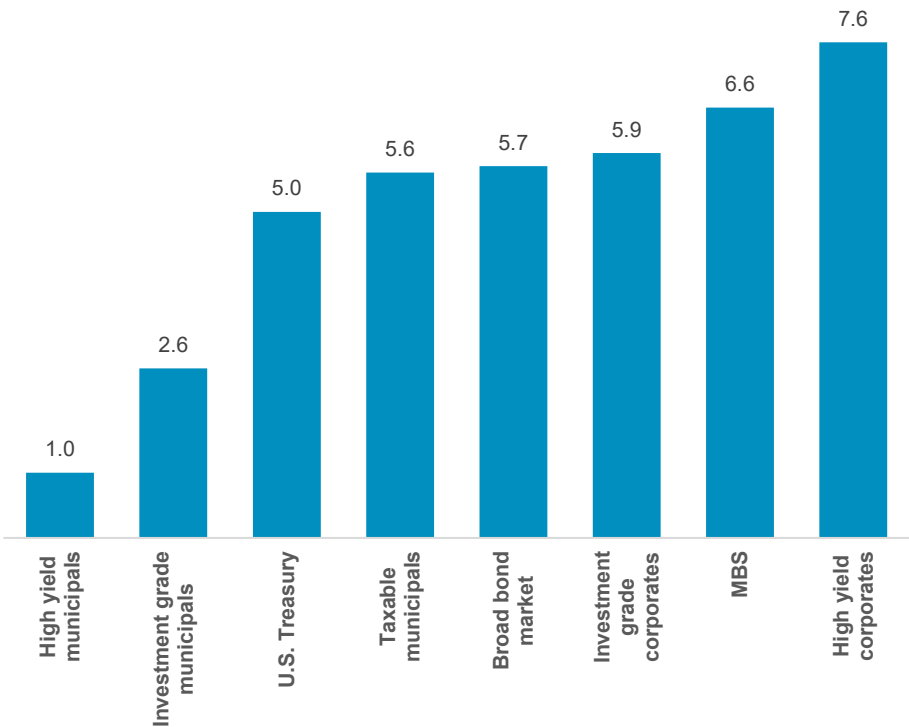
Data source: Bloomberg L.P., 30 Nov 2025. **Performance data shown represents past performance and does not predict or guarantee future results.** Yields are yield to worst. **Yield to worst** is the lowest potential yield that can be received on a bond without the issuer defaulting. **Taxable-equivalent yield** is the yield a taxable investment needs to possess (before taxes) for its yield to be equal to that of a tax-free municipal investment. The yields shown are based on the highest individual marginal federal tax rate of 37%, plus the 3.8% Medicare tax on investment income. Individual tax rates may vary. They do not take into account the effects of the federal alternative minimum tax (AMT) or capital gains taxes. **Representative indexes:** **Short term taxable bonds:** Bloomberg U.S. Government/Credit 1-5 Year Index; **Short term municipal bonds:** Bloomberg Municipal Short Index; **Intermediate term taxable bonds:** Bloomberg U.S. Government/Credit 5-10 Year Index; **Intermediate term municipal bonds:** Bloomberg Municipal Intermediate Index; **High yield taxable bonds:** Bloomberg Corporate High Yield 2% Issuer Capped Index; **High yield municipal bonds:** Bloomberg High Yield Municipal Bond Index. Different benchmarks, economic periods, methodologies and market conditions will produce different results.

OPINION PIECE. PLEASE SEE IMPORTANT DISCLOSURES IN THE ENDNOTES.

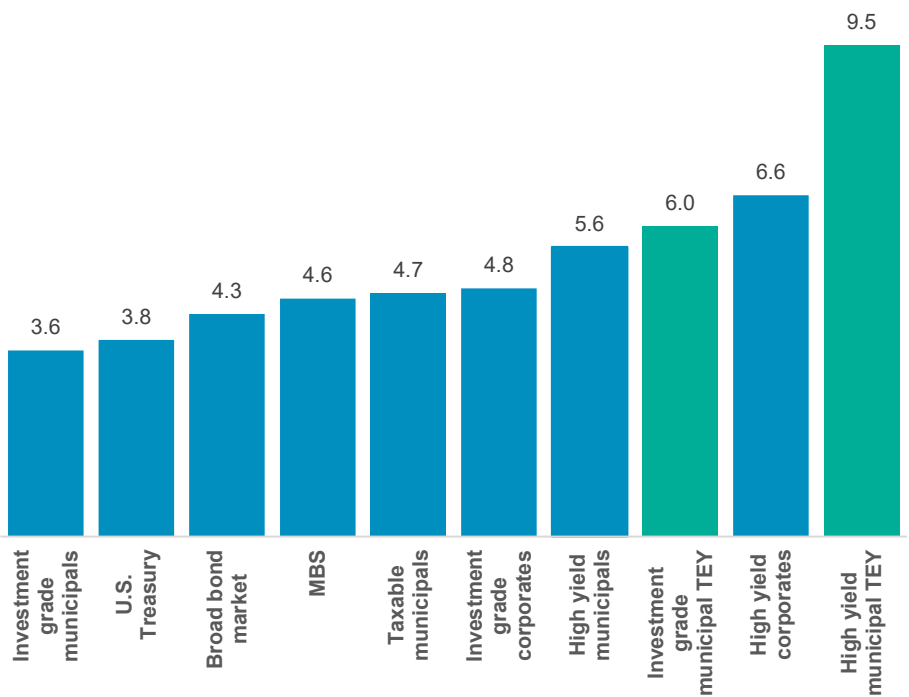
Fixed income sector performance is mixed, and investment grade municipals can show resilience

While recent municipal performance has been lagging, yield levels remain attractive.

Trailing 12 month returns (%)



Yield to worst (%)

