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Active Fixed Income Perspectives Q3 2022: Bonds are back

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Key takeaways

Performance

The first half of 2022 was the worst six months for fixed income since either before the Civil War or George Washington was president, depending on the source. Interest rates are up. Credit spreads have widened. Global bond markets are spooked.

Looking ahead

Positive real yields now exist, with bond yields higher than expected inflation over the next five years and beyond. Corporates, municipals, high yield, and emerging markets present more opportunity than any time in the recent past. TINA has resigned—bonds offer an alternative with reasonable income again and have reestablished their role as a portfolio hedge to equity risk.

Approach

The economic outlook remains hazy, so patience is still needed. In recent weeks, markets have priced in lower growth projections and fewer rate hikes for this cycle. Valuations have improved as recession fears grow, offering more value and better long-run returns. Risks of stickier-than-expected inflation or a policy overreaction must be factored in.

Bonds are back

The New Reality we discussed in April arrived quickly. Surprised by broader inflation, the Federal Reserve signaled and then started to enact a series of rate hikes. The Fed is not alone, as central banks around the globe have been hiking all year.

Markets are now considering the possibility of a recession and later rate cuts. It's probably premature to price in more cuts, but growth concerns have brought down longer-term Treasury rates and helped to widen credit spreads.

Long-term investors should cheer—yields above the inflation expected over the next five years or longer exist in the Treasury market for the first time since a brief spike during the initial COVID panic of March 2020. For those looking for tangible income, that exists now, too.

Bonds have also started to behave as a stable hedge to equities after spending most of the year correlated with risk assets. Signs of a weaker

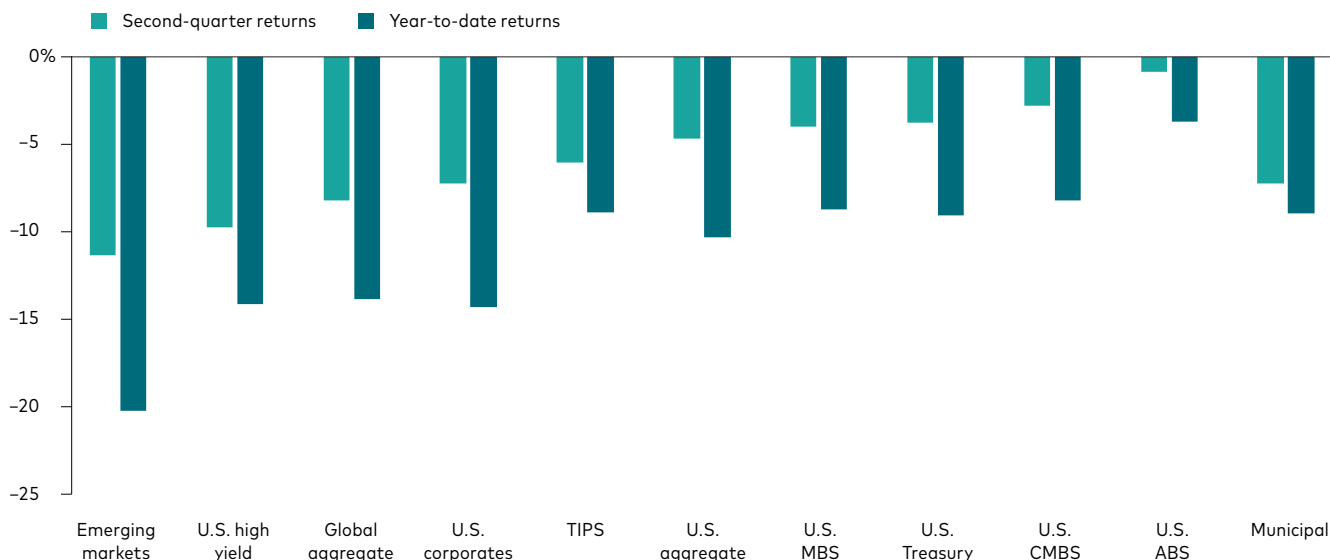
economy ahead are likely to validate the role of bonds as a portfolio diversifier. That has been the case over the long term, and we believe it will be going forward as well.

