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Fixed Income Strategy

March 2024

FolioBeyond - Fixed Income Strategy

Are the Fixed Income markets efficient? If not, what are the drivers of this inefficiency? And how can these be monetized?

Fixed Income market participants have very different goals and constraints

Insurance Company objectives:

Portfolio construction is driven by policy duration, multiple state and tax environments, and unique industry-specific rating protocols (NAIC).

Pension Fund objectives:

Longer-term liabilities have distribution requirements often due to creation during higher rate environments.

Banks / Deposit Institution objectives:

Strict regulatory capital requirements limit credit exposure.
Asset/liability mix is driven by funding and loan duration matching.

These multiple drivers impact the valuation of fixed-income instruments which can be monetized through a disciplined, algorithmic process.

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How can FolioBeyond clients monetize these inefficiencies?

Investors must consider some critical risks in fixed income

Bond trading suffers from a significant lack of transparency

Bond dealers see bid-offer spreads and transactions.
These specifics are rarely seen by non-professional investors.

Fixed Income pricing inefficiencies are difficult to quantify

Bonds have many risk characteristics including credit, options, duration and convexity. These are difficult to monitor on a frequent basis.

Any inefficiency needs a consistent, disciplined, algorithmic method to extract

Any successful methodology will require calibration, out-of-sample testing as well as sensitivity analysis.

Extracting and monetizing fixed income market inefficiencies requires an organization with an appropriate infrastructure

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Our algorithm also allows customization for different client constraints

Client Driven Factors

- Limit Duration
- Exclude Market Sectors
- Cap On Sub-IG Credit
- Control Risk vs Upside
- Include Partner Products

Client-specific Portfolio

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Key Aspects of the FolioBeyond Model

Forward-looking yield and return measures

DRIVEN BY:	DEFINED AS:
1. ***Duration***	Price risk driven by coupon and maturity
2. ***Prepayment risk***	Mortgage holders can prepay as rates decline
3. ***Call risk***	Corporations can retire high coupon debt pre-maturity
4. ***Default risk***	Potential for defaults must be weighed by credit rating
5. ***Tax rate***	Attractiveness of munis vs comparable taxable bonds
6. ***Inflation***	Purchasing power of TIPS versus fixed coupon bonds

Creating this type of market transparency, generally only found in equity market analysis, is a key feature of FolioBeyond's fixed-income strategy.

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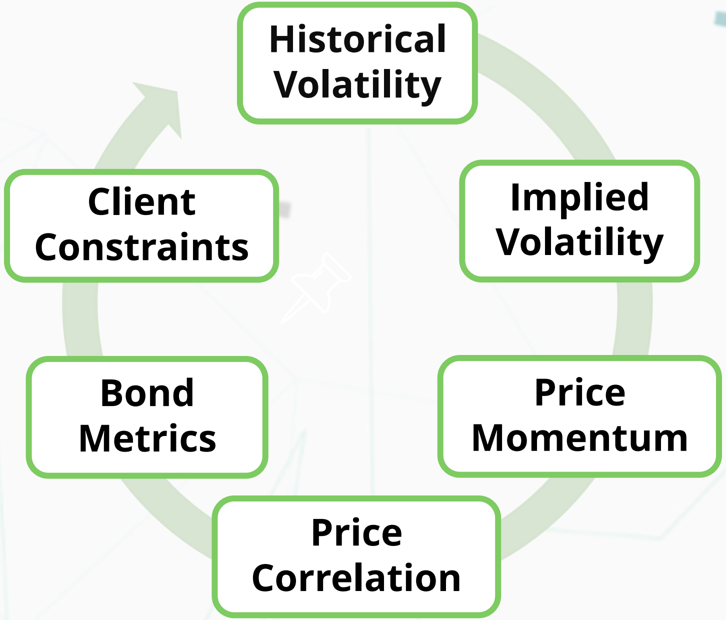
Applying the impact of volatility and other risk measures



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Using ETFs to efficiently implement strategy – 24 Possible Selections

