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Active Fixed Income Perspectives Q3 2023: Cruising altitude

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Key takeaways

Performance

Higher-than-desired inflation and a stronger-for-longer global economy in the second quarter helped yields to rise and credit spreads to fall.

Despite yields rising year-to-date, the U.S. Aggregate Float-Adjusted Bond Index has returned +2.12% through June 30, 2023. Such results re-affirm our "bonds are back" view as higher yields can generate positive returns even in the face of continued rate hikes and periods of elevated volatility.

Looking ahead

The odds of a recession rise as rates go higher themselves. In the end, we believe a shallow recession will occur. Bonds have traditionally done well after the Federal Reserve stops raising the fed funds rate.

Approach

Our strategy favors higher-quality securities that are less economically sensitive. We believe 10-year Treasury yields near 4% are at an attractive level to add duration. In municipals, the longer end of the curve offers better value.

When the Fed is done hiking, quality and duration should prove their mettle. For now, higher yields mean investors are getting paid to wait.

Cruising altitude

There are those post-takeoff moments in an airplane—after the pressure against your chest has eased and your ears have stopped popping—when you gaze out the window at the clouds below.

For most of the global bond market, that's roughly where we are: near cruising altitude. We may hit some turbulence yet, but with respect to the U.S., we believe the Fed has moved on from playing catch-up with its policy actions to a period of fine-tuning, which likely translates into one or two more rate hikes this year before holding steady well into 2024.

When the end of rate hikes comes clearly into view, investors will focus more on the trajectory of the economy. Market commentators have obsessed over whether we will have a hard, soft, or extended "landing"—that point when the economy cools and rates eventually drop. Each is possible. However, the current flight path points toward more of a bumpy landing: a shallow recession next year.

We don't see economic excesses that could spark a deep and prolonged downturn. Still, our portfolios are positioned more defensively since not all segments of the market are priced for a slowdown.

An upgrade to first class?

With short-term Treasuries and money markets offering yields between 4% and 5%, many investors may believe there is little point in taking off those cash seat belts. More than \$5 trillion was in money market funds as of late June, according to SEC data.

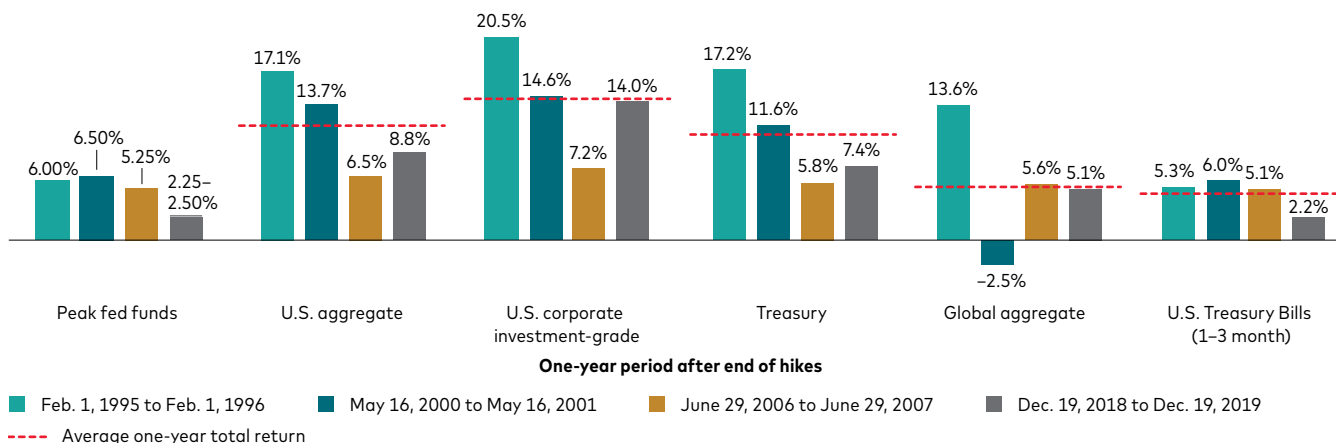
But the rest of this year could be a good time to average into the more durable yields in longer-dated maturities. Today's higher yields provide cushion for market volatility, and bonds have traditionally done well after the Fed stops raising interest rates.