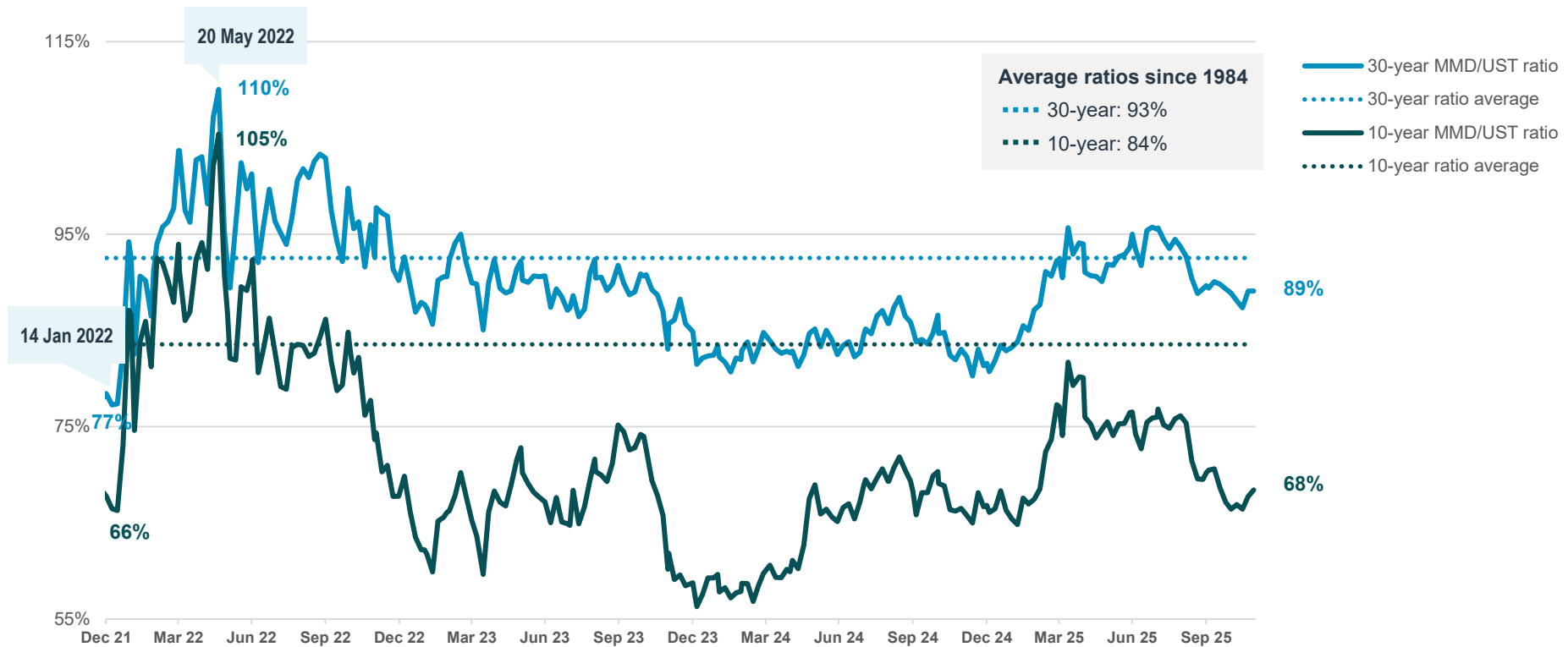


Data source: Bloomberg, L.P., trailing 12 month returns from 30 Nov 2024 – 30 Nov 2025; yield to worst as of 30 Nov 2025. Performance data shown represents past performance and does not predict or guarantee future results. Yields are yield to worst. Yield to worst is the lowest potential yield that can be received on a bond without the issuer defaulting. Representative indexes: Broad bond market: Bloomberg U.S. Aggregate Bond Index. High yield corporates: Bloomberg U.S. Corporate High Yield Index; High yield municipals: Bloomberg High Yield Municipal Bond Index; Investment grade corporates: Bloomberg U.S. Corporate Investment Grade Index; Investment grade municipals: Bloomberg Municipal Bond Index; Mortgage-backed securities (MBS): Bloomberg MBS (fixed rate) Index; Taxable municipals: Bloomberg Taxable Municipal Bond Index; U.S. Treasury: Bloomberg U.S. Treasury Index; The taxable-equivalent yield is based on the highest individual marginal federal tax rate of 37%, plus the 3.8% Medicare tax on investment income (the Net Investment Income Tax). Individual tax rates may vary.

OPINION PIECE. PLEASE SEE IMPORTANT DISCLOSURES IN THE ENDNOTES.

Absolute yield levels are attractive, and technical conditions are constructive

Municipal-to-Treasury ratios: AAA municipal bonds value relative to Treasuries

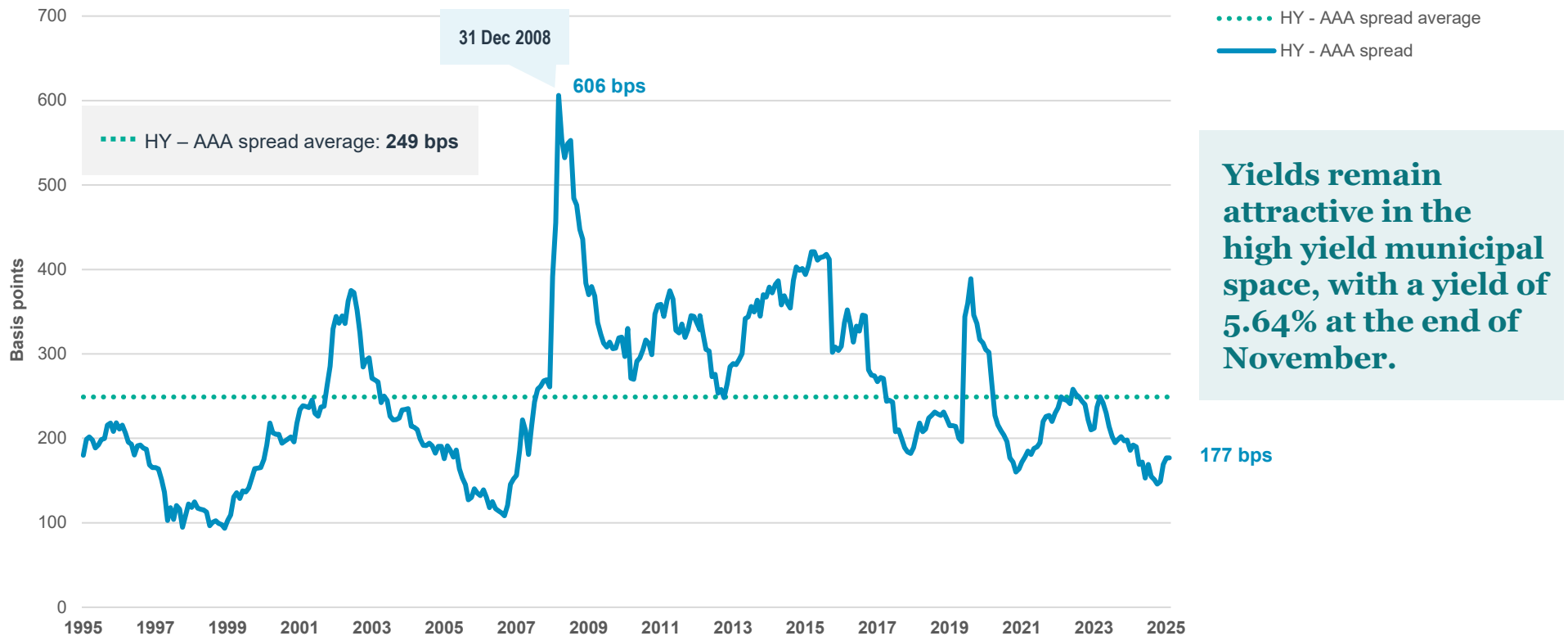


Data source: Refinitiv MMD for fair value Municipal 10- and 30-Year Index AAA General Obligation bonds; Bloomberg for 10- and 30-year U.S. Treasury yields, shown weekly, 31 Dec 2021 – 30 Nov 2025, averages shown from 01 Jan 1984 – 30 Nov 2025. Performance data shown represents past performance and does not predict or guarantee future results. Municipal-to-Treasury ratio represents the value of AAA municipal yields relative to U.S. Treasury yields.

