



Using fixed income ETFs to mitigate risk

Diversifying with bonds can help reduce downside risk and volatility

Investing in a broad range of businesses is less risky than investing in just one—because investing in just one would mean taking on the specific risk and performance of only that business. The same principle applies to investing in a range of asset classes rather than just equities. It spreads the risk. A fixed income exchange-traded fund (ETF) is one easy way to access a broad range of bonds that can help investors diversify, reduce downside risk, and dampen volatility.

A fixed income ETF is a pooled portfolio of bonds that trades daily on an exchange. This means that fixed income ETFs offer intraday trading and continuous transparent pricing while commonly seeking to replicate the return of a chosen index.

A single fixed income ETF can hold hundreds or thousands of bonds, providing potential diversification benefits as well as access at a lower cost than would be possible to obtain by buying each issue separately.

This installment of ETF Know:How™ shows some of the beneficial effects of adding bonds to a portfolio.

Key terms

Interest rate risk. Changes in interest rate may reduce the value of bonds an investor holds. Interest rate risk increases the longer the time period remaining until a bond's maturity.

Credit risk. If an issuer can't make interest payments, they could possibly default on their debt obligation. If this occurs, the investor may not receive the full value of their principal investment.

Inflation risk. If inflation increases faster than the income investment, purchasing power declines.

Liquidity risk. If unable to sell a fixed income security, the investor may have to sell at a discount to market value.

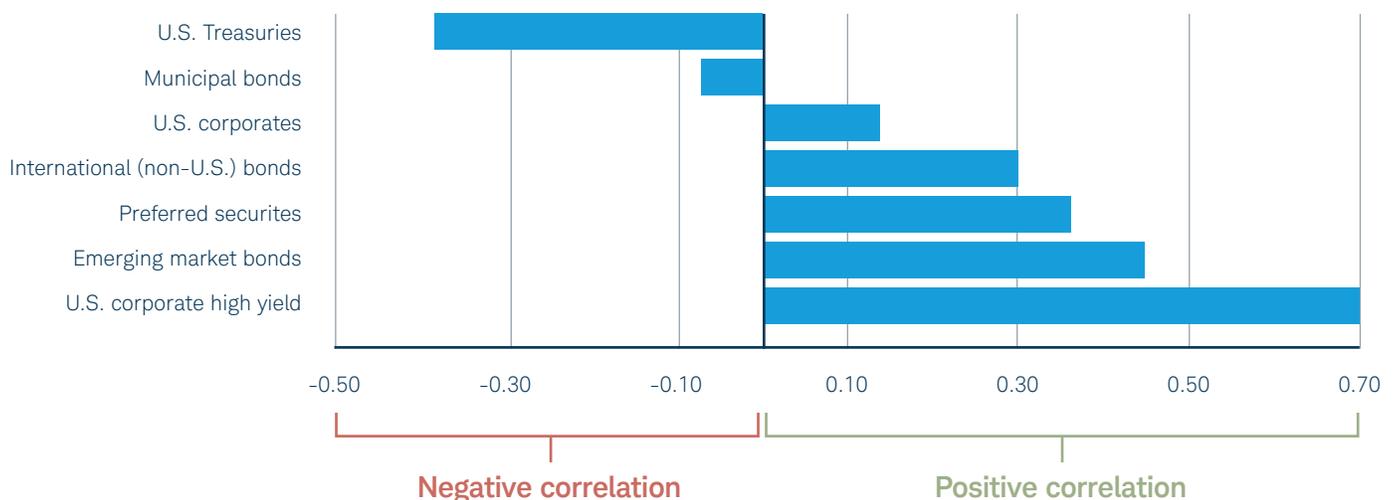
Correlation: Foundation of diversity

To start, it's helpful to understand correlation, one of the foundational measures of portfolio diversification. Correlation is a measure of the extent to which two investments move in relation to one other. A correlation of +1 indicates a perfect positive correlation. In other words, when one asset moves up or down, the other asset does too. Conversely, a correlation of -1 is a perfect negative correlation. When one asset moves up or down, the other does the opposite.