Stranger Things

No doubt, the first half of the year was a horror show. Just when we believe this nightmare has already reached its climax, stranger things keep turning the data upside down. Inflation will likely linger at an abnormal level for at least another season, which will keep the markets on edge.

Our outlook and positioning in our active funds will be closely linked to how central banks respond once policy rates reach their presumed neutral levels. Inflation will likely still be uncomfortably high at that point, making the trade-off between avoiding a recession and curbing rising prices more challenging. We expect the Fed in particular to push into territory that will restrict the economy. The key question is: how far?

Fixed income sector returns



Sources: Bloomberg indexes and J.P. Morgan EMBI Global Diversified Index, as of June 30, 2022.

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.

Rates and inflation

Inflation concerns shifted after the June meeting of the Federal Open Market Committee and its larger-than-expected rate hike of 75 basis points (bps).

The increasing risk of a recession caused market participants to rethink how high the Fed will be able to hike rates before pulling back. The largest inversion between the 2-year and 10-year Treasuries since 2000 clearly signaled those recession fears. Yet June's 9.1% Consumer Price Index print offered the Fed little choice but to remain aggressive.

Markets now see the Fed hiking faster, but pulling back more quickly. By mid-July, markets expected the overnight rate to peak at 3.5% in December, followed by 50 basis points of cuts next year. By the end of summer, we project that the federal funds rate will be above 3%.

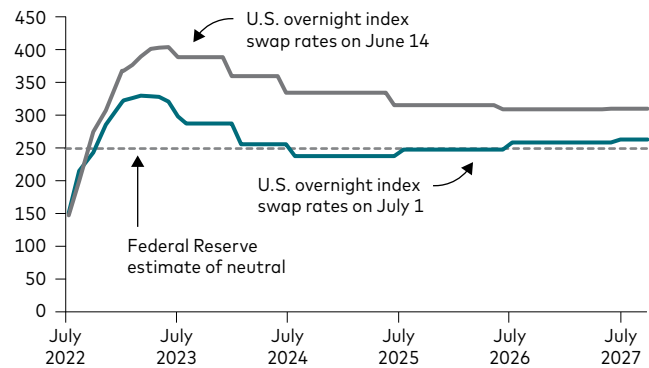
Declining inflation?

Inflation expectations have dropped. Short-term TIPS (Treasury Inflation-Protected Securities) breakeven inflation rates have fallen to around 3% from a peak of 5% in late March. Longer-term breakeven rates are back in the mid-2% range. We believe inflation will remain above longer-run averages for some time but should peak soon.

Conditions are similar across the pond, but the European Central Bank is a few months behind the U.S. in normalizing policy. The ECB's new "anti-fragmentation" tool should help contain any major blowout of peripheral or Italian spreads, but it will also give the ECB a way to hike rates more aggressively if needed. We may continue to see upward repricing in German bunds, but an increasingly weaker economic outlook for the region will weigh heavily on European rates.

Recession fears are changing the expected path of interest rates

(in basis points)

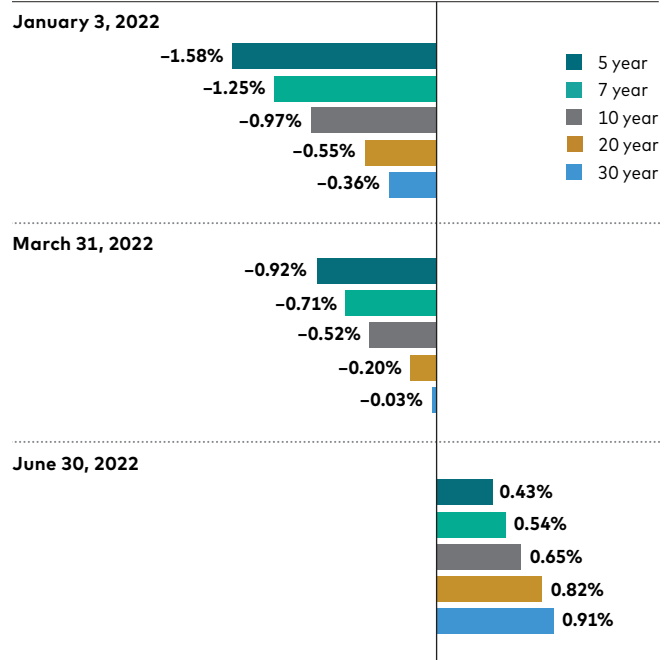


Note: Chart shows overnight index swap rates on June 14, 2022, before the Federal Open Market Committee (FOMC) June meeting announcement, and on July 1, 2022.