OPINION PIECE. PLEASE SEE IMPORTANT DISCLOSURES IN THE ENDNOTES.

High yield credit spreads are below historical averages as flows continue to return

Bloomberg High Yield Municipal Index versus AAA yields

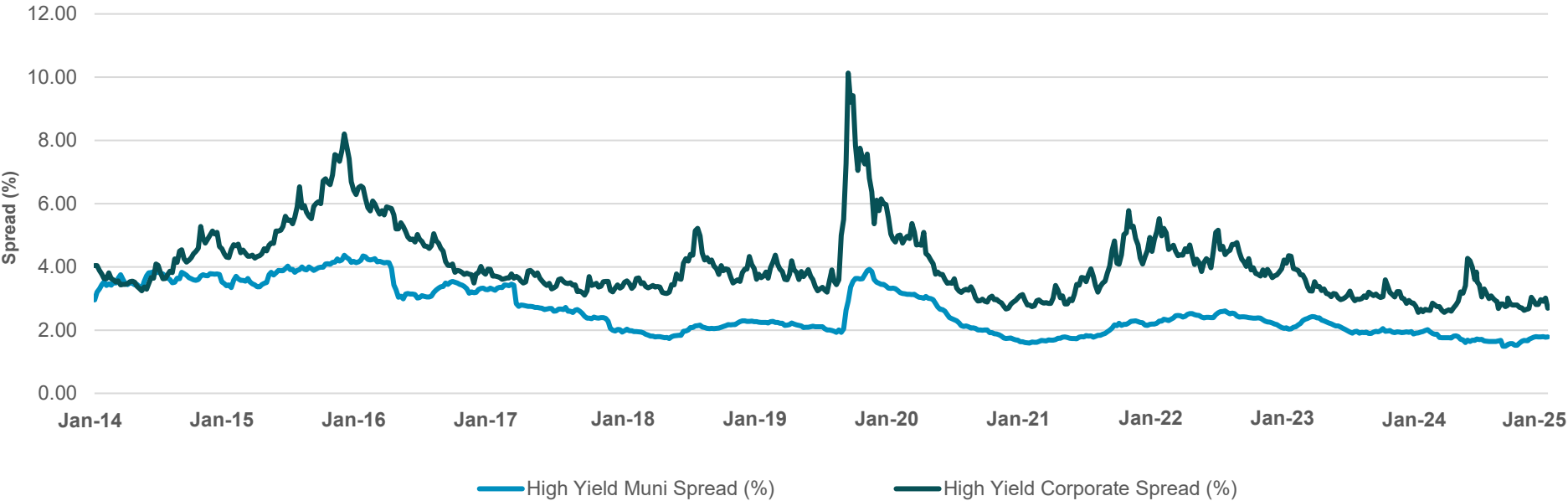


Data source: Bloomberg, Refinitiv MMD, 31 Oct 1995 – 30 Nov 2025, shown monthly. Chart shows data to the earliest period available. Performance data shown represents past performance and does not predict or guarantee future results. High yield municipal yields represented by the Bloomberg High Yield Municipal Index; AAA municipal yields represented by Municipal Market Data (MMD) yields for AAA rated 20-year bonds. High yield or lower-rated bonds and municipal bonds carry greater credit risk, and are subject to greater price volatility. Ratings shown are from S&P and are subject to change. AAA, AA, A, and BBB are investment grade ratings; BB, B, CCC/CC/C and D are below-investment grade ratings. Different benchmarks, economic periods, methodologies and market conditions will produce different results.

OPINION PIECE. PLEASE SEE IMPORTANT DISCLOSURES IN THE ENDNOTES.

High yield municipal bond spreads have remained relatively stable over time

High yield municipal spreads are stable, even during equity selloffs



We favor fixed income sectors such as high yield municipals that could withstand an equity drawdown while rewarding investors with attractive income.

Data source: Bloomberg, L.P., 01 Jan 2014 – 30 Nov 2025. Performance data shown represents past performance and does not predict or guarantee future results. Representative indexes: high yield municipal spread: Bloomberg Municipal High Yield Index yield-to-worst minus BVAL AAA Municipal 20-year tenor; high yield corporate spread: Bloomberg U.S. Corporate High Yield Option Adjusted Spread Index. Shaded areas represent S&P 500 Total Return drawdown periods of 10% or greater. Yield-to-worst is the lowest potential yield that can be received on a bond without the issuer actually defaulting.

OPINION PIECE. PLEASE SEE IMPORTANT DISCLOSURES IN THE ENDNOTES.

Outlook



Opportunities

Attractive interest rates, favorable yield curve and strong municipal credit fundamentals present compelling opportunities for investors.

Yield & valuation advantages

Favorable market conditions are creating attractive entry points for municipal investors.

Positive structural factors

The current yield curve structure presents specific tactical advantages in intermediate maturities.

Credit fundamentals

Solid municipal financial health is evidenced by resilient revenues and reserve funds.



Challenges

Municipals face potential volatility due to high supply levels, shifting demand dynamics, and attractive short-term rates that are keeping cash on the sidelines.

Supply-demand imbalances

Market dynamics create potential volatility as supply remains elevated while demand has not fully returned.

Lagging performance

Municipals are underperforming other asset classes amidst a historic pace of supply and sporadic flows.

Changing landscape

Greater inflows into ETFs and SMA structures leave the long end of the yield curve with limited support.

Source: Nuveen as of 30 Nov 2025. Certain statements may be deemed forward-looking statements. Please note that any such statements are not guarantees or intended to constitute a prediction of any future performance; actual results or developments may differ materially from those projected. Investing involves risk, including possible loss of principal. This information should not be relied upon as investment advice or recommendations. For additional information, please refer to Risks and Important Disclosures provided at the end of this presentation.

OPINION PIECE. PLEASE SEE IMPORTANT DISCLOSURES IN THE ENDNOTES.

Taxable municipal market

OPINION PIECE. PLEASE SEE IMPORTANT DISCLOSURES IN THE ENDNOTES.

