



A Systematic Perspective on Credit Investing

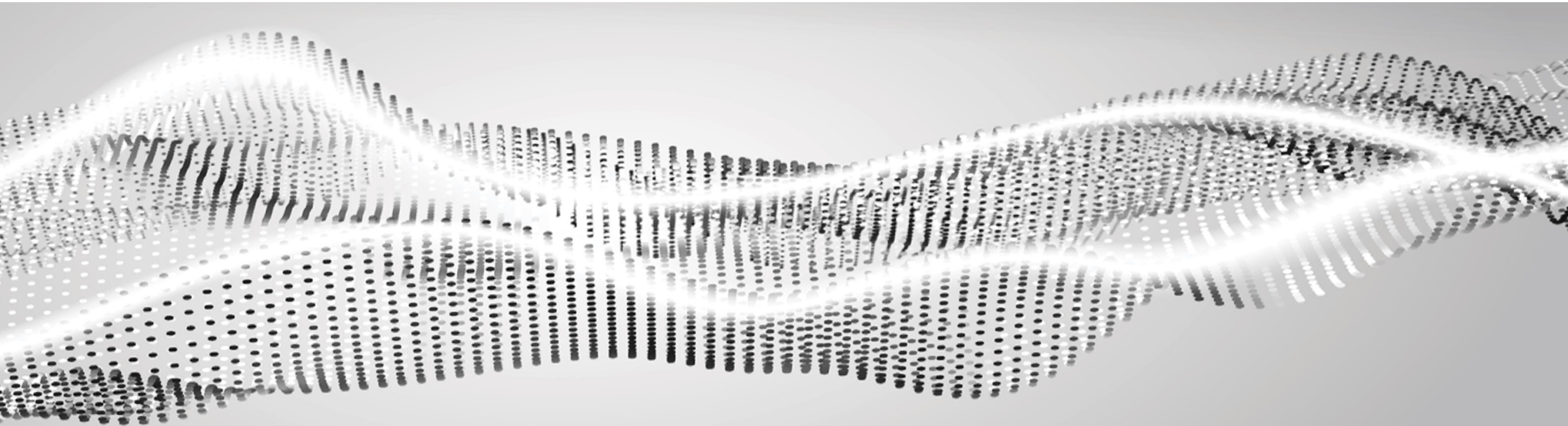
— Scott Richardson —

November 16, 2023

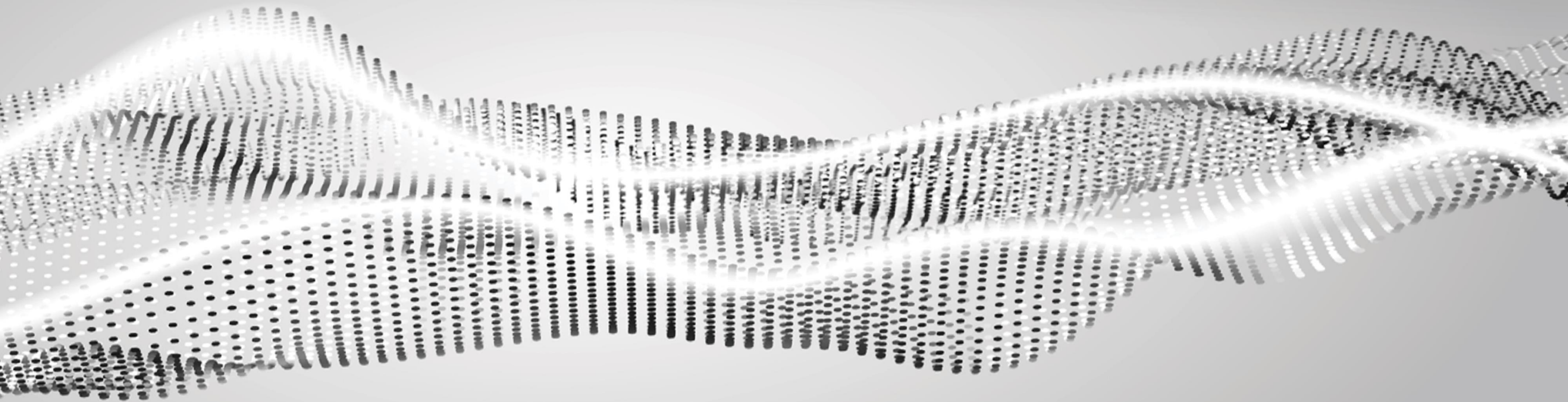
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Agenda

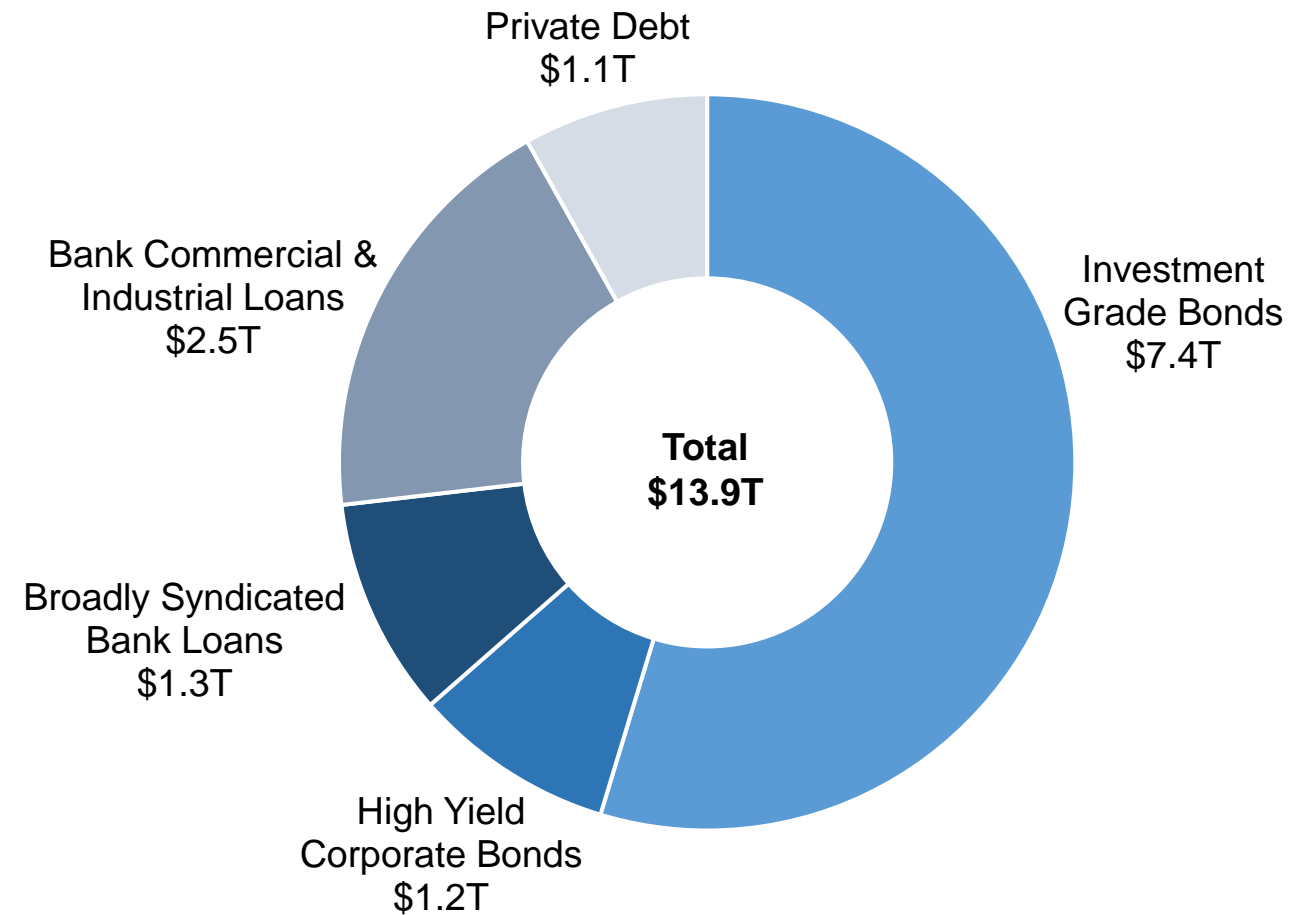
- The Corporate Credit Landscape
- Systematic Credit Overview
- Credit Outlook



