A Core fixed income solution: Outperforming the Agg with low TEV

Insights
November 2025

In this case study, we explain how we used a systematic active fixed income (SAFI) building block to create an enhanced core fixed income strategy for a client. Our solution met the client's objectives of achieving high-quality fixed income exposure with a stronger risk/return profile than the Bloomberg US Aggregate Index (the Agg).

Scenario

Our client, a consultant, had clients invested in the US Aggregate Index. The clients were looking for ways to outperform the Agg, but with limited tracking error volatility (TEV). The client's objectives were alpha of +25–50 basis points (bps), with modest tracking risk.

Summary of analysis and recommendations

In a "building block" approach, we used our Systematic US Investment Grade Corporate Bond strategy (with modestly expanded constraints beyond our base SAFI configuration) as the corporate "sleeve" of the Agg, and we combined it with Agg ex-corporate index exposure for the remaining sleeves. We were able to meet the client's return objectives. This is a strategy we have introduced as the Systematic Enhanced Core Bond Strategy.

Detailed analysis

The performance benefits of SAFI

SAFI strategies use a disciplined, quantitative, factor-based, bottom-up security selection process to generate alpha relative to a benchmark index. Our SAFI investment process maximizes exposure in the portfolio to well-researched style factors—value, momentum, sentiment—that are known to outperform over time, while keeping high-level risk factors in line with the benchmark index (Figure 1). These diversified and complementary style factor exposures contribute to excess returns, while carefully controlling risk in all other dimensions. Our SAFI investment approach is transparent, scalable, and customizable.

Figure 1: Quantitative signals for identifying outperformance opportunities in fixed income

Identified signal	Purpose	Economic rationale
Value Excess Spread Over Peers (ESP)	Identifies underpriced risk.	This signal seeks to identify bonds that are cheap relative to their peers* after adjustments for structural and fundamental features such as industry, rating quality and maturity have been made. By analyzing a wide array of securities, the relative value signal identifies bonds that are mispriced. In essence, ESP helps to pinpoint underpriced risk.
Momentum Equity Momentum in Credit (EMC)	Identifies attractive names with strong equity-implied sentiment and protects against value traps.	Momentum focuses on trends in the equity price of the underlying issuer. Bonds of issuers with strong equity price momentum are expected to outperform and are scored higher. Research confirms the lead-lag relationship between equity and bond prices, making EMC an informative early signal for the bond's future performance. Importantly, combining equity momentum with the value signal enhances accuracy by mitigating the risk of being exposed to value traps, which occur when bonds trade cheaply relative to peers for good economic reasons.
Sentiment Equity Short Interest (ESI)	Screens out high-risk issuers aggressively shorted by sophisticated investors.	This signal identifies issuers with significant short interest in their equity. Certain sophisticated investors, such as hedge funds, express negative views on companies by taking sizable short positions in their equity. Companies with significant short interest, therefore, have potential downside risks and are best excluded from credit portfolios. We use this sentiment indicator to screen out issuers that are actively shorted by investors.

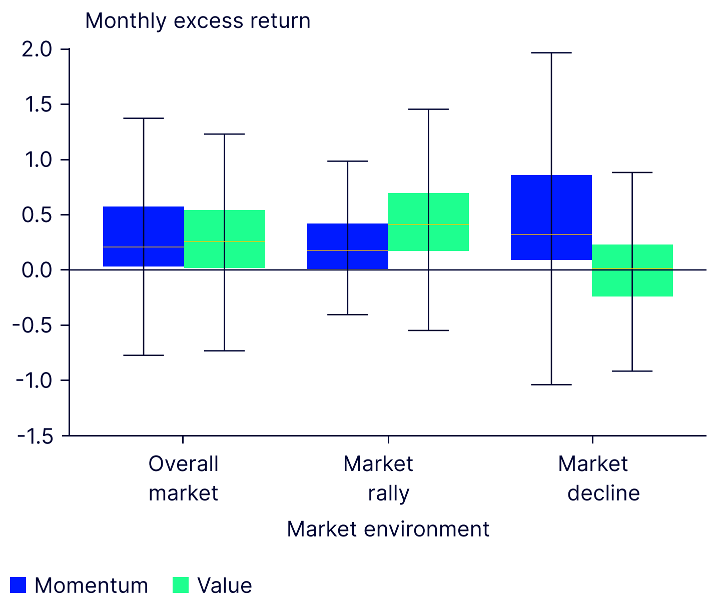
Source: State Street Investment Management, Barclays QPS, as of September 30, 2025.
*Peer groups are defined by sector, credit rating, and maturity to control for systematic risk.