Fundamentals and technical strength continue to be a tailwind

Characteristics and performance

Index	Yield to worst (%)	Spread (bps)	Effective duration (years)	Returns (%)		
				November 2025	3Q 2025	2024
Taxable municipal (AA-)	4.73	59	7.58	0.64	2.51	1.57
U.S. asset-backed securities (AA+)	4.11	54	2.67	0.56	1.64	5.02
U.S. mortgage-backed securities (AA+)	4.61	29	5.54	0.62	2.43	1.20
U.S. corporate investment grade (BBB+)	4.76	80	6.82	0.65	2.60	2.13
U.S. aggregate bond (AA)	4.26	29	5.93	0.62	2.03	1.25
U.S. Treasury (AAA)	3.82	0	5.84	0.62	1.51	0.58
Global corporate bonds (BBB+)	4.28	82	5.86	0.54	1.92	1.10
Global aggregate (unhedged) (A+)	3.43	29	6.33	0.23	0.60	-1.69

Data sources: Bloomberg, L.P., Bloomberg indexes, as of 30 Nov 2025. Performance data shown represents past performance and does not predict or guarantee future results. Total returns for a period of less than one year are cumulative. OPINION PIECE. PLEASE SEE IMPORTANT DISCLOSURES IN THE ENDNOTES.

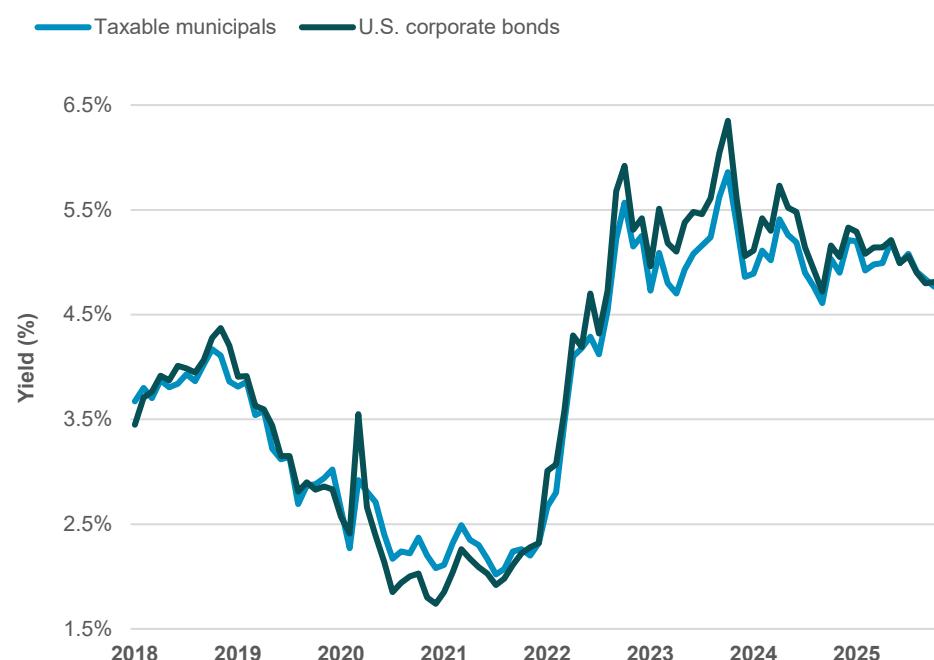
Taxable municipals can have higher credit quality than corporates but similar spreads and yields

Taxable municipals have historically been more defensive during economic downturns.

Credit spreads



Yield

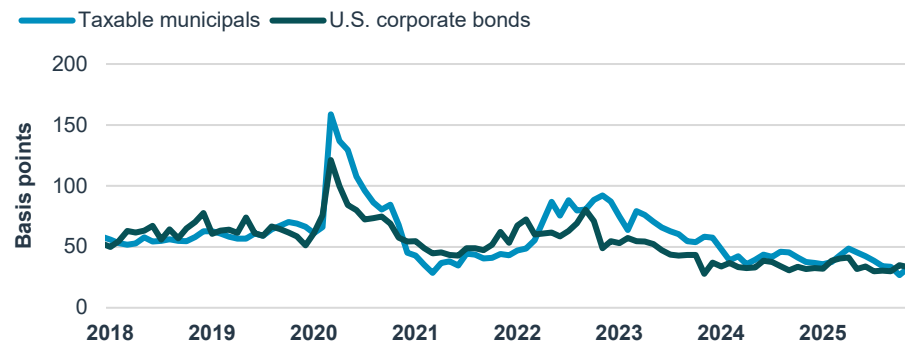


Data source: Bloomberg, L.P., 31 Jan 2018 – 30 Nov 2025, shown monthly. **Spread** represents option-adjusted spread (OAS). **Performance data shown represents past performance and does not predict or guarantee future results.** Representative indexes: taxable municipals: Bloomberg U.S. Taxable Municipal Bond Index; U.S. corporate bonds: Bloomberg U.S. Corporate Bond Index.

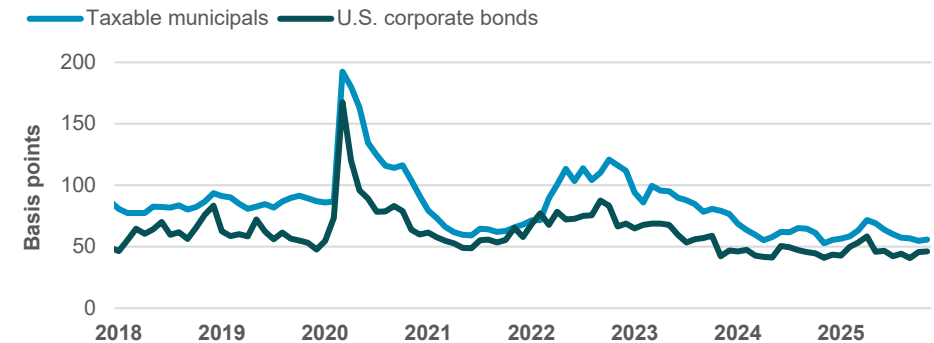
OPINION PIECE. PLEASE SEE IMPORTANT DISCLOSURES IN THE ENDNOTES.