THE CORPORATE CREDIT LANDSCAPE



Overview of U.S. Corporate Debt Market



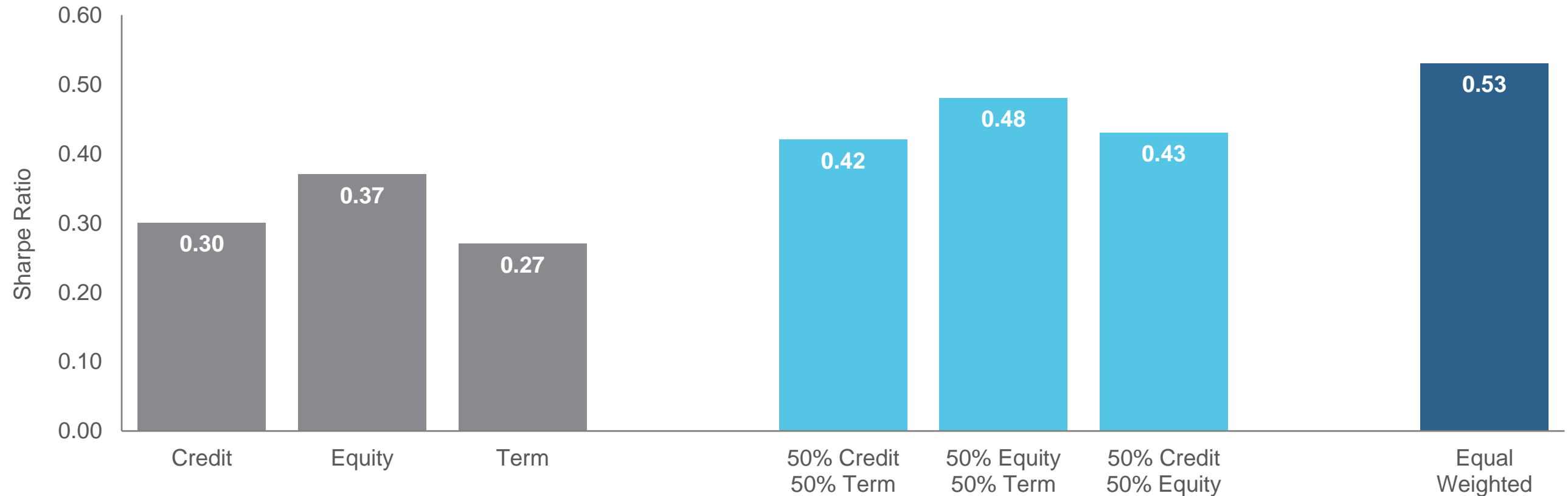
Variety of Offerings and Access

	Public / Private	Quality	Fixed / Floating	Common Index	Inception Date (Launch Date)	Investment Options
Investment Grade	Public	IG	Fixed	Ibbotson's U.S. Long-Term Corporate Bond	1973	Broad range of passive and active options
High Yield	Public	HY	Fixed	Bloomberg High Yield Corporate	1988	Broad range of passive and active options
Broadly Syndicated Bank Loans	Public	HY	Floating	Morningstar LSTA Leveraged Loan	1996 (2011)	Passive and active options available
Direct Lending	Private	HY / Not-Rated	Floating	Cliffwater Direct Lending	2004 (2015)	Public BDCs, active managers

Credit in Asset Allocation: Long-Term Sharpe Ratios

Credit has historically provided investors with robust, diversifying, and income-generating return streams