In Overview: Systematic Active Fixed Income Signals, we discussed how traditional style factors like Value and Momentum can not only help performance, but also provide diversification benefits when combined in one strategy. This is because Value and Momentum behave differently in various market environments. Value tends to be procyclical, as the Value factor tilts toward higher-yielding, higher-spread bonds where risk is mispriced. By contrast, Momentum tends to be countercyclical, and movements in equities can effectively predict movements in bond prices (Figure 2). The third factor, Sentiment, helps the portfolio avoid potential trouble issuers with a high degree of equity short interest.

SAFI portfolio construction: A Practitioner's guide

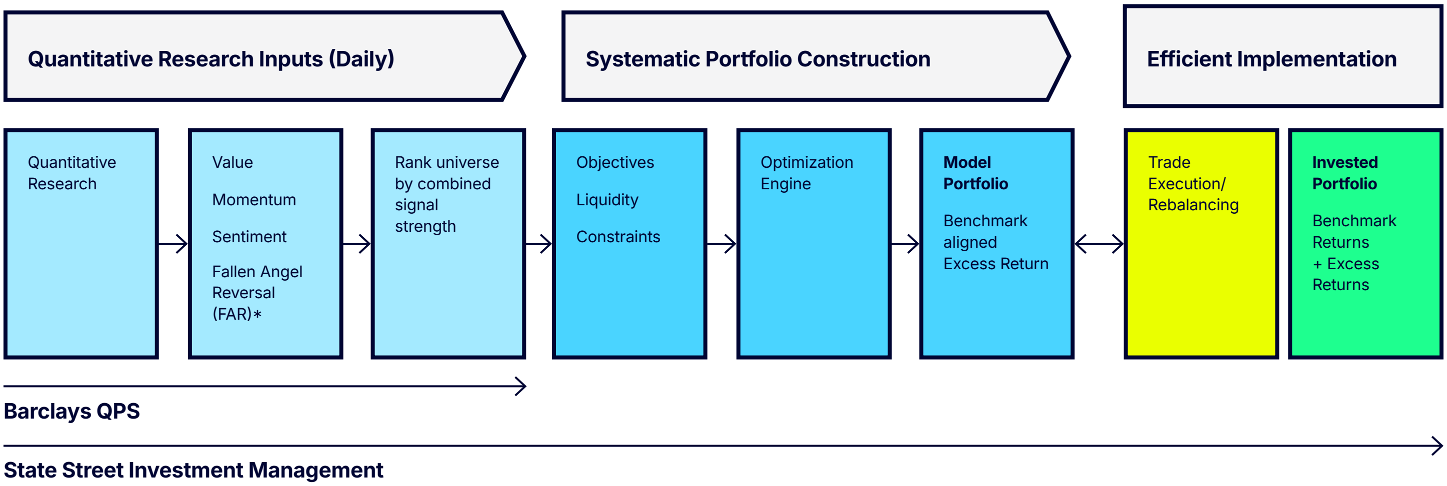
Specifically for the Systematic US Investment Grade Corporate Bond strategy, every bond in the universe is assigned four scores: one for each style factor, as well as a composite score. The higher the composite score, the more attractive the bond. We lean on a liquidity-aware portfolio optimization process that's calibrated based on client objectives and constraints. Our SAFI portfolio managers use this model portfolio output to construct and maintain the invested portfolio, applying value-additive techniques like primary market participation, substitutions, and skilled trading/execution to create implementation alpha (Figure 3).

Figure 2: Factor performance in credit up and down markets: value versus momentum



Sources: State Street Investment Management, Barclays QPS. Analysis is conducted on monthly excess returns over like-duration Treasuries for the 1st-quintile portfolio of the highest-scoring bonds minus the 5th-quintile portfolio of the lowest-scoring bonds over the period from January 1993 to December 2024. The investment universe is the Bloomberg US Investment Grade Corporate Bond Index. Turnover is not controlled, and transaction costs are ignored. Past performance is not a reliable indicator of future performance.

