Vanguard

Vanguard Commentary

The strategic role of high-yield and emerging markets bonds in a balanced portfolio

Most defined contribution (DC) plan sponsors design their fund lineups with an array of investment options across various asset categories, aimed at meeting the diverse needs of plan participants. In the previous Vanguard commentary,1 we emphasized the importance of assessing a plan's fixed income lineup amid an aging U.S. population and shifts in the size and quality of the global bond market. While passive strategies with investment-grade bonds were once the norm, active strategies have grown significantly and now surpass passive assets in this space—excluding target-date funds—and allocations to broad Morningstar categories such as core, core plus, and multisector income are increasingly common.

Funds that fall into these broad categories have the flexibility to invest across a range of bond sectors and credit qualities, including emerging markets and high-yield bonds. Although these sectors can potentially add value to fixed income and multiasset portfolios, they come with risks beyond traditional investment-grade bonds. As their presence in DC plans continues to grow, it's important for investors to understand their key characteristics. In the sections that follow, we provide historical context for high-yield and emerging markets bonds and evaluate their potential role in multiasset portfolio construction.



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Bond fund strategies: Core to multisector income

Bond funds classified as core, core plus, or multisector income generally seek diversified exposure across fixed income markets, offering varying degrees of flexibility and risk. These strategies are designed to generate different levels of income and total return based on their investment scope. Funds with greater allocations to sectors such as high-yield and emerging markets bonds typically come with higher expected returns—alongside increased risk.

At Vanguard, our fixed income approach emphasizes disciplined risk management and cost efficiency to pursue long-term value. Our three core active bond funds target a blend of investment-grade and below-investment-grade sectors, with the goal of generating long-term outperformance. Their expected allocations to emerging markets and high-yield corporate bonds are outlined below:

| | Core | Core plus | Multisector income | US Aggregate Bond Index |
|-----------------------|--------|-----------|--------------------|-------------------------|
| Emerging markets | 5%-10% | 10%-15% | 0%-20% | 1%-2% |
| High-yield corporates | 0%-5% | 5%-10% | 40%-60% | 0% |
| Combined allocation | 5%-15% | 15%-25% | 40%-80% | 1%-2% |

Notes: Allocations for Vanguard funds represent long-term expected exposures as of September 30, 2025. Allocations for the Bloomberg U.S. Aggregate Bond Index reflect approximate average exposures over the 10-year period ended September 30, 2025, using quarterly index holdings data.

Sources: Vanguard, Barclays Live.

Background: Evolution of the high-yield and emerging markets bond markets

High-yield bonds

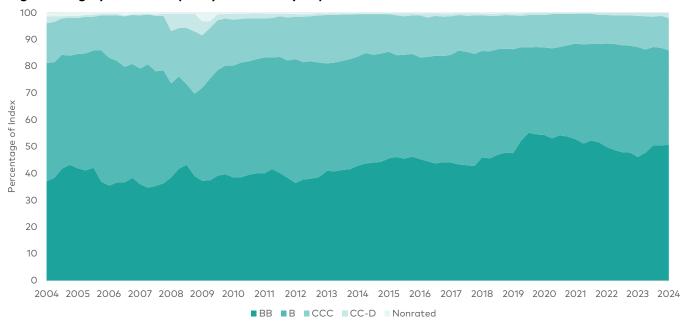
High-yield debt, issued by corporations considered riskier and rated below BBB by rating agencies, exhibits characteristics that lie somewhere between investment-grade bonds and equities. To compensate for additional credit risk, they typically offer higher coupons than U.S. Treasuries and investment-grade corporate bonds, providing equity-like returns but with lower volatility. From 2005 to 2024, high-yield bonds, represented by the Bloomberg U.S. High-Yield Corporate Index, earned an annualized total return of 6.5%. In comparison, investmentgrade bonds (Bloomberg U.S. Corporate Index) returned only 4.0%, while equities (S&P 500 Index) delivered 10.4%. Average volatility of highyield bonds was also somewhere in between, with an annualized standard deviation of 9.1% versus 6.5% and 15.0% for investment-grade bonds and equities, respectively.2 Vanguard's longterm asset class projections suggest that this relationship is likely to continue.