Monthly Data: January 1973 – December 2022

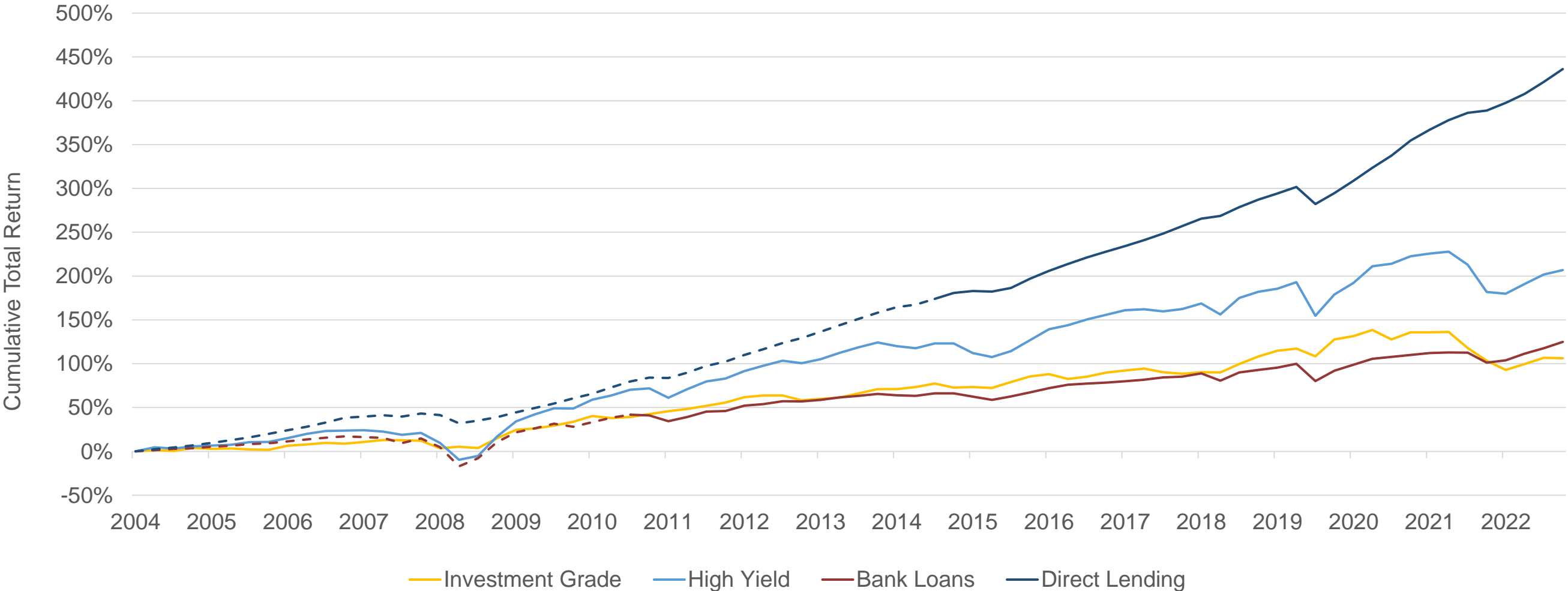


Source: "Current Opportunities in Public Credit Markets." Acadian Asset Management. <https://www.acadian-asset.com/investment-insights/systematic-methods/current-opportunities-in-public-credit-markets>. Credit: Investment grade credit minus duration-matched Treasuries. Equity: U.S. equity minus T-bills. Term: Intermediate Treasuries minus T-bills.

Performance By Corporate Credit Categories

Cumulative Total Return by Category

September 2004 – June 2023

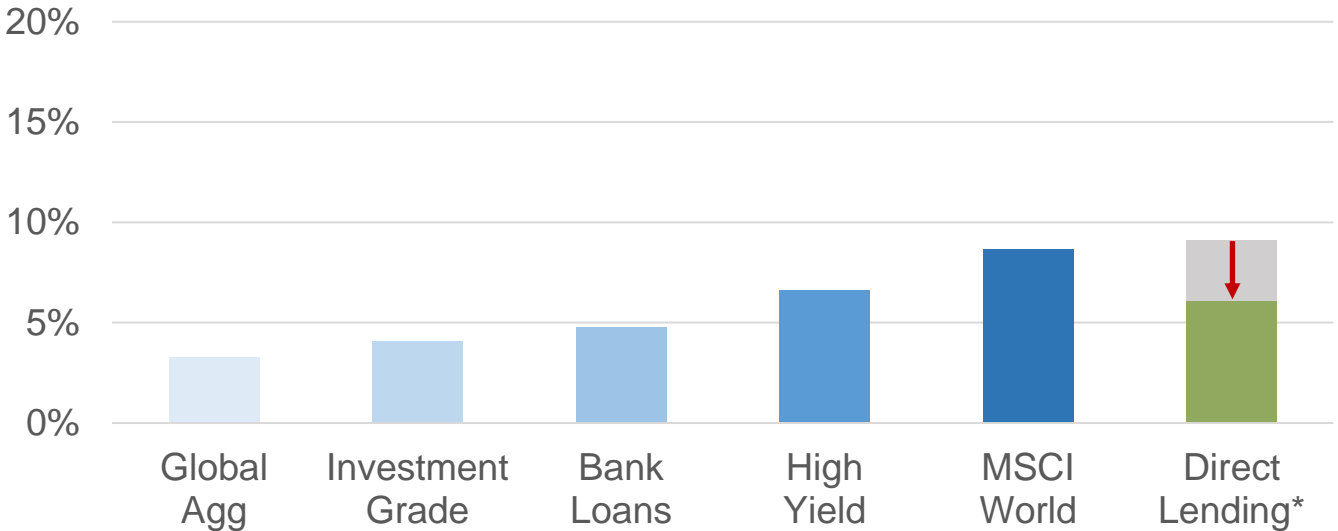


Dashed lines represent and index backfilling returns prior to its inception. Date range shown is based on available data from Direct Lending (Cliffwater Direct Lending Index). Investment Grade is proxied by the ICE BofA Corporate Index. High Yield is proxied by ICE BofA U.S. High Yield Index. Bank Loans is proxied by the Morningstar LSTA U.S. Leveraged Loans Index.

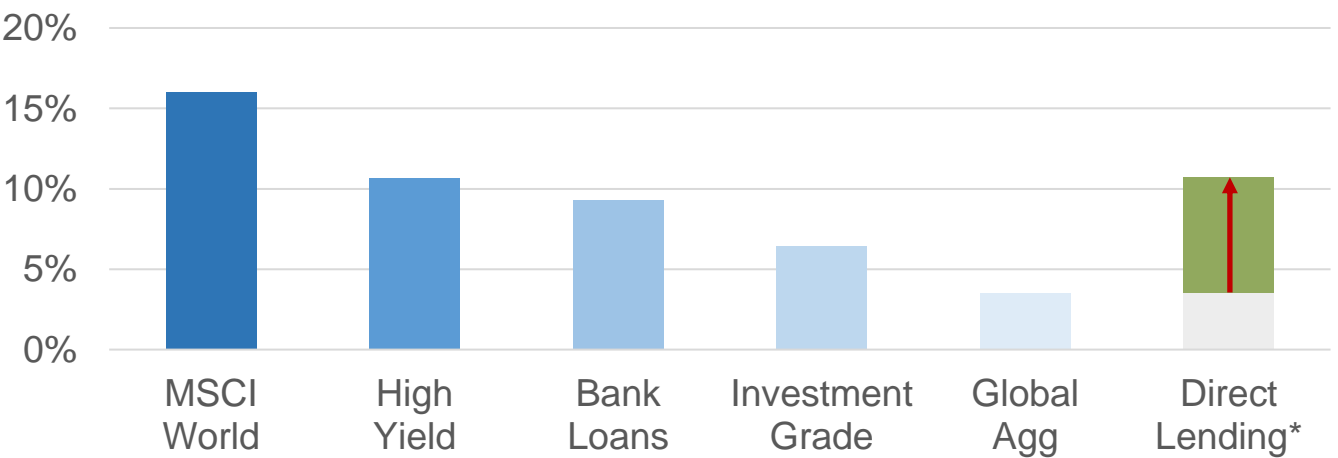
Direct Lending: Performance Comparison

Adjusting for higher fees and smoothed returns results in performance beginning to be sensible

