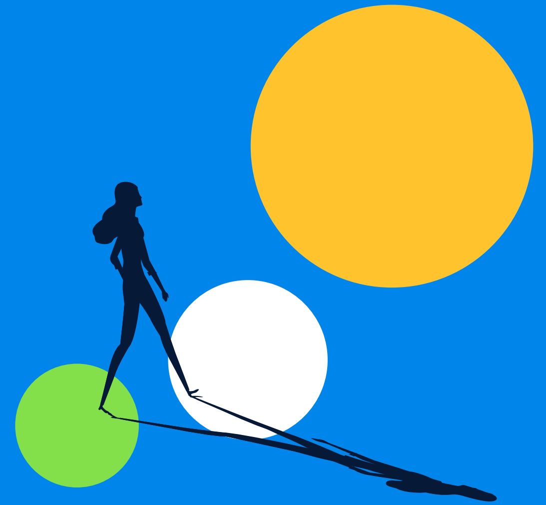
T. Rowe Price

# Why every basis point matters in a core fixed income ETF



**From the Field**
May 2024

## Key Insights

- Index investing in fixed income is complicated by intrinsic challenges related to the structure of bond markets.
- While alternatives to the Bloomberg U.S. Aggregate Bond Index benchmark have emerged, investors in those ETFs may be taking on unintended risks.
- The T. Rowe Price QM U.S. Bond ETF seeks to efficiently mirror the risk profile of the benchmark while looking to exploit structural index inefficiencies.

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A core bond allocation has traditionally been a key element of a diversified portfolio. High-quality bonds generate regular income and, importantly, can be a stabilizing force when riskier assets come under pressure (Figure 1). Exchange-traded funds (ETFs) that seek to track the Bloomberg U.S. Aggregate Bond Index (U.S. Agg), a benchmark with a market value of more than USD 26 trillion,[1] are a common choice for core bond allocations.

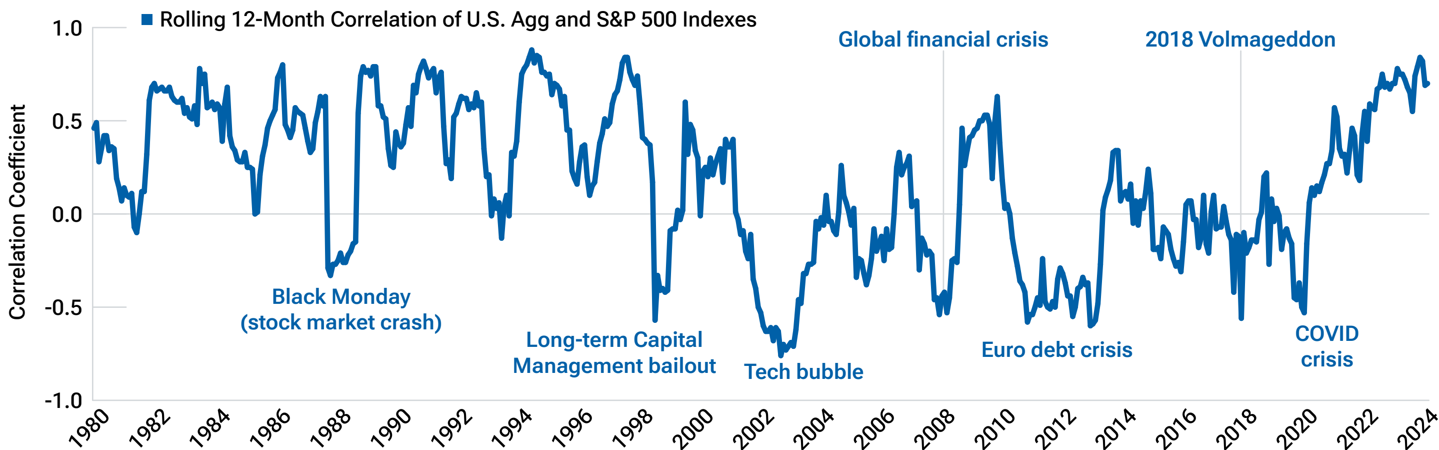
Following the 2008 global financial crisis, the U.S. Agg came under criticism for the low yields it offered, with the Federal Reserve (Fed) pinning the policy rate near 0% and engaging in quantitative easing to depress yields on Treasury and mortgage bonds. At the same time, low borrowing costs encouraged issuers to sell more longer-term bonds. As a result, the duration—a measure of interest rate risk—of the index rose, creating an unattractive risk/reward proposition.

