

Diversification among bond funds makes good sense

The best performers among bond categories can change each year. Diversification can help you avoid unnecessary risk.

Bond fund categories ranked by performance, December 31, 2007–December 31, 2017

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
HIGHEST RETURN	U.S. TREASURY 13.74%	HIGH-YIELD 58.21%	HIGH-YIELD 15.12%	TIPS 13.56%	HIGH-YIELD 15.81%	HIGH-YIELD 7.44%	MUNICIPAL 9.05%	MUNICIPAL 3.30%	HIGH-YIELD 17.13%	INTL. 10.51%
	MORTGAGE-BACKED 8.34%	CORPORATE 16.04%	CORPORATE 8.47%	MUNICIPAL 10.70%	CORPORATE 9.37%	MORTGAGE-BACKED -1.41%	CORPORATE 7.53%	MORTGAGE-BACKED 1.51%	CORPORATE 5.63%	HIGH-YIELD 7.50%
	INTL. 4.39%	MUNICIPAL 12.91%	TIPS 6.31%	U.S. TREASURY 9.81%	TIPS 6.98%	CORPORATE -2.01%	MORTGAGE-BACKED 6.08%	U.S. TREASURY 0.84%	TIPS 4.68%	CORPORATE 6.18%
	TIPS -2.35%	TIPS 11.41%	U.S. TREASURY 5.87%	CORPORATE 8.35%	MUNICIPAL 6.78%	MUNICIPAL -2.55%	U.S. TREASURY 5.05%	CORPORATE -0.77%	MORTGAGE-BACKED 1.67%	MUNICIPAL 5.45%
	MUNICIPAL -2.47%	INTL. 7.53%	MORTGAGE-BACKED 5.37%	MORTGAGE-BACKED 6.23%	INTL. 4.09%	U.S. TREASURY -2.75%	TIPS 3.64%	TIPS -1.44%	INTL. 1.49%	TIPS 3.01%
	CORPORATE -3.08%	MORTGAGE-BACKED 5.89%	INTL. 4.95%	HIGH-YIELD 4.98%	MORTGAGE-BACKED 2.59%	INTL. -3.08%	HIGH-YIELD 2.45%	HIGH-YIELD -4.47%	U.S. TREASURY 1.04%	MORTGAGE-BACKED 2.47%
LOWEST RETURN	HIGH-YIELD -26.16%	U.S. TREASURY -3.57%	MUNICIPAL 2.38%	INTL. 4.36%	U.S. TREASURY 1.99%	TIPS -8.61%	INTL. -3.08%	INTL. -6.02%	MUNICIPAL 0.25%	U.S. TREASURY 2.31%

Source: Vanguard.

- **CORPORATE = Bloomberg Barclays US Credit Index:** Includes investment-grade corporate and international dollar-denominated bonds.
- **HIGH-YIELD = Bloomberg Barclays US Corp High Yield Index:** Includes mainly corporate bonds considered below-investment-grade.
- **INTL. = Bloomberg Barclays Global Agg Index ex USD:** Provides a broad measure of the international investment-grade bond market, excluding U.S. bonds.
- **MORTGAGE-BACKED = Bloomberg Barclays US Mort-Backed Sec Index:** Includes U.S. agency mortgage-backed pass-through securities.
- **MUNICIPAL = Bloomberg Barclays Municipal Bond Index:** Includes most investment-grade, tax-exempt bonds that are issued by state and local governments.

- **TIPS = Bloomberg Barclays US Trsy Inflat Prtcd Index:** Includes the inflation-indexed securities within the Barclays US Treasury Index, which represents U.S. Treasury obligations with maturities of more than 1 year.
- **U.S. TREASURY = Bloomberg Barclays US Treasury Index:** Includes U.S. Treasury obligations with maturities of more than 1 year.

Diversification does not ensure a profit or protect against a loss in a declining market. Past performance is not a guarantee of future results. The performance of an index is not an exact representation of any particular investment, as you cannot invest directly in an index.

Vanguard bond funds

Category	Short-term	Intermediate-term	Long-term
Treasury/agency/blend	Short-Term Bond Index* Short-Term Federal Short-Term Treasury Bond Index* Short-Term Inflation Protected Securities Index* Short-Term Treasury	GNMA Inflation-Protected Securities Intermediate-Term Bond Index* Intermediate-Term Treasury Bond Index* Intermediate-Term Treasury Mortgage-Backed Securities Index* Total Bond Market Index*	Extended Duration Treasury Index* Long-Term Bond Index* Long-Term Treasury Bond Long-Term Treasury Index*
Investment-grade	Short-Term Corporate Bond Index* Short-Term Investment-Grade Ultra-Short-Term Bond	Total Corporate Bond ETF Core Bond Intermediate-Term Corporate Bond Index* Intermediate-Term Investment-Grade	Long-Term Corporate Bond Index* Long-Term Investment-Grade
Below-investment-grade		High-Yield Corporate	High-Yield Tax-Exempt
International/global		Emerging Markets Bond Index Emerging Markets Government Bond Index* Total International Bond Index*	
Federal tax-exempt	Limited-Term Tax-Exempt Short-Term Tax-Exempt	Intermediate-Term Tax-Exempt	Long-Term Tax-Exempt Tax-Exempt Bond Index*
State tax-exempt		California Intermediate-Term Tax-Exempt	California Long-Term Tax-Exempt Massachusetts Tax-Exempt New Jersey Long-Term Tax-Exempt New York Long-Term Tax-Exempt Ohio Long-Term Tax-Exempt Pennsylvania Long-Term Tax-Exempt

*Includes a Vanguard ETF®.

For more information on Vanguard funds and Vanguard ETFs, contact your financial advisor 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.

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.

All investments are subject to risk, which may result in the loss of principal. Investments in bond funds are primarily subject to interest rate, income, and credit risk. U.S. government backing of Treasury or agency securities applies only to the underlying securities and does not prevent share-price fluctuations. Because high-yield bonds are considered speculative, investors should be prepared to assume a substantially greater level of credit risk than with other types of bonds. 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.

The Emerging Markets Government Bond is 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. The Fund seeks to track the performance of an index that measures the investment return of dollar-denominated bonds issued by governments of emerging market countries (including government agencies and government-owned corporations). It is subject to emerging market risk, which is the chance that bonds of governments located in emerging markets will be substantially more volatile and substantially less liquid than the bonds of governments located in more developed foreign markets. Because the ETF invests only in U.S. dollar denominated bonds, U.S.-based shareholders are not subject to currency risk.

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