The U.S. high-yield corporate bond market, which is not part of the broader Bloomberg U.S. Aggregate Bond Index, has grown significantly over the past two decades, reaching \$1.4 trillion³ while undergoing a notable improvement in credit quality. Figure 1 shows the credit distribution of the Bloomberg U.S. High-Yield Corporate Index over the past 20 years, illustrating the steady increase in the proportion of the highest-rated issues (BB), which now constitute a majority of the index (51%) as of December 31, 2024. At the same time, we have seen the percentage of more speculative issues—those rated CCC and below-gradually decline. This shift in market composition can be attributed to a general improvement in the credit fundamentals among high-yield issuers, a rise in the issuance of BBrated bonds, and the migration of riskier loans to private credit and leveraged loan markets.

² Morningstar, as of December 31, 2024. Past performance is not a 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.

³ Barclays Live. Bloomberg U.S. High-Yield Index data, as of December 31, 2024.

Figure 1. High-yield credit quality has steadily improved



Source: Vanguard calculations, based on data from Barclays Live.

Despite cyclical swings in prices and yields, high-yield bonds have historically delivered attractive risk-adjusted returns with relatively low default rates. Figure 2 shows that although yields and default rates have occasionally spiked—usually during periods of market turmoil such as the 2008–2009 global financial crisis and the 2020 coronavirus pandemic—the long-term default

rate has averaged only about 3% annually, with an average option-adjusted spread of 4.9% relative to Treasuries. In other words, approximately 97% of high-yield bond investors have received their interest and principal payments as expected while being compensated for the additional risk with higher income and enhanced returns.

Figure 2. Historical U.S. high-yield corporate default rates and spread levels



Source: Vanguard calculations, based on data from Bloomberg.

Emerging markets bonds

Emerging markets (EM) debt, issued by sovereign, quasi-sovereign, and corporate issuers in developing nations, makes up about 25% of the global fixed income universe.⁴ Although EM countries vary significantly in size and include some of the largest economies in the world (for example, China, India, and Brazil), EM issuers tend to carry lower credit ratings than their developed-market peers due to heightened economic and political risk factors. Like highyield bonds, EM bonds offer higher yields and attractive risk-adjusted returns to compensate investors for these additional risks. As of December 31, 2024, the annualized 20-year return for the Bloomberg Emerging Markets USD Aggregate Index⁵ was 5% with average annualized volatility of 9%. In comparison, the broader global bond market, represented by the Bloomberg Global Aggregate USD Hedged Index, returned 3% with an annual volatility of 3%. As with high-yield bonds, Vanguard's asset

class forecasts suggest that this long-term relationship will persist.

Over the past few decades, the EM debt market has undergone a significant shift in size and quality, driven by economic reforms, improved governance, and economic growth. As illustrated in Figure 3, the proportion of investment-grade bonds in the Bloomberg Emerging Markets USD Aggregate Index has expanded from less than 25% of the index 20 years ago to more than 60% today. With most EM issuers now being higher quality, average default rates have been lower than those for U.S. high-yield bonds. The average default rate for emerging markets corporate issuers over the past 20 years is just above 1%.6 The number of investable instruments in the index has also grown more than sevenfold, from less than 300 issues at the end of 2004 to more than 2,000 issues today (Figure 4). This growth has been partially driven by new countries joining the index, providing investors with an increasingly diverse opportunity set.

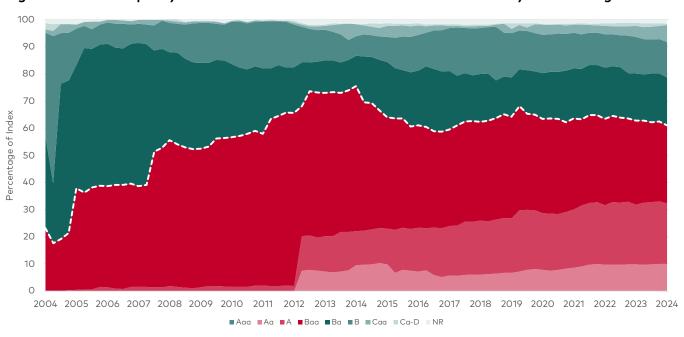


Figure 3. The credit quality of the EM bond market has evolved to become mostly investment grade