Adding investments with a lower correlation can help diversify a portfolio and potentially mitigate risk. U.S. Treasuries, municipal bonds, and U.S. corporate bonds have historically shown low to negative correlations to equities as represented by the S&P 500® Index (see chart).

Higher returns come with higher risks

10-year correlation with S&P 500 Index



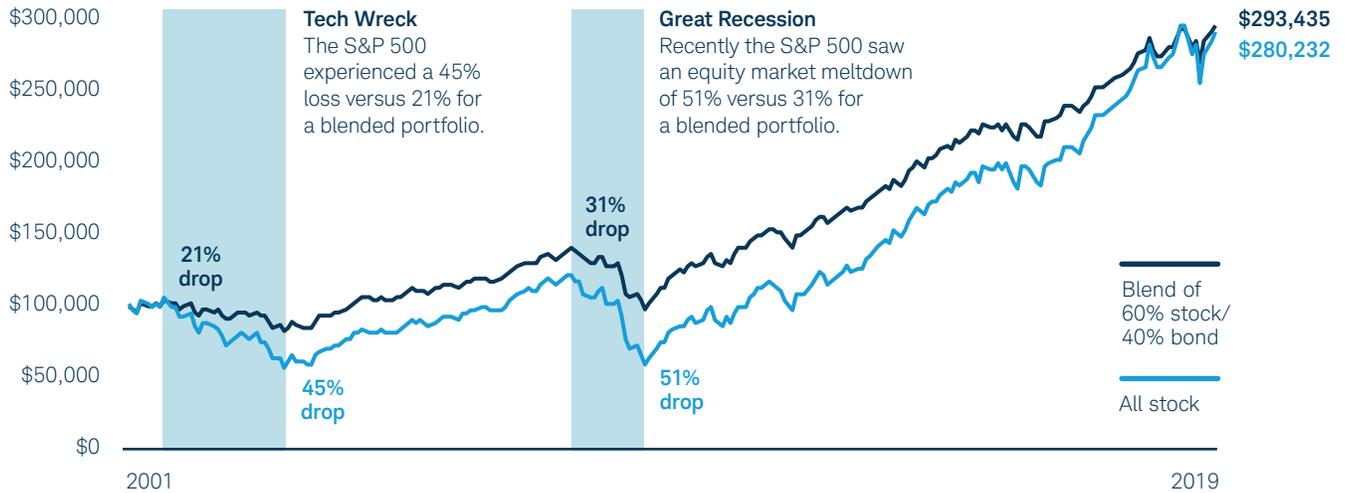
Source: Schwab Center for Financial Research, Barclays, Bloomberg. The chart shows correlation of monthly index returns to the S&P 500 Index, as of 5/31/2019. U.S. Treasuries are represented by total annual returns of the Bloomberg Barclays U.S. Treasury Index. Municipal bonds are represented by total annual returns of the Barclays U.S. Municipal Bond Index. U.S. corporate bonds are represented by total annual returns of the Barclays U.S. Corporate Bond Index. International (non-U.S.) bonds are represented by total annual returns of the Barclays Global Aggregate ex-USD Index. Preferred securities are represented by total annual returns of the BofA Merrill Lynch Fixed Rate Preferred Securities Index. Emerging market bonds are represented by total annual returns of the Barclays Emerging Markets USD Aggregate Bond Index. U.S. corporate high yield bonds are represented by total annual returns of the Barclays U.S. Corporate High Yield Index. Indexes are unmanaged, do not incur management fees, costs or expenses, and cannot be invested in directly. Diversification does not eliminate the risk of investment losses. **Past performance does not guarantee future results.**

Managing downside risk

While diversification is one benefit of adding fixed income to a portfolio, it's not the only one. Managing downside risk and volatility are also key advantages. The example below shows a historical performance comparison between an all-stock portfolio and a 60% stock/40% bond portfolio. Through two dramatic downturns, the stock/bond portfolio didn't decline as much as the all-stock portfolio. In other words, allocating a portion of a portfolio to bonds mitigated downside risk and improved performance.

