BRAMSHILL MULTI-STRATEGY INCOME FUND April 2023

MONTHLY INSIGHTS DECOMPOSING RATES, SPREADS AND YIELDS



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Decomposing Rates, Spreads and Yields

Bramshill Investments ("Bramshill") investment process uses both quantitative frameworks and qualitative inputs when researching asset classes, themes, and investments across our investment universe. At the same time, we use a Top/Down and a Bottom/Up process to analyze opportunities. In addition, our firm also looks at Fundamental, Technical, and Macro/Environment characteristics when constructing our portfolios.

	Qualitative	Quantitative
Top / Down	Macro/Environment Technical Fundamental	
Bottom / Up		

This month's Monthly Insights piece focuses on a few of the Quantitative tools we use in our Top/Down process.

Rates and Yields

During the last fifteen months, we have witnessed some of the fastest increases in rates ever experienced over the last few decades. Below is a graph of the U.S. Treasury ("UST") curve and its transformation since the end of 2021. Much has been written on this topic, so we will not dwell further here.



Source: Bloomberg

The increase in rates across the curve has substantially raised yields on most fixed income instruments. Below is a graph of certain asset classes that Bramshill invests in.



Yields and Spreads

There has recently been much discussion on whether certain fixed income sectors are now attractive due to these higher yields. For simple analysis, we will disect these yields into a rate component and a spread component.

The rate component is the base for any investment and is delineated by the U.S. Treasury Curve in the previous chart. An interest rate can be thought of as the basic cost of money over a certain period of time and also represents the minimum opportunity cost of capital for any investment. Spreads, on the other hand, are a form of reward for certain types of risks one finds in an investment:

- 1. Credit risk: probability and magnitude of loss (default rates and recovery rates)
- 2. Complexity: documentation, covenants, underlying collateral opacity, etc...
- 3. Liquidity: the ease (or lack thereof) of transacting (buying or selling) a given investment
- 4. Ownership structure: examples being, single investor versus small club deal versus fully syndicated deal versus public markets. This characteristic can have an impact on the liquidity dimension as well. But also allows for in/direct discussions with issuer in case of dire straits for the company
- 5. Various other aspects: these can be esoteric and very unique to a specific investment

The above risk premia ebb and flow, and sometimes as an investor you get attractively compensated for taking them, and sometimes the market can price undue risk without fair and proper compensation.

At Bramshill, our investment process stands on the three pillars of our firmwide investment philosophy:

- 1. Risk as permanent loss of capital (probability and magnitude of potential loss)
- 2. Absolute Value (orientation)
- 3. Relative Value (allocation)

The first pillar, which is considering Risk as a permanent loss of capital instead of using volatility or tracking error to a benchmark as our preponderant internal risk measure, is mostly assessed through fundamental analysis on individual investments, therefore and for the specific purposes of this paper which focuses on broader picture thinking, we will not dwell on this topic here.

When assessing the Absolute Value of an asset class (our second pillar), Bramshill utilizes two basic quantitative models to analyze a segment of the Fixed Income universe through its yield, spread, duration and/or historic total return. The first quantitative model, our Z-score model, utilizes a normal distribution for analysis and typically functions well inside of a business cycle given its shorter period of analysis (5 years of rolling data), but may not be as adept at handling paradigm shifts or a rotation to a new business cycle. The Z-score model

analyzes deviations from the mean for that variable. The greater the deviation, the stronger the signal and the more interested we become in that asset class or segment of the market.

For example, in the below chart, we analyze the Yield-to-Worst ("YTW") of the ICE BoFA US High Yield index ("HY"). The blue line represents YTW of HY. The light blue dotted line represents the rolling 5-year mean, the green dotted line represents the rolling 5 year +1 standard deviation, and the orange dotted line represents the rolling 5 year -1 standard deviation. The solid green and orange lines represent the +2 and -2 standard deviation lines, respectively.



Below is a graph of just the Z-score (deviations from the mean) of the YTW of the HY index from the chart above. As can be seen, the Z-score tends to be mean reverting and oscillating around zero. The recent increase in yield was clearly substantial and quite fast, going from a -2 standard deviation in the summer of 2021 (rich) to a +2 standard deviation in the summer of 2022 ("cheap" or undervalued). This overall +4 standard deviation move in just twelve months is why the price adjustment was so brutal.



Our second quantitative model, the percentile model, utilizes a different statistical approach and encompasses a larger data set (25 years of data) so as to include three to five business cycles within that timeframe. This model provides long-term historical context and is a good complement to the Z-score model's shorter 5 year rolling time dataset.