Source: Bloomberg, as of July 1, 2022.

Treasury real yields turned positive in June

Real yield (%)



Notes: Treasury Par Real Yield Curve Rates: These rates are commonly referred to as "Real Constant Maturity Treasury" rates. They are estimated by the U.S. Treasury using market pricing on Treasury Inflation-Protected Securities (TIPS). See Treasury.gov for more detail.

Source: U.S. Department of the Treasury.

Mortgage-backed securities

Government-backed mortgages underperformed Treasuries over the second quarter as spreads widened. Higher interest rates and worries about the Fed's plans to reduce its mortgage-backed securities (MBS) holdings drove the selling.

We are more optimistic. While there is precedent in prior tightening cycles for the Fed to slowly wind down its MBS balance sheet, active sales of MBS by the Fed would be unprecedented and are unlikely.

Mortgage rates have jumped, considerably lowering the amount of outstanding mortgage debt eligible for refinancing. We expect the Fed's ability to shrink its MBS holdings will be well below its stated pace of \$35 billion per month through the end of the year, which is a positive for the sector.

Securities that offer prepayment protection have cheapened materially because prepayments have slowed as mortgage rates have climbed higher. We view adding prepayment protection in our portfolios—at a time when such securities are out of favor with investors—as an attractive investment.

Implications for Vanguard funds

- We are duration neutral, but we have shifted from a curve-flattening bias to more exposure in the intermediate part of the yield curve where we see better value.
- We are more constructive on MBS at today's valuations and see opportunities for MBS as an alternative to higher-quality credit exposure.

Credit markets

Credit spreads widened over the quarter as markets adjusted to tighter financial conditions and higher recession risks. Risk premiums needed to rise to compensate investors for the downside potential of aggressive central bank policy, but not all segments of fixed income credit have priced in these concerns fully.

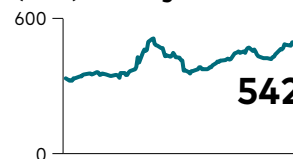
Emerging markets bonds have corrected the most, while higher-quality corporate spreads may need to widen further. As valuations improve, we are taking the opportunity to move up in credit quality. We are adding positions that, in our view, have overcorrected and can withstand a weaker growth environment.

Credit valuations today offer better cushion against further price drops, though it appears likely that some negative performance could lie ahead. In a recession, credit spreads can go significantly wider. As the Fed's path forward becomes clearer, there are many security selection opportunities to take advantage of that do not subject our funds to large downside risks.

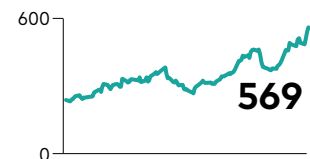
Credit spreads blew out in the first half

(in basis points, from December 31, 2021, through June 30, 2022)

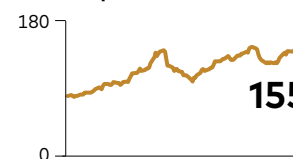
Emerging markets (USD) sovereigns



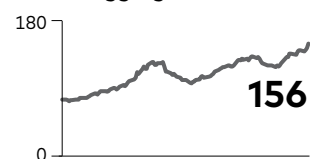
U.S. high yield



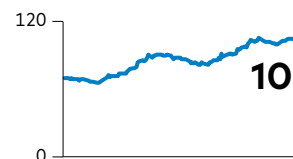
U.S. corporates



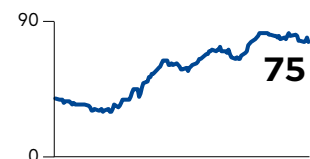
Global aggregate credit



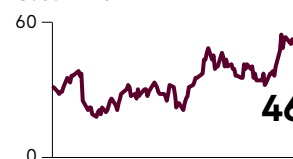
U.S. CMBS



U.S. ABS



U.S. MBS



Sources: Bloomberg indexes and J.P. Morgan EMBI Global Diversified Index, as of June 30, 2022.