Looking across the credit spectrum in taxable municipals can provide yield premium

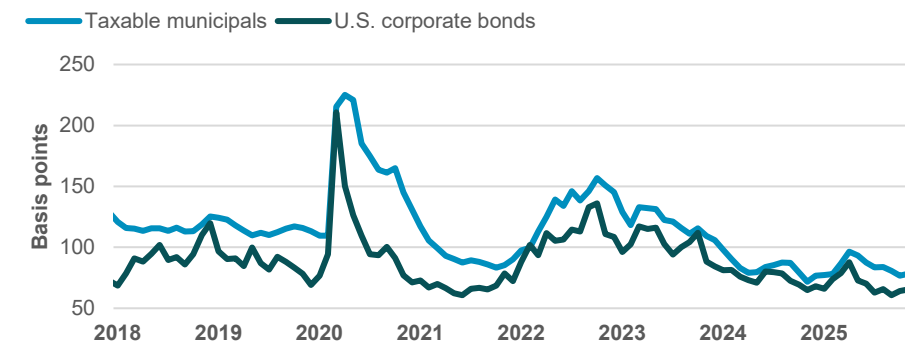
AAA-rated spread



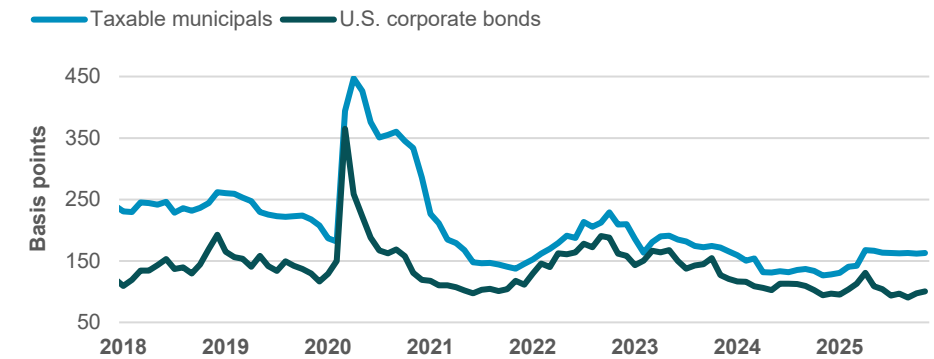
AA-rated spread



A-rated spread



BBB-rated spread



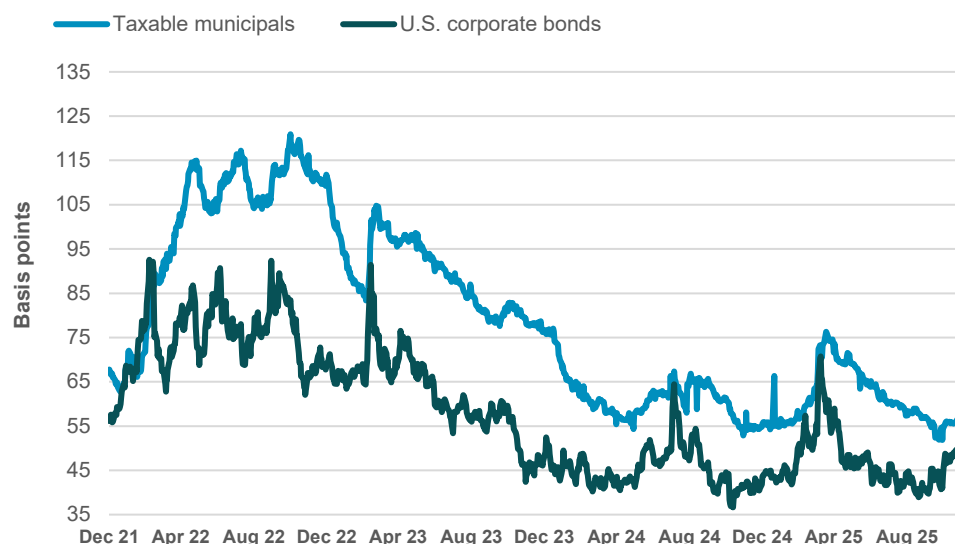
Data source: Bloomberg, L.P., 31 Jan 2018 – 30 Nov 2025, shown monthly. **Spread** represents option-adjusted spread (OAS). **Performance data shown represents past performance and does not predict or guarantee future results.** Representative indexes: taxable municipals: Bloomberg U.S. Taxable Municipal Bond Index; U.S. corporate bonds: Bloomberg U.S. Corporate Bond Index.

OPINION PIECE. PLEASE SEE IMPORTANT DISCLOSURES IN THE ENDNOTES.

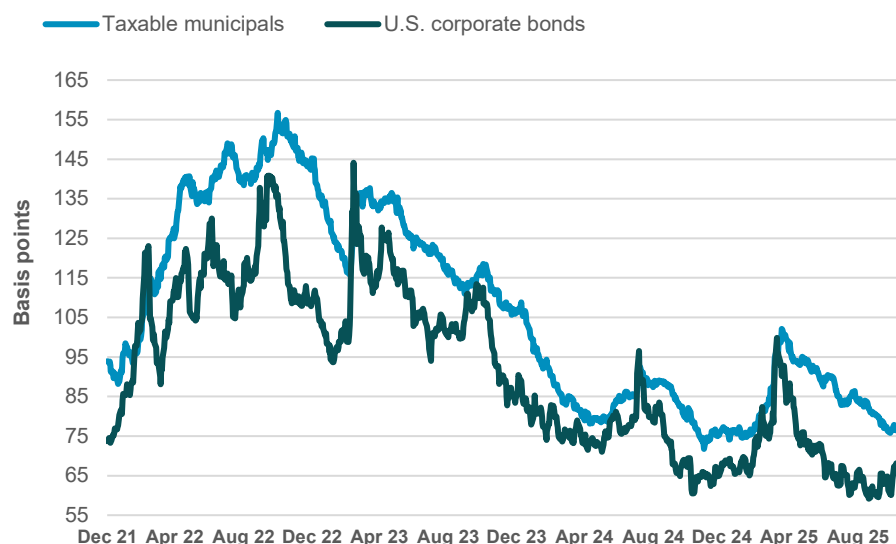
Taxable municipal credit spreads remain wider relative to corporate bonds

Municipal bonds provide financing for essential services, which can help provide insulation from economic downturns.

AA-rated spread



A-rated spread



Credit spreads have widened YTD, but taxable municipals continue to offer an advantage over similarly rated corporate bonds.

