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Same Destination, Different Journey: A New Approach to Customized Fixed Income

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Investors over the last decade have increasingly turned to cost-effective passive products, such as exchange-traded funds (ETF), as a way to target exposure to specific equity sectors in their portfolio. Benefiting from this trend, Parametric's Custom Core® strategy has experienced tremendous growth, with financial advisors and their clients seeking alternatives to ETFs—especially those that can add value through customization and tax-loss harvesting in a separately managed account (SMA). In response to investor requests for these same attributes in their bond SMAs, Parametric has launched the new Custom Core Fixed Income (CCFI) strategy, extending its franchise to include seven bond benchmarks.

Due to structural differences between the equity and fixed income markets, optimization has proven to be the most effective method for constructing a low-tracking-error equity SMA, while a stratified cells approach that incorporates fundamental research is a more practical way to construct a bond portfolio. This paper describes how the CCFI hybrid investment process constructs fixed income SMA portfolios using this innovative approach.

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Overview

Parametric's Custom Core strategies offer certain advantages over ETFs. Custom Core allows investors to own the individual securities in a tax-managed SMA, with the ability to customize the portfolio based on their own unique needs. In our CCFI strategy, clients choose from a range of benchmarks and can further customize exposures based on maturity, sector, issuer, or ESG preferences, while applying these rules to benchmarks with different sector, maturity, and spread profiles.

When first designing the CCFI strategy in 2015, Parametric's fixed income team determined that the corporate, government/credit, and broad market indexes were the three most popular fixed income categories with ETF investors that also lent themselves well to our strategy and represent over half of the domestic fixed income ETF assets. The CCFI lineup includes three strategies benchmarked against three corporate indexes, three government/credit indexes, and one broad-market index. The corporate index is a subset of the government/credit index, which in turn is a subset of the broad-market index, which also includes mortgage-backed securities.

Given the overlapping nature of fixed income indexes, CCFI clients are less likely to blend benchmarks, which is a feature of the Custom Core equity strategy. The ideal benchmark for a specific client will depend on their risk tolerance, market outlook, and return objectives. Each of the seven indexes has varying degrees of interest rate risk, credit risk, and prepayment risk. Indexes with more corporate exposure and longer maturity will generally exhibit the most volatility, which investors witnessed during the selloff seen in March 2020.

While the CCFI strategy offers the same advantages for the investor as the original Custom Core equity strategy, there are some key product distinctions due to structural differences between fixed income and equity markets. Fixed income indexes tend to contain many more securities than equity indexes; for example, the Bloomberg Barclays US Corporate Bond index holds over 8,000 constituents, many of which won't trade on a particular day. This difference between equity and fixed-income indexes is the result of public companies typically having only one class of stock, while an investment-grade issuer may have many bonds outstanding with vastly different coupons, maturities, and liquidity.

Monthly rebalancing can materially change the characteristics of a bond index depending on the size of the new issue calendar and the number of bonds removed that no longer meet the index criteria for inclusion. An investment-grade corporate bond index will have higher turnover than a comparable equity benchmark. Since the cost of trading a corporate bond is higher than the cost of trading the company's stock, it's important to minimize transaction costs by limiting turnover and using a liquidity screen that focuses on bonds with relatively low bid-ask spreads.

While it's possible to transact in fractional shares, investment-grade corporate bonds typically require trades of a minimum par of 2,000 and increments of 1,000 afterward. Taking into account bond premiums and accrued interest, this limits the number of positions that can be practically owned in an SMA. Due to the nature of portfolio construction, there's a decreased utility of owning a large number of securities in a portfolio to minimize idiosyncratic risk, since these risks are independent and uncorrelated. While still well diversified, a CCFI portfolio may have more concentrated positions than an equity SMA. For these reasons, we generally target owning around 75 bonds in CCFI portfolios with a minimum investment of $250,000. To mitigate higher idiosyncratic risk and provide downside principal protection for our CCFI strategy, we employ a hybrid investment process, combining sound portfolio construction techniques with the best aspects of forward-looking fundamental research.

