Vanguard

JANUARY 2025

Active Fixed Income Perspectives Q1 2025: A real deal

Key takeaways

Performance

Higher income returns helped spark positive performance across most bond market sectors in 2024, despite a modest rise in intermediate- and long-term yields. Lower-quality credit segments outperformed, driven by favorable macroeconomic conditions and robust investor demand.

The big picture

The overall outlook for bonds in 2025 is notably positive. We anticipate an era where interest rates remain above inflation, helping investors achieve success in fixed income. Yields are attractive compared with those observed since the 2008 global financial crisis. Still, uncertainties underlie the outlook, given potential changes to U.S. immigration and trade policy. Monetary easing is expected to continue in 2025, albeit at a notably slower pace this year in the U.S.

Approach

Evolving macroeconomic conditions will test taxable credit spread valuations that look full relative to historical levels. We favor a tactical approach to rates strategies and prefer credit sectors that have lagged recent tightening. In municipals, tax-equivalent yields for high earners are above yields for most taxable sectors. We prefer municipal credit and see more room for spreads to tighten.

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Contents

A real deal for investors 2

Opportunities and risks 3

Economy, policy, and markets 4

Active strategy 5

Current positioning in taxable portfolios 10

Municipals 12

Current positioning in tax-exempt portfolios 14

A real deal for investors

We expect a favorable environment for fixed income this year. Attractive starting yields across the curve offer the prospect of durable income and can also provide a buffer against price volatility and capital appreciation if rates drop.

Bonds are positioned to perform well across a range of scenarios, which strengthens the case for their role in a portfolio, especially for those investors who hold excess cash. Most bond yields are comparable to or notably higher than prevailing money market rates, and bonds offer better diversification properties.

In our economic and market outlook for 2025, we reemphasized our view that we've entered an era of sound money—one characterized by positive real interest rates, which provides a foundation for solid fixed income returns over the next decade. Importantly, even though policy rates are generally expected to fall further, we believe they will ultimately settle at levels higher than those observed during the 2010s.

Relative to history, we are back to a more normal fixed income regime. Investors should recognize that there is a real deal in bonds.

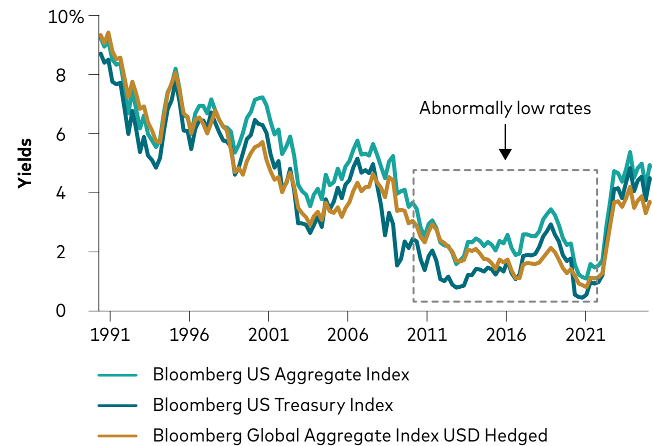
A rare occurrence: The 10-year U.S. Treasury yield is higher than the S&P 500 earnings yield

Note: The Standard and Poor's (S&P) 500 Index earnings yield is a weighted average of each constituent stock's most recent trailing 12-month earnings per share divided by its share price.

Past performance is no guarantee of future returns. The performance of an index is not an exact representation of any particular investment, as you cannot invest directly in an index.

Source: Bloomberg, as of December 31, 2024.

Back to normal: Bond yields during the 2010s were an outlier



Source: Bloomberg, as of December 31, 2024.

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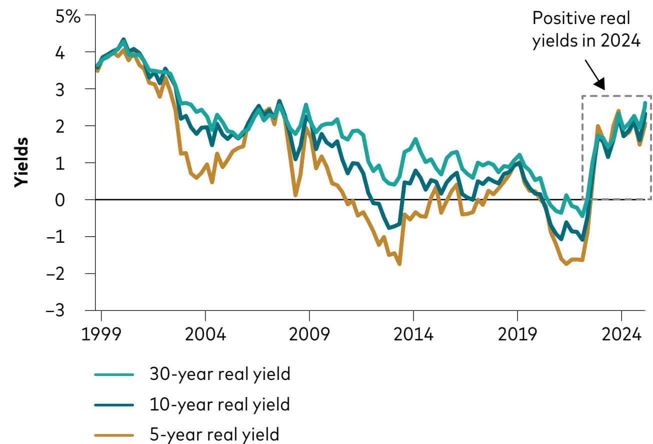
Treasury yields in excess of inflation were positive across the curve



Source: Bloomberg, as of December 31, 2024.

Past performance is no guarantee of future returns.

Opportunities and risks

There is always policy uncertainty when a new administration takes the reins in Washington, D.C., but perhaps even more so now given today's level of partisan rancor and domestic and global tensions. While our base case outlook is positive, we emphasize that the uncertainty created by the incoming administration creates a broader range of potential outcomes for growth, inflation, and monetary policy, both domestically and abroad. This merits a disciplined and nimble approach to risk assets, and the need for ballast should be considered in portfolio construction.