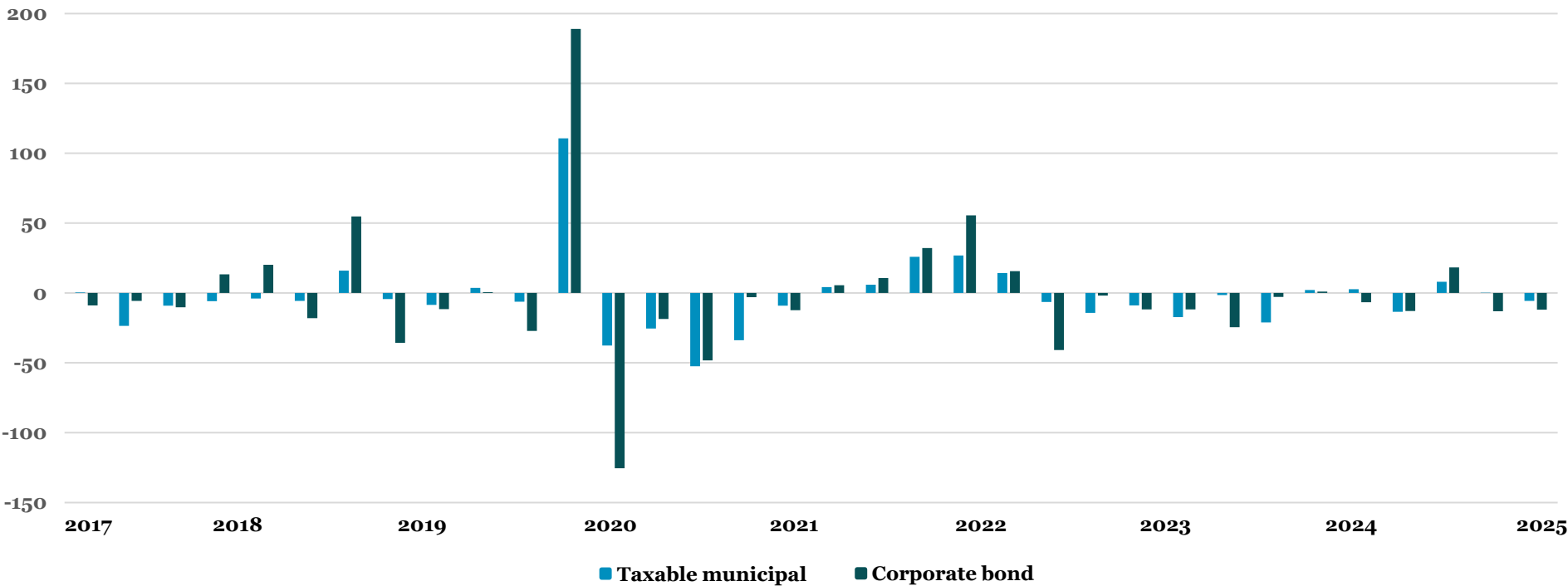
Data source: Bloomberg, L.P., 31 Dec 2021 – 30 Nov 2025, shown daily. Spread represents option-adjusted spread (OAS). Performance data shown represents past performance and does not predict or guarantee future results. Representative indexes: taxable municipals: Bloomberg U.S. Taxable Municipal Bond Index; U.S. corporate bonds: Bloomberg U.S. Corporate Bond Index.

OPINION PIECE. PLEASE SEE IMPORTANT DISCLOSURES IN THE ENDNOTES.

Taxable municipal bonds have displayed less credit spread volatility

Taxable municipals’ spread movements reflect a more stable market for investors.

Quarterly option adjusted spread changes



Data source: Bloomberg Taxable Municipal Bond Index and Bloomberg Corporate Bond Index. 7-10 year duration bonds only, data through 30 Sept 2025.

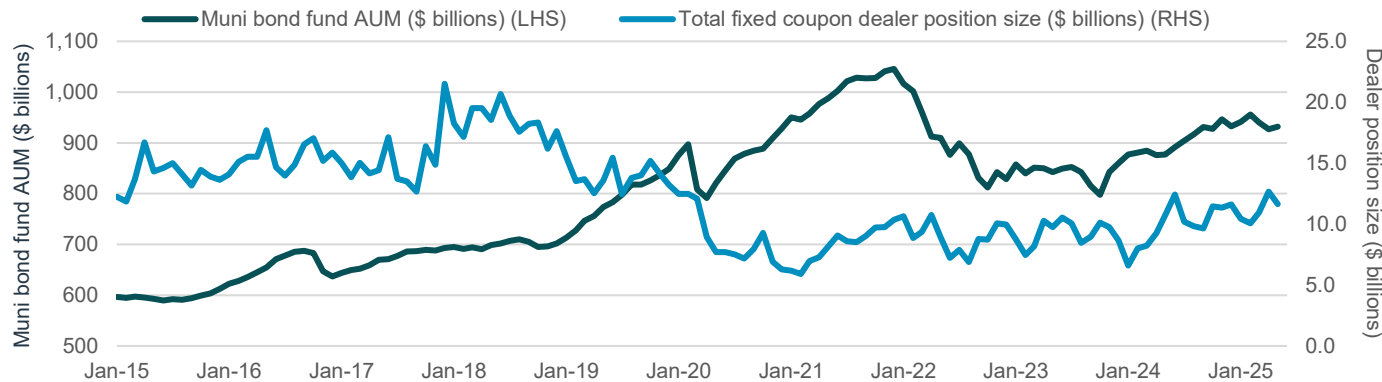
OPINION PIECE. PLEASE SEE IMPORTANT DISCLOSURES IN THE ENDNOTES.

Appendix

OPINION PIECE. PLEASE SEE IMPORTANT DISCLOSURES IN THE ENDNOTES.

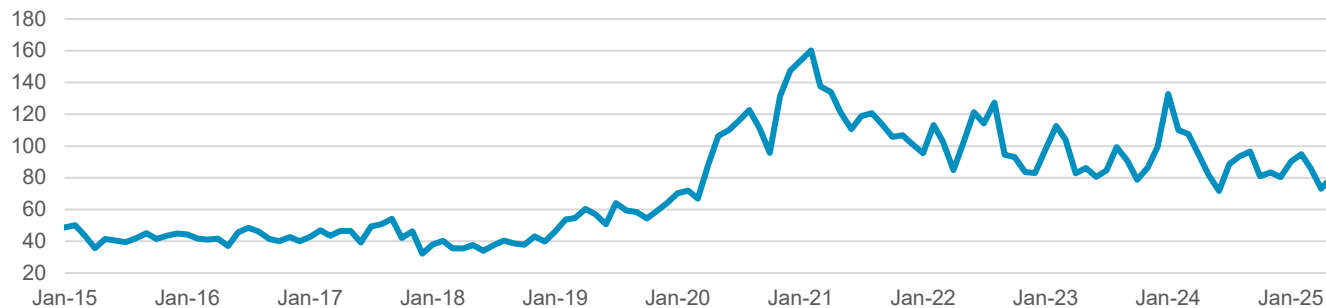
Diminished dealer participation has created elevated volatility within the municipal market

Muni fund AUM vs. average dealer position size¹



Increased cost of capital has diminished dealer inventory. An institutional manager can help capitalize on market dislocations.

Muni fund AUM over dealer inventory ratio²



Muni fund AUM is 80x the size of dealer inventory levels, contributing to more volatile markets.

¹ Data sources: Fund AUM data is sourced from Morningstar. Coupon dealer position size is sourced from Bloomberg. Both data sets span from 31 Dec 2014 to 31 May 2025.

² Data sources: Fund AUM data is sourced from Morningstar. Dealer inventory ratio data is sourced from Bloomberg. Both data sets span from 31 Dec 2014 to 31 May 2025.