The situation is much different today. The Fed has significantly raised interest rates, broadly lifting yields to near their highest levels since the late 2000s. Following a historic bond sell-off in 2021–2022, driven by the Fed's inflation fight, many older bonds are now trading at discounted prices. This lessens downside risk and creates potential for price gains if lower inflation gives the Fed comfort to ease policy. Today, bonds also provide more coupon income to help offset price declines should rates rise further.

[1] As of March 31, 2024, Bloomberg Index Services Ltd.

**Higher-quality bonds have historically provided stabilization in volatile time periods**

(Fig. 1) U.S. Agg and S&P 500 Index correlations over rolling 12-month periods




As of March 31, 2024.
Source: Bloomberg Finance, L.P.

## Structural issues with the U.S. Agg

Critics have highlighted some other deficiencies with the popular index. Nearly 70% of the U.S. Agg consists of U.S. Treasuries and government-backed mortgage bonds—sectors valued for their high credit quality and usually low correlations with equities. However, they also offer lower yields and possess greater interest rate sensitivity. The remaining allotment consists mostly of high-quality corporate bonds along with small allocations to securitized credit sectors.

The composition of bond benchmarks is also largely determined by the amount of debt issued. Because downgrade and default risk rise as issuers take on more leverage, indiscriminately buying bonds from heavily indebted issuers solely because they are index constituents may not be a prudent move.

Moreover, certain parts of the index have proven their propensity over time to generate stronger risk-adjusted returns than others. As such, investors using traditional passive products are unable to capitalize on the differentiated characteristics bond markets have to offer.

## Pure passive is impossible in fixed income

In our view, full bond index replication is not only undesirable due to the factors noted above but also unrealistic because of the structure of bond markets. Unlike major equity indexes, for example, it's impossible to fully replicate fixed income benchmarks—especially a massive index like the U.S. Agg that contains over 13,000 individual bonds.

Bonds are issued in limited quantities, and many trade infrequently—if at all—in the secondary market. The composition of bond indexes is also constantly in flux due to factors such as new issuance, maturities, credit rating changes, and early redemptions, making it challenging for managers to mirror the index while being mindful of transaction costs.

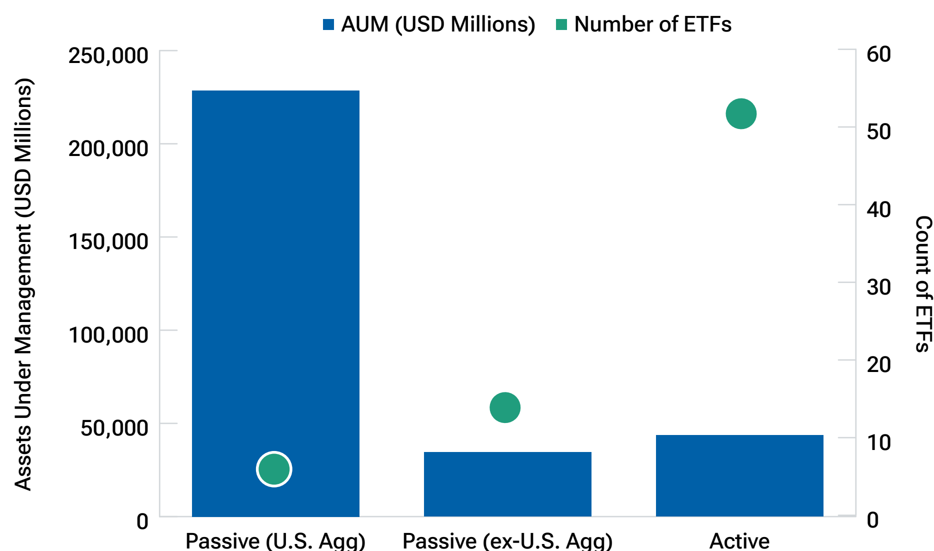
Given that full index replication is unfeasible, most passive fixed income ETFs seek to replicate the index with a smaller set of bonds using various quantitative methods. However, imprecision with any of the three major risk factors for bond indexers—duration, yield curve, and credit spread[2] risk—causes tracking error versus the benchmark, which is impossible to fully avoid. These challenges, along with fees, cause core bond index funds to routinely lag the benchmark—sometimes by large degrees.

> “... investors using traditional passive products are unable to capitalize on the differentiated characteristics bond markets have to offer.

[2] Credit spread measures the additional yield that investors demand for holding a bond with credit risk over a similar maturity, high-quality government security.