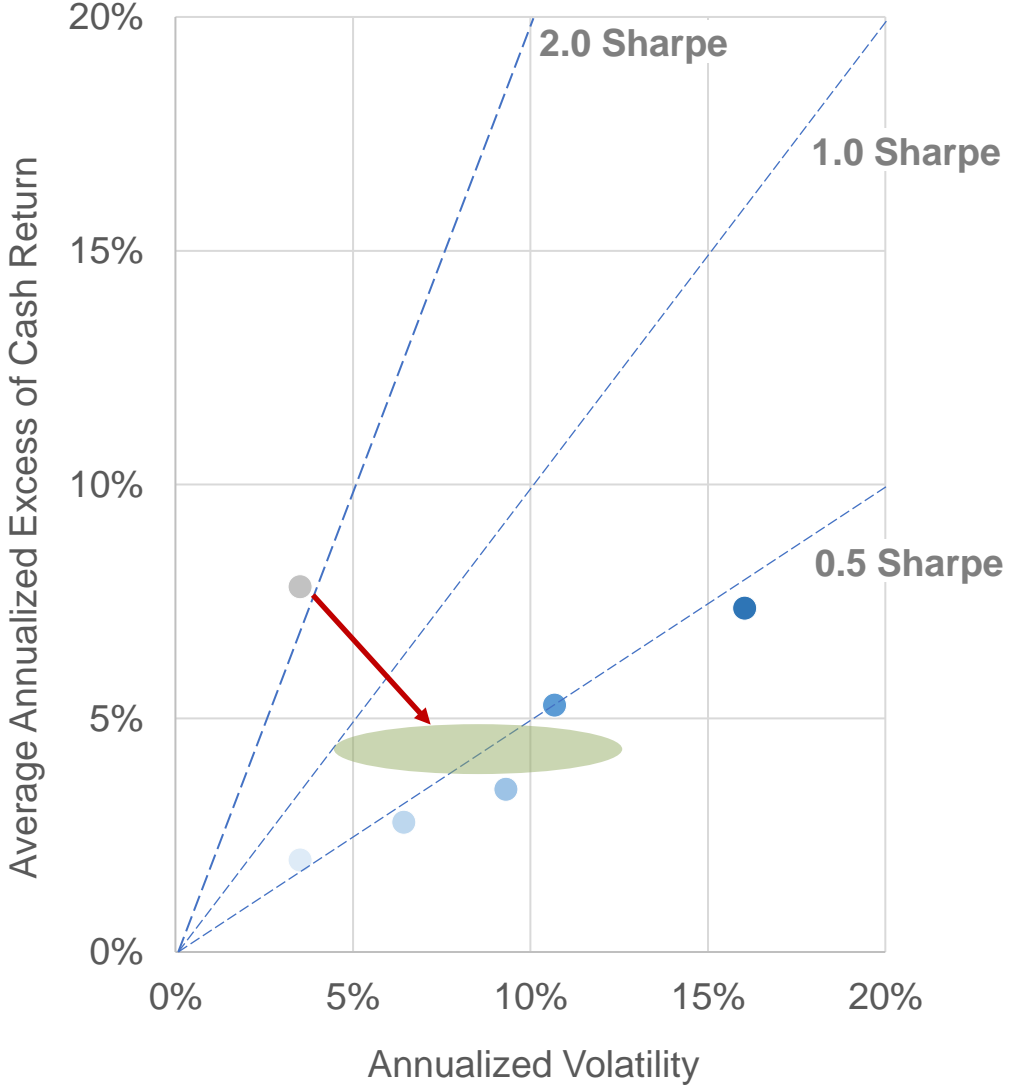
Average Annualized Total Return



Annualized Volatility

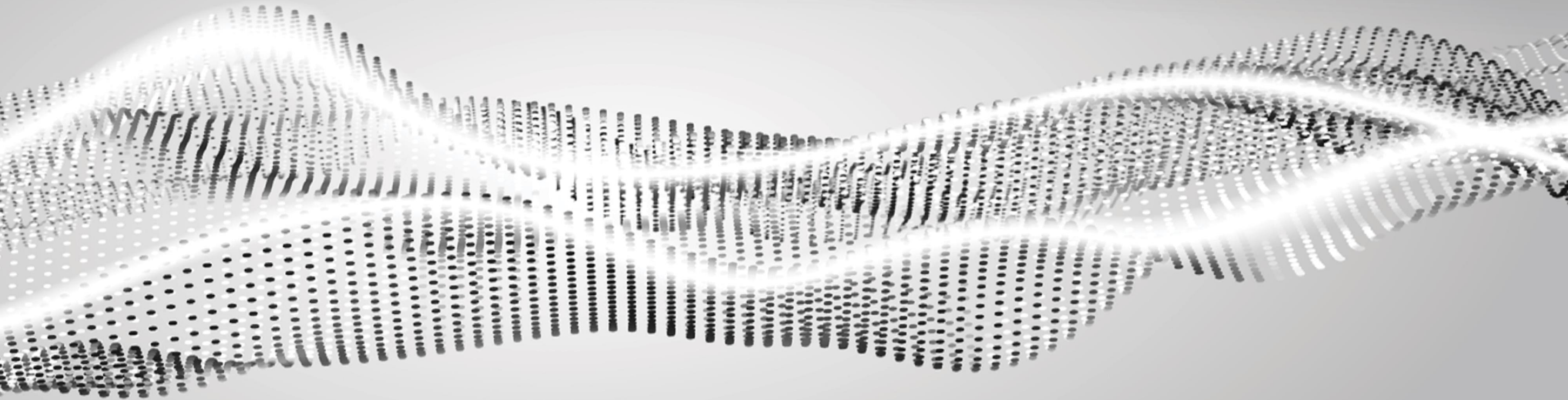


Risk Versus Return



Source: Bloomberg, MSCI, ICE. Data is from September 2004 to June 2023. MSCI Copyright MSCI 2023. All Rights Reserved. Unpublished. PROPRIETARY TO MSCI.