Please refer below for the percentile score over the last 25 years for the same YTW of the HY index time series. Higher percentile values represent higher yields (therefore more attractiveness) and lower percentile values represent an asset class becoming more expensive (as represented in lower yields). Note how in 2019, HY yields were decreasing, historically low and not compelling, and how they then quickly jumped for only a brief period during Covid and became attractive and then quickly came in again to expensive levels (low yields) during 2021.

Note how though becoming increasingly attractive, yield levels did not reach Great Financial Crisis (2008) levels, nor 2001/2002 levels. As mentioned above, the percentile model provides a better overall long term historical context.



When analyzed through both of these prisms, during Q3-2022 HY corporate bonds had reached yields of approximately 9% which represent over two standard deviations from the mean (Z-score model) and 70th percentile scores (percentile model). Therefore, we might have considered HY bonds to be "cheap" in absolute terms on both these metrics. But herein comes our third pillar of investing: Relative Value.

When considering Relative Value, we must not only consider that asset class relative to other asset classes, but also relative to Cash & Cash Equivalents (i.e. short-term U.S. Treasury Bills) as an investment allocation. After all, a 4.5% yield on a 6 month U.S. Treasury Bill has "no" credit risk, basically accrues in a straight line with almost no volatility and very limited potential for drawdown and is one of the most liquid investment types available. These traits are very desirable amidst uncertainty and turmoil, as liquidity provides the flexibility to quickly deploy capital into risk assets should opportunities present themselves. Bramshill has shown acumen through its longer than 14 year history in being patient and disciplined in its investment process so as to deploy that liquidity opportunistically and successfully. Our investors, being knowledgeable and understanding of our investment process and successful investing history, have granted us the amplitude to be disciplined and patient which is one of the keys to our attractive risk-adjusted performance.

Therefore, it is imperative that we measure these yields to the UST curve and to other asset classes. Below is the difference between the yield on the HY index relative to the yield on the 5yr U.S. Treasury Note. When looked through this lens, we can observe that most of the increase in the yield of HY has really been due to the increase in UST rates, not to a substantial cheapening of the HY asset class itself. That is, the increase in the general cost of money (i.e. increase in UST rates) has increased the yield in every asset class. The spread between HY and UST has become slightly more attractive, yes, but not to levels that Bramshill would consider particularly attractive (yet).



To be fair also, these are nominal spreads, not 'risk-adjusted' spreads, which is how Bramshill really evaluates its potential investments. It is not the same for HY spreads to widen to 800 basis points right before a recession, when default rates are expected to go up (bad for bond investor) and recovery rates potentially go down (bad for bond investor), versus when no recession is in sight. Sometimes spreads widen and dislocate for other reasons than a recession (such as in Q1-2016). But if investors expect higher default rates and/or lower recovery rates, then wider spreads might still not be attractive enough to compensate for those risks. Therein lies the rub, and the value added by an active fixed income manager: in "separating the wheat from the chaff" at the single name level when a broad-based asset class pricing dislocation occurs, be it preceding a recession or not.

Rate Volatility

With interest rate volatility hitting close-to-historic peaks, there is also increased uncertainty around the cost of money (i.e. rates). Please refer to graph below, which represents the Merrill Lynch Option Volatility Estimate (MOVE index), a measure of interest rate volatility.



If an investor does not really know what the cost of money is, which is ultimately the medium of exchange to purchase every other investment, how can they have confidence what the real price of any investment is? High interest rate volatility is very hazardous to the overall economic system as it is the underpinning of the valuation of every asset. Valuation models should not only include the level of interest rates, but somehow also incorporate their volatility and confidence on those levels. Spreads (and other relative value measures) should somehow reflect that heightened price discovery uncertainty. We believe they

*Graph Footnotes (Bloomberg Index/Function):

Graph 1 – S&P U.S. Treasury Bill 0-3 Month Index YTM, ICE BofA US 6-Month Treasury Bill Index YTM, ICE BofA 1 Year US Treasury Note Index YTM, ICE BofA Current 2-Year US Treasury Index YTM, ICE BofA US 5-Year US Treasury Index, ICE BofA Current 10-Year US Treasury Index/TM, ICE BofA Current 30-Year US Treasury Index YTM

Graph 2 - ICE BofA Current 10-Year US Treasury Index YTM, ICE US Broad Municipal Index YTM, Bloomberg U.S. Securitized: MBS/ABS/CMBS YTW, The Bloomberg US Corporate Bond Index YTW, ICE BofA US High Yield Index YTW, The ICE BofA Core Fixed Rate Preferred Securities Index YTM