Market performance this year will depend on several key factors:

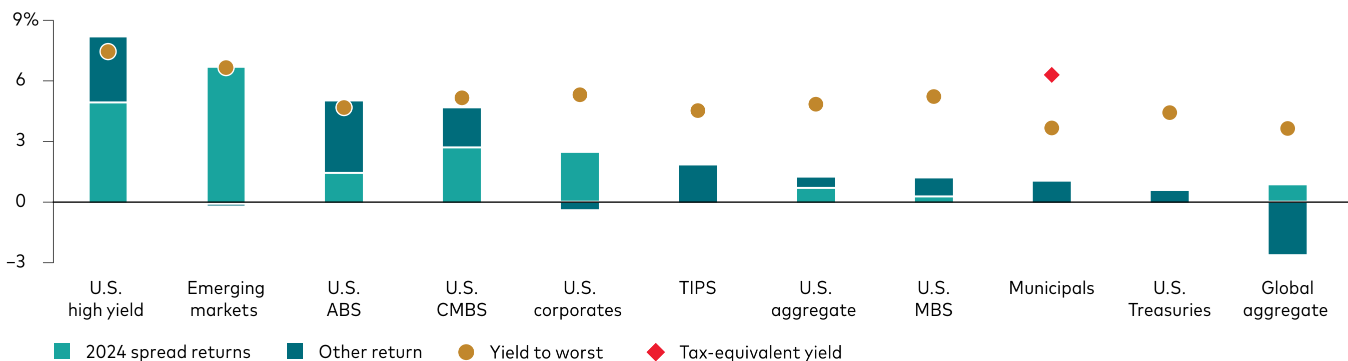
- **Economic momentum.** Households and corporate balance sheets are fundamentally healthy, contributing to the spending that is helping bolster growth and stall disinflation.
- **Tariffs.** The size and distribution of tariffs could dampen growth while potentially boosting inflation. Geopolitical retaliation could increase business uncertainty and further constrain growth.
- **Immigration.** Border policy and its implementation could sharply curtail immigration, which would reduce much of the labor supply that has spurred growth recently. That could dampen future growth and increase inflation as businesses compete for workers.
- **Fiscal policy.** The net impact of tax and spending decisions could be expansionary and inflationary, which could push yields high enough to tighten financial conditions and ultimately slow the economy down. Risks are higher given the elevated levels of government debt.
- **Deregulation.** Depending on how it is implemented, deregulation could spur innovation and productivity, impacting some sectors of the economy more than others.

Depending on how these factors play out, the Federal Reserve will have to guide monetary policy in an environment where there is significant uncertainty about the neutral rate.

With a lot of good news already priced into risk assets, such as equities and corporate bond spreads, we continue to take a long-term view and approach the year ahead with patience. Uneven economic environments can produce higher market volatility but also uncover new opportunities.

Within a framework of disciplined risk management and robust credit research, the dispersion and dislocations in the market can be harnessed and monetized into alpha via security selection.

Fixed income sector returns and yields



Note: The municipal tax-equivalent yield is calculated using a 40.8% tax bracket, which includes a 37.0% top federal marginal income tax rate and the 3.8% net investment income tax to fund Medicare.

Sources: Bloomberg indexes and JPMorgan, as of December 31, 2024. See page 7 for a full list of indexes.

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Economy, policy, and markets

Market participants were surprised last year by the resilience of the U.S. economy, which powered through the effects of the fastest rate-hiking cycle in 40 years. Since the Fed stopped raising rates 18 months ago, the economy has enjoyed strong growth, low unemployment, and cooling inflation.

As we detailed in our recent economic outlook, we attribute these conditions primarily to healthy supply factors, including a surge in productivity and available labor.

We anticipate that the U.S. economy will maintain its momentum, albeit at a slightly slower pace. Emerging policy risks, including the potential implementation of trade tariffs and stricter immigration rules, could reduce the labor supply and increase inflationary pressures. Our base case forecast is for U.S. GDP growth to remain sound at 2.1%, which accounts for a modest drag from potential changes in trade and immigration policies.

We also expect progress on inflation to stall, driven by increases in shelter and services costs. That will likely keep core inflation measures above the Fed's 2% target and above 2.5% for most of the year.

The decline in inflation from pandemic-era highs has allowed the Fed to deliver 100 basis points (bps) of maintenance cuts so far this cycle, reducing the policy rate from 5.5% to 4.5%. However, economic growth and persistent above-target inflation should lead to a more gradual path of rate cuts in 2025. Unless growth weakens significantly, we expect the Fed to maintain a cautious approach, keeping the federal funds rate at or above 4%.

Markets and the Fed will need to navigate the uncertainty. We are closely monitoring emerging policy risks, particularly those that could dampen economic growth and exacerbate inflation. These factors may influence the Fed's decisions regarding the extent and timing of further policy rate reductions.

International markets

Outside the U.S., less favorable supply dynamics and restrictive monetary policies in Europe and elsewhere have translated into weaker economic growth. The course ahead looks uneven and hinges on the status of U.S. tariff policy. We see the following scenarios playing out across the globe:

- **Euro zone.** Growth is likely to remain below trend next year. We expect the European Central Bank (ECB) to cut rates to below 2% by the end of 2025, which is appropriately reflected in market pricing, in our view.
- **United Kingdom.** Fiscal stimulus measures should support growth. Slowing but sticky inflation will likely put the Bank of England on a gradual cutting path and keep policy rates above neutral next year.
- **Japan.** A pickup in domestic demand should propel growth above 1%. We expect the Bank of Japan (BOJ) to continue its gradual hiking cycle as economic activity recovers and inflation momentum holds steady.
- **Emerging markets.** We anticipate that easing cycles broadly will continue and will include more countries, though interest rates will likely stay in restrictive territory.
- **China.** Stimulus measures could offer a temporary economic boost, but more comprehensive fiscal and monetary policies will be essential to counter the significant external challenges posed by potential U.S. trade policies, structural issues in the property sector, and the lack of confidence among households and businesses.