The broad fixed income index is composed of US Treasury notes, mortgage-backed securities, corporate bonds, and government-related debt, with performance in each sector driven by distinct fundamentals and supply-demand technicals. There are two components to a bond's yield: the US Treasury note interest rate and a spread that compensates for any added risk, such as credit or prepayment risk. Spreads and rates are typically negatively correlated; Treasury rates tend to rise when the economy does well, but corporate bond yields go up by a smaller amount because the likelihood of a credit event has declined, causing spreads to narrow.

An optimization approach relies on a matrix that estimates the ever-changing correlation between risk factors such as Treasury rates and credit spreads. Investment managers have widely adopted stratified cells as the preferred method to produce the desired factor exposures in a fixed income portfolio. This approach produces more intuitive results that don't rely on a fixed income factor covariance matrix that's considerably more complex than its equity equivalent.

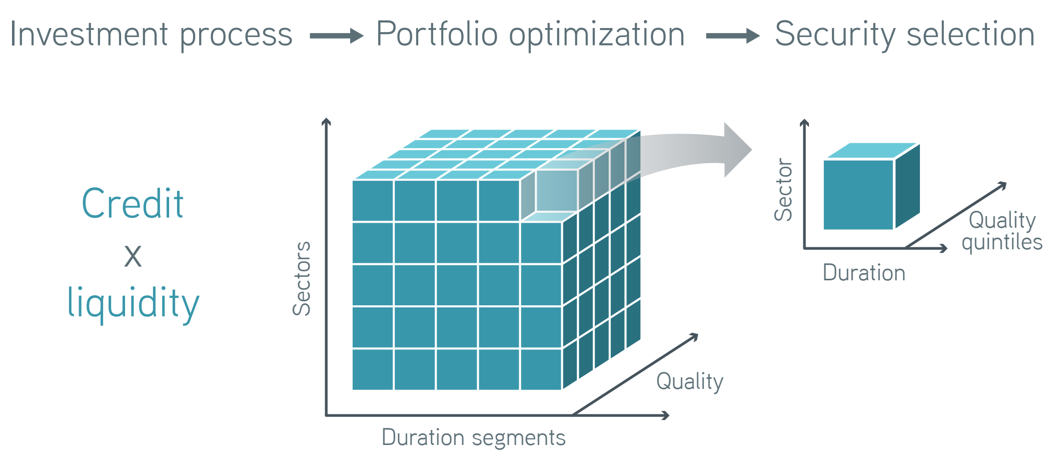
Portfolio construction

The objective of the CCFI strategy is to provide investors with their desired fixed income market exposure, often defined by a client-specified benchmark. Given the complexity, liquidity, and fragmented nature of fixed income benchmarks, the full index replication used in the Custom Core equity strategy is impractical. The CCFI strategy therefore uses a stratified cells framework that invests in fixed income instruments based on the primary drivers of return: duration, industry, and spread. This rules-based approach produces transparent trade recommendations that take into account the unique liquidity, trading, and index characteristics of the bond market.

This approach seeks to construct a portfolio that produces the desired exposure and investor outcomes with more stability and liquidity than the broad fixed income market. Investors should therefore expect the portfolio to deviate somewhat from the benchmark return. Based on the results of testing our methodology on actual portfolios through various market conditions, our CCFI strategies have realized lower tracking error on average than comparable ETFs.

The stratified cell approach uses rules-based portfolio construction algorithms to minimize the tracking error caused by systematic risk, primarily fluctuations in interest rates and credit spreads. Our team uses fundamental research to provide downside protection from idiosyncratic or company-specific risk. While each CCFI portfolio will be markedly more concentrated than its benchmark, our proprietary hybrid portfolio construction framework is designed to balance issuer risk against the strategy's other investment objectives.