- Graph 3 ICE BofA US High Yield Index YTW
- Graph 4 ICE BofA US High Yield Index YTW

Graph 5 - ICE BofA US High Yield Index YTW

Graph 6 - ICE BofA US High Yield Index YTW, ICE BofA US 5-Year US Treasury Index YTM

Graph 7 - Merrill Lynch Option Volatility Estimate (MOVE Index)

currently do not in most asset classes. Higher volatility in any marketplace should also naturally widen bid-offer spreads (the "cost" of accessibility to buy/sell a security) as looked through the lens of market microstructure. Think of a bid as being short a call option (the entity bidding is willing to buy from another entity at a certain "strike" price) and the offer as being short a put option (the entity is offering to sell to another entity at a certain "strike" price). Then the higher the volatility in that asset, the wider the bid-offer spread should be since both bid and offer are short option positions, as discussed above, and option prices are highly sensitive to the volatility of the asset (higher volatility would demand higher price/compensation). Both the bid and offer want to "hedge" this higher asset volatility by separating further away from each other. This wider bid-offer spread typically creates larger transactional friction and impacts liquidity in that asset's marketplace by reducing it. It is not uncommon to see liquidity reduced as volatility increases. For example, we have recently seen substantial deterioration in the liquidity of the U.S. Treasury market, which naturally disseminates to various credit markets as well.

The above is just an individual example of the types of analysis we have embedded into our investment process. We conduct these types of analysis and cross-analysis on all the asset classes in which we invest, be they government-related, corporate credit, or securitized products. Our internal proprietary database can analyze over 700 variables (spreads, yields, duration, returns, etc...) through these quantitative lenses and we create internal weekly reports to highlight any statistical anomalies that warrant further qualitative analysis by our investment team.

Due to the increase in interest rate volatility and uncertainty in asset class valuations, a highly uncertain overall macro-economic environment, and the relative unattractiveness of many asset classes, Bramshill continues to be defensively positioned across its portfolios, retaining significant liquidity and considerable "dry powder" while still generating attractive absolute yields. We believe flexibility provides optionality on opportunity.



Nicolas Amato, CFA, CAL Managing Director 25 years experience



Scott Cowin, FRM Director 21 years experience

Index performance is not indicative of fund performance. It is not possible to invest directly in an index. **Past performance is no guarantee of future results**. For current standardized performance of the Fund, please go to <u>www.libertystreetfunds.com/bramshill-multi-strategy-income-fund/</u>.

This commentary must be preceded by or accompanied with a copy of the Fund's current prospectus.

RISKS AND OTHER DISCLOSURES:

Effective December 1st, 2022, Bramshill Investments, LLC is the Fund's Sub-advisor responsible for managing the Fund's portfolio, replacing the Fund's prior sub-advisor, and the Fund's name changed to Bramshill Multi-Strategy Income Fund. The Fund's investment objective and principal investment strategy did not change.

An investment in the Bramshill Multi-Strategy Income Fund is subject to risk, including the possible loss of principal amount invested and including, but not limited to, the following risks: Market Risk: the market price of a security may decline, sometimes rapidly or unpredictably, due to general market conditions that are not specifically related to a particular issuer, company, or asset class. Fixed income/interest rate: Generally, fixed income securities decrease in value if interest rates rise, and increase in value if interest rates fall. High Yield ("Junk") bond: involve greater risk of default, downgrade, or price declines, can be more volatile and less liquid than investment-grade securities. Mortgage-backed and Asset-Backed securities: subject to prepayment risk, "extension risk" (repaid more slowly), credit risk, liquidity, and default risks. Liquidity: the Fund may not be able to sell some or all of the investments that it holds due to a lack of demand in the marketplace or it may only be able to sell those investments at a loss. Liquid investments may become illiquid or less liquid after purchase by the Fund, Illiquid investments may be harder to value, especially in changing markets. Sector Focus: focus may present more risks than if broadly diversified. Valuation: From time to time, the Fund will need to fair-value portfolio securities at prices that differ from third party pricing inputs. This may affect purchase price or redemption proceeds for investors who purchase or redeem Fund shares on days when the Fund is pricing or holding fair-valued securities. Such pricing differences can be significant and can occur quickly during times of market volatility. Credit Risk: If an issuer or guarantor of a debt security held by the Fund or a counterparty to a financial contract with the Fund defaults or is downgraded or is perceived to be less creditworthy, the value of the Fund's portfolio will typically decline. The Fund's securities are generally not guaranteed by any governmental agency. Real estate market: property values may fall due to various economic factors. Management and Strategy: the evaluation and selection of the Fund's investments depend on the judgment of the Fund's Sub-Advisor about the quality, relative yield, value or market trends affecting a particular security, industry, sector or region, which may prove to be incorrect. Collateralized Loan Obligations: subject to interest rate, credit, asset manager, legal, regulatory, limited recourse, liquidity, redemption, and reinvestment risks. COVID-19 Related Market Events: The COVID-19 pandemic has resulted in extreme volatility in the financial markets, and domestic and global economic downturns. It may exacerbate other risks that apply to the Fund. Non-diversification: focus in the securities of fewer issuers, which exposes the Fund to greater market risk than if its assets were diversified among a greater number of issuers. Repurchase agreement: may be subject to market and credit risk. Reverse repurchase agreement: risks of leverage and counterparty risk. Leverage: The use of leverage may magnify the Fund's gains and losses and make the Fund more volatile. Derivatives: derivative instruments (e.g. short sells, options, futures) involve risks different from direct investment in the underlying assets, including possible losses in excess of amount invested or any gain in portfolio positions. ETF Risk: Investing in an ETF will provide the Fund with exposure to the securities comprising the index on which the ETF is based and will expose the Fund to risks similar to those of investing directly in those securities. LIBOR: Many financial instruments use a floating rate based on the London Interbank Offered Rate ("LIBOR"), which is being phased out. Any effects of the transition away from LIBOR could result in losses.