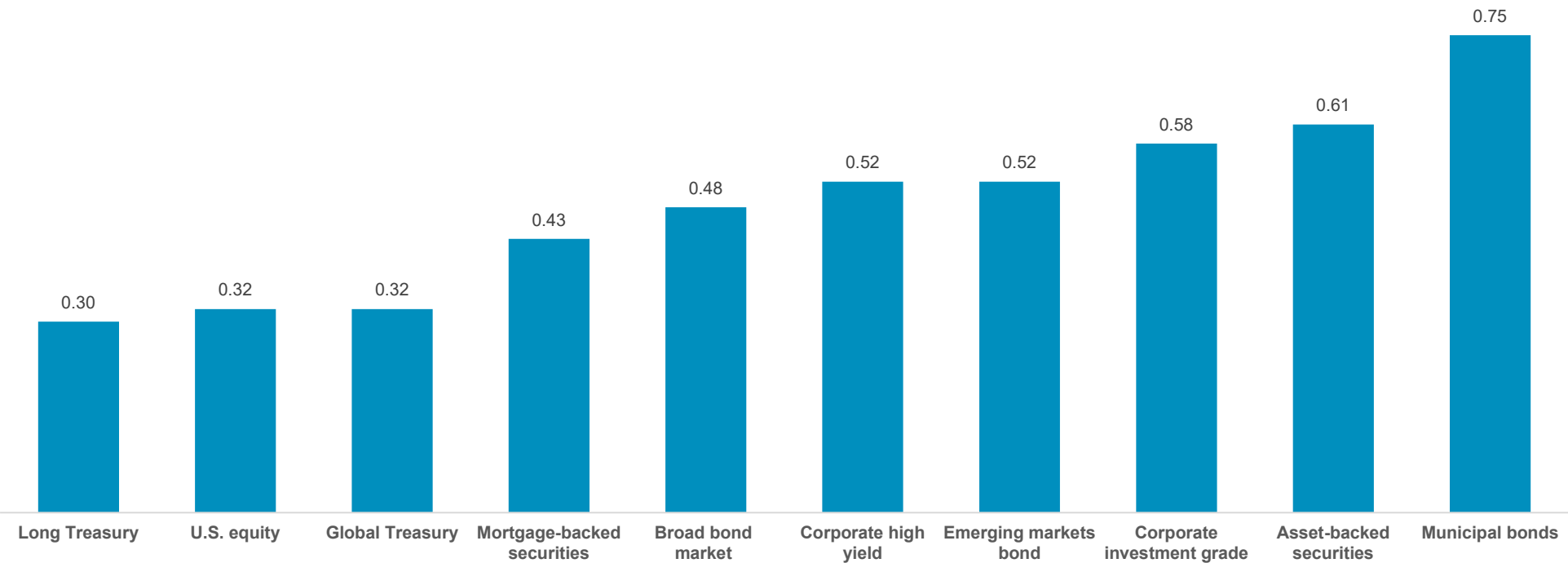
OPINION PIECE. PLEASE SEE IMPORTANT DISCLOSURES IN THE ENDNOTES.

High yield municipal bonds have a low correlation to other asset classes

High yield municipal bonds tend to be less cyclical than corporate bonds due to the essential nature of the projects being financed.

Correlation to Bloomberg High Yield Municipal Bond Index

01 Jul 1999 – 30 Nov 2025



Data source: Morningstar Direct; 01 Jul 1999 – 30 Nov 2025. Performance data shown represents past performance and does not predict or guarantee future results. Representative indexes: Asset-backed securities: Bloomberg Asset-Backed Securities Index; Broad bond market: Bloomberg U.S. Aggregate Bond Index; Corporate high yield: Bloomberg U.S. Corporate High Yield Index; Corporate investment grade: Bloomberg U.S. Corporate Investment Grade Index; Emerging markets bond: Bloomberg Emerging Markets Bond Index; Global Treasury: Bloomberg Global Ex U.S. Treasury Bond Index; Long Treasury: Bloomberg U.S. Treasury Long Index; Mortgage-backed securities: Bloomberg MBS (fixed rate) Index; Municipal bonds: Bloomberg U.S. Municipal Bond Index; U.S. equity: S&P 500 Index.

OPINION PIECE. PLEASE SEE IMPORTANT DISCLOSURES IN THE ENDNOTES.

Municipal bond default rates have fared better than for similarly rated corporate bonds

A-rated municipal default rates are lower than for Aaa corporate bonds.

Moody's average cumulative default rates of municipals vs. global corporates, 1970-2024¹

	Rating	Aaa	Aa	A	Baa	Ba	B	Caa-C	Investment Grade	Below Investment Grade
5-Year	Municipal	0.00%	0.01%	0.03%	0.46%	1.93%	11.90%	20.62%	0.04%	4.81%
	Corporate	0.08%	0.29%	0.71%	1.43%	7.62%	20.58%	35.24%	0.86%	18.98%
10-Year	Municipal	0.00%	0.02%	0.10%	1.09%	3.49%	17.07%	25.59%	0.10%	7.14%
	Corporate	0.36%	0.76%	2.03%	3.61%	15.25%	34.31%	51.44%	2.24%	29.74%

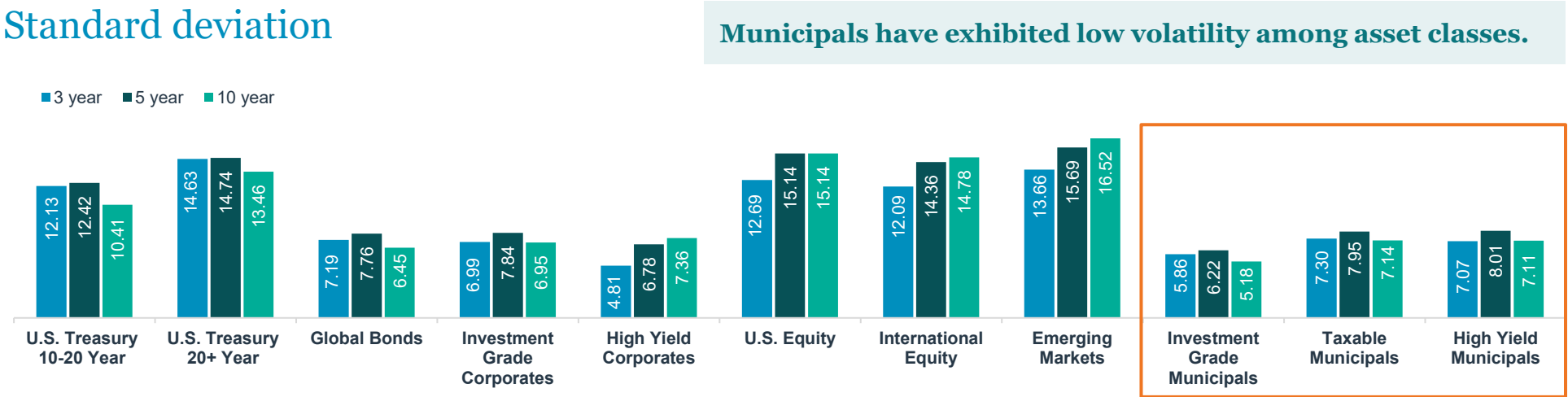
Municipal recovery rates are significantly higher than for corporates, with an average weighted recovery of 65% for municipals vs. 47% for corporates.