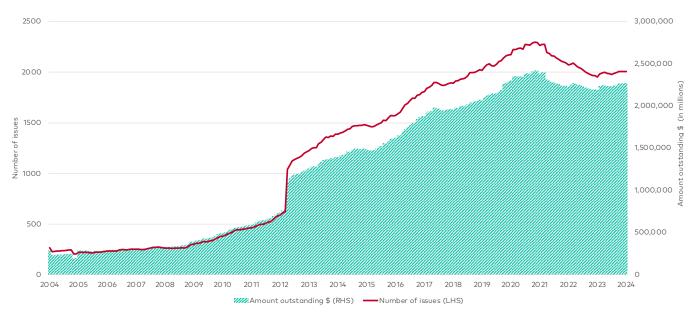
Source: Vanguard calculations, based on data from Barclays Live.

⁴ Bond Basics: Emerging Market Debt Explained. Vanguard, November 2022.

⁵ The Bloomberg Emerging Markets USD Aggregate Bond Index is a flagship hard currency emerging markets debt benchmark that includes fixed-and floating-rate U.S. dollar-denominated debt issued from sovereign, quasi-sovereign, and corporate EM issuers.

⁶ S&P Global Ratings Credit Research & Insights.

Figure 4. The size of the EM bond market has grown significantly



Source: Vanguard calculations, based on data from Barclays Live.

How do these bond sectors fit into a multiasset portfolio?

Historically, U.S. high-yield corporate bonds and emerging markets bonds have both shown low to moderately low correlations with other bond types and equities by leveraging additional exposures across market sectors and credit qualities. Although these sectors tend to be more volatile than investment-grade bonds, their nonperfect correlations with other asset classes offer investors a valuable opportunity to diversify both fixed income and multiasset portfolios while capturing risk premia to enhance yields (Figure 5).

Figure 5. High-yield and emerging markets bonds offer diversification benefits and the opportunity for higher returns

| 20-year correlation of total returns | | | | | | | | |
|--------------------------------------|---------------|-------------------|------------|----------------|---------------------------------|---------------------------------|--|--|
| | U.S. equities | Non-U.S. equities | U.S. bonds | Non-U.S. bonds | U.S. high-yield corporate bonds | Emerging markets bonds (USD) | | |
| U.S. equities | 1.0 | | | | | | | |
| Non-U.S. equities | 0.9 | 1.0 | | | | | | |
| U.S. bonds | 0.2 | 0.3 | 1.0 | | | | | |
| Non-U.S. bonds | 0.2 | 0.2 | 0.8 | 1.0 | | | | |
| U.S. high-yield corporate bonds | 0.8 | 0.8 | 0.4 | 0.3 | 1.0 | | | |
| Emerging markets bonds (USD) | 0.6 | 0.8 | 0.6 | 0.4 | 0.8 | 1.0 | | |

20-year return and volatility metrics

| | Annualized total return | Annualized volatility | | |
|---------------------------------|-------------------------|-----------------------|--|--|
| U.S. equities | 10.3 | 15.5 | | |
| Non-U.S. equities | 5.0 | 17.0 | | |
| U.S. bonds | 3.0 | 4.2 | | |
| Non-U.S. bonds | 3.4 | 3.5 | | |
| U.S. high-yield corporate bonds | 6.4 | 9.1 | | |
| Emerging markets bonds (USD) | 5.0 | 9.0 | | |

Notes: Correlations were calculated using monthly asset returns from January 2005 through December 2024. U.S. equities are represented by the Dow Jones U.S. Total Stock Market Index (formerly known as the Dow Jones Wilshire 5000 Index) through April 22, 2005; MSCI US Broad Market Index through June 2, 2013; and CRSP US Total Market Index thereafter. Non-U.S. equities are represented by the Total International Composite Index through August 31, 2006; MSCI EAFE + Emerging Markets Index through December 15, 2010; MSCI ACWI ex USA IMI Index through June 2, 2013; and FTSE Global All Cap ex US Index thereafter. U.S. bonds are represented by the Bloomberg U.S. Aggregate Bond Index. Non-U.S. bonds are represented by the Bloomberg Global Aggregate ex-USD Hedged Index through January 2013 and Bloomberg Global Aggregate ex-USD Float-Adjusted RIC Capped Index Hedged thereafter. U.S. high-yield corporate bonds are represented by the Bloomberg U.S. Corporate High-Yield Index. Emerging markets bonds are represented by the Bloomberg Emerging Markets U.S. Aggregate Bond Index. 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: Vanguard calculations, based on monthly index returns data.