A balanced portfolio has helped reduce volatility over time

(December 1999–March 2019)



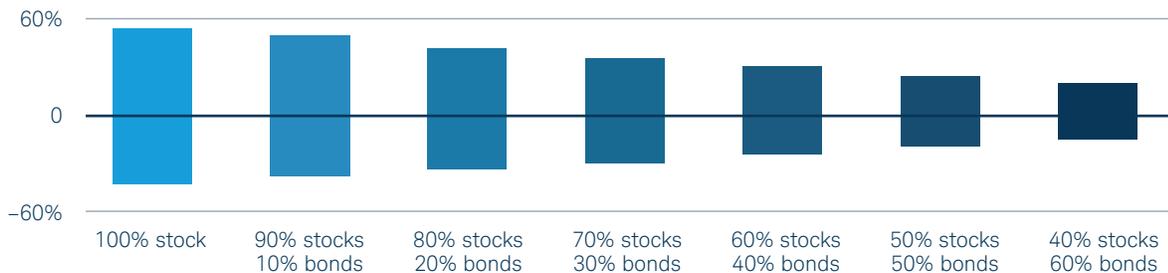
Source: Schwab Center for Financial Research, with data provided by Morningstar, Inc. Stocks are represented by total annual returns of the S&P 500 Index, bonds are represented by total annual returns of the Bloomberg Barclays U.S. Aggregate Bond Index and total annual returns of the FTSE Treasury Bill 3 Month Index. The portfolio is rebalanced annually. Returns include reinvestment of dividends, interest, and capital gains. Indexes are unmanaged, do not incur fees or expenses, and cannot be invested in directly. **Diversification does not eliminate the risk of investment losses. Past performance is no indication of future results.**

Dampening volatility

Evidence shows that the more bonds are included, the less volatility the portfolio typically experiences. The chart below illustrates the volatility-dampening effect of increasing levels of bonds versus equities in a portfolio. Across the board, adding fixed income securities to a portfolio reduced volatility and the dispersion of returns.

Fixed income investments can lower portfolio volatility

Range of annual returns (1926–2019*)



Source: Schwab Center for Financial Research, with data provided by Morningstar, Inc. Stocks are represented by total annual returns of the S&P 500 Index, and bonds are represented by total annual returns of the Ibbotson U.S. Intermediate Government Bond Index. The return figures are the average, the maximum, and the minimum annual total return for the portfolios represented in the chart, and are rebalanced annually. Returns include investment of dividends, interest, and capital gains. Indexes are unmanaged, do not incur fees or expenses, and cannot be invested in directly. **Diversification strategies do not ensure a profit and do not protect against losses in declining markets. Past performance is no indication of future results. *YTD as of March 2019**

Summary

Building a diversified portfolio is a sound investment strategy. Fixed income ETFs can help investors diversify while also seeking to protect downside risk, reduce volatility over time, preserve capital, and provide periodic income. Plus, fixed income ETFs offer liquidity, price visibility, and low costs.

But fixed income ETFs aren't risk-free, and diversification doesn't guarantee against investment loss. Investors should evaluate an investment based on its investment objectives and associated risks.



We're always here to help

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Investment returns will fluctuate and are subject to market volatility, so that an investor's shares, when redeemed or sold, may be worth more or less than their original cost. Unlike mutual funds, shares of ETFs are not individually redeemable directly with the ETF. Shares of ETFs are bought and sold at market price, which may be higher or lower than the net asset value (NAV).

Fixed income securities are subject to increased loss of principal during periods of rising interest rates. Fixed income investments are subject to various other risks including changes in credit quality, market valuations, liquidity, prepayments, early redemption, corporate events, tax ramifications, and other factors.

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