## The majority of core bond ETF assets are passive

(Fig. 2) Core bond ETFs displayed by assets under management (AUM) and number of products




As of March 31, 2024.
Sources: Bloomberg Finance, L.P. Analysis by T. Rowe Price.

## U.S. Agg ETFs dominate the core bond universe[3]

Despite these shortcomings, investors continue to flock to core bond ETFs, and many turn to index trackers. According to Bloomberg, as of March 31, 2024, there were USD 306 billion of assets in core bond ETFs. Like many large ETF categories, active and passive strategies taking different approaches have emerged as alternatives to simply owning ETFs seeking to track the U.S. Agg. In fact, there are more than twice the number of passive and five times the number of active ETFs for investors to choose from compared with those seeking to track the U.S. Agg (Figure 2). Despite this abundance of choice, investors continue to vote with their dollars and pour money into a handful of popular U.S. Agg ETFs.

Some passive alternatives employ a "smart-beta" or rules-based indexing methodology (e.g., yield-weighted; environmental, social, and governance; or factor tilts), which can lead to a lower-credit-quality portfolio and potentially provide less downside protection. Others still use a market-value-weighted methodology (similar to the U.S. Agg) and can include a broader investible universe that may introduce exposure to lower credit-quality issuer debt or international (denominated in U.S. dollars or local currencies) debt.

Actively managed strategies, on the other hand, have the flexibility to tactically invest across various asset classes beyond the U.S. Agg, which, as we'll discuss, is quite concentrated in certain areas. Many of

[3] As of March 31, 2024, funds benchmarked to the U.S. Agg accounted for 75% of the core bond ETF universe. Please refer to Fig. 2 for additional detail.

## Alternatives to the U.S. Agg ETF exist

(Fig. 3) Investors can evaluate each methodology against the U.S. Agg ETF

| Investment Style | Pros vs. U.S. Agg ETFs | Cons vs. U.S. Agg ETFs |
|---|---|---|
| Passive Smart Beta | Potential for more income and a higher yield-to-duration profile. | Higher fees, lower credit quality, and less downside protection. |
| Passive Broad Asset Class | Diversification and potential for higher yields. | Higher fees, non-U.S. exposure, and lower credit quality. |
| Active Core Plus | Potential for alpha and higher income. | Higher fees and less control over non-benchmark exposure. |

Source: T. Rowe Price analysis.

these strategies rely on macroeconomic, credit, and duration bets as a means of generating alpha.[4]

While we believe innovation and choice are positive for ETF investors, we also feel that it's more important than ever—especially for a core bond allocation—for investors to know what they own and understand the risks of choosing either passive or active alternatives.

## What are you looking for out of your core bond ETF?

For the core of their fixed income allocations, investors often seek low-cost options that closely track the benchmark to provide a ballast to higher-return-seeking asset classes (e.g., equities, high yield, and emerging markets credit, etc.)

ETFs that seek to track the U.S. Agg can certainly play this role. But we believe there are inefficiencies in fixed income indexes and markets that can be exploited while still maintaining low tracking error, a high level of diversification, and downside protection attributes.

Our approach to indexing aims to replicate the key risk characteristics of the index but with a yield advantage and a focus on more efficient market segments. We supplement this quantitative-based structure with fundamental insights from our research platform to emphasize bonds in which our analysts have high conviction.

## U.S. Agg is less diversified than it appears

As noted above, the U.S. Agg has become primarily an index of U.S. government-issued debt. While there is little credit risk in those sectors, the trade-offs are lower yields and greater interest rate risk than some competing sectors.

As depicted in Figure 3, in fixed income, nominal sector and security weights provide limited information value about actual risk exposures. Every bond has unique characteristics (e.g., credit quality, time to maturity, structural features). Indeed, two bonds in the same sector or even from the same issuer can have starkly different risk profiles. Therefore, we focus more on exposures to the underlying risks that drive bond performance—most notably, interest rate risk and credit spread risk.

Removing the interest rate risk component and focusing on credit spread risk (the risk that spreads increase due to credit or macroeconomic concerns), most of the U.S. Agg's risk comes from corporate bonds. Considering this, our strategy aims to diversify and enhance the risk exposures investors receive from the U.S. Agg.