SYSTEMATIC CREDIT OVERVIEW



Credit Markets: The Evolution of Electronic Trading

Credit trading finally exits the Dark Ages

Financial Times, 4-Apr-23

**Is This the New Era for
Electronic Credit Trading?**

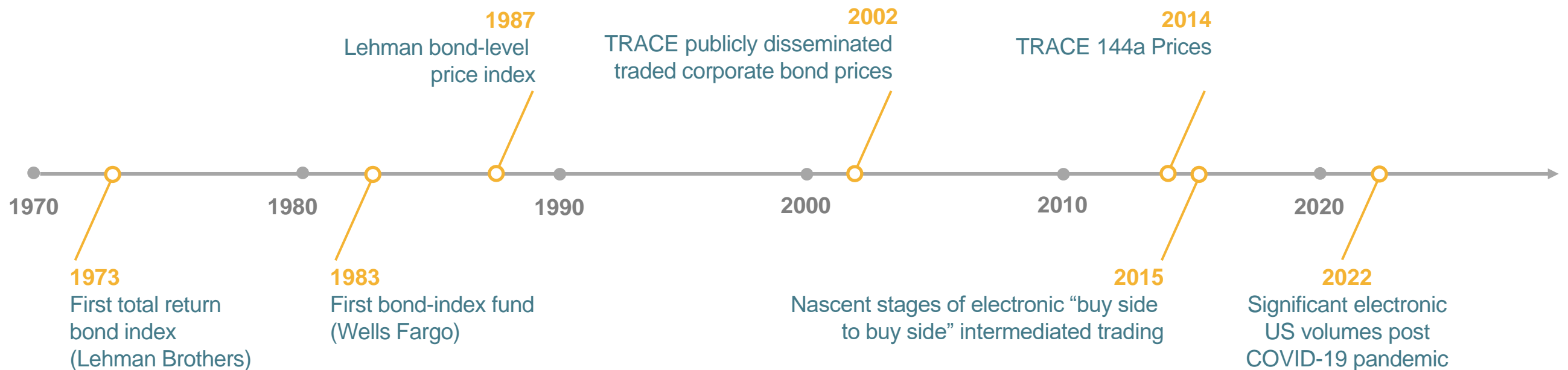
Tradeweb, 16-May-23

**The creeping equitisation of
credit trading**

Financial Times, 2-Jun-23

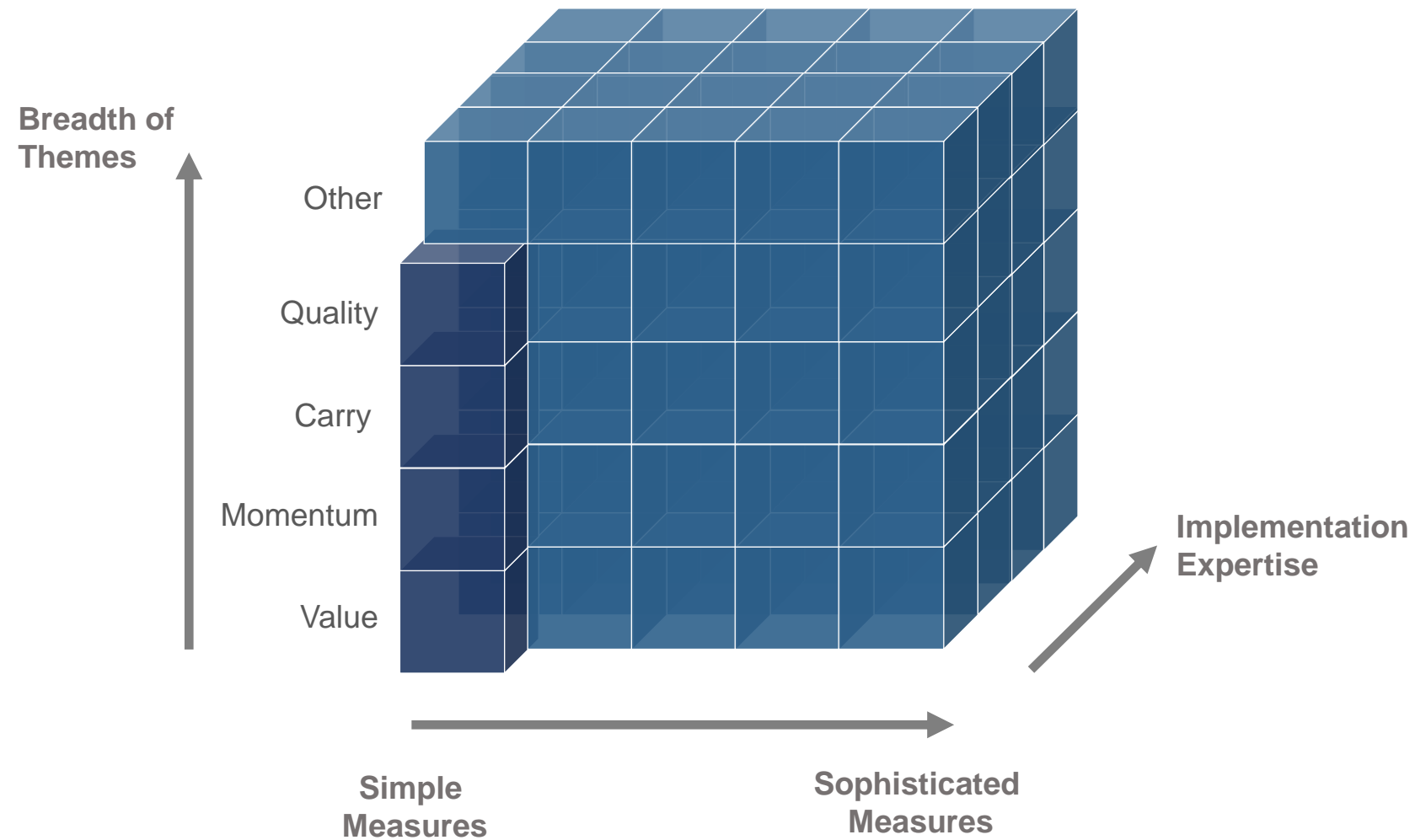
Systematic Investing in Corporate Credit Markets

- While the roots of systematic investing in equities were established around the 1960s, the same concept applied to corporate bonds was not formally studied until the early 2010s
- Reasons for late adoption include limited data, greater fragmentation in corporate bond liquidity and pricing relative to equities, and the historically manual process of corporate bond trading



Adding Value Across Multiple Dimensions

Managers can add value by expanding themes, by more sophisticated measures, and in implementation

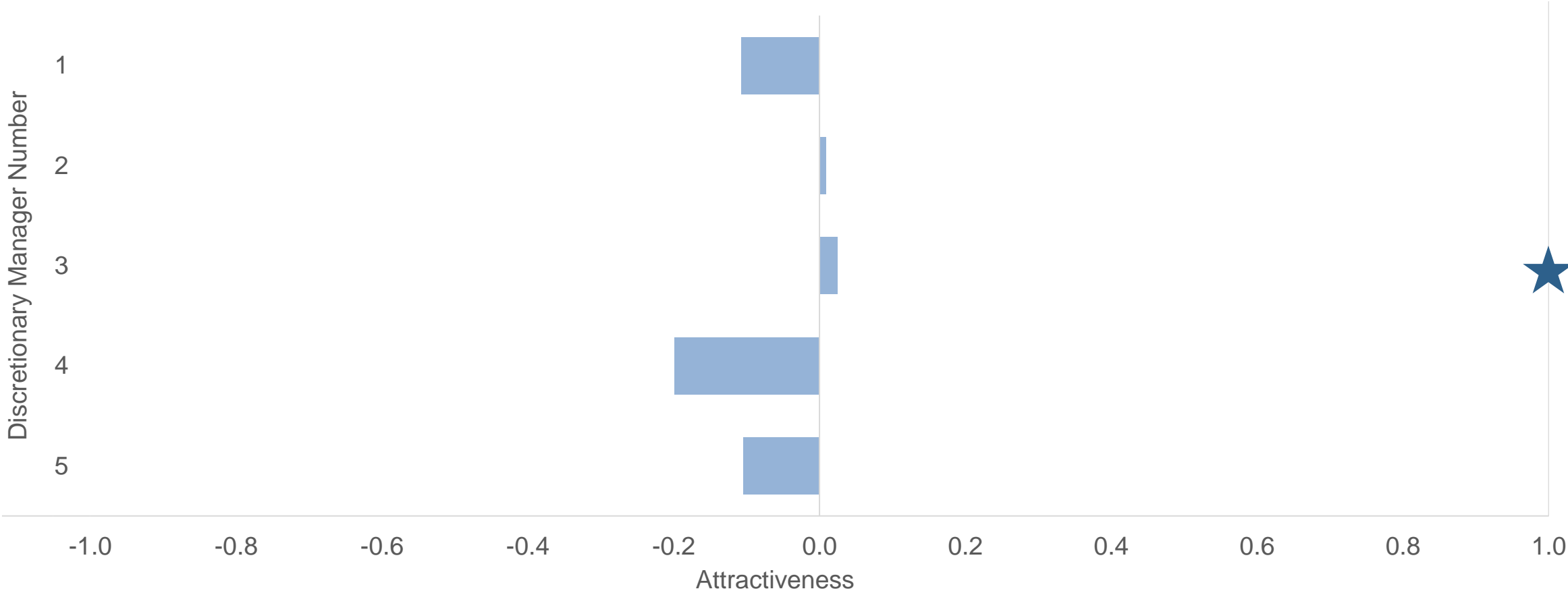


Diversifying Potential of Systematic Strategies

We find little evidence that discretionary managers provide exposure to systematic strategies' themes

