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In-depth analysis and insights to inform your decision-making.

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Taxable Fixed Income

DEVIATING FROM BENCHMARK FOR TRUE SECTOR DIVERSIFICATION

KEY POINTS

- When structuring a diversified fixed income portfolio, incorporating spread risk into contribution to risk calculations leads to deeper insights into portfolio risk relative to the benchmark.
- We use these insights into risk composition, which we believe can lead to improved risk-adjusted returns, to construct a more risk-balanced sector allocation in the T. Rowe Price Total Return Fund.
- This effort to more evenly allocate spread risk results in a portfolio that looks quite different from the benchmark, because a more diversified portfolio can more efficiently generate returns than one with spread risk concentrated in investment-grade corporates.
- Broadening the opportunity set by allowing for allocations to sectors that are not included in the benchmark, such as bank loans, can further enhance risk diversification at the portfolio level.

Investors who want to truly diversify their fixed income allocations need to be comfortable with sector exposure that is very different from the Bloomberg Barclays U.S. Aggregate Index, a common benchmark for taxable domestic bond portfolios. When structuring a diversified fixed income portfolio, incorporating spread risk (see "Analyzing Spread Risk" below) into contribution to risk calculations leads to deeper insights into portfolio risk relative to the benchmark, which the portfolio manager can use to enhance sector diversification. In conventional core bond portfolios that closely track the benchmark, we have found that much of the spread risk derives from investment-grade corporate credit exposure, while securitized debt sectors typically contribute relatively little spread risk. This can result in overly concentrated risk exposures and limit risk-adjusted returns.

We use these insights into risk composition, which we believe can lead to improved risk-adjusted returns, to construct a more risk-balanced sector allocation in the T. Rowe Price Total Return Fund. Additionally, broadening the opportunity set by allowing for allocations to sectors that are not included in the benchmark, such as bank loans, non-agency mortgage-backed securities (known as RMBS), and emerging markets debt, can further enhance risk diversification at the portfolio level.

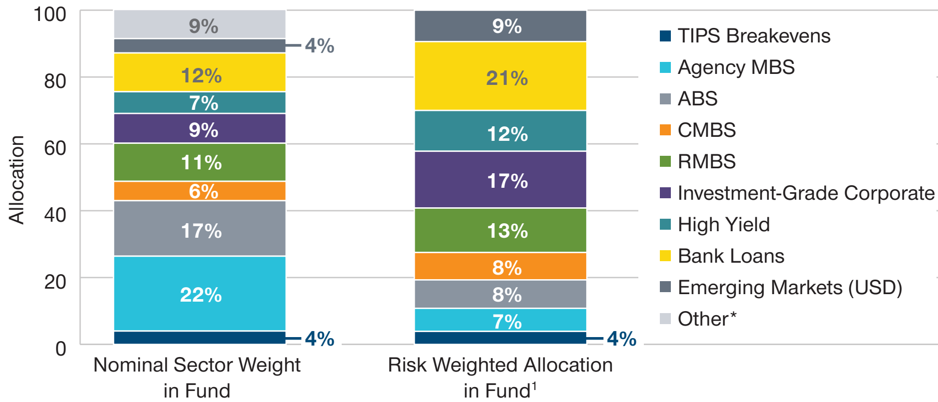
ANALYZING SPREAD RISK

Analyzing spread risk is a critical component of determining a bond fund's true level of diversification. A bond's spread is the additional yield that an investor earns over a comparable "risk free" Treasury security. This spread compensates investors for various risks, including default risk and liquidity risk. Two key risk factors for credit-sensitive bonds are spread duration—which measures the sensitivity of a bond's price to changes in spread—and the bond's absolute level of spread. Bonds with higher spread duration and wider absolute spread levels typically generate more volatility in bond portfolio returns than those with tighter spreads and lower spread duration.

Spread duration and average spread levels vary across sectors, resulting in very different sensitivities to changes in market risk sentiment that cause spreads to fluctuate. A larger weighting in a sector with lower spread risk can actually have a similar contribution to overall portfolio risk as a smaller weighting in a sector with higher spread risk.

FIGURE 1: **Risk Weighting Provides a Different Perspective on Sector Allocation in the T. Rowe Price Total Return Fund**

As of June 30, 2018



Source: T. Rowe Price.

*Cash, U.S. Treasuries, etc.

[1]Calculated as each spread sector's percentage contribution to total return volatility.

WHY DOES SPREAD RISK MATTER?

While the Bloomberg Barclays U.S. Aggregate Index appears to be relatively well diversified across sectors, an analysis of spread risk across its sector components reveals that it is not as diversified as it seems. For example, investment-grade corporate bonds constitute about a quarter of the benchmark in terms of nominal sector weight. However, because corporate spreads can be more volatile and spread durations longer than those in other investment-grade sectors, corporates actually dominate the index when analyzing each sector's contribution to total spread risk.