Active strategy

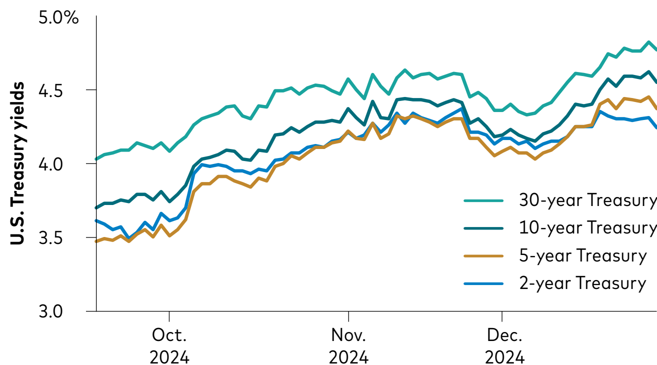
Rates

Last year, interest rates responded to shifting narratives around the economy and Fed policy. Multiple hotter-than-expected inflation prints drove rates higher in April. Then, with the unemployment rate rising in a pattern reminiscent of previous recessions, markets reacted and yields fell sharply in the third quarter.

The Fed responded forcefully by cutting rates by 100 bps over three months. However, since its initial cut of 50 bps in September, labor market and growth data have painted a more positive picture of U.S. economic growth and consumer health while inflation has stalled above the Fed's target.

Yields retraced higher in response and gained further momentum in the aftermath of the U.S. presidential election, as the market continues to digest expectations for pro-growth and potentially pro-inflationary policies.

U.S. Treasury yields since the September Fed rate cut



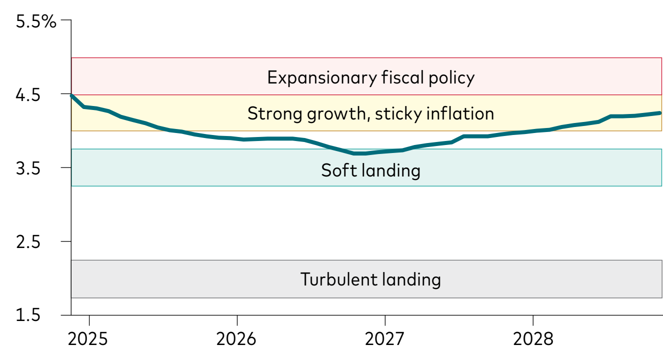
Source: Bloomberg, as of December 31, 2024.

Past performance is no guarantee of future returns.

Over the first half of 2025, we expect strong growth and sticky inflation to persist, keeping the yield curve relatively flat and yields to be consistently higher than they were for most of 2024. The Fed sees itself in a new phase of the cycle where the bar for further cuts is higher. If inflation continues to run hot, as it has done in the first quarter of the past couple of years, yields on the short end of the curve could back up a bit and flatten the curve even more as 2025 cuts get priced out.

Market pricing reflects economic expectations

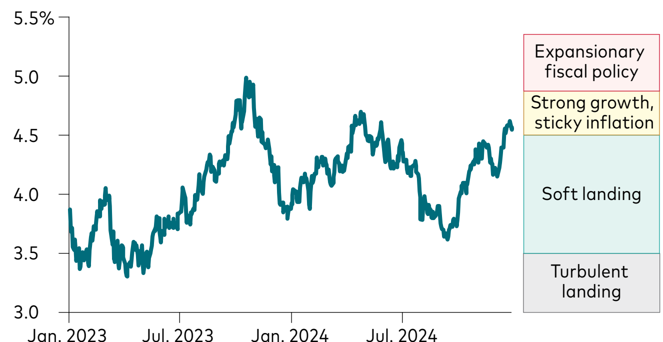
Fed funds futures' implied policy path



Note: Fed funds futures are financial futures contracts based on the federal funds rate and traded on the Chicago Mercantile Exchange operated by CME Group Inc.

Source: Bloomberg, as of December 31, 2024.

U.S. 10-year Treasury yield



Source: Bloomberg, as of December 31, 2024.

Past performance is no guarantee of future returns.

In the near term, we don't see a catalyst for a sustained rise at the long end of the curve. Continued flows into fixed income across maturities have helped keep bond yields in check.

Worries about U.S. deficit spending, as well as a potential term-premium shock to yields, are front of mind with the nomination of Scott Bessent as Treasury Secretary. Bessent has communicated his preference to reduce the fiscal deficit. Though we don't expect it, significant changes in U.S. government policies could provide a basis for long-end rates to go higher.

With respect to curve positioning, we like the risk/reward mix best in the belly of the yield curve. Short- to intermediate-term yields offer a good balance of attractive income potential with less downside price risk.