Investment-grade corporates

Credit spreads for both U.S and European corporate bonds have widened considerably this year, but European spreads have moved faster in recent weeks. U.S. spreads vaulted from below 100 bps at the start of the year to around 160 bps in mid-July. Yet in Europe, spreads doubled to 200 bps over the same time period.

U.S. market valuations, in our view, don't yet reflect the full set of risks on the table, but pockets of value are apparent. European valuations screen as cheap, but there's little dispersion across sectors and the region is in the crosshairs of a recession. A selective approach is appropriate.

Higher-rated bonds

The BBB rated segment of the sector has started to turn after a long run of outperformance. We expect that turn to continue with a more challenged economic situation. We now see the best/risk reward opportunities in higher-rated bonds. Similarly, we've moved away from cyclical sectors and toward companies with more earnings stability. Issuers with low liquidity needs and strong balance sheets should hold up.

High-yield corporates

Yields in below-investment-grade bonds hover near 9%. Behind the improving valuations lies a fundamental credit picture that remains strong even in the face of a likely economic slowdown ahead.

Downside economic scenarios are generally not friendly to high yield, but there are several mitigating factors that are important to consider. For one, the high-yield market has improved in quality compared with years past. For example, the BB rated segment of the sector now represents more than half of the universe, up from 35% before the global financial crisis.

Low default rates

Default rates remain around 1%, well below the historical average of 3.5%. Leverage levels are back to below pre-pandemic levels. Companies appear to be well situated to manage a difficult economic environment, but security selection can ease downside risk.

Emerging markets

Emerging markets (EM) debt has had among the worst performances this year in fixed income. The expectation for slower global growth, combined with the Russian invasion of Ukraine and some social unrest, has weighed heavily on EM bond prices.

As a result, yields on U.S. dollar-denominated EM credit have climbed above 9% and, in our view, several potential negative outcomes are reflected in today's prices. Historically at these yield levels, expected returns for a year ahead are quite strong. We feel EM debt is further along in its adjustment, and better positioned for recovery, than many other asset classes.

The rapid sell-off in spreads and global interest rates has resulted in historically low dollar prices for EM bonds. While this is most supportive for distressed issuers that may be forced to restructure (minimizing potential loss in default), it should also result in tighter spreads for healthy credits, considering the lower dollar amount investors have to put at risk for each bond purchased.

Better outlook

While fundamentals are mixed, valuations and technicals are supportive. We do not expect to see a sizable rally until investor flows into EM turn positive again. We've been cautious on our overall exposure this year but now feel much more constructive about the outlook for returns over the next 12 to 18 months.

Implications for Vanguard funds

- Investment-grade corporates could see further spread widening, but yields are approaching 5%. Pharmaceuticals, utilities, REITs, and financials offer value.
- With a broad 20% decline in EM bonds so far this year, there are attractive entry points across the quality spectrum.
- High-yield bonds are trading at discounted prices. We see better risk/reward in higher-quality segments, but this market offers opportunities to pick winners with larger upside.

Municipal bonds

Municipal yields

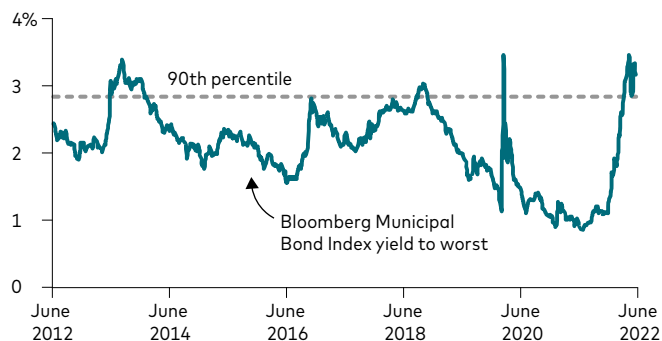
After municipal markets reached all-time rich levels in 2021, municipal bond prices loosened materially in the first half of this year. Rising rates, driven by higher-than-expected inflation, fed a \$75 billion outflow from municipal bond funds through June 30; both of these effects pressured municipal yields higher.