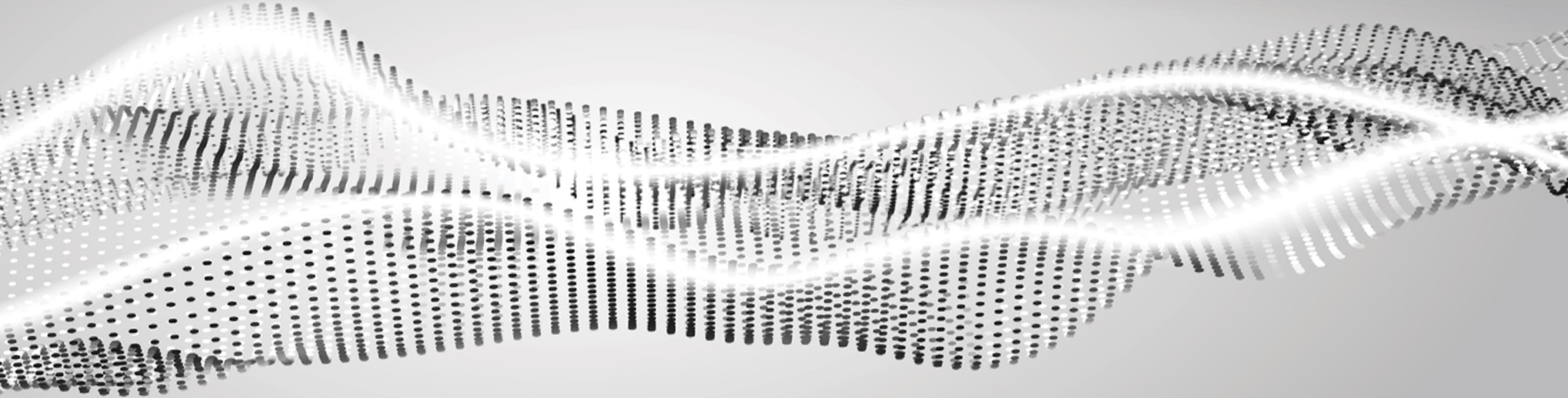
Top Discretionary Managers Exposure to a Systematic Credit Approach

As of December 31, 2022



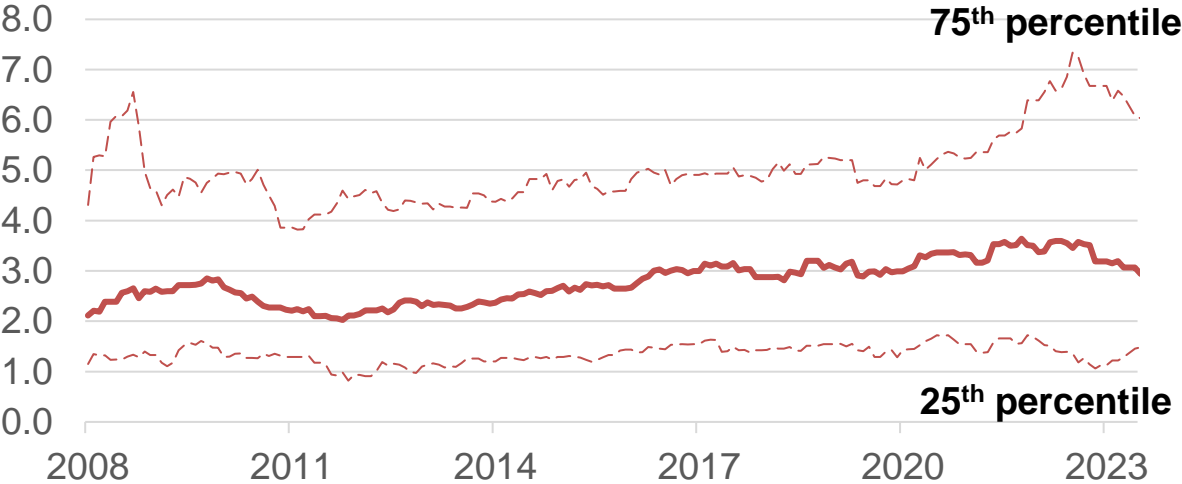
Source: eVestment, CRSP. Holdings as of December 31, 2022. Discretionary managers selected based on largest strategy AUM in eVestment. Attractiveness measured as a Z-score reflecting deviation of forecast return from benchmark return expectations. Return forecasts are based on Acadian's proprietary systematic credit investment themes. Portfolios are reweighted to exclude bonds without a return forecast. CRSP®, Center for Research in Security Prices. Graduate School of Business, The University of Chicago. Used with permission. All rights reserved. crsp.uchicago.edu. Please see appendix for additional disclosures.