Figure 3: The State Street Investment Management SAFI investment process



Source: State Street Investment Management, as of June 30, 2025. The information contained above is for illustrative purposes only.
*Currently FAR is used in our High Yield strategies only.

Detailed recommendations

The Systematic Enhanced Core Bond Strategy

For this client, a SAFI approach was used as the corporate sleeve of the Agg, and combined with index exposures to create a customized solution. In backtested portfolio results,[1] we were able to achieve the level of alpha over the Agg that the client sought.

For the SAFI approach, we built a systematic portfolio using the US investment grade corporate bond universe, and modestly expanded the constraints beyond our base SAFI investment grade configuration. Importantly, in our SAFI portfolios, constraints can be tailored for the goals and risk tolerance of each client (Figure 4).

Figure 4: A customizable Core fixed income solution

Systematic strategy	**Performance objective & risk budget**
Systematic Enhanced US Core Bond	25–50 bps excess return vs benchmark with tracking risk of 25–50 bps
Optimization constraint: Corporate sleeve	**Rationale**
Maximum Monthly Turnover	Control turnover and transaction costs
Liquidity Screen	Favor liquid issues—cost and reliability
Duration Times Spread (DTS) Range	**Align portfolio with benchmark along key risk dimensions, to ensure systematic credit selection is key alpha driver**
Portfolio Relative OAD/OASD	
Relative Sector Weights	
Relative Baa Exposure	
<Baa3/BBB- Exposure	
Issuer Active BM Weight	Control idiosyncratic risk

Source: State Street Investment Management, as of September 30, 2025.

Outcomes

Backtested results for the Systematic Enhanced Core Bond model portfolio suggest a level of expected outperformance over the Bloomberg US Aggregate Bond Index, gross of assumed management fees, that comfortably meets the client's performance objectives on both the return and risk dimensions. We generated alpha in the backtest by simulating a portfolio that takes advantage of data-driven style factors and expanding the constraints thereby allowing the optimizer to take more risk and generate higher returns within the corporate sleeve.

We leaned on our SAFI capabilities to put together a solution that helped a consultant meet their expected performance goals on behalf of their clients. The Systematic Enhanced Core Bond Strategy represents a strong value proposition for clients, offering the potential for attractive risk-adjusted alpha with a long-term information ratio of nearly two.[2]

Our SAFI capabilities

Currently, we offer 13 approved SAFI strategies covering US, Euro, and global corporate markets, for investment grade and high yield, including approved climate strategies for IG (Figure 5). In general, our IG strategies target 50–75 bps of alpha with expected tracking risk of 75–125 over a full cycle. For our HY strategies, alpha and TEV targets are modestly higher.

Beyond systematic, State Street Investment Management offers a broad range of fixed income exposures to help clients achieve their goals. We currently have $1.3 trillion of fixed income AUM, including $95 billion of IG corporate and $44 billion of HY corporate assets.[3]

Figure 5: SAFI exposures across the credit spectrum

SAFI strategy	Benchmark index	Maturity range	Alpha target	Tracking error
US High Quality Intermediate Corporate	Bloomberg US Intermediate Corporate ex-Baa	1–10	25–50	50–100
US High Quality Long Corporate	Bloomberg US Long Corporate Bond A+	10+	50–75	75–125
US Investment Grade Corporate	Bloomberg US Corporate Bond	All Mty	50–75	75–125
US Long Corporate	Bloomberg US Long Corporate Bond	10+	50–75	75–125
Euro Investment Grade Corporate	Bloomberg Euro Aggregate Corporate	All Mty	50	75–125
Euro Investment Grade Corporate Climate	Bloomberg Euro Aggregate Corporate	All Mty	50	75–125
US Investment Grade Corporate Climate	Bloomberg US Corporate Bond	All Mty	50–75	75–125
Global Investment Grade Corporate	Bloomberg Global Investment Grade Bond	All Mty	50–75	75–125
Global Investment Grade Corporate Climate	Bloomberg Global Investment Grade Bond	All Mty	50–75	75–125
US High Yield Corporate	Bloomberg US High Yield Corporate Bond	All Mty	100	150–200
US High Yield Corporate BB-B	Bloomberg US High Yield BB-B Corporate Bond	All Mty	100	150–200
Global High Yield Corporate	Bloomberg Global High Yield Corporate Bond	All Mty	100	150–200
Enhanced US Core	Bloomberg US Aggregate Bond	All Mty	25–50	30

Source: State Street Investment Management, as of September 30, 2025.