The diversifying properties of high-yield and emerging markets bonds, along with the historical presence of risk premia, underpin our long-term view on these asset classes. Utilizing our proprietary Vanguard Capital Markets Model® (VCMM)⁷ to project forward-looking returns and volatility, we show that allocations to these bond sectors can improve the expected risk-adjusted returns of a portfolio. In Figure 6, we compare the median expected 10-year annualized returns, volatility, and Sharpe ratios for globally diversified baseline portfolios—excluding high-yield and emerging markets bonds—with those

having a 25% overweight⁸ to each. We assess these metrics across portfolios with varying stock and bond allocations to show that high-yield corporate and emerging markets bonds can potentially benefit investors across different risk profiles, albeit with associated risk-and-return trade-offs. We can see that allocations to these sectors may improve portfolio total returns and generate similar or higher Sharpe ratios. Notably, portfolios with higher overall bond allocations tend to experience the greatest impact from these overweights.

Figure 6. Allocations to emerging markets and high-yield corporate bonds can improve risk-adjusted returns

| Emerging markets | | | | | | | |
|---------------------|-----------------------------|----------------|---------------------------------------|----------------|---------------------------------------|----------------|--------------------------|
| | 100% fixed income portfolio | | 70% fixed income/30% equity portfolio | | 40% fixed income/60% equity portfolio | | 100% equity portfolio |
| | Base | 25% overweight | Base | 25% overweight | Base | 25% overweight | Base |
| Median return | 4.70% | 5.03% | 4.93% | 5.15% | 4.93% | 5.06% | 4.56% |
| Median volatility | 5.27% | 5.58% | 5.69% | 6.08% | 9.17% | 9.40% | 15.13% |
| Median Sharpe ratio | 0.24 | 0.28 | 0.26 | 0.28 | 0.16 | 0.17 | 0.07 |

| High-yield corporates | | | | | | | |
|-----------------------|-----------------------------|----------------|---------------------------------------|----------------|---------------------------------------|----------------|--------------------------|
| | 100% fixed income portfolio | | 70% fixed income/30% equity portfolio | | 40% fixed income/60% equity portfolio | | 100% equity portfolio |
| | Base | 25% overweight | Base | 25% overweight | Base | 25% overweight | Base |
| Median return | 4.70% | 4.87% | 4.93% | 5.01% | 4.93% | 4.94% | 4.56% |
| Median volatility | 5.27% | 5.02% | 5.69% | 6.24% | 9.17% | 9.63% | 15.13% |
| Median Sharpe ratio | 0.24 | 0.28 | 0.26 | 0.24 | 0.16 | 0.15 | 0.07 |

Notes: Returns of global equities, global bonds, high-yield corporate bonds, and emerging markets bonds are represented by, respectively, the MSCI All Country World Index, the Bloomberg Global Aggregate USD Hedged Index, the Bloomberg U.S. High-Yield Corporate Bond Index, and the Bloomberg Emerging Markets USD Sovereign Index.

Source: Vanguard Capital Markets Model.

IMPORTANT: The projections and other information generated by the Vanguard Capital Markets Model (VCMM) regarding the likelihood of various investment outcomes are hypothetical in nature, do not reflect actual investment results, and are not guarantees of future results. Distribution of return outcomes from VCMM derived from 10,000 simulations for each asset class and macroeconomic variable modeled. Simulations are as of September 30, 2025. Results from the model may vary with each use as well as over time. For more information, please see the Appendix.

Conclusion

The U.S. high-yield corporate and emerging markets bond segments have grown and matured over the years, with notable improvements in issuer quality. While these markets still carry inherent risks, research has shown that allocations to these sectors in fixed

income or multiasset portfolios can provide valuable diversification benefits and the potential for enhanced yields and total returns. Therefore, plan sponsors and participants might consider the long-term strategic role these investments can play in a well-balanced portfolio.