As expected, when municipal valuations cheapened alongside a stabilized Treasury market, outflows moderated. This led to a meaningful rally in municipal bond yields to reflect more normalized valuations. We believe front-end ratios are currently on the rich side of fair value while long-end ratios are on the cheap side.

Attractive tax-adjusted yields

The Bloomberg Municipal Bond Index sported a yield of 3.21% as of June 30, which equates to a tax-adjusted yield of 5.42% for investors in the highest federal income tax bracket. Comparable yields at this credit quality (average rating: AA/AA-) are hard to find. These yield levels notably reside in the top 2.5% of daily yields observed in the past 10 years.

Bloomberg Municipal Bond Index yield to worst



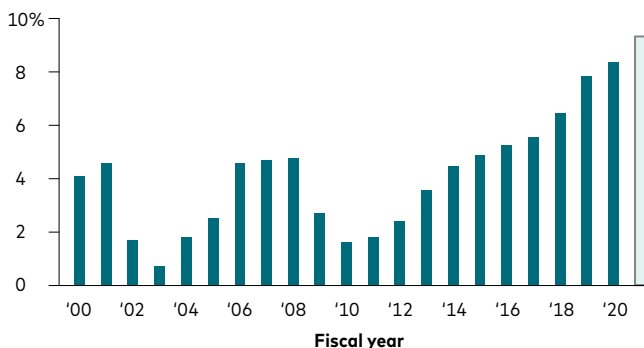
Source: Bloomberg, as of June 30, 2022.

Municipal credit

It's hard to believe: Municipal bonds have suffered through one of the worst six-month stretches in their history, yet few marketwide credit concerns are on the horizon. State and local tax collections have been strong in correlation with the robust economic growth of 2021. Credit fundamentals are as healthy as they have been in decades.

Maintaining that credit profile over the long term will be directly tied to how municipal fiscal surpluses are spent. State and local governments that established or bolstered rainy day funds and resisted the temptation to use temporary surpluses to create enduring programs will be best positioned for future downturns.

States' rainy day funds as a percentage of general fund expenditures



Notes: State fiscal years typically run from July 1 to June 30. The percentage for FY 2021 is estimated.

Source: Pew Charitable Trusts, as of December 31, 2021.

Favoring higher quality

We currently favor higher-rated issues in the credit spectrum. Despite balance sheet strength, spreads in lower-quality tiers will widen more in a recession. As a precaution, we are taking advantage of opportunities to upgrade the credit quality in our funds.

Implications for Vanguard funds

- U.S. Treasury yields are driving municipal price movements. Given rate volatility, we have brought our duration positioning from underweight to neutral.
- Outflows from muni funds could continue for several months, so higher tax-exempt yields may remain available. Investors swimming against the tide can benefit from allocating over time.

Active fixed income at Vanguard

		Admiral™ Shares or ETF ticker symbol	Expense ratio*
Vanguard active bond funds or 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
	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		
	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

Active fixed income leadership team



Sara Devereux
Global Head of Fixed
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30 years' experience



Chris Alwine, CFA
Global Head of Credit
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32 years' experience



Joe Davis, Ph.D.
Global Chief
Economist
20 years' experience



Paul Malloy, CFA
Head of U.S.
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17 years' experience



Kaitlyn Caughlin, CFA
Global Head of Risk
Management Group
13 years' experience

Taxable bond \$233B AUM 16 FUNDS/ETF**	Municipal bond \$193B AUM 5 NATIONAL FUNDS / 7 STATE-SPECIFIC FUNDS
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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.

** Includes funds advised by Wellington Management Company LLP.

Note: Data as of June 30, 2022.

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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. 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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