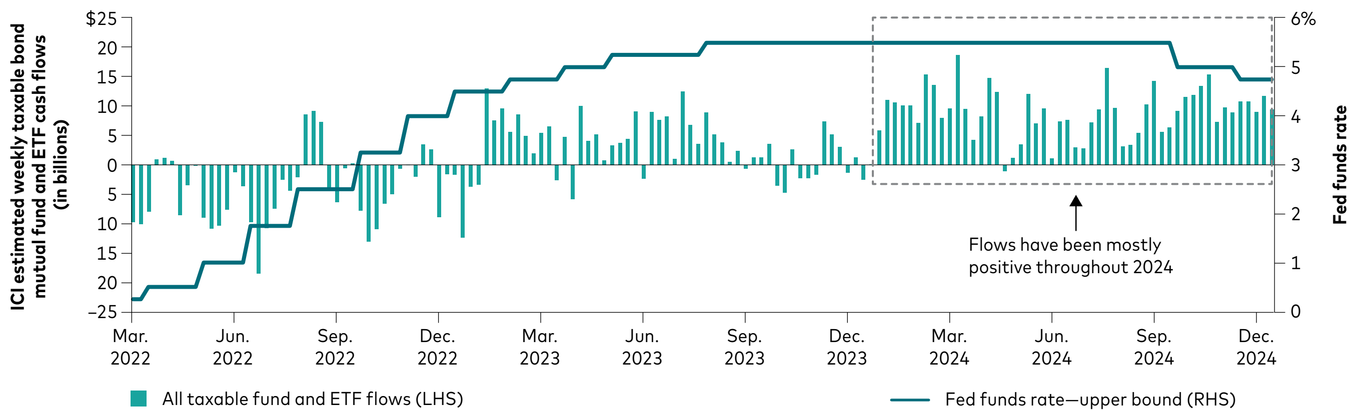
Global positioning

Inflation for the past two years has declined significantly in most economies outside the U.S., but so has economic growth. As inflation rates approach central bank targets, the global easing cycle is expected to continue into 2025, though the paths for policy rates are likely to vary.

European rates markets are now appropriately pricing in a weaker growth outlook that accounts for potential global trade friction and a more dovish tone from the ECB. We have reduced our European exposure, taking profits after a period of outperformance. Nevertheless, we remain positive on sovereign fundamentals in peripheral Europe and would seek to add back exposure at wider spread levels.

In Japan, we anticipate that monetary policy will become more restrictive. We believe that the BOJ will raise rates more aggressively than current market expectations suggest to combat domestic inflation. As a result, we are maintaining a short position in Japanese government bonds and will continue to position for a flatter yield curve.

Flows into taxable bond funds and ETFs were strongly positive throughout 2024



Sources: Bloomberg, Federal Reserve, and Investment Company Institute, as of December 31, 2024.

Credit

The positive U.S. growth story has driven credit spreads across sectors to multidecade lows. In 2024, excess returns were notably positive, with the highest gains observed in lower-rated bonds.

While spread levels remain narrow relative to history, we believe the vigor of the economy and issuers' clean balance sheets justify the prices. All-in yields remain compelling across sectors when compared with prior decades, which has attracted investor demand across most sectors.

Credit yields remain attractive while spreads imply risk

	Yields (%)			Spreads (bps)		
Sector	**Yield to worst (12/31/2024)**	**25-year median***	**25-year percentile***	**Option-adjusted spread (12/31/2024)**	**25-year median***	**25-year percentile***
U.S. corporates	5.31	4.41	66%	80	131	0%
1- to 5-year corporates	4.92	2.85	75%	60	91	7%
5- to 10-year corporates	5.36	3.59	91%	82	131	1%
10-year-plus corporates	5.80	5.02	71%	98	169	0%
Euro corporates	3.45	3.80	43%	102	112	40%
High yield	7.49	7.68	44%	287	455	3%
High yield BB	6.39	6.28	50%	179	311	1%
High yield B	7.43	7.53	46%	277	450	4%
High yield CCC	10.16	10.85	36%	558	820	13%
Emerging markets investment-grade (USD)	5.84	4.58	97%	106	187	2%
Emerging markets high yield (USD)	10.34	9.07	76%	401	554	17%
U.S. ABS	4.73	3.04	67%	44	63	13%
U.S. CMBS	5.66	4.19	73%	75	104	15%
U.S. MBS	5.27	3.81	73%	43	44	46%

***** Index data for yields and spreads go back to December 31, 1998 when available; all others use earliest date possible.

Note: Option-adjusted spread (OAS) is the yield spread to be added to a benchmark yield curve to discount a security's payments to match its market price using a dynamic pricing model that accounts for embedded options. **Past performance is no guarantee of future returns. The performance of an index is not an exact representation of any particular investment, as you cannot invest directly in an index.**

Source: Bloomberg, as of December 31, 2024. See below for a full list of indexes.

Indexes used in charts

The following indexes are represented in the sector returns and yields chart on page 3: Bloomberg US Corporate High Yield Bond Index; J.P. Morgan Emerging Markets Bond Index (EMBI) Global Diversified; Bloomberg US Asset-Backed Securities Index; Bloomberg CMBS Erisa Eligible Index; Bloomberg US Corporate Bond Index; Bloomberg US Treasury Inflation-Linked Bond Index (Series-L); Bloomberg US Aggregate Index; Bloomberg US Mortgage Backed Securities Index; Bloomberg US Municipal Index; Bloomberg US Treasury Index; and Bloomberg US Global Aggregate Index.

The following indexes are represented in the credit yields chart on page 7: Bloomberg US Corporate Bond Index; Bloomberg US 1–5 Year Corporate Bond Index; Bloomberg U.S. 5–10 Year Corporate Bond Index; Bloomberg U.S. 10+ Year Corporate Index; Bloomberg Pan-European Aggregate Index; Bloomberg US Corporate High Yield Bond Index; Bloomberg Ba US High Yield Index; Bloomberg B US High Yield Index; Bloomberg Caa US High Yield Index; J.P. Morgan Emerging Markets Bond Index Global Diversified Investment Grade; J.P. Morgan Emerging Markets Bond Index Global Diversified High Yield; Bloomberg US Asset-Backed Securities Index; U.S. CMBS: Bloomberg CMBS: Erisa Eligible Index; Bloomberg US Mortgage Backed Securities Index.

