Core Disciplined Alpha:
Portfolio Turnover, Risk and Trading Costs

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KEY TAKEAWAYS

- The level of turnover in Loomis Sayles CDA portfolios is a result of the alpha generation and risk management process.

- The security selection strategy of CDA has succeeded not just by identifying relative value opportunities, but by exiting positions where value has been realized in order to make room for new opportunities.

- The CDA strategy of high turnover and many small positions historically has achieved an information ratio of roughly 3.

The Loomis Sayles Core Disciplined Alpha (CDA) strategy has historically had relatively high turnover. In 2017, turnover of 296% put CDA in the top decile among managers that report turnover.[i] While high turnover is potentially beneficial for efficiently harvesting alpha while managing risk, frequent trading requires adequate market liquidity for efficient implementation, so it's natural to be concerned that such a strategy might run into headwinds in a lower liquidity environment. Therefore, it is worthwhile to delve more deeply into the dependence of CDA performance on liquidity, as well as characterizing the potential advantages of a high turnover strategy.

It's important to clarify that to date the level of turnover in CDA portfolios has been a result of the alpha generation and risk management process, not an ex-ante decision. For any source of excess return, there is an expected time required to realize the outperformance. Deep-value strategies often depend on finding bonds that may never have to be sold to capture alpha, so they naturally have low turnover. Sector or macro strategies typically depend on forecasting a few, usually relatively slow, movements in broad market factors across potentially multi-year time frames, and maintaining persistent exposures to these factors. By contrast, relative-value security selection strategies such as CDA depend on finding many small, typically short-lived discrepancies, and don't necessarily entail exposure to broad market factors.

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For comparison suppose that, hypothetically, one were able to correctly predict the direction of Treasury bond yield changes on a monthly basis with a win/loss ratio of 55:45—a skillful performance for such a strategy.[ii] A strategy using this signal to make monthly directional trades would yield an information ratio[iii] (IR) of about 0.35.[iv] Less frequent trading would produce correspondingly lower IR. Achieving our CDA gross of fees excess return objective of 50-100 basis points per year using such a strategy would entail duration tilts producing an expected tracking error of approximately 200 basis points (50-100 basis points/(0.35) ≈140-280 basis points).[v] A multi-factor macro strategy can potentially perform better than this by taking many active exposures, but still faces the challenge of the relatively long time frame needed to realize the investment ideas. Even with as many as 16 directional factor views at a time, such a strategy would likely still achieve an information ratio only modestly larger than 1.[vi] Low turnover, in this case, implies relatively few opportunities to capture excess returns. We note that the CDA strategy of high turnover and many small positions has achieved an information ratio of roughly 3 with a tracking error of less than 35 basis points since inception.[vii]

The security selection strategy of CDA has succeeded not just by identifying relative value opportunities, but by exiting positions where value has been realized (or where the value thesis has changed) in order to make room for new opportunities. The following figure shows the cumulative distribution of holding periods for credit positions in CDA for the three years ending January 2018.[viii] While the median risk-weighted holding period is roughly 31 trading days, there is also a long tail of longer-held positions—the next quartile extends to 70 trading days.

CUMULATIVE HOLDING PERIOD FOR POSITIONS IN CDA

Source: Loomis Sayles. Data as of 1/31/2018.