CREDIT OUTLOOK

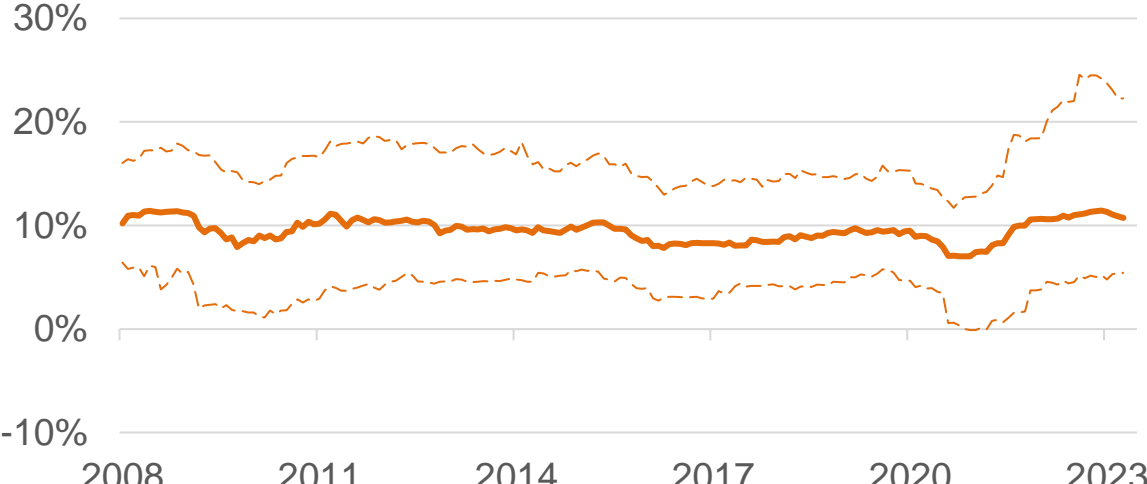


U.S. High Yield Outlook: Borrower Quality is Robust

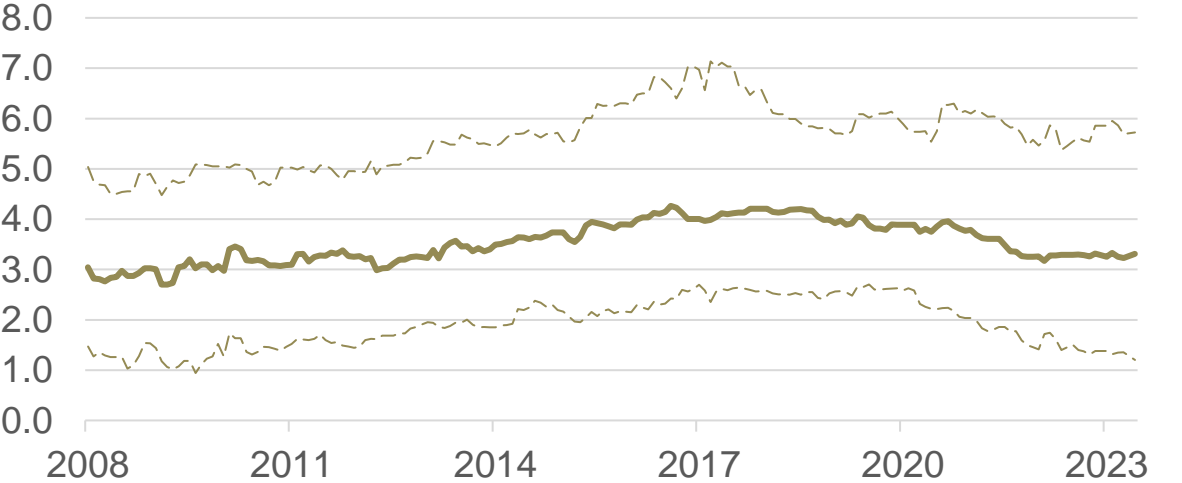
Interest Coverage



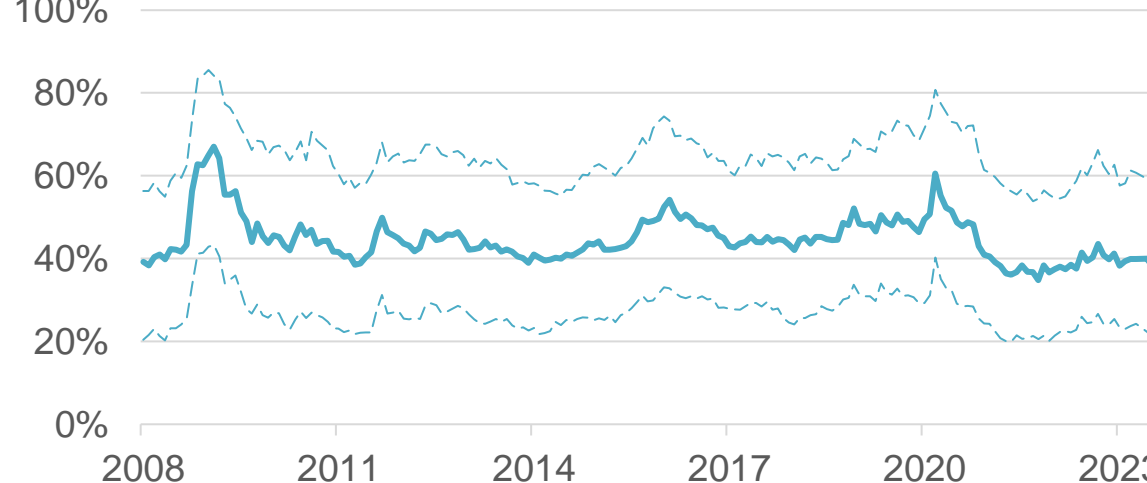
Profitability



Leverage (EBITDA)



Leverage (Market)

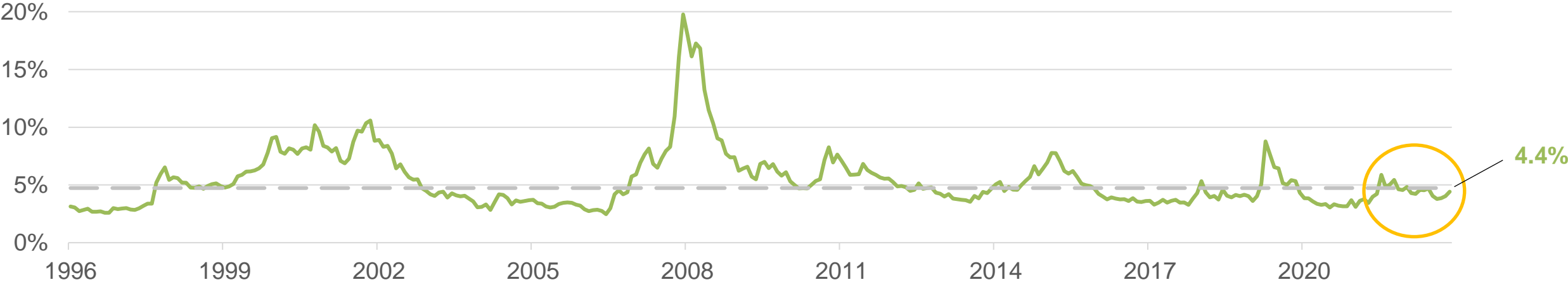


Source: ICE. Data from January 2008 to June 2023. Dashed lines represent the 25th and 75th percentiles and solid lines represent the median.