Target 1 Yr Historical Volatility of Bloomberg Barclays US Aggregate Bond Index

US Government		Agency / Sovereign			Investment Grade			High Yield		
US Treasury	TIPs	Gov't Agency	Non-US	Structured Credit	Structured Credit	Corp Bonds	Muni Bonds	Corp Loans	Muni Bonds	Non-US
Negative				MBS IO						
Ultra Short								Bank Loans		
Short Term	Short Term					Short Term	Short Term	Short High Yield		
Intermediate	Intermediate	Debentures	Developed Non-US	MBS	CMBS	Intermediate	Intermediate	Intermediate High Yield		
Long					Mortgage REIT	Intermediate / Long			Long Muni	Emerging Market
Ultra Long						Long				

Growth in the ETF Fixed Income Sector has created the ability to construct dynamic, algorithmic asset allocation strategies.
We select 23 best-in-class ETFs representing 23 discrete market subsectors.

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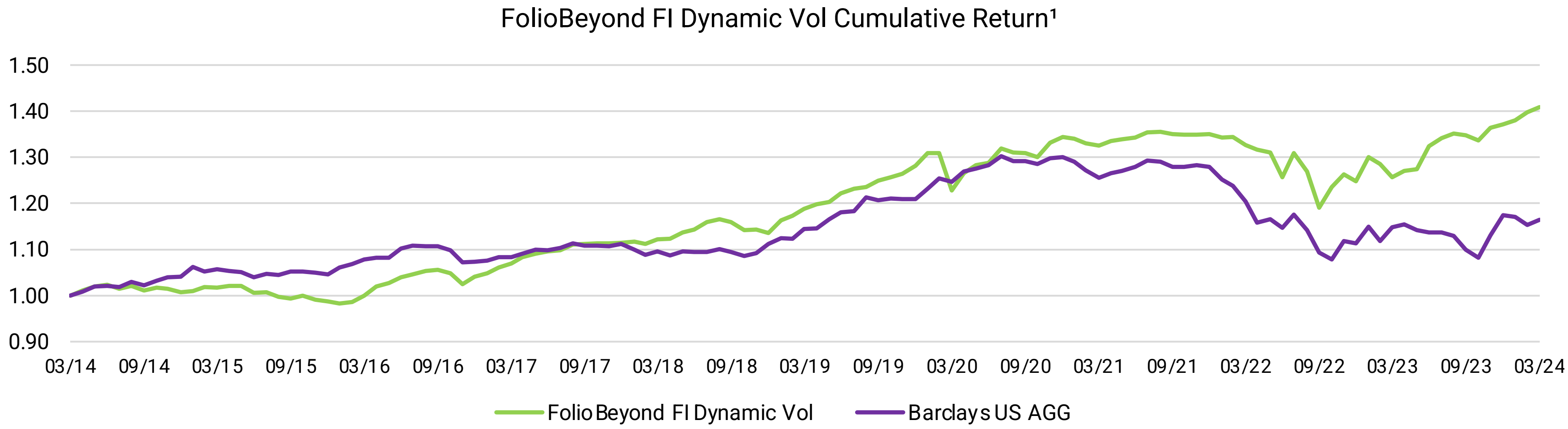
FolioBeyond – Historical Performance

The annualized return for FolioBeyond's Dynamic Volatility Optimized Fixed Income Strategy is **+3.49% vs. +1.53%** for Bloomberg Barclays U.S. Aggregate Bond Index, respectively, during a 10-year period.



Material on this page is intended for professional and institutional investors.

FolioBeyond Dynamic Volatility Optimized Fixed Income Strategy returns are net of underlying ETF fees and 30 bp assumed management fee. Returns are monthly based on back-tested simulation results until 11/1/20 followed by actual returns thereafter. Back-tested performance does not represent actual performance and should not be interpreted as an indication of such performance. Actual performance for client accounts may be materially lower than that of the index portfolios. Back-tested performance results have certain inherent limitations. Such results do not represent the impact that material economic and market factors might have on an investment adviser's decision-making process if the adviser were actually managing client money. Back-tested performance also differs from actual performance because it is achieved through the retroactive application of model portfolios (in this case, FolioBeyond's ETF portfolios) designed with the benefit of hindsight. As a result, the models theoretically may be changed from time to time and the effect on performance results could be either favorable or unfavorable.