¹ Data source: Moody's Ratings, U.S. Municipal Bond Defaults and Recoveries, 1970 – 2024, 05 Aug 2025, with data as of 31 Dec 2024; updated annually. Performance data shown represents past performance and does not predict or guarantee future results. The universe for the study represents approximately 12,500 fundamental U.S. public finance ratings from Moody's.

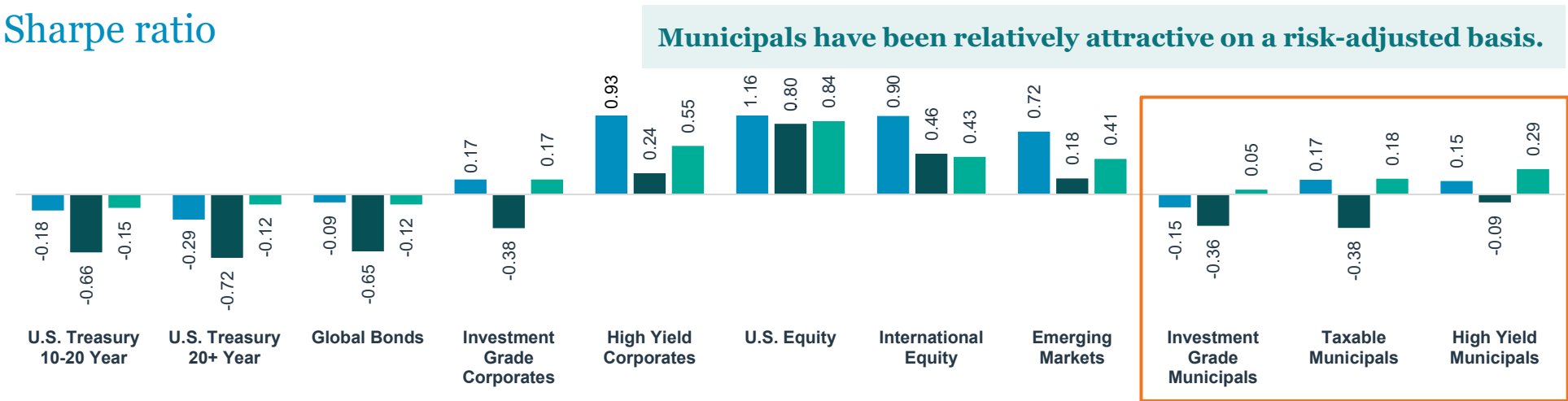
OPINION PIECE. PLEASE SEE IMPORTANT DISCLOSURES IN THE ENDNOTES.

Municipals have exhibited lower volatility with strong risk-adjusted returns

Standard deviation



Sharpe ratio



Data source: Morningstar, period ending 30 Nov 2025. Performance data shown represents past performance and does not predict or guarantee future results. Representative Indexes: Treasuries: Bloomberg U.S. 10-20 Year Treasury Index and the Bloomberg U.S. 20+ Year Treasury Index; Global bonds: Bloomberg Global Aggregate Unhedged Index; Investment grade corporates: Bloomberg US Corporate Bond Index; High yield corporates: Bloomberg High Yield Corporate Index; U.S. equity: S&P 500 Index; International equity: MSCI EAFE Index; Emerging markets: MSCI Emerging Markets Index; Investment grade municipals: Bloomberg Municipal Bond Index; Taxable municipals: Bloomberg Taxable Municipal Bond Index; High yield municipals: S&P Municipal Yield Index.

OPINION PIECE. PLEASE SEE IMPORTANT DISCLOSURES IN THE ENDNOTES.

Risks and important disclosures

This material is not intended to be a recommendation or investment advice, does not constitute a solicitation to buy, sell or hold a security or an investment strategy, and is not provided in a fiduciary capacity. The information provided does not take into account the specific objectives or circumstances of any particular investor, or suggest any specific course of action. Investment decisions should be made based on an investor's objectives and circumstances and in consultation with his or her financial professionals.

The views and opinions expressed are for informational and educational purposes only as of the date of production/writing and may change without notice at any time based on numerous factors, such as market or other conditions, legal and regulatory developments, additional risks and uncertainties and may not come to pass. This material may contain "forward-looking" information that is not purely historical in nature. Such information may include, among other things, projections, forecasts, estimates of market returns, and proposed or expected portfolio composition. Any changes to assumptions that may have been made in preparing this material could have a material impact on the information presented herein by way of example. **Performance data shown represents past performance and does not predict or guarantee future results.** Investing involves risk; principal loss is possible.

All information has been obtained from sources believed to be reliable, but its accuracy is not guaranteed. There is no representation or warranty as to the current accuracy, reliability or completeness of, nor liability for, decisions based on such information and it should not be relied on as such. For term definitions and index descriptions, please access the glossary on nuveen.com. **Please note, it is not possible to invest directly in an index.**

IMPORTANT INFORMATION ON RISK

Investing involves risk; principal loss is possible. All investments carry a certain degree of risk and there is no assurance that an investment will provide positive performance over any period of time. Investing in municipal bonds involves risks such as interest rate risk, credit risk and market risk. The value of the portfolio will fluctuate based on the value of the underlying securities. There are special risks associated with investments in high yield bonds, hedging activities and the potential use of leverage. Portfolios that include lower rated municipal bonds, commonly referred to as "high yield" or "junk" bonds, which are considered to be speculative, the credit and investment risk is heightened for the portfolio. Bond insurance guarantees only the payment of principal and interest on the bond when due, and not the value of the bonds themselves, which will fluctuate with the bond market and the financial success of the issuer and the insurer. No representation is made as to an insurer's ability to meet their commitments. This information

should not replace an investor's consultation with a financial professional regarding their tax situation. Nuveen is not a tax professional. Investors should contact a tax professional regarding the appropriateness of tax-exempt investments in their portfolio. If sold prior to maturity, municipal securities are subject to gain/losses based on the level of interest rates, market conditions and the credit quality of the issuer. Income may be subject to the alternative minimum tax (AMT) and/or state and local taxes, based on the state of residence. Income from municipal bonds held by a portfolio could be declared taxable because of unfavorable changes in tax laws, adverse interpretations by the Internal Revenue Service or state tax authorities, or noncompliant conduct of a bond issuer. It is important to review your investment objectives, risk tolerance and liquidity needs before choosing an investment style or manager.

Nuveen Asset Management, LLC is a registered investment adviser and an affiliate of Nuveen, LLC.

Nuveen, LLC provides investment solutions through its investment specialists.

This information does not constitute investment research as defined under MiFID.

OPINION PIECE. PLEASE SEE IMPORTANT DISCLOSURES IN THE ENDNOTES.