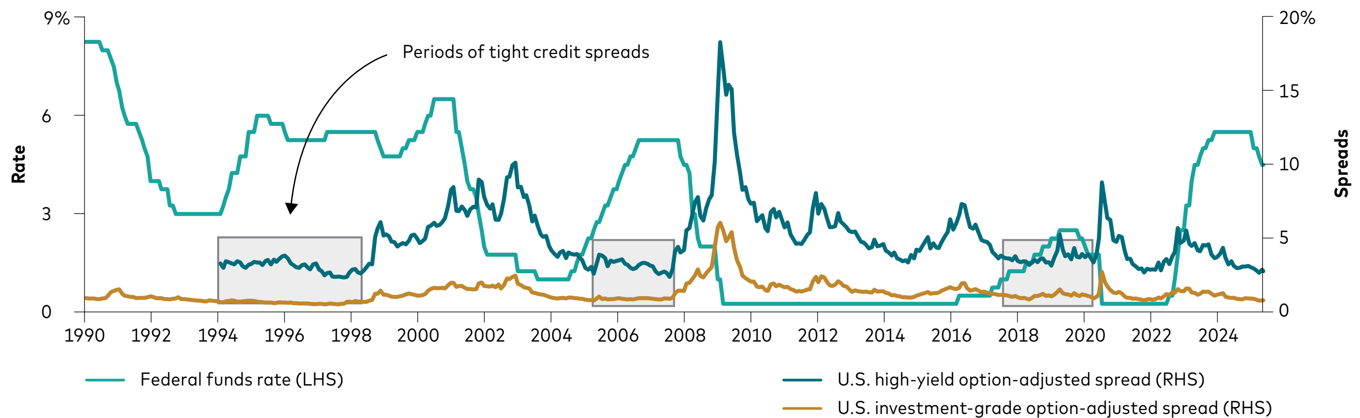
Nonetheless, there is limited room for spreads to narrow much further. Recent inflation trends have prompted the Fed to adopt a more cautious stance, which is likely to dampen the performance of risk assets.

History shows that credit spreads can remain narrow for extended periods of time, particularly in the later stages of an economic expansion. If spreads are able to hold near current levels, credit should outperform government bonds due to higher starting yields.

Our base case view expects credit spreads to stay within a narrow range over the coming months. We remain constructive on credit risk but are maintaining a lower-than-average exposure. We expect higher volatility in 2025 as new trade, tax, and immigration policies are negotiated and potentially implemented. If credit fundamentals stay healthy, these volatile periods should present opportunities to add credit risk.

Our portfolios have higher-conviction positions in sectors that have lagged recent tightening. Short-term credit, including consumer asset-backed sectors and specific pockets of U.S. and European corporates, has room to outperform. We remain defensive and focused on bond selection opportunities in U.S. high yield and emerging markets.

Credit spreads can remain tight for long periods even as the Federal Reserve keeps rates high



Note: The index tracking high-yield option-adjusted spreads began in January 1994.

Source: Bloomberg data as of December 31, 2024. Option-adjusted spread (OAS) is the yield spread to be added to a benchmark yield curve to discount a security's payments to match its market price using a dynamic pricing model that accounts for embedded options.

Alternate scenarios

The best possible scenario for credit would require sustained economic growth and inflation falling clearly downward toward 2%, which would enable the Fed to implement more rate cuts than currently anticipated.

A less optimistic scenario would be one where inflation progress stalls, leading the Fed to communicate a pause in rate cuts. Markets might then become concerned about possible rate hikes. Fear of a prolonged period of restrictive rates could raise growth concerns, and credit spreads would likely widen as a result.

The most challenging scenario for credit performance would be a sustained trend of weaker growth. Rising recession fears would result in much wider spreads, although the negative performance impact may be cushioned by a corresponding decline in Treasury yields. While not likely over the near term, this scenario could be a rising risk as 2025 progresses.

Current positioning in taxable portfolios

Rates

Exposure	View	Strategy
U.S. duration & curve	• The recent trend higher in yields and a steeper curve reflect the market's view of a less accommodative policy outlook, as well as expectations for a surge in issuance at the start of year. • The risk/reward of owning duration is improving given improved valuations, policy risks, and the tightening of financial conditions. • A substantial move higher in yields would require the market to contemplate more hawkish Fed policy or significant term-premium concerns.	• We have a bias to extend duration above 4.75% on 10-year Treasuries as long as inflation is less than 3% and there is no meaningful deficit expansion.
Global duration & curve	• BOJ rate hikes and quantitative tightening to continue to pressure Japanese government bond yields higher, which should also flatten the curve. • U.S.-imposed tariffs may present significant headwind to euro zone growth. • Favorable valuations on U.K. gilts versus German bunds	• We remain short Japanese government bonds and are positioned for yield curve flattening. • We retain a modest overweight in peripheral Europe. • Long 10-year U.K. rates versus short German 10-year rates.
Mortgage-backed securities (MBS)/ agencies	• Strong flows into bonds are supportive for the sector. • MBS index spreads are toward the lower end of our fair-value range. • Higher yields and steeper curves should improve bank and REIT demand this year. • Higher mortgage rates should translate into lighter 2025 supply.	• We maintain a modest overweight to agency MBS and look to add selectively in agency commercial mortgage-backed securities (CMBS) and non-agency residential mortgage-backed securities (RMBS).