Inflation will dictate when that day comes. We believe the Federal Open Market Committee (FOMC) will keep rates on hold for as long as possible. If a recession comes, rising credit spreads could dampen returns, but then, at some point, falling rates would provide a strong tailwind.

Nonetheless, with a fed funds rate well into restrictive territory, the potential remains for equity-like returns in fixed income when policy rates eventually normalize. For bond investors, that would be like an upgrade to first class.

How bonds have responded after the Fed stopped raising rates

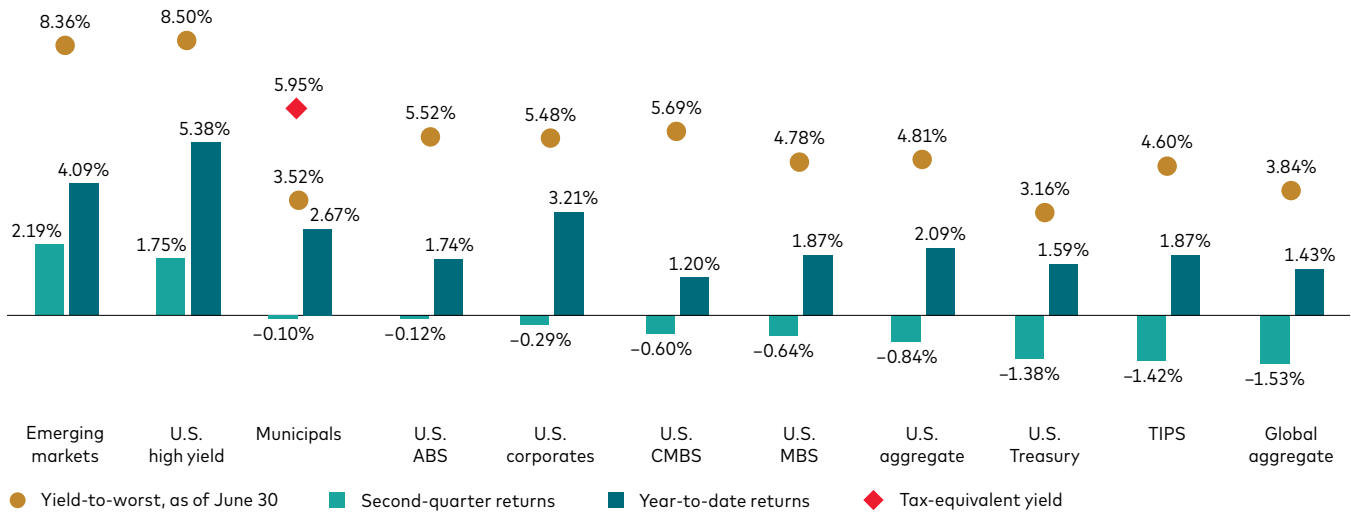
(One-year returns)



Sources: Vanguard calculations using FactSet data and Bloomberg indexes.

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.

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 J.P. Morgan EMBI Global Diversified Index, as of June 30, 2023.

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Rates and inflation

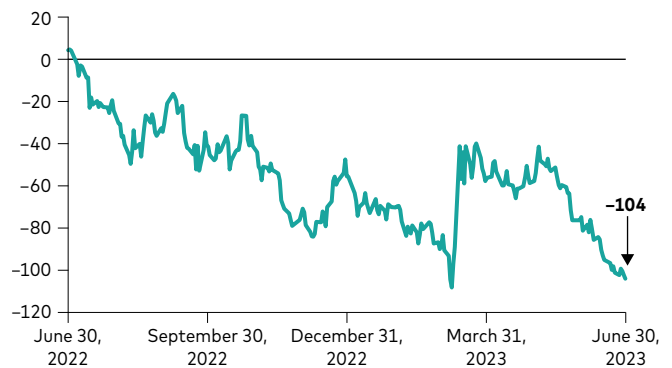
U.S. Treasury yields climbed across all maturities in the weeks before June 30 as fears of a broader banking crisis faded and the U.S. economy remained stronger for longer. Short-term yields moved most. The one-year Treasury bill jumped 73 basis points (bps) while longer-term yields moved only modestly higher.

