FOLIOBEYOND FIXED INCOME COMMENTARY FOR DECEMBER 2020

Performance Summary

FolioBeyond's algorithmic Fixed Income strategy returned +0.89% and +0.59% in its dynamic and static volatility versions, respectively, for December. As a reminder, the dynamic volatility version targets the trailing 1-year volatility of the commonly followed Bloomberg Barclays U.S. Aggregate Bond Index ("AGG"), which leads to higher risk targeting in more volatile market environments. The static volatility version targets a constant annual volatility of 3.5%, which generally corresponds to the long-term average volatility of AGG.

As a possible harbinger of future rate moves, the Treasury yield curve steepened by 12 basis points in December, with the 10-year yield rising by nine basis points while the 2-year yield declined by three basis points. Short duration credit exposures were the main drivers of our strategy returns as High Yield Corporate Credit and Bank Loan exposures were the main contributors to positive returns.

STRATEGY	1- Month Return	1-Year Return (2020)	3-Year Return	5-Year Return	10-Year Return
FolioBeyond Dynamic Volatility*	0.89%	4.88%	6.42%	6.37%	5.60%
FolioBeyond Static Volatility*	0.59%	1.78%	5.22%	5.73%	4.65%
Morningstar US Fund Multisector Bond Category Average	1.28%	4.75%	4.15%	5.14%	4.29%
Bloomberg Barclays U.S. Aggregate Bond Index ("AGG")	0.14%	7.51%	5.34%	4.44%	3.84%
Dynamic Volatility Standard Deviation	-	8.50%	5.30%	4.49%	4.35%
Static Volatility Standard Deviation	-	6.08%	4.44%	4.00%	4.12%
Morningstar Multisector Bond Average Standard Deviation	-	11.71%	6.86%	5.57%	4.85%
AGG Standard Deviation	-	3.41%	3.40%	3.16%	2.93%
Dynamic Volatility Sharpe Ratio	-	*0.53*	*0.91*	*1.14*	*1.14*
Static Volatility Sharpe Ratio	-	*0.22*	*0.82*	*1.13*	*0.98*
Morningstar Multisector Bond Average Sharpe Ratio	-	*0.40*	*0.40*	*0.72*	*0.77*
AGG Sharpe Ratio	-	*2.02*	*1.10*	*1.04*	*1.10*

Source: FolioBeyond's returns are from SMAs on Interactive Brokers (from January 1, 2019 for Static Volatility and from November 1, 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: Review of Fixed Income Markets and FolioBeyond's Model

As we enter the new year, it is important to put current market conditions in perspective and discern potential risks and opportunities as investors plan out portfolio positioning for both shorter- and longer-term horizons.

Given the transition to a Democratic administration and other macro effects related to the Covid vaccine, both rate and spread products may respond quickly to changing economic conditions. The relative value relationships will likely continue to be in flux as shifts in fundamental factors, whether it be changes in prepayment expectations in MBS, modifications in default projections on corporate credit, or rising CPI projections. There will be direct implications for Fixed Income sector valuations and risks. The re-shaping of the yield curve will also determine potential benefits from extending duration to pick up additional income. These dynamic changes need to be captured in a disciplined and objective manner, with regular updates to relevant analytical measures. FolioBeyond's algorithm is set up to capture these effects systematically and on a daily basis.

In terms of diversity, the Fixed Income market offers a variety of risk/return tradeoffs that are well represented in liquid, sub-sector ETFs. May Fixed Income investors have tended to simplify their exposure to be in a few broad sectors, missing the opportunity for excess returns with some allocation to a multisector and tactical approach. FolioBeyond explores a wider range of sub-sector opportunities than most other multi-sector strategies, with a process that is implemented in an algorithmic and systematic manner. Currently, we have 23 liquid, sub-sector ETFs in our Fixed Income universe, each with fairly discrete exposures along the dimensions of duration, credit and product type. There is minimal overlap in the underlying bond holdings across these sub-sector ETFs. In a low interest-rate environment, it is even more imperative that an investment strategy constantly explores opportunities in a wide range of sub-sectors. Based on a full analysis of the various sector opportunities, FolioBeyond's algorithm typically produces an optimized portfolio consisting of 5-7 sub-sectors.

Momentum effects can be enduring and significant in the Fixed Income market. Due to the vagaries of the market and certain structural impediments facing different types of institutional investors, price relationships can often be driven by momentum effects that can overshoot. Many investment management firms have implemented momentum models to capture positive short-term and long-term momentum trends. FolioBeyond's proprietary 2-factor momentum model is embedded into our portfolio optimization model to adjust portfolio allocations based on both positive and negative trends. But in addition to simply modeling this phenomenon, what differentiates our optimization process versus most other momentum approaches in the marketplace is that our momentum factor is one of multiple factors that drive the model's overall optimization process. De-risking when there is downward momentum can be expected but this effect has to be evaluated in the context of resulting changes in relative value relationships. Our model attempts to capture all these variables in an effective manner to generate properly optimized solutions.

Another dimension of risk is future expectation of volatility as priced into the options market. Relying solely on historical data puts all the focus on the rear-view mirror. Forward expectations of volatility levels are efficiently captured in the options market. This provides another automated input to our models which can potentially trigger adjustments in portfolio allocations. The result is consistent risk management oversight that ensures the portfolio remains within the range of desired risk targets, with a goal to capture upside while avoiding extreme downside scenarios. This approach leaves less room for qualitative bias as the markets effectively price risk emanating from macro events.

Please contact us to explore how our advanced, low-cost portfolio optimization solutions can help you achieve your overall investment goals for the new year.

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