Figure 6: Performance of Systematic US High Quality Intermediate and Long Corporate Fund

	Intermediate (1–10Yr) Portfolio				Long (10+ Yr) Portfolio			
	QTR (%)	YTD (%)	1 year (%)	Since SAFI inception (%)*	QTR (%)	YTD (%)	1 year (%)	Since SAFI inception (%)*
Systematic US High Quality Corporate Bond (Gross)	2.10	6.88	5.55	6.01	4.03	8.03	0.99	3.03
Benchmark	1.92	6.41	4.77	5.16	3.65	7.46	0.03	1.96
Excess return (Gross)	0.19	0.47	0.78	0.84	0.37	0.58	0.96	1.07
Systematic US High Quality Corporate Bond (Net)	2.1	6.87	5.54	5.99	4.02	8.02	0.98	3.02
Benchmark	1.92	6.41	4.77	5.16	3.65	7.46	0.03	1.96
Excess return (Net)	0.18	0.46	0.76	0.83	0.37	0.57	0.95	1.06
Tracking error volatility	—	—	0.22	0.29	—	—	0.4	0.41
Information ratio	—	—	3.57	2.89	—	—	2.4	2.63

Source: State Street Investment Management. As of September 30, 2025. *The Systematic US High Quality Corporate Bond portfolios were converted to the SAFI investment process on December 31, 2023. Fund history predates this period; however, it was not managed using the SAFI approach. Past performance is not a reliable indicator of future performance. Performance returns for periods of less than one year are not annualized. The performance figures contained herein are provided on a gross and net of fees basis. Gross of fees do not reflect and net of fees reflect the deduction of advisory or other fees which could reduce the return. The performance includes the reinvestment of dividends and other corporate earnings and is calculated in US dollars. The benchmark for the SAFI intermediate strategy is the Bloomberg Intermediate Corporate ex Baa Index. The benchmark for the SAFI long strategy is the Bloomberg Long Corporate A+ Index.

SAFI live strategy performance

Our two live US High Quality Corporate Bond portfolios, intermediate and long, generated +84-107 bps of annualized alpha with low realized tracking error of 30-40 bps since SAFI inception at the end of 2023, resulting in IRs of 2.6 to 2.9 (Figure 6).

Endnotes

1 See Appendix for backtest methodology.

2 State Street Investment Management, as of September 30, 2025.

3 State Street Investment Management, as of March 31, 2025.

Appendix

Backtest assumptions and parameters

Model methodology	Linear optimizer with linear constraints
Time Horizon	Monthly, from January 2011 to March 2024
Universe	US Investment Grade Corporate Bond Index (Bloomberg Ticker: LUACTRUU Index)
Objective Function	Maximizing QPS Composite Score with the following filtering & constraints
Filters & Eligible Universe	The following filters are only applied to newly-entering bonds in the universe: *Liquidity: Barclays TES score (Trading Efficiency Score, a ranked version of LCS which also includes trading volume) is used to determine its liquidity level within a given universe *Maturity *Amount Outstanding
Constraints	*Portfolio-level (all vs. benchmark): (1) DTS (as % of benchmark); (2) OAD and OASD; and (3) KRD buckets (long, intermediate, short bucket) *Market Value % (all vs. benchmark): (1) Rating Bucket (letter grade); (2) Sector Class 3; (3) Issuer Level *Turnover Cap: Monthly

statestreet.com/investment-management

State Street Global Advisors (SSGA) is now State Street Investment Management. Please click here for more information.

Information Classification: General

Marketing communication.

For institutional/professional investors use only.

All information is from SSGA unless otherwise noted and has been obtained from sources believed to be reliable, but its accuracy is not guaranteed. There is no representation or warranty as to the current accuracy, reliability or completeness of, nor liability for, decisions based on such information and it should not be relied on as such.

Investing involves risk including the risk of loss of principal.

The whole or any part of this work may not be reproduced, copied or transmitted or any of its contents disclosed to third parties without SSGA's express written consent.

The views expressed are the views of Arkady Ho, Chris Carpentier and Tim Herlihy through September 30, 2025, and are subject to change based on market and other conditions. This document contains certain statements that may be deemed forward-looking statements. Please note that any such statements are not guarantees of any future performance, and actual results or developments may differ materially from those projected.