The Fund may not be suitable for all investors. We encourage you to consult with appropriate financial professionals before considering an investment in the Fund.

Spreads are the difference or gap between two prices, rates, or yields. **Yield to Worst (YTW)** is a measure of the lowest possible yield that can be received on a bond that fully operates within the terms of its contract without defaulting. **Basis Points** is a unit of measure used in finance to describe the percentage change in the value or rate of a financial instrument. One basis point is equivalent to 0.01% (1/100th of a percent) or 0.0001 in decimal form. **Standard Deviation** is the statistical measure of market volatility, measuring how widely prices are dispersed from the average price. **Yield to Maturity (YTM)** is the total rate of return that will have been earned by a bond when it makes all interest payments and repays the original principal.

S&P U.S. Treasury Bill 0-3 Month Index is designed to measure the performance of U.S. Treasury bills maturing in 0 to 3 months. The ICE BofA U.S. 1 Year Treasury Bill Index is comprised of a single issue purchased at the beginning of the month and held for a full month. At the end of the month that issue is sold and rolled into a newly selected issue. The ICE BofAU.S. 1 Year Treasury Index is market value weighted and is designed to measure the performance of U.S. dollar-denominated, fixed rate securities with a maturity of one year. The ICE BofA Fixed Rate Preferred Securities Index tracks the performance of fixed rate US dollar-denominated preferred securities issued in the US domestic market. ICE BofA US 5-Year US Treasury Index is market value weighted and is designed to measure the performance of U.S. dollar-denominated, fixed rate securities with a maturity of five years. ICE BofA Current 10-Year US Treasury Index is market value weighted and is designed to measure the performance of U.S. dollar-denominated, fixed rate securities with a maturity of ten years. ICE BofA Current 2-Year US Treasury Index is market value weighted and is designed to measure the performance of U.S. dollar-denominated, fixed rate securities with a maturity of two years. ICE BofA Current 30-Year US Treasury Index is market value weighted and is designed to measure the performance of U.S. dollar-denominated, fixed rate securities with a maturity of thirty years. The Bloomberg US Corporate Bond Index measures the investment grade, fixed-rate, taxable corporate bond market. The ICE BofA US High Yield Index is market capitalization weighted and is designed to measure the performance of U.S. dollar denominated below investment grade (commonly referred to as "junk") corporate debt publicly issued in the U.S. domestic market. ICE US Broad Municipal Index tracks the performance of U.S. dollar-denominated, investment grade (IG), tax-exempt debt publicly issued by U.S. states and territories, and their political subdivisions, in the U.S. domestic market. Merrill Lynch Option Volatility Estimate (MOVE Index) measures Treasury rate volatility through options pricing. ICE BofA US 6-Month Treasury Bill Index is comprised of a single issue purchased at the beginning of the month and held for a full month. Bloomberg U.S. Securitized Index: MBS/ABS/CMBS Yield To Worst is subset of the Bloomberg U.S. Aggregate Bond Index and only includes the securities that are classified under BCLASS Level 1 "Securitized" group.

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Liberty Street Advisors, Inc. is the advisor to the Fund. The Fund is part of the Liberty Street Family of funds within the Investment Managers Series Trust.