Alpha Research & Management

Dec 2024 - PlusAlpha Systematic Active Model Portfolios

NEW! Active Multi-Asset Portfolios using the S&P500 SPY ETF with Benchmark Fixed Income ETFs!

ARAM PlusAlpha Active Fixed Income Model Portfolios

	Monthly Net Return Stats							Stats to Bloomberg Aggregate Index				
ARAM Model Portfolio Name	Dec 2024	2024 YTD Net %	1 year Net %	3 year Net %	5 Year Net %	Cum Net % since 1/2016	Positive Return Months	Alpha since 1/2016	12mo Alpha	12mo Beta	12mo Correll	12mo Ret/ StDev
Baseline	0.44%	8.9%	8.9%	15.2%	36.1%	71%	73%	5.4%	8.9%	0.02	0.10	9.0
Aggressive	0.51%	8.3%	8.3%	15.8%	71.5%	146%	65%	9.8%	8.2%	0.10	0.21	2.8
Scalable IG	0.27%	6.5%	6.5%	7.9%	21.5%	38%	63%	2.9%	6.4%	0.07	0.27	4.0
Scalable Broad	0.36%	8.3%	8.3%	7.6%	12.9%	37%	61%	2.7%	8.2%	0.07	0.28	5.3

Fixed Income Benchmark Passive Fixed Income Index

	Monthly Net Return Stats							Stats to Bloomberg Aggregate Index				
Aggregate	-1.64%	1.3%	1.3%	-7.1%	-1.6%	14%	54%	0.0%	0.0%	1.00	1.00	0.2

ARAM PlusAlpha Active Multi-Asset Model Portfolios

	Monthly Net Return Stats							Stats to SPY-AGG ETF 60/40 Portfolio				
SPY-FI IG	-1.08%	20.9%	20.9%	29.7%	109.9%	229%	69%	2.4%	10.3%	0.66	0.83	3.0
SPY-FI Broad	-0.45%	21.7%	21.7%	30.7%	111.4%	232%	69%	2.5%	12.5%	0.57	0.78	3.4
	Monthly Net Return Stats							Stats to SPY ETF				
SPY-FI IG	-1.08%	20.9%	20.9%	29.7%	109.9%	229%	69%	1.8%	7.3%	0.53	0.88	3.0
SPY-FI Broad	-0.45%	21.7%	21.7%	30.7%	111.4%	232%	69%	1.9%	9.8%	0.46	0.84	3.4

Benchmark Multi-Asset ETF Portfolios

	Monthly Net Return Stats							Stats to SPY-AGG ETF 60/40 Portfolio				
SPY-AGG 60/40	-2.09%	15.0%	15.0%	14.0%	51.5%	123%	71%	0.0%	0.0%	1.00	1.00	1.8
SPY ETF	-2.41%	24.9%	24.9%	29.0%	96.5%	235%	71%	0.7%	4.6%	1.28	0.97	2.2

***Model Portfolio Hypothetical Net Returns using assumed Fees shown on the Fact Sheets (click blue links above)**

Download All Fact Sheets

Hello. In December 2024, we finalized a new version of our eCIO Risk Targeting Algorithm, GEN 3.6. This was introduced in the newsletter which went out during the December holiday period and might have been missed by some, so I am repeating some of its attributes and results below.

We also created our first Multi-Asset Active Model Portfolios, combining the S&P500 SPY ETF with the Benchmark Scalable Fixed Income ETFs that are used in our ***Scalable IG*** and ***Scalable Broad*** Model Portfolios, thus calling them ***SPY-FI IG*** and ***SPY-FI Broad.***

These create Active alternatives to the ubiquitous passive *SPY-AGG 60-40* portfolios and variants used by Wealth Managers and Investment Consultants. As you will see below, they can also be used as a substitute for the SPY ETF itself.

Fixed Income Active Model Portfolio Results

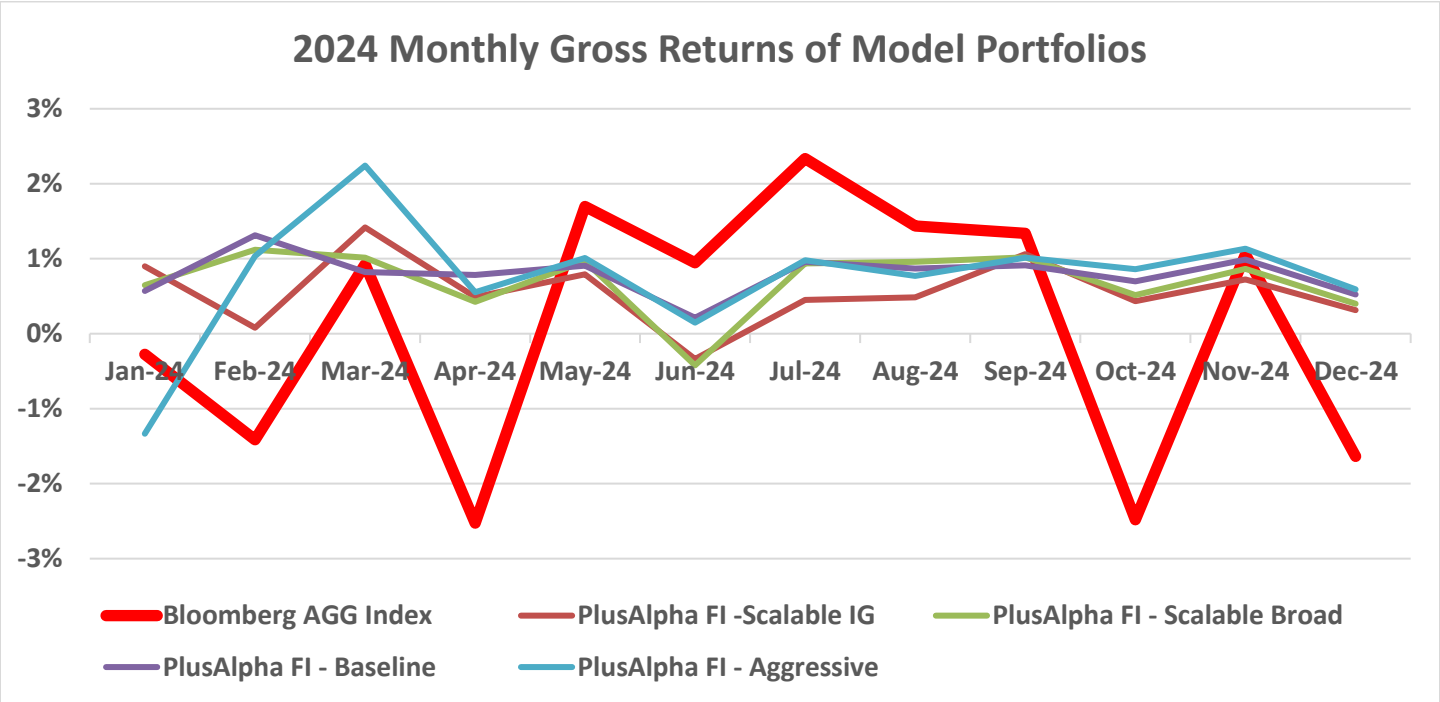
All four recommended Model Portfolios dominantly outperform the AGG and other Fixed Income Benchmarks by significant amounts, in every metric, with very low correlations and a very high difference in Return/Risk ratio.