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2. FolioBeyond, LLC (FolioBeyond) is an SEC registered investment adviser. Information pertaining to FolioBeyond's advisory operations, services, and fees is set forth in FolioBeyond's current Form ADV Part 2 (Brochure), a copy of which is available upon request and at www.adviserinfo.sec.gov. The performance information presented in certain charts or tables represent backtested performance based on combined simulated index and ETF data for the dates indicated, using the FolioBeyond's automated fixed income strategy and rebalancing the index and ETF weightings. Backtested performance is hypothetical (it does not reflect trading in actual accounts) and is provided for informational purposes only to indicate historical performance had the indices been available over the relevant time period. FolioBeyond did not offer referenced portfolios until November 1, 2020. Prior to November 1, 2020, FolioBeyond managed client assets using strategies with risk profiles that were different from what's shown. FolioBeyond's investment strategies are based on proprietary models and algorithms that are designed to capture alpha generating opportunities in the fixed income and equity markets. FolioBeyond utilized Exchange Traded Funds ("ETFs") in constructing client portfolios that are designed to provide substantial global diversification in order to reduce investment concentration and the resulting potential increased risk caused by the volatility of individual companies, indexes, or asset classes.
3. The ETFs used in FolioBeyond's portfolios are FolioBeyond's best estimate of an ETF that will come closest to the index data included in the simulated performance. FolioBeyond's backtested performance data is based on a starting value of January 1, 2005.
4. **Backtested performance does not represent actual performance and should not be interpreted as an indication of such performance.** Actual performance for client accounts may be materially lower than that of the backtested portfolios. Backtested performance results have certain inherent limitations. Such results do not represent the impact that material economic and market factors might have on the execution of model-based portfolio strategies. Backtested performance also differs from actual performance because it is achieved through the retroactive application of model portfolios (in this case, FolioBeyond's ETF portfolios) designed with some benefit of hindsight. As a result, the models theoretically may be changed from time to time and the effect on performance results could be either favorable or unfavorable.
5. Backtested performance results assume the reinvestment of dividends and capital gains and rebalancing, as required based on a 15% risk deviation threshold on fixed income model. It is important to understand that the assumption of rebalancing has an impact on the monthly returns reported for the FolioBeyond ETF portfolios. Actual monthly and year-to-date returns will differ from the backtested returns due to the cost impact of rebalancing transactions on the overall portfolio. Backtested risk and return data can be a combination of live (or actual) ETF results and simulated results. **All returns data reflect gross returns without a deduction of investment advisory fees, consistent with gross returns on the benchmarks.** Tax liability is not deducted from performance results**. Performance results reflect estimated transaction fees (e.g., commissions, platform access fees and ETF bid-offer spreads) but there is no assurance that these assumptions are accurate and represent actual transaction costs that would have been incurred by investors in live accounts.**
6. Performance results for clients that invested in accordance with the FolioBeyond Model Portfolios will vary from the backtested performance due to market conditions and other factors, including investment cash flows, allocations, frequency and precision of rebalancing, tax-management strategies, cash balances, advisory fees, varying custodian fees, and/or the timing of fee deductions. As the result of these and potentially other variances, actual performance for client accounts may differ materially from (and may be lower than) that of the backtested portfolio(s). Clients should consult their account statements for information about how their actual performance compares to that of the index portfolios.
7. As with any investment strategy, there is potential for profit as well as the possibility of loss. FolioBeyond does not guarantee any minimum level of investment performance or the success of any portfolio or investment strategy. All investments involve risk and investment recommendations will not always be profitable.
8. Past performance does not guarantee future results.
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