— Risk-weighted
— Unweighted
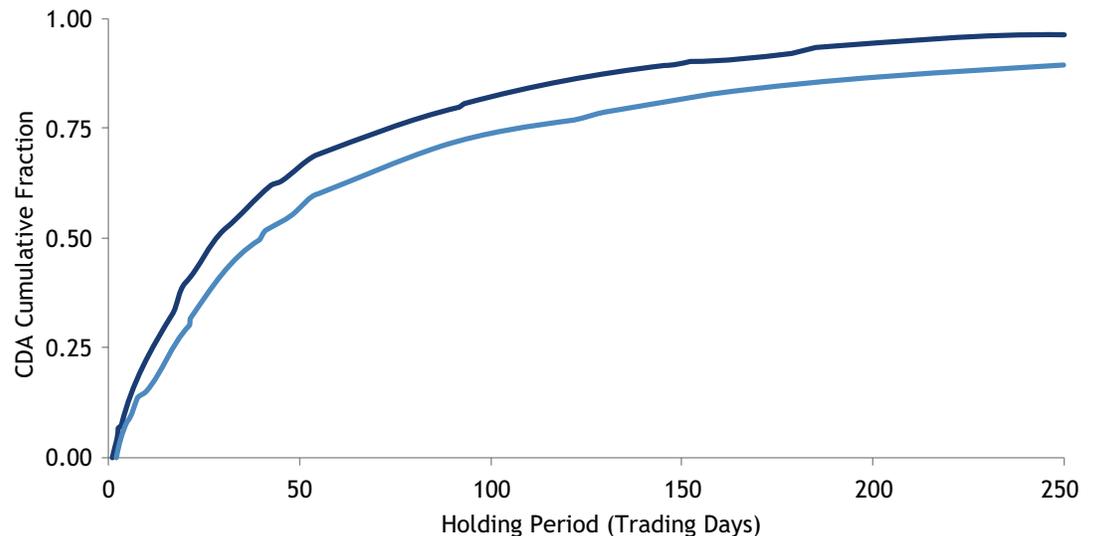
A point on this curve shows what fraction of all positions was held for no more than the given number of trading days. For example, approximately half of all CDA positions (measured by portfolio risk contribution) were held for less than 31 trading days and half for more. Source data is a Loomis Sayles Core Disciplined Alpha representative account's monthly returns since inception (November 2010 through January 2018). This account was used because it closely reflects the Loomis Sayles Core Disciplined Alpha investment strategy and has the longest record in the composite. Due to guideline restrictions and other factors, there may be some dispersion between the returns of this account and other accounts managed in the Core Disciplined Alpha investment style.

The distribution of holding periods is a result of a combination of three aspects of the CDA strategy:

- **Many small trades**. Over the three-year period ending January 31, 2018, the strategy typically held about 105 credit names

- **Continual re-assessment** of the relative value of each position

- **Tight risk control** resulting in an exit from positions that are, in our view, fairly valued in order to enter what we believe to be more attractive positions

We believe the first aspect of the strategy is a significant contributor to producing a high information ratio. Making a large number of small bets with positive expected alpha can be an effective approach to generating maximum return for a given level of risk (tracking error). The second and third dictate the typical holding period, as well as the possibility that risk considerations may cause some positions to be held for longer periods.
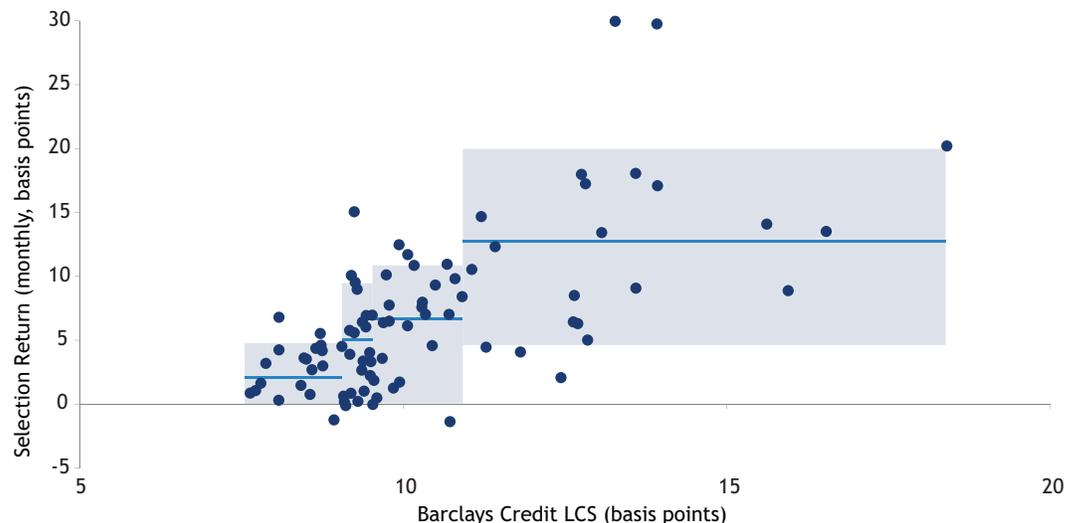
As mentioned at the outset, a consideration for a relatively high turnover strategy is that it may face difficulty generating excess return in a low liquidity/high trading cost environment, as higher trading costs would potentially eat up more excess return on trades entered at the offer side and exited at the bid. On the other hand, low liquidity environments may involve forced sellers, reduced capital commitments by dealers, and other technical factors that can produce larger-than-normal relative mis-valuations that may be exploitable by the CDA strategy.