U.S. High Yield Outlook

Spreads and yields are at attractive levels versus long-term values

Option Adjusted Spread



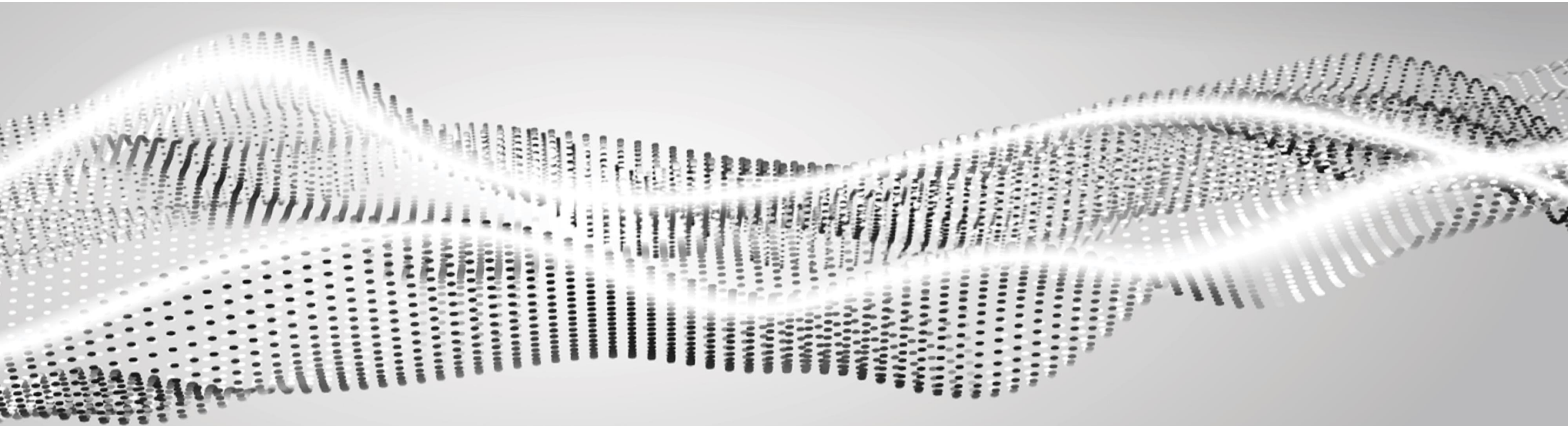
Yield to Worst



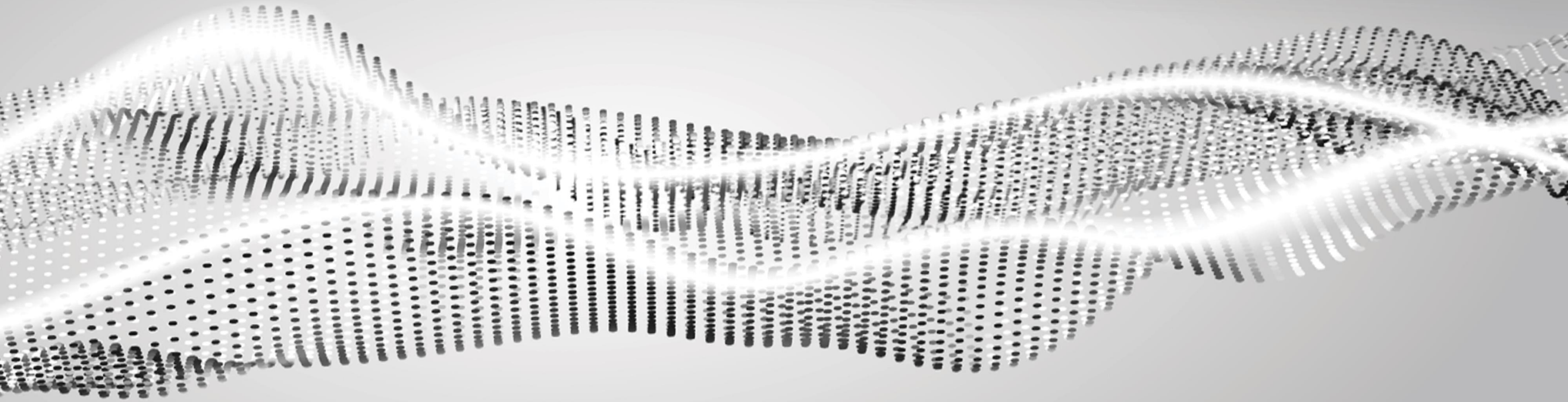
Source: ICE. December 1996 to October 2023. ICE BofA U.S. High Yield Index. Long-term values are based on the medians since January 1997.

Takeaways

- **Corporate credit:** Plays an evergreen role in asset allocation and current conditions suggest a strong tactical opportunity
- **Accessing credit premium:** We believe an active approach to public credit is superior to a passive implementation and more compelling than private credit in the current environment
- **Systematic active in corporate credit:** Captures a unique opportunity set, attractive as a standalone allocation and a diversifying complement to discretionary strategies



APPENDIX

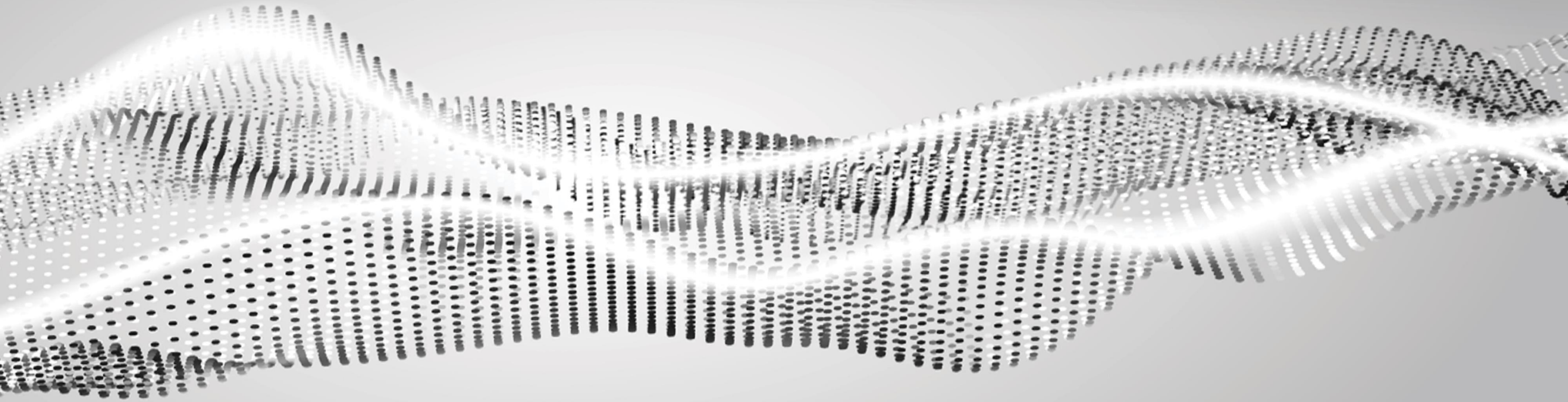


Intuitive Themes Implemented in Credit Markets

Themes have efficacy on a standalone basis and low correlations to other themes

Theme	Concept	Example
Value	Cheap bonds outperform expensive bonds <i>Drivers: Over-extrapolation, potential compensation for systematic risk</i>	→ Spread relative to rating (i.e., a measure of credit risk)
Momentum	A bond's recent outperformance will continue <i>Drivers: Under reaction to news, investor herding</i>	→ Issuer returns
Carry	Higher yielding assets outperform lower yielding <i>Drivers: Excess demand for capital</i>	→ Option-adjusted spread level
Quality	High-quality outperforms low-quality <i>Drivers: Leverage aversion, lottery preferences</i>	→ Strong balance sheets

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