- 7 Vanguard Global Capital Markets Model. Vanguard, 2014.
- 8 We illustrate a 25% overweight to both emerging markets bonds and high-yield bonds to highlight meaningful differences in annualized returns and volatility compared with the base portfolio. This should not be considered a recommended allocation to these sectors.

Given the nature of fixed income markets, it is essential to find a skilled manager to implement these strategies. Unlike equity markets, the global interests of fixed income investors and economies are very diverse, presenting a favorable opportunity set for active management. This diversity makes active strategies particularly well suited for accessing opportunities in high-yield and emerging markets bonds. As of September 30, 2025, Vanguard managed \$2.7 trillion in fixed income assets, with \$1.1 trillion in actively managed funds—85% of which outperformed their 10-year Lipper peergroup averages on both an absolute and risk-adjusted basis.⁹

Vanguard offers several actively managed funds targeting the high-yield corporate and emerging markets bond sectors directly or in a multisector structure, such as the Vanguard Core Bond Fund, the Vanguard Core-Plus Bond Fund, and the Vanguard Multi-Sector Income Fund. Vanguard's active fixed income team utilizes a teambased, portfolio manager-led process built on specialization, collaboration, and accountability, helping to navigate the deep fixed income market.

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Appendix

About the Vanguard Capital Markets Model

IMPORTANT: The projections and other information generated by the Vanguard Capital Markets Model regarding the likelihood of various investment outcomes are hypothetical in nature, do not reflect actual investment results, and are not guarantees of future results. VCMM results will vary with each use and over time.

The VCMM projections are based on a statistical analysis of historical data. Future returns may behave differently from the historical patterns captured in the VCMM. More important, the VCMM may be underestimating extreme negative scenarios unobserved in the historical period on which the model estimation is based.

The Vanguard Capital Markets Model® is a proprietary financial simulation tool developed and maintained by Vanguard's primary investment research and advice teams. The model forecasts distributions of future returns for a wide array of broad asset classes. Those asset classes include U.S. and international equity markets, several maturities of the U.S. Treasury and corporate fixed income markets, international fixed income markets, U.S. money markets, commodities, and certain alternative investment strategies. The theoretical and empirical foundation for the Vanguard Capital Markets Model is that the returns of various asset classes reflect the compensation investors require for bearing different types of systematic risk (beta). At the core of the model are estimates of the dynamic statistical relationship between risk factors and asset returns, obtained from statistical analysis based on available monthly financial and economic data from as early as 1960. Using a system of estimated equations, the model then applies a Monte Carlo simulation method to project the estimated interrelationships among risk factors and asset classes as well as uncertainty and randomness over time. The model generates a large set of simulated outcomes for each asset class over several time horizons. Forecasts are obtained by computing measures of central tendency in these simulations. Results produced by the tool will vary with each use and over time.

⁹ For the 10-year period ended September 30, 2025, 41 of 48 Vanguard active bond funds outperformed their peer-group averages; results will vary for other time periods. Only funds with a 10-year history, respectively, were included in the comparison (source: LSEG Lipper). Note that the competitive performance data shown represent past performance, which is not a guarantee of future results, and that all investments are subject to risks. For the most recent performance, visit our website at vanguard.com/performance.

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Important information

For more information about Vanguard funds, visit vanguard.com to obtain a prospectus or, if available, a summary prospectus. Investment objectives, risks, charges, expenses, and other important information are contained in the prospectus; read and consider it carefully before investing.

Diversification does not ensure a profit or protect against a loss. Investments in target-date funds are subject to the risks of their underlying funds. The year in the fund name refers to the approximate year (the target date) when an investor in the fund would retire and leave the workforce. The fund will gradually shift its emphasis from more aggressive investments to more conservative ones based on its target date. An investment in target-date funds is not guaranteed at any time, including on or after the target date.

Bond funds are subject to the risk that an issuer will fail to make payments on time, and that bond prices will decline because of rising interest rates or negative perceptions of an issuer's ability to make payments.

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.

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

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