Rates markets had, for much of this year, priced in rate cuts for the fall. As recession expectations have been pushed further out, rate cut projections are now more in line with what we've long expected—a later 2024 event.

The yield curve became more inverted over the quarter, with a 100 bps difference between 2-year and 10-year rates. The curve has been inverted for now for a full year, so the measure continues to project falling rates in the foreseeable future.

Inverted for a year: 10-year minus 2-year Treasury yield

(in bps)



Source: Bloomberg, as of June 30, 2023.

Treasury issuance being absorbed

Following the resolution of the debt ceiling showdown, the U.S. Treasury embarked on an issuing spree to restore its cash balance, which had dwindled leading up to the agreement. Over \$1 trillion in bills, notes, and bonds are expected to be issued by year-end.

Investors initially raised concerns about the negative impact that such supply could have on Treasury yields, given that the Fed is still reducing the amount of Treasuries on its balance sheet through quantitative tightening. But the additional T-bill supply has been met with strong demand by money market funds.

Tipping point?

The U.S. market is pricing in an optimistic scenario: That inflation will come back down to 2% in a couple years and stay there for a long time. That would normally provide an opportunity to buy insurance in the form of Treasury Inflation-Protected Securities (TIPS), which would benefit if inflation remained elevated.

However, we believe that the huge outflow pressure on the sector may not be done. Current valuations may be on the cheap side, but a better relative value tipping point could come later.

Central banks still hawkish

After 10 consecutive rate hikes, the decision at the June FOMC meeting to hold rates steady, for now, bought valuable time for policymakers to consider incoming data. A slower-moving, more patient Fed should remove some market uncertainty. Until inflation takes the next leg down, we expect all central banks to maintain a more hawkish tone in their communications.

Outside the U.S., the European Central Bank reaffirmed its commitment to dousing inflation with a 25 bps hike in June. After increasing policy rates by a total of 4% in the last 12 months, another hike in July is nearly assured because of strong wage gains and employment levels.

While most economies have turned the corner on inflation, the United Kingdom has not quite done so. Core inflation in the U.K. ticked up in May to a 30-year high, prompting the Bank of England to surprise markets in June with a hike of 50 bps—double what many economists had expected.

Mortgage-backed securities

Mortgage-backed securities (MBS) have been a trendy favorite of the asset management industry of late. Valuations improved quickly over the quarter, and the team sees opportunity in the sector.

Following the FDIC takeover of Silicon Valley Bank and Signature Bank in March, MBS spreads neared crisis levels as the market braced for the liquidation of \$80 billion of MBS from these banks' portfolios.

The improved valuations then provided an opportunity for our funds. Over the near term, we like the prospects for MBS, and we have moved to an overweight allocation in core portfolios.

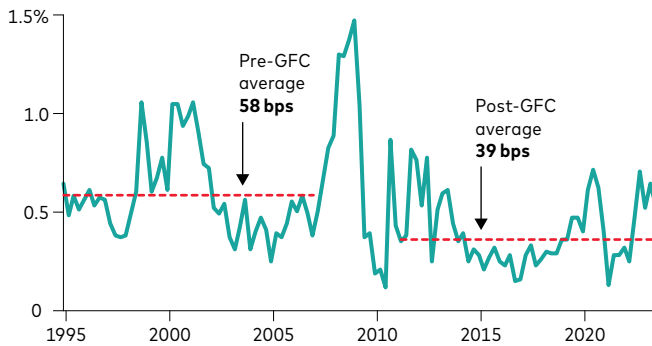
Longer-term outlook

Although the team sees potential for near-term spread tightening, it is unlikely that spreads will return to the tight levels experienced during much of the period after the 2008 global financial crisis (GFC), during which strong demand from the Fed and banks generally kept MBS spreads tighter.