Figure 1: Custom Core Fixed Income stratified cell methodology



Source: Parametric, 5/31/2020

While Custom Core equity strategies employ an optimization process, we find our stratified cell methodology to be more suitable for fixed income portfolios, with the same goal of delivering an index's market exposure with lower tracking error and greater flexibility. This methodology divides an index into buckets along the dimensions of duration, industry, and spread. It then constructs a diversified portfolio of bonds with the same weight and spread of each cell compared with that of a chosen benchmark. The objective is to group bonds of similar characteristics and select issues that are likely to perform in line with all the other bonds aggregated in their stratified cell. This process results in a portfolio that will have similar key rate duration exposures as its benchmark. Therefore, changes in the shape of the yield curve should have the same impact on both of their values.

For the credit component of risk, we take into account the average spread of each sector. The idea is to select bonds in a way for the portfolio and its benchmark to have the similar Duration-Times-Spread (DTS) contribution by industry. Research has shown that price volatility increases as a bond's DTS increases within a sector.[1] For this reason, risk model providers have incorporated DTS as a major credit factor in their multifactor risk models.

To make the stratified cells process manageable, our team assigns companies to one of five industry groups based on our analysis of sector correlations. Since duration is a better measure of a bond's interest rate sensitivity than maturity, we use it as the next dimension in our stratified cells. Our stepwise regression analysis found that five duration buckets are sufficient to explain the majority of historical performance of corporate bonds. Last, we sort bonds into five spread decile buckets, with a preference for bonds not trading in the tightest or widest spread ranges. Spreads represent the market consensus as to the riskiness of a bond, while credit rating can vary by agency and often lags changes in fundamentals.

[1] Arik Ben Dor, Lev Dynkin, Jay Hyman, Patrick Houweling, Erik Van Leeuwen, and Olaf Penninga, "DTS[SM] (Duration Times Spread)," *The Journal of Portfolio Management* 33, no. 2 (Winter 2007): 77–100.

Fundamental research

CCFI portfolios managed against a corporate index will initially hold 75 issuers, all of which are reviewed and approved by our credit analyst team. Anticipating and avoiding deteriorating credits is the key objective of their approval process. Companies that earn our team's approval will have a high likelihood of ratings stability due to favorable industry fundamentals, leading market share, and strong credit ratios.

While an active manager uses fundamental research to add risk to their portfolio in the hope of higher returns, we use it to minimize idiosyncratic risk. The recession triggered by the COVID-19 pandemic led to a wave of investment-grade issuers being downgraded to high yield. During the first half of 2020, these fallen angels underperformed the overall investment-grade bond market by 13%. The poor relative performance of fallen angels is why we view avoiding credit deterioration as especially important.

Trading

Growth in electronic trading has materially reduced the cost of transacting corporate bonds, making passive bond products even more cost effective. Our experienced traders were early adopters of electronic trading and continue to embrace innovative solutions to further lower transaction costs. They're an integral part of the implementation of the CCFI portfolios, providing valuable market insights that are incorporated into our liquidity screens.

The CCFI portfolio construction algorithm proposes trades on the same monthly cycle as the index rebalancing. We review portfolio exposures daily and implement trades on the basis of corporate actions, changes in analyst ratings, or account flows. For in-kind funded portfolios, we generate a transition analysis that minimizes turnover, resulting in lower-cost and more tax-efficient implementation than if all positions were liquidated, which would be required to purchase an ETF.

Conclusion

Financial advisors have long appreciated the benefits of Parametric Custom Core's strategies for clients seeking targeted equity exposures customized to their unique goals and values. The Parametric Fixed Income team undertook a concerted effort over the past five years to development portfolio construction algorithms that bring these same advantages to bond investors. CCFI shares the same objective and principals as its well-established sister product while using a hybrid stratified cells approach designed specifically for the bond market's unique liquidity, trading, and index rules. Our heavy investment in technology integrates account management, portfolio construction, and security trading, resulting in a scalable and transparent SMA product that provides financial advisors with the client solutions they require.

About

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