Using contribution to risk to inform structural portfolio positioning highlights potential diversification benefits from holding larger allocations to securitized debt sectors. Securitized debt includes agency MBS and RMBS, asset-backed securities (ABS), and commercial mortgage-backed securities (CMBS). We also see value in including non-benchmark sectors like bank loans and collateralized loan obligations for improved diversification, which should lead to a better balance of risk and potentially higher risk-adjusted returns.

STRUCTURAL OVERWEIGHT TO SECURITIZED SECTORS

We strive to maintain a more balanced spread risk profile in the Total Return Fund (Figure 1), leading us to structurally overweight some areas of securitized debt, which combined accounts for a relatively low proportion of the benchmark's spread risk. We also maintain an allocation to RMBS, which are not included in the benchmark index.

In most market environments, securitized bonds have historically provided better risk-adjusted returns than investment-grade corporate debt with comparable credit ratings and maturities, which we mostly attribute to a complexity premium for the securitized sectors. RMBS, ABS, and CMBS can have various types of collateral, different deal structures, and multiple levels of credit enhancement, all of which make them more complex than most types of corporate bonds. The fund typically has a relatively low absolute weighting in investment-grade corporates, which account for a high proportion of the spread risk in the benchmark, and is often underweight the sector relative to the index.

ALLOCATION TO LOANS AS PART OF STRUCTURAL POSITIONING

Bank loans are another sector that historically has generated some of the best risk-adjusted returns in markets with credit risk. As a result, we use an allocation to loans as part of the fund's structural positioning, accounting for some of the underweight to investment-grade corporate debt.

Bank loans can also provide stronger risk-adjusted returns than high yield bonds—loans (which also have noninvestment-grade credit ratings) have historically offered comparable spread compensation with about half the volatility in spreads. Some of this risk-adjusted performance advantage is a premium for the sector's low liquidity. Loans, which are not securities, settle 14 or more days following the trade date versus the same-day or two-days-after trade date settlement for bonds.

To offset the relatively low liquidity of loans, we include meaningful allocations to highly liquid sectors, such as high-quality global sovereign bonds and agency MBS, in the fund. In addition to managing liquidity risk, the lower credit quality and complex capital structures in the loan market require intensive fundamental analysis to avoid defaults.

ENHANCED SECTOR DIVERSIFICATION ALLOWS MORE CONCENTRATED SECURITY POSITIONS

We are confident that the breadth of T. Rowe Price's global research platform will allow us to benefit from the premiums available in both bank loans and securitized debt. In general, this greater diversification at the sector level allows us to take more concentrated positions at the security level. These larger positions in individual bonds allow the portfolio managers to take full advantage of the highest-conviction picks of our credit analysts to generate return. We can also use derivatives to tactically reduce the portfolio's exposure to broad credit risk in a particular sector, while maintaining positions in individual securities that have the potential to outperform.

FLEXIBILITY FOR TACTICAL POSITIONING ADJUSTMENTS

While our focus on risk composition leads to structural sector weights that are quite different from the benchmark, we believe this positioning currently makes a lot of sense from a cyclical perspective as well. For example, an underweight to investment-grade corporate debt could have a short-term tactical benefit in the current environment. By many measures, the credit cycle is approaching or is already in its later stages, and with corporate leverage quite high relative to history, there is potential for spreads on corporate bonds to widen meaningfully as Federal Reserve rate hikes slow the economy and issuers' fundamental credit quality broadly deteriorates.

In contrast, securitized sectors are primarily exposed to U.S. consumers, which we believe are relatively healthy as they benefit from a solid housing market and strong balance sheets. Bank loans could also outperform other types of corporate debt late in the credit cycle because of their limited sensitivity to rising interest rates and their senior position in the issuer's capital structure; however, we are monitoring the crowded positioning in this popular trade. Importantly, as our shorter-term outlook evolves, the Total Return Fund has the flexibility to make tactical changes in sector positioning as we see opportunities.

OPTIMIZING RISK-ADJUSTED RETURNS

We believe that we can optimize risk-adjusted returns by analyzing spread risk and building sector weightings in the Total Return Fund according to their contribution to risk. This analysis typically results in a structural underweight to the investment-grade corporate bond sector because a more diversified portfolio can more efficiently generate returns than one with spread risk concentrated in investment-grade corporates. We offset some of this underweight with an overweight position in securitized debt, where we believe that our analysts can help the fund benefit from the complexity premium in the sector. T. Rowe Price's strong global fundamental research platform also allows us to find value in out-of-benchmark sectors such as bank loans, which have historically generated strong risk-adjusted returns.

The fund is subject to risks of fixed income investing, including interest rate risk and credit risk. The fund's investments in high-yield securities are subject to greater volatility and credit risk than investment-grade bonds. Investors should note that if interest rates rise significantly from current levels, bond fund total returns will decline and may even turn negative in the short term.

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T. Rowe Price focuses on delivering investment management excellence that investors can rely on—now and over the long term.

To learn more, please visit troweprice.com.

Important Information

Call 1-800-225-5132 to request a prospectus or summary prospectus; each includes investment objectives, risks, fees, expenses, and other information you should read and consider carefully before investing.

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