FOLIOBEYOND FIXED INCOME COMMENTARY FOR JULY 2021

Performance Summary

FolioBeyond's algorithmic Fixed Income strategy returned +0.82% and +0.86% in its dynamic and static volatility versions, respectively, in July. Year-to-date, the strategies have outperformed a comparable risk benchmark, the Bloomberg Barclays U.S. Aggregate Bond Index ("AGG"), by 126 to 194 bps.

The Treasury yield curve extended last month's flattening move as the bond market rallied across the curve. As the 10-year Treasury yield dropped by 21 basis points for the month, the 10-year to 2-year yield spread narrowed by 15 basis points. Our strategies generally kept up with AGG with exposures to intermediate/long-duration Treasuries, Agencies, and TIPs contributing to returns.

STRATEGY	1- Month Return	YTD Return	1-Year Return	3-Year Return	5-Year Return	10-Year Return
FolioBeyond Dynamic Volatility*	0.82%	0.76%	2.67%	5.30%	5.31%	5.16%
FolioBeyond Static Volatility*	0.86%	1.44%	2.96%	4.18%	4.78%	4.37%
Bloomberg Barclays U.S. Aggregate Bond Index ("AGG")	1.12%	-0.50%	-0.70%	5.73%	3.13%	3.35%
Dynamic Volatility Standard Deviation	-	-	*2.54%*	*3.84%*	*3.35%*	*3.39%*
Static Volatility Standard Deviation	-	-	*1.54%*	*3.30%*	*3.13%*	*3.49%*
AGG Standard Deviation	-	-	*3.12%*	*3.79%*	*3.48%*	*3.36%*
Dynamic Volatility Sharpe Ratio	-	-	*1.02*	*1.04*	*1.22*	*1.33*
Static Volatility Sharpe Ratio	-	-	*1.86*	*0.88*	*1.15*	*1.07*
AGG Sharpe Ratio	-	-	*-0.23*	*1.16*	*0.58*	*0.82*

Source: FolioBeyond's returns are from SMAs on Interactive Brokers (from January 1, 2019, for Static Volatility and from November 3, 2020, for Dynamic Volatility) and back-tested simulated results prior to that. AGG and Multisector Bond Category returns are from Morningstar.

** FolioBeyond Dynamic and Static Volatility returns are net of underlying ETF fees and 30 bp assumed management fee. Although the information herein is believed to be reliable, FolioBeyond makes no representation or warranty as to its accuracy, and information and opinions reflected herein are subject to change at any time without notice. The past performance information presented herein is not a guarantee of future results.*

Highlight: Yield Curve Twists

The bond market has been buffeted by dramatic shifts in the shape of the yield curve in recent months. The bear market steepening from earlier this year made a quick U-turn as uncertainty related to the strength of the economic recovery and possible early withdrawal of Fed-induced liquidity worried investors. The confluence of factors that drive changes in the yield curve's level and shape have often blindsided portfolio managers as the markets respond quickly to changing fundamentals, interpretation of

Fed-speak, and technical forces. While it may be daunting to manage various possible yield curve fluctuations, it is helpful to analyze the key drivers of returns across a representative set of scenarios.

The table below summarizes four major curve twists and the likely associated economic backdrop and Fed stance. A bear steepening scenario was what we experienced early this year and we list some of the sectors that should perform well in that environment. As noted earlier, this was followed by a bull flattening scenario that the market digested for a couple of months, with different bond sectors gaining favor. This quick turnaround impacted some of the hedge funds, with a large macro fund suffering significant losses.

Yield Curve Twist	Treasury yield change	Economic Forecast	Fed	Sectors to Overweight
Bear Steepening	10-yr rises more than 2-yr	Bullish	Neutral	Short dur IG credit; Short dur TIPs; HY credit
Bear Flattening	2-yr rises more than 10-year	Bullish	Hawkish	Int dur IG credit; Floating rate
Bull Flattening	10-yr falls more than 2-yr	Bearish/Bullish	Modestly hawkish	Long duration Treasury; Agency MBS; Long dur IG credit
Bull Steepening	2-yr falls more than 10-year	Bearish	Dovish	Int duration Treasury; IG credit; Agency MBS

A bear flattening scenario would become more likely if the economic forecasts become rosy and the Fed decides to embark on a belt-tightening program sooner. A bull steepening scenario will get us back to the bull market we experienced in previous years if the economy were to stumble again due to the continued spread of the delta Covid variant or other factors.

These scenarios, however, are not meant to cover most of the outcomes. First, the severity of the moves will have different implications. For example, during an initial period of bear steepening, High Yield Corporates, and TIPs might be in favor. But an over-extended move may end up eventually hurting High Yield Corporate spreads as higher rates will ultimately slow down the economy and absolute spread levels may need to be wider at higher yields to provide a similar percentage pick-up above risk-free rates. The belly of the curve may also move up and down without accompanying changes at the short and long ends of the curve, making barbell strategies attractive.

FolioBeyond's dynamic and comprehensive approach to optimizing Fixed Income portfolios in response to changing environments can provide several advantages. Our multi-factor, multi-sector model is reactive to the daily changes in relative value and risk characteristics. But it is also prospective by capturing forward-looking return expectations and implied volatility levels in the options market. It is disciplined and objective by automatically updating the analytics daily. It captures the technical factors by utilizing a 2-factor momentum model. Finally, it can efficiently rebalance large segments of the portfolio by trading liquid sector ETFs in contrast to the likely inefficient task of rebalancing large portfolios of individual CUSIP bonds.

As a reminder, our model portfolios are available on Folio Institutional, Boutique Exchange, and as an S-Network FolioBeyond Optimized Fixed Income Index on SMArtX and C8 Technologies. Our algorithm can also be customized and linked to other custodian platforms. Please contact us to explore how our portfolio solutions can enhance your goals.

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