Going forward, the Fed and banks will be on the sidelines. With supply coming to market, money managers will need to step in to buy a significant amount of MBS in the next several years. A more valuation-sensitive buyer base means that spreads on average are likely to remain wider than they have been in the post-GFC period. But wider spreads create the potential for better long-term returns for the sector.

Our team views the pre-GFC period as a more relevant point of comparison for evaluating MBS today than the post-GFC period. Back then, both the Fed and banks held a much smaller percentage of MBS than they have recently, and we see that as a likely scenario in the years ahead. Through that lens, MBS valuations today look fairly priced while providing an attractive, high-quality source of carry.

U.S. Mortgage-Backed Securities Index spread over Treasuries



Source: Bloomberg data, as of June 30, 2023.

Implications for Vanguard funds

- Intermediate-term yields near 4% are a favorable entry point for adding duration, and they are less volatile than shorter term Treasuries.
- The sell-off in MBS provided opportunities to add exposure. A near-term rebound in investor demand should support the sector. Specified pools¹ offer the best value.
- Sustained outflow pressure in TIPS suggests further cheapening is required to make them attractive.

Credit markets

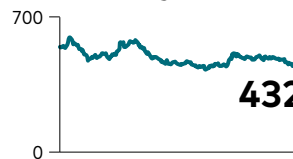
The rally in risk assets pushed equities up and credit spreads down. Lower-quality bonds performed best as investors discounted near-term recession risks. We haven't changed our preference for higher-quality, more recession-resistant exposure.

However, we've added credit risk as the credit cycle continues to extend, and the macroeconomic backdrop remains supportive. Companies are issuing less in new bonds and investors are rotating back into fixed income, which should provide a sunnier market environment over the summer months.

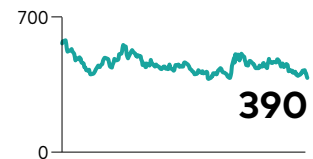
Credit spreads ratcheted tighter in second quarter

(in bps, from June 30, 2022, through June 30, 2023)

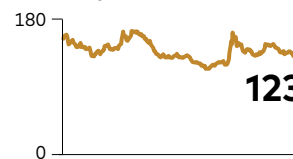
Emerging markets (USD) sovereigns



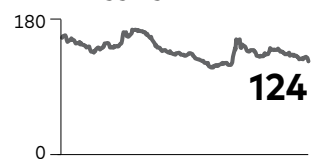
U.S. high yield



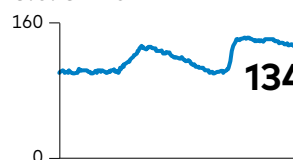
U.S. corporates



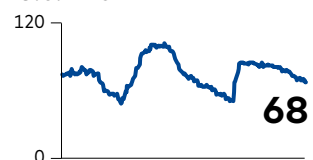
Global aggregate credit



U.S. CMBS



U.S. ABS



Sources: Bloomberg indexes and J.P. Morgan EMBI Global Diversified Index, as of June 30, 2023.

¹ Specified pools are pools of agency mortgages that have common characteristics (e.g., loan size, geographic location, credit score). These pools typically exhibit different prepayment speeds than generic (non-specified) pools of the same coupon.

Investment-grade corporates

Investors are snapping up high-grade bonds across the maturity spectrum with yields near 5.5%. Yields are now more than two full percentage points above their five-year averages, which has contributed to 12 straight weeks of inflows and kept spread levels in a tight range.

Spreads remain right around their 20-year median, reflecting the fundamental strength of higher-quality companies. But we think spreads may widen from current levels as the economy slows.