Diversification does not ensure a profit or guarantee against loss.

Bonds generally present less short-term risk and volatility than stocks, but contain interest rate risk (as interest rates raise, bond prices usually fall); issuer default risk; issuer credit risk; liquidity risk; and inflation risk. These effects are usually pronounced for longer-term securities. Any fixed income security sold or redeemed prior to maturity may be subject to a substantial gain or loss.

The information provided does not constitute investment advice and it should not be relied on as such. It should not be considered a solicitation to buy or an offer to sell a security. It does not take into account any investor's particular investment objectives, strategies, tax status or investment horizon. You should consult your tax and financial advisor.

Barclays is not affiliated with State Street Global Advisors Funds Distributors, LLC.

Barclays Index License Disclaimer

Barclays Bank PLC has licensed certain systematic strategy indices to State Street Global Advisors that incorporate quantitative signals developed by Barclays' Quantitative Portfolio Strategy (QPS) Research team.

Neither Barclays Bank PLC ("BB PLC") nor any of its affiliates (collectively "Barclays") is the issuer or producer of the products referenced herein and Barclays has no responsibilities, obligations or duties to investors in such products. The Barclays Indices referenced herein (collectively, the "Indices"), together with any Barclays indices that are components of such Indices, are trademarks owned by Barclays and, together with any component indices and index data, are licensed for use by State Street Global Advisors as the producer of the products referenced herein (the "Product Provider"). The Indices are used by the Product Provider in connection with the management of the products referenced herein, but the Indices are not used by the Product Provider as the benchmark for such products, including as defined under Regulation (EU) 2016/1011 of the European Parliament and of the Council of June 8, 2016 on indices used as benchmarks in financial instruments and financial contracts or to measure the performance of investment funds.

Barclays' only relationship with the Product Provider in respect of the Indices is the licensing of the Indices, which are administered, compiled and published by BB PLC in its role as the index sponsor (the "Index Sponsor") without regard to the Product Provider or the products referenced herein or investors in such products. Additionally, State Street Global Advisors as Product Provider may for itself execute transaction(s) with Barclays in or relating to the Indices in connection with such products. Investors acquire such products from the Product Provider and investors neither acquire any interest in the Indices nor enter into any relationship of any kind whatsoever with Barclays upon making an investment in such products. The products referenced herein are not sponsored, endorsed, sold or promoted by Barclays and Barclays makes no representation regarding the advisability of such products or use of the Indices or any data included therein.

Barclays shall not be liable in any way to the Product Provider, investors or to other third parties in respect of the use or accuracy of the Indices or any data included therein.

Barclays has engaged Bloomberg Index Services Limited as the official index calculation and maintenance agent of the Indices, which are owned and administered by Barclays. Bloomberg Index Services Limited does not guarantee the timeliness, accurateness, or completeness of the calculations of the Indices or any data or information relating to the Indices. Bloomberg Index Services Limited makes no warranty, express or implied, as to the Indices or any data or values relating thereto or results to be obtained therefrom, and expressly disclaims all warranties of merchantability and fitness for a particular purpose with respect thereto. To the maximum extent allowed by law, Bloomberg Index Services Limited, its affiliates, and all of their respective partners, employees, subcontractors, agents, suppliers and vendors (collectively, the 'protected parties') shall have no liability or responsibility, contingent or otherwise, for any injury or damages, whether caused by the negligence of a protected party or otherwise, arising in connection with the calculation of the Indices or any data or values included therein or in connection therewith and shall not be liable for any lost profits, losses, punitive, incidental or consequential damages.

Past performance is not a reliable indicator of future performance.

The trademarks and service marks referenced herein are the property of their respective owners. Third party data providers make no warranties or representations of any kind relating to the accuracy, completeness or timeliness of the data and have no liability for damages of any kind relating to the use of such data.

This document provides summary information regarding the Strategy. This document should be read in conjunction with the Strategy's Disclosure Document, which is available from SSGA. The Strategy Disclosure Document contains important information about the Strategy, including a description of a number of risks.

State Street Global Advisors, One Congress Street, Boston, MA 02114.

ID3333950-8511167.1.2.GBL.INST 1025 Exp. Date: 11/30/2026