The figure below shows the monthly returns from security selection for CDA as a function of market liquidity as measured by the Barclays Liquidity Cost Score (LCS), an estimate of the average round-trip trading cost for bonds in the Bloomberg Barclays US Credit Index (represented here in yield spread terms).[ix] Points to the right represent low liquidity months, points to the left correspond to better liquidity. The segmented horizontal lines with gray bands show the mean and 10%/90% quantile range for the realized CDA selection returns grouped into quartiles by LCS. There is a trend in the data toward higher selection returns in less liquid environments, suggesting that the second alternative in the previous paragraph is realized.

Source data is Loomis Sayles Core Disciplined Alpha representative account's monthly returns since inception (November 2010 through January 2018). This account was used because it closely reflects the Loomis Sayles Core Disciplined Alpha investment strategy and has the longest record in the composite. Due to guideline restrictions and other factors, there may be some dispersion between the returns of this account and other accounts managed in the Core Disciplined Alpha investment style.
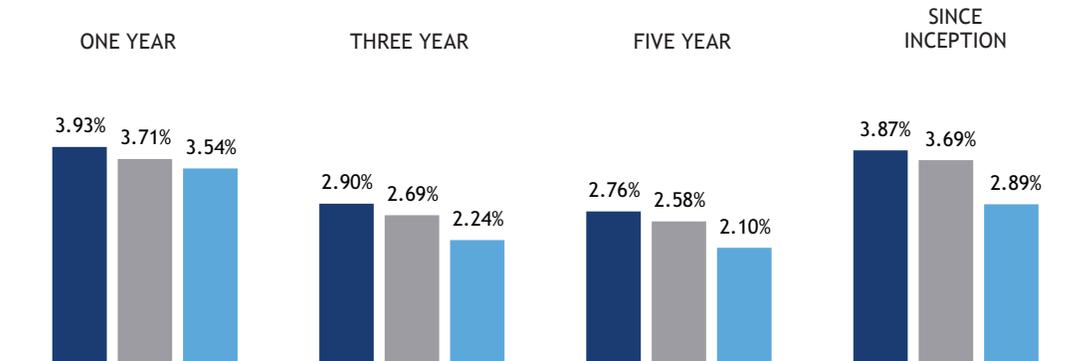
Conclusion

The CDA philosophy and process has resulted in a high turnover process designed to produce a risk-adjusted portfolio with very limited exposure to market factors, many small positions, and a long-tailed distribution of holding periods. In spite of the high turnover, the strategy has produced positive excess return in times of high trading costs as well as periods of more ordinary market conditions.

CORE DISCIPLINED ALPHA COMPOSITE
Trailing returns vs. Index

Source: Loomis Sayles and Bloomberg Barclays. Data as of 12/31/2017.

■ Core Disciplined Alpha (gross)

■ Core Disciplined Alpha (net)

■ Bloomberg Barclays US Aggregate Index

	ONE YEAR	THREE YEAR	FIVE YEAR	SINCE INCEPTION
Core Disciplined Alpha (gross)	3.93%	2.90%	2.76%	3.87%
Core Disciplined Alpha (net)	3.71%	2.69%	2.58%	3.69%
Bloomberg Barclays US Aggregate Index	3.54%	2.24%	2.10%	2.89%

Gross returns are net of trading costs. Net returns are gross returns less effective management fees. Returns for multi-year periods are annualized.