Earnings stability

We are maintaining an overweight to quality, which we define as a company's earnings stability rather than its credit rating. Pharma, telecom, and utilities tend to fit the profile. Companies that are best positioned to sustain altitude during a shallow recession—our current base case—offer the best risk/reward.

In terms of our international views, European investment-grade corporates have outperformed those in the U.S. this year. With the Fed moderating and U.S. economic fundamentals holding up, we see better opportunities domestically over the near term.

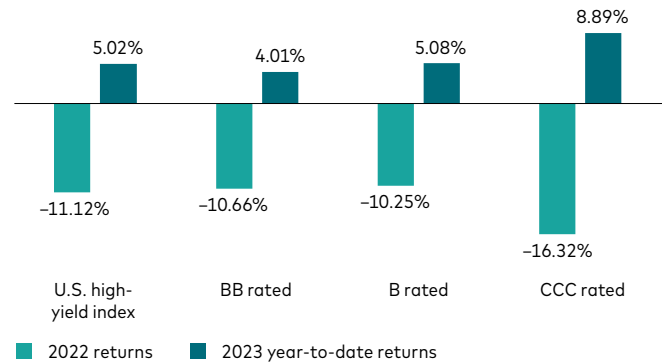
High-yield corporates

CCC rated bonds have led all tranches in high yield: CCCs earned close to 9% year-to-date as of June 30, while higher-quality BBs returned just 4%. Those results have helped high-yield returns outpace all other bond market segments so far in 2023.

With a recession broadly expected, this performance may seem surprising, but it can be explained by a couple of factors. First, CCC bonds underperformed their higher-rated peers by a significant margin last year, so there was room to

rebound with better economic numbers. Also, while default rates have moved higher, they remain below long-term averages, giving investors comfort to reach down in quality.

CCCs lead high-yield rebound



Source: Bloomberg, as of June 30, 2023.

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.

Metrics look strong

The trailing 12-month default rate of high-yield bonds rose to 2.4% in May from 1.7% at the start of the year. We do not expect a pronounced rise over the next year.

The market is pricing in an eventual default rate of 3.5% to 4.0% based on current spread levels, which we see as reasonable. Leverage for companies below investment grade is near decade lows, and interest coverage metrics are slightly below all-time highs.

If economic conditions deteriorate quickly, high yield could reprice much lower. Until then, we are focused on higher-quality issuers and identifying mispriced securities that still have upside potential.

Emerging markets

Opportunistic investors piled into the bonds of below-investment-grade emerging markets (EM) countries. High-yield EM bonds produced quarterly returns of 3.4%, while investment-grade names felt the headwinds from higher Treasury yields and returned only 0.5%. We've held the view this year that EM high yield would offer the best opportunities, since it was one of the few segments of the market that was priced for a recession.

At this point in the economic cycle, we typically prefer exposure to countries with high- and mid-quality bonds. The recent mix of cheap valuations, a more favorable near-term outlook, and light investor exposure to EM provided an opportunity to add high-yield exposure in names with favorable risk/reward characteristics.

We see the best opportunities in Guatemala, South Africa, Oman, Egypt, and Angola. Even as spreads on lower-quality bonds have tightened substantially, we still see potential further upside relative to investment grade.