Credit

Exposure	View	Strategy
Investment-grade (IG) corporates	• Corporate fundamentals remain healthy but are well reflected in narrow spreads. • Potential deregulation could provide further upside, but the impact will vary across sectors. • Net new issuance in 2025 should be modest ($250B) and met with strong demand absent an economic downturn. • Valuations and cycle position justify moving up in earnings quality.	• We're overweight BBB rated industrials and shorter-maturity financials. • We prefer issuers that are deleveraging, and we are cautious on those looking to pursue debt-funded M&A. • Across the curve, we like the front end and the long end.
High-yield corporates	• Credit fundamentals have improved given a better growth backdrop, resulting in lower default rate activity. • Spreads are below historical averages and have limited room to absorb negative surprises. • We see a positive supply/demand mix in 2025 as higher expected new issue volume should be met by strong demand for credit.	• We hold a lower-than-average allocation to the sector. • Focus is on bottom-up security selection as dispersion across issuers remains high.

(Continued on page 11)

Credit

Exposure	View	Strategy
Emerging markets	• Performance across countries has been uneven, creating pockets of value in some areas while others look expensive. • The fiscal picture for emerging markets should continue to look favorable relative to developed markets in 2025. We expect low default activity. • We are cautious given risks to trade and growth. Flows into the sector may stall with policy uncertainty and slower Fed easing.	• We are using the first wave of 2025 issuance to add where we see value. We are defensive on names that have near-term spread widening risk. • We are looking for opportunities to add local duration exposure. We prefer emerging markets foreign currencies in Latin America versus Asia.
Structured products	• Our favorable view of asset-backed securities (ABS) vs. short-duration corporates is reflected in recent performance. We still view ABS as an attractive source of carry. • In CMBS, 10-year AAA rated bonds offer value over similar duration corporates and should see strong demand given lack of 10-year issuance.	• Our favorable view of ABS versus short-duration corporates is reflected in recent performance. • We still view ABS as an attractive source of carry. • In CMBS, 10-year AAA rated bonds offer value over similar duration corporates and should see strong demand given lack of 10-year issuance.

Municipals

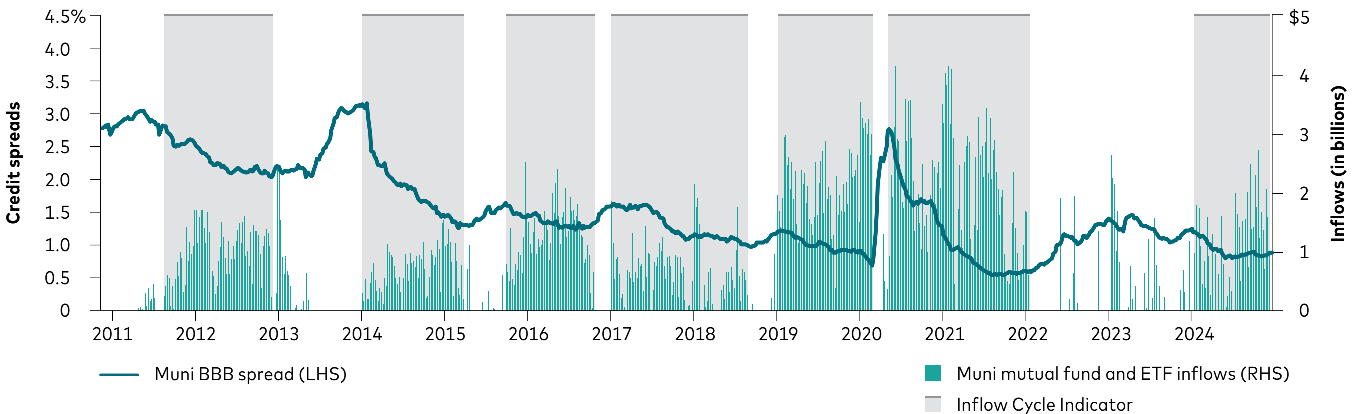
The municipal market is poised to deliver attractive returns this year driven by a combination of three key reasons:

- **Yields and tax-equivalent yields remain high.** As of December 31, 2024, the Bloomberg Municipal Bond Index yield stood at 3.74%, translating to 6.32% for investors in the highest tax bracket. Such yields reside in the 75th percentile over the past 20 years.
- **Investors are clamoring for more.** With inflows to funds returning in strength, investors promptly scooped up a record $507.7 billion in municipal issuance last year, and we expect inflows to municipals to persist.
- **Compelling relative value.** Credit spreads remain attractive, especially relative to the historic tights approached in the taxable market. Our portfolio managers see attractive valuations in middle- and lower-rated bonds, particularly at the short end of the curve.

Credit spread levels present opportunity...
We find that municipal credit spreads, relative to AAA muni yields, are still in the 40th percentile for the past 10 years after adjusting for sectors, maturities, and other variables, offering strong relative value opportunities. But these valuations may not last long.

The municipal bond market has benefited from a sustained inflow cycle, with 22 consecutive weeks of positive flows into municipal funds and ETFs since July. This demand surge has been driven, in part, by the Fed's easing cycle, which has motivated tax-sensitive investors to move out of cash in search of higher-yielding, tax-exempt alternatives. Overall demand has been strong enough to not only effectively digest record-high issuance, but even tighten valuations. Historically, credit spreads have compressed during sustained inflow cycles, and we expect this trend to continue. As a result, we maintain an overweight position in credit beta.