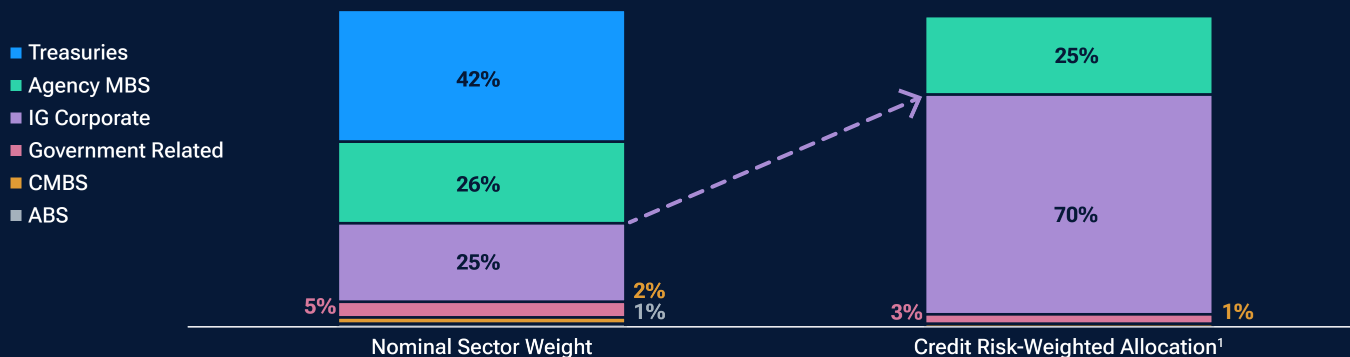
## The T. Rowe Price approach to bond indexing

Our approach centers on carefully managing the underlying components of risk within each sector while emphasizing the more efficient parts of the opportunity set and deemphasizing areas that tend to generate weaker risk-adjusted returns.

[4] Alpha measures an investment portfolio's performance, or excess return, against a benchmark.

### Nominal index sector weights provide limited insight into credit risk

(Fig. 4) Investment-grade corporate bonds dominate from a credit risk perspective

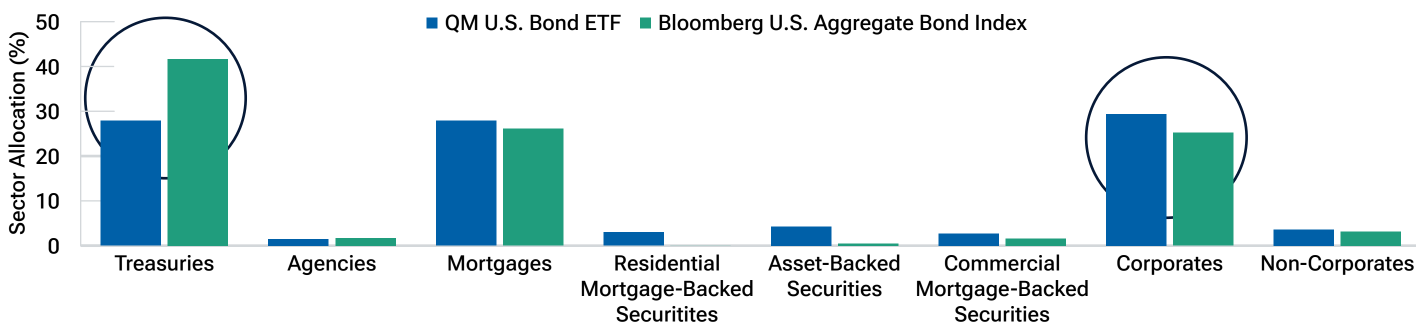



As of March 31, 2024.
Source: Bloomberg Index Services Ltd.
[1] U.S. Treasuries are assumed to be free of credit risk and do not trade with an associated credit spread. Therefore, Treasuries are not included in the credit risk-weighted allocation totals.

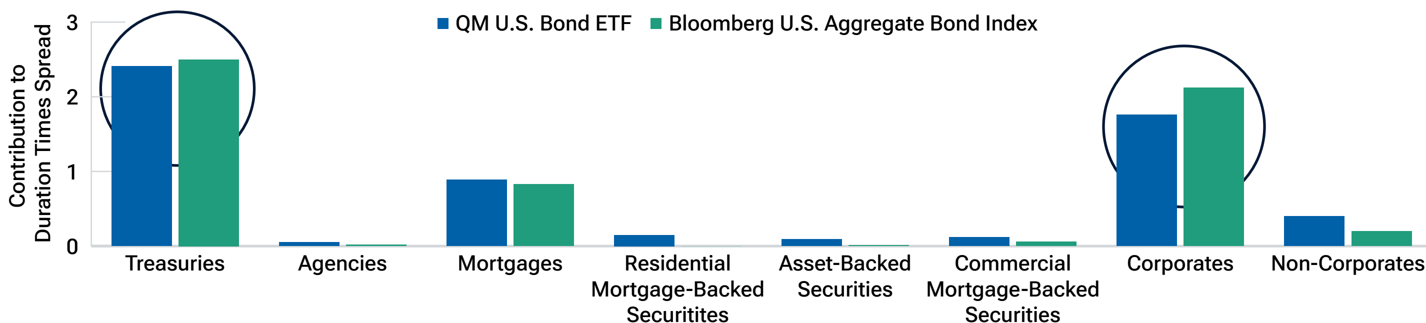
## Focusing on risk characteristics to build an index-like, yield-enhanced portfolio