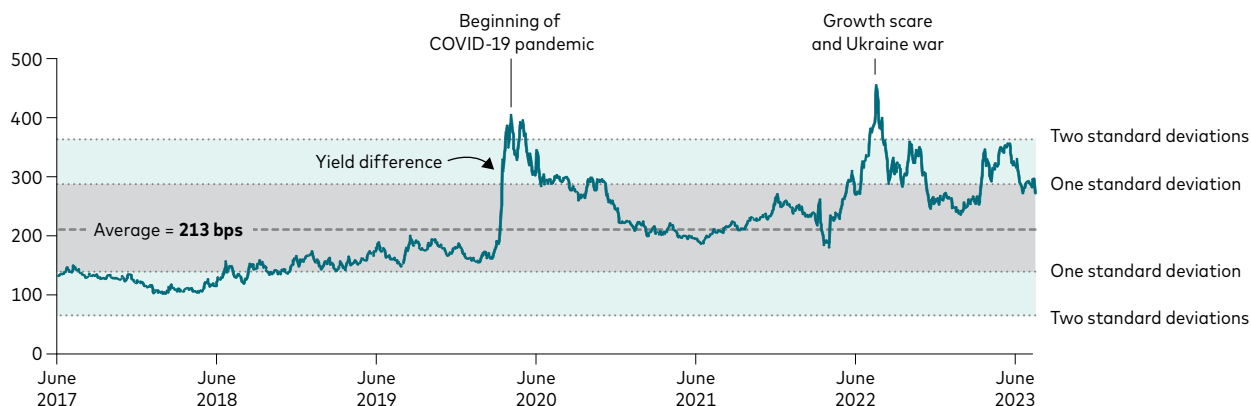
Supply/demand stability

The low supply of newly issued bonds continues to be favorable for investors. Countries with higher bond ratings have reduced funding needs and many lower-rated countries remain unable to issue new debt due to higher borrowing costs and weak investor interest. EM is still experiencing modest outflows, but nothing like last year's pressure.

EM local currency bonds have been star performers this year, bolstered by EM central banks normalizing interest rate policy, which has restored the positive carry that has historically attracted investors. We expect local markets to continue to perform well.

Yield difference between investable emerging markets high-yield and investment-grade bonds

(in bps)



Notes: Investable emerging markets high yield is defined as Vanguard's assessment of countries that have suitable levels of daily liquidity. The subset of countries included above is part of the JP Morgan EMBI Global Diversified High Yield Index.

Sources: Vanguard calculations, based on Bloomberg data and the JP Morgan EMBI Global Diversified Index, as of June 30, 2023.

Structured products

Commercial real estate trends remain stable for most property types. However, office properties have been in an unflattering spotlight for some time due to higher interest rates and changing work models, which have driven vacancy and delinquency rates higher.

To avoid the higher costs of refinancing, borrowers have angled toward extending the maturities of their existing loans. Spreads widened to multiyear highs after the March banking crisis and have remained elevated since. While the sector scans as cheap, we will keep our exposure very low until better opportunities emerge.

In the asset-backed securities (ABS) sector, we continue to position up in quality and up in liquidity with a preference for top-tier prime auto issuers over subprime autos. ABS valuations look fair compared to 1–5 year corporate bonds, but moving down in quality is not attractive enough.

Implications for Vanguard funds

- If the economic backdrop holds steady, we expect demand for the higher yields in credit. When the cycle turns, we will be ready to take advantage of cheaper prices.
- The recent rally in U.S. high yield is somewhat justified, but we don't expect it to be long-lasting. Higher-quality securities should fare better given our outlook.
- Quality in corporate bonds is best represented by earnings stability. We are overweight allocations to companies that we believe can best weather an economic slowdown.

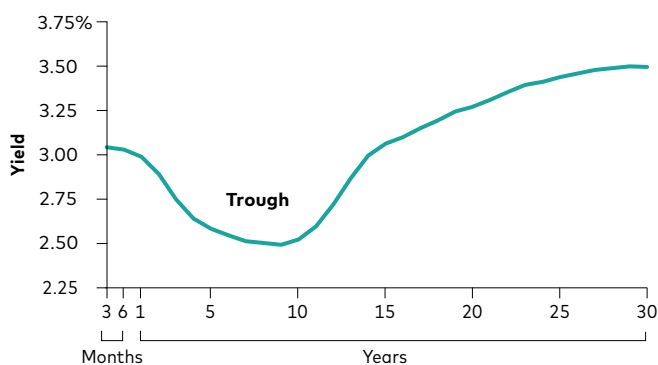
Municipal bonds

Municipal AAA yields: Adding value with a barbell

The municipal AAA curve has taken on a pronounced U-shape.