Municipal fund inflow cycles tend to tighten credit spreads



Note: Municipal spreads are the Bloomberg Municipal Bond BBB Index yield above Bloomberg Municipal Bond AAA Index yield.
Source: Bloomberg, as of December 31, 2024.

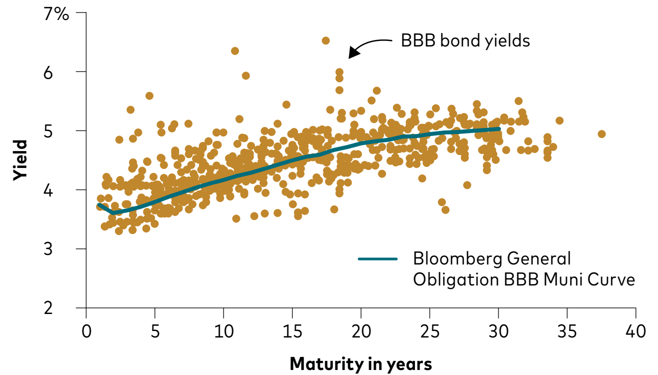
...as does spread dispersion

However, not all municipal credit spreads are created equal. While data providers can chart a hypothetical BBB curve, valuations on individual bonds can vary significantly. For example, there are approximately 650 bonds rated "BBB flat" (that is, BBB excluding BBB- and BBB+) in the Bloomberg Municipal Bond Index, with yields that differ by as much as hundreds of basis points despite being of similar credit quality. These disparities can be attributed to various factors, including sector, structure, complexity, and state of issuance.

For example, higher education bonds have traded at a discount compared with hospital bonds of similar ratings. This is a case of sentiment being positive for hospitals versus negative for universities that leaves room for adding value through meticulous research of the higher education space. On the higher-quality end of the spectrum, prepaid gas and housing bonds are often highly rated yet priced attractively due to their complex structures.

This means managers with the expertise to accurately incorporate these various factors and find cheap bonds with attractive risk-return profiles have plenty of opportunity to add outperformance.

Yield dispersion among municipal bonds is significant

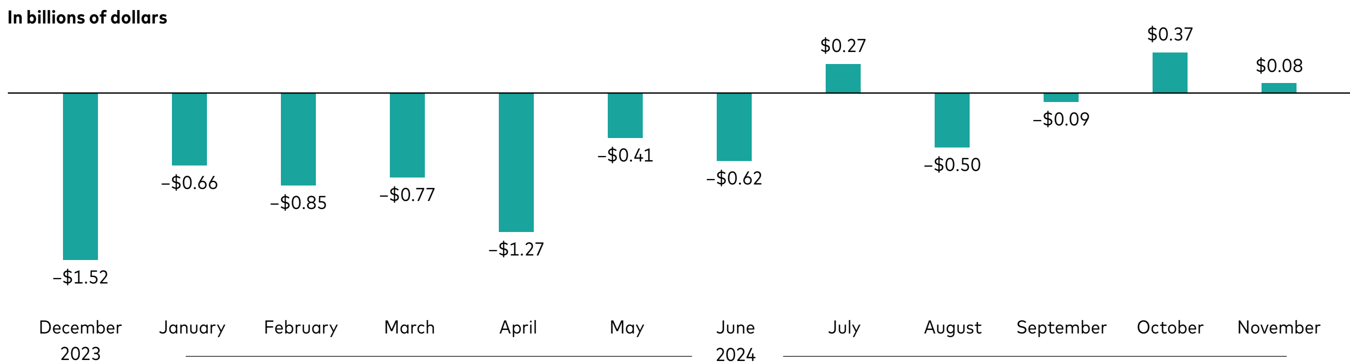


Source: Bloomberg, as of December 31, 2024.
Past performance is no guarantee of future returns.

A new flow trend emerging

One area in credit that has flown under the radar is the short-term municipal bond market. Funds focused on the front end of the curve experienced significant outflows in 2022, 2023, and much of 2024 as investors sought higher yields in cash positions. Now, 100 bps into the Fed's cutting cycle, investors are motivated to move back into the short-term space with a more upward-sloping curve. Such activity should help support and compress credit spreads in the short end and bring spreads more in line with intermediate- and longer-dated muni bonds, which have experienced inflows throughout 2024.

National short-term municipal fund flows turning positive



Source: Bloomberg, as of December 31, 2024.

Treasury deficit sell-offs are a muni manager's treasure

We view any potential sell-off in U.S. Treasuries, driven by concerns about the federal budget deficit, as a buying opportunity in the municipal bond market. Investors may conflate federal, state, and local governments, as well as their respective creditworthiness, but these entities have distinct balance sheets and fiscal profiles.

State and local governments are subject to balanced budget requirements, which reduces their exposure to fiscal stress. Further, the underlying fundamentals for these issuers remain as strong as they have been in decades. Nonetheless, the gravitational force that Treasuries exert on muni yields could open attractive valuations that would present additional opportunities for active managers to capitalize on.