(Fig. 5) Contrasting allocation by notional sector weight with duration times spread[1]

**Tradtional View: Sector Allocation Based on Market Weight**




**What Matters Most: Sector Contribution to Risk[1]**




As of March 31, 2024.
Sources: Bloomberg Index Services Ltd., T. Rowe Price.
[1] Duration times spread (DTS) is a measure of credit spread volatility. Bonds with longer durations and wider credit spreads are expected to be more volatile than shorter-dated bonds trading at tighter spread levels.

Most notably, credit spread volatility tends to be much higher for longer-term corporate bonds than it is for short- or intermediate-term issues. This makes sense because there's greater risk of a credit rating downgrade or default over longer time horizons. Because of supply/demand factors, the compensation investors receive for buying long-term issues is often not commensurate with the risk. This, combined with higher volatility, results in inferior risk-adjusted returns.

We prefer intermediate-term corporates, which have historically produced stronger risk-adjusted returns than longer-term corporates. We also typically hold overweight allocations to securitized credit sectors, another area where risk-adjusted returns have proven better over the long term.

Holding more corporate bonds and securitized credit helps build a yield advantage versus the index. But because Treasuries are used as a funding source, they cause a nominal underweight in that large sector and a duration shortfall versus the benchmark. We make up for that by buying more longer-term Treasuries to add duration. This results in a portfolio that outyields the index but has similar underlying risk characteristics to help keep returns from straying too far from the index (Figure 4).

T. Rowe Price also leverages a broad and deep global research platform to identify improving credit fundamentals and avoid deteriorating situations. Although the fund uses a quantitative security screening process, a key input is our analysts' fundamental views on issuers and securities. We believe this is a better approach than simply buying whatever the index holds without regard for fundamentals or valuations.

## T. Rowe Price aggregate bond ETF options

(Fig. 6) ETF investors can evaluate against many variables, including fees

| T. Rowe Price ETF | Strategy Category | Expense Ratio | Category Avg. Expense Ratio | Difference |
|---|---|---|---|---|
| T. Rowe Price QM U.S. Bond ETF (TAGG) | U.S. Core Aggregate Bond | 8bps | 37bps | 29bps |
| T. Rowe Price Total Return Bond ETF (TOTR) | U.S. Core Plus Aggregate Bond | 31bps | 37bps | 6bps |

As of March 31, 2024.
Source: T. Rowe Price.

The end result is a portfolio that has passive features but also boasts active elements to enhance returns. The objective is to incrementally outperform the index after deducting fees—a feat that traditional passive funds rarely achieve despite their low advertised costs. Portfolio Manager Rob Larkins has managed the strategy since 2007 and has refined its "quantamental" process over time. In September 2021, the T. Rowe Price QM U.S. Bond ETF was introduced to provide a new vehicle for accessing this unique indexing strategy.

## Every basis point counts

The hallmarks of ETFs—low fees, tax efficiency, intraday liquidity, and daily transparency—are well understood. While some of these benefits are more important than others depending on the underlying asset class, investor profile, and investment strategy, we believe that in fixed income—where yield is the primary source of total return—fees are paramount.

Across both active and passive strategies, T. Rowe Price offers competitively priced ETFs in the core bond universe. The QM U.S. Bond ETF (TAGG) competes in the U.S. Core Aggregate Bond category and is a higher-quality, lower tracking error strategy. For those seeking higher returns and willing to accept more credit risk, the Total Return Bond ETF (TOTR) is another option to consider. A member of the U.S. Core Plus Aggregate Bond universe, TOTR makes full use of T. Rowe Price's fundamental credit, quantitative, and macro research, and it has greater flexibility to invest outside of the benchmark in sectors offering higher yields.

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