The U.S. Treasury curve has been deeply inverted for some time, reflecting the Fed's restrictive monetary policy and expectations that a neutral fed funds rate is lower than the current rate. The Treasury curve has a greater effect on the shape of the municipal bond curve up to 10 years, and investor demand is high in that segment. The steep upward slope for the muni curve beyond 10 years, meanwhile, currently reflects the slower return of investors to long-dated funds after the 2022 outflow cycle. Combine these two effects, and investors are left to navigate a U-shaped curve with a distinct trough.

The AAA municipal curve is exhibiting a U-shape with a noticeable trough



Source: Bloomberg, as of June 30, 2023.

A barbell strategy *around* the trough—by purchasing short-maturity and long-maturity bond funds—should create a more attractive yield/risk trade-off for municipal fund investors while retaining an intermediate-level duration. With recession risks elevated, maintaining at least an intermediate level of duration is important.

The bank holdings unwind

Following the failure of Silicon Valley Bank and Signature Bank, the FDIC put together a sales program to dissolve their asset holdings, including \$7.4 billion in municipal securities at par value.

While there was some anxiety about how well the market would digest this new supply, the secondary trading activity was smooth and orderly. The unwinding was made effective by the FDIC's transparent view of securities, prices that were attractive to crossover investors, and the timing of the sale, which was conducted during the late spring when the primary market slows but demand is still strong.

Overall, the program demonstrated the relatively low correlation between the municipal market and the banking sector, removing a possible reason for near-term investor angst.

Expect supportive summer technicals

As mentioned briefly above, summer supply and demand differences can be an impactful, supportive technical factor for municipal bond valuations. Summer is traditionally a heavy time for coupon and principal reinvestment; however, primary market issuance has historically been slower during the summer months. Often, imbalances of excess demand are more than \$10 billion over issuance levels for each of June, July, and August.

Every year since 2015 (apart from the rising-rates environment in 2022), municipal bonds have generated positive returns in the summer as buyers chase fewer available bonds. While we can't discount the possibility, or impact, of another wave of rising rates, investors should expect summer technicals to support municipal valuations again.

Implications for Vanguard funds

- Investors should adhere to their long-term strategic objectives, but, for those uncomfortable with longer duration, a barbell strategy offers value.
- The unwinding of bank assets unfolded smoothly, offering relief to those concerned over its potential impact on muni valuations.
- As is typical in summer months, an excess supply of cash to be reinvested versus available new issuance should spur positive returns absent other factors.

Vanguard active bond funds and ETFs

		Admiral™ Shares or ETF ticker symbol	Expense ratio*
Vanguard active bond funds and ETFs	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-Plus Bond	VCPAX	0.20
	Intermediate-Term Investment-Grade	VFIDX	0.10
	Long-Term Investment-Grade†	VWETX	0.12
	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	0.13%
	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%
	Limited-Term Tax-Exempt	VMLUX	0.09
	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	

* 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. Vanguard High Yield Corporate Bond Fund is partially managed by Vanguard Fixed Income Group.

* Investor Shares available only. There is no minimum investment required for advised clients.

** Includes funds advised by Wellington Management Company LLP.

Note: Data as of June 30, 2023.

Active fixed income leadership team



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22 years' experience



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Municipals
17 years' experience

Active fixed income at Vanguard

\$265B

Taxable bond AUM
16 funds/ETF**

\$182B

Municipal bond AUM
5 national funds/
7 state-specific funds

25+

Portfolio managers

35+

Traders

60+

Credit research analysts

130+

Dedicated team members

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

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Vanguard ETF Shares are not redeemable with the issuing Fund other than in very large aggregations worth millions of dollars. Instead, investors must buy and sell Vanguard ETF Shares in the secondary market and hold those shares in a brokerage account. In doing so, the investor may incur brokerage commissions and may pay more than net asset value when buying and receive less than net asset value when selling.

Past performance is no guarantee of future results. All investing is subject to risk, including possible loss of principal. Diversification does not ensure a profit or protect against a loss.

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.

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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