Current positioning in tax-exempt portfolios

Munis

Exposure	View	Strategy
Credit allocation	• A supportive technical environment of municipal fund inflows favors an overweight to credit overall. • Inflows are just starting for short-term funds, offering a strong opportunity for spread compression after an extended period of outflows.	• Maintain exposure in sectors like housing and prepaid gas. • Selectively add exposure in sectors with negative sentiment (such as universities). • Primary markets are screening rich, so utilize more secondary markets. • Heavy focus on valuations in conditions where many investors are simply attempting to maximize yield.
Structure	• A historically diverse range of coupons and higher yields places convexity management front and center for risk management and alpha opportunity.	• Look to trade out of par issues in favor of premium callable bonds.
Duration/ curve	• Without any clear dislocation of municipal yields, look to primarily use duration as a credit hedge. • Valuations in higher-rated bonds are generally rich due to higher absolute yield levels and ongoing demand from separately managed accounts (SMAs).	• Overweight duration proportionate to risk contribution from credit exposure. • Barbell curve positioning, with heavier exposures in cash and 12–15 year bonds to take advantage of rolldown effects into SMA demand.

Vanguard active bond funds and ETFs

Vanguard active bond funds and ETFs		Admiral™ Shares or ETF ticker symbol	Expense ratio*
Treasury/ Agency	GNMA†	VFIJX	0.11%
	Inflation-Protected Securities	VAIPX	0.10
	Intermediate-Term Treasury	VFIUX	0.10
	Long-Term Treasury	VUSUX	0.10
	Short-Term Federal	VSGDX	0.10
	Short-Term Treasury	VFIRX	0.10
Investment-grade corporate	Core Bond	VCOBX	0.10%
	Core Bond ETF	VCRB	0.10
	Core-Plus Bond	VCPAX	0.20
	Core-Plus Bond ETF	VPLS	0.20
	Intermediate-Term Investment-Grade	VFIDX	0.10
	Long-Term Investment-Grade†	VWETX	0.11
	Multi-Sector Income Bond	VMSAX	0.30
	Short-Term Investment-Grade	VFSUX	0.10
	Ultra-Short-Term Bond	VUSFX	0.10
	Ultra-Short Bond ETF	VUSB	0.10
Below-investment-grade	High-Yield Corporate†	VWEAX	0.12%
Global/ international	Emerging Markets Bond	VEGBX	0.40%
	Global Credit Bond	VGCAX	0.25

Vanguard active municipal bond funds			
National municipal	Ultra-Short-Term Tax-Exempt	VWSUX	0.09%
	Short Duration Tax-Exempt Bond ETF	VSDM	0.12
	Limited-Term Tax-Exempt	VMLUX	0.09
	Core Tax-Exempt Bond ETF	VCRM	0.12
	Intermediate-Term Tax-Exempt	VWIUX	0.09
	Long-Term Tax-Exempt	VWLUX	0.09
	High-Yield Tax-Exempt	VWALX	0.09
State municipal	California Intermediate-Term Tax-Exempt	VCADX	0.09%
	California Long-Term Tax-Exempt	VCLAX	0.09
	Massachusetts Tax-Exempt‡	VMATX	0.13
	New Jersey Long-Term Tax-Exempt	VNJUX	0.09
	New York Long-Term Tax-Exempt	VNYUX	0.09
	Ohio Long-Term Tax-Exempt‡	VOHIX	0.13
	Pennsylvania Long-Term Tax-Exempt	VPALX	0.09

Active fixed income leadership team

Sara Devereux
Global Head of Fixed Income Group
In industry since 1992

Chris Alwine, CFA
Global Head of Credit
In industry since 1990

Roger Hallam, CFA
Global Head of Rates
In industry since 2000

Paul Malloy, CFA
Head of U.S. Municipals
In industry since 2005

Active fixed income at Vanguard

$473B
Vanguard Global Active Bond AUM

$276B Vanguard Global Active Taxable Bond AUM

$197B Vanguard Global Active Municipal Bond AUM

25+ Portfolio managers

35+ Traders

60+ Credit research analysts

130+ Dedicated team members

* As reported in each fund's prospectus. A fund's current expense ratio may be higher or lower than the figure shown.
† Investment advisor: Wellington Management Company LLP.
‡ Investor Shares available only. There is no minimum investment required for advised clients.
Note: Data as of December 31, 2024.

For more information about active fixed income, speak with your financial advisor.

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Bonds of companies based in emerging markets are subject to national and regional political and economic risks and to the risk of currency fluctuations. These risks are especially high in emerging markets.

High-yield bonds generally have medium- and lower-range credit-quality ratings and are therefore subject to a higher level of credit risk than bonds with higher credit-quality ratings.

U.S. government backing of Treasury or agency securities applies only to the underlying securities and does not prevent share price fluctuations. Unlike stocks and bonds, U.S. Treasury bills are guaranteed as to the timely payment of principal and interest.

Bond funds are subject to interest rate risk, which is the chance bond prices overall will decline because of rising interest rates, and credit risk, which is the chance a bond issuer will fail to pay interest and principal in a timely manner or that negative perceptions of the issuer's ability to make such payments will cause the price of that bond to decline.

Investments in bonds issued by non-U.S. companies are subject to risks including country/regional risk and currency risk.

Although the income from a municipal bond fund is exempt from federal tax, you may owe taxes on any capital gains realized through the fund's trading or through your own redemption of shares. For some investors, a portion of the fund's income may be subject to state and local taxes, as well as to the federal Alternative Minimum Tax.

Be aware that fluctuations in the financial markets and other factors may cause declines in the value of your account. There is no guarantee that any particular asset allocation or mix of funds will meet your investment objectives or provide you with a given level of income.

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