Composite inception: 9/1/2010.

Past performance is no guarantee of future results.

For more information on the Core Disciplined Alpha Composite, please request a full presentation book.

This report was originally published in January 2017. We have updated the content as necessary and otherwise believe the information is current and relevant.

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Endnotes

[i] *Source: eVestment Alliance, as of 12/31/2017. Based on the US Core Fixed Income Universe.*

[ii] *Although not directly interpretable in the same terms, a study by Boney, Comer and Kelly (Journal of Empirical Finance, January 2009) shows that across 84 bond funds they examined across a nine-year period, market timing of interest rates produced an average negative excess return of roughly -57 basis points/year relative to an unmanaged benchmark. Only five of the funds showed positive timing ability over the period. Forecasting rate movements is difficult.*

[iii] *Information ratio, a measure of manager skill, is the annualized ratio of a portfolio's excess return over its benchmark to the tracking error.*

[iv] *This is derived via the "fundamental law of active management": where IR is the information ratio, IC is the correlation of forecasts with outcomes, and BR is "breadth," with IC= 0.1 and BR = 12. For further details, see Grinold and Kahn, "Active Portfolio Management," 2nd Ed. (2000), Chapter 6.*

[v] *There is no guarantee that the investment objective will be realized or that the strategy will generate positive or excess return. Excess return objectives are subject to change and are not based on past performance.*

[vi] *For investors whose primary concern is total return, without regard to risk, the information ratio may not be the most important metric of performance.*

[vii] *Based on Loomis Sayles Core Disciplined Alpha representative account monthly returns since inception (November 1, 2010 through January 31, 2018) relative to the Bloomberg Barclays US Aggregate Index. Due to system limitations, it is difficult to analyze this data on a composite basis. This representative account was selected because it closely reflects the Loomis Sayles Core Disciplined Alpha investment strategy. Due to guideline restrictions and other factors, there is some dispersion between the returns of this account and other accounts managed in the Core Disciplined Alpha investment style. Please note standard performance shown on page 4 is for the Core Disciplined Alpha composite.*

[viii] *Holding period is defined as the number of trading days between an issuer's first appearance at positive active weight in the portfolio and the time its active weight drops to zero or below. Loomis uses a proprietary "risk-weighted" holding period that takes into account the size of the position, its sensitivity to changes in interest rates, and its sensitivity to changes in sector spreads, and weights each position based on its contribution to portfolio risk relative to the benchmark. The unweighted holding period just counts days held equally for all positions with positive market value weight. The analysis is restricted to credit because the sources of return correspond straightforwardly to identifiable issuers. For mortgages, the sources of return generally correspond to attributes (such as loan balance) that aren't easily identifiable in the portfolio data.*

[ix] *Bloomberg Barclays US Credit Index data are from November 1, 2010 through January 31, 2018.*

About Risk

Fixed income securities may carry one or more of the following risks: credit, interest rate (as interest rates rise bond prices usually fall), inflation and liquidity. **Below investment grade fixed income securities** may be subject to greater risks (including the risk of default) than other fixed income securities. **Foreign and emerging market securities** may be subject to greater political, economic, environmental, credit, currency and information risks. Foreign securities may be subject to higher volatility than US securities due to varying degrees of regulation and limited liquidity. These risks are magnified in emerging markets.

Disclosure

Diversification does not ensure a profit or guarantee against a loss.

There is no guarantee that the investment objective will be realized or that the strategy will generate positive or excess return.

Indices are unmanaged and do not incur fees. It is not possible to invest directly in an index.

Past performance is no guarantee of future results.

The use of model or hypothetical examples has inherent limitations, including but not limited to, an inability to reflect the impact of actual trading on a portfolio or economic and market factors on investment decisions, and should not be viewed as predictive of future events. They rely on opinions, assumptions and mathematical models, which can turn out to be incomplete or inaccurate. Actual results will be different.

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