Difference versus AGG Benchmark

ARAM Model Portfolio Name	DATA TO GRAPH	2024 YTD Net %	1 year Net %	3 year Net %	5 Year Net %	Cum Net % since 1/2016	Positive Return Months	Alpha since 1/2016	12mo Alpha	12mo Beta	12mo Correll	12mo Ret/ StDev
Baseline	2.08%	8%	8%	22%	38%	57%	19%	5.4%	8.9%	-0.98	-0.90	8.77
Aggressive	2.15%	7%	7%	23%	73%	133%	11%	9.8%	8.2%	-0.90	-0.79	2.59
Scalable IG	1.91%	5%	5%	15%	23%	25%	9%	2.9%	6.4%	-0.93	-0.73	3.74
Scalable Broad	2.00%	7%	7%	15%	15%	23%	7%	2.7%	8.2%	-0.93	-0.72	5.08

Our Model Portfolios make Fixed Income allocations into a source of attractive returns, instead of using Fixed Income as a very poor diversifying tool for portfolio insurance (as practiced by 60/40 and Risk-Parity adherents).

This is a result of Active responses to risk changes, resulting in lower portfolio volatility of returns, and dramatically higher Sharpe Ratios. This is visible in the next chart of monthly returns in 2024, where we avoided being whipsawed, and 2 of the models, Baseline and Aggressive, did not have any negative returns.



New Active Multi-Asset Portfolio Results

We combine Equities and Fixed Income in our Multi-Asset Portfolios. Our first cut at Multi-Asset Portfolios has some interesting results. Over the coming months we will be improving on it.

The Risk Target is the risk of the 60/40 SPY-AGG portfolio. Rather than fixed portfolio weights, which make no sense to me given the lack of inverse correlation, and the returns ranges involved, we allow the ratios to float from 0% to 100% for any of the funds used.

The resulting Active Multi-Asset portfolios outperform the 60/40 completely, with cumulative returns of ~ 230% vs 71% for the 60/40, with 2.4+% Annualized Alpha over 60/40 since 2016, and 10%-12% 1yr Alpha over 60/40 in 2024! The Beta to 60/40 is only 0.6.

The initial reaction might be these portfolios are largely long the SPY ETF, as the cumulative returns are similar to that of SPY. So, **we compared the resulting portfolios to SPY as well.**

Upon closer observation of the statistics, one can see that the Fixed Income ETFs in the Model Portfolio are buffering the volatility of the SPY ETF, reducing risk, with barely any concession to returns.

Our Multi-Asset Model Portfolios actually outperform SPY in their 5yr total returns, and generate 1.8%-1.9% long term Annual Alpha to SPY, and ~8% Alpha to SPY in 2024, with a 0.5 1yr Beta!

This can be seen in the table repeated here that show the SPY-FI Statistics versus SPY. The Active Multi-Asset Betas are only 0.5, with a 0.9 correlation.

ARAM Model Portfolio Name	SPY Equity	2024 YTD Net %	1 year Net %	3 year Net %	5 Year Net %	Cum Net % since 1/2016	Positive Return Months	Alpha since 1/2016	12mo Alpha	12mo Beta	12mo Correl	12mo Ret/ StDev
SPY-FI IG	-1.08%	20.9%	20.9%	29.7%	110%	229%	69%	1.8%	7.3%	0.53	0.88	3.0
SPY-FI Broad	-0.45%	21.7%	21.7%	30.7%	111%	232%	69%	1.9%	9.8%	0.46	0.84	3.4

One can also infer this in SPY's statistics to 60/40 when compared to the SPY-FI models – the SPY-FI models have greater Alpha and lower Betas than SPY to the 60/40 benchmark.

(What is also interesting is that our FI-Aggressive Model Portfolio, which does not include any equities (but has convertible bonds) outperforms the 60/40 Benchmark in the long term – see Fact Sheets.)

What is Direct Risk Targeting?

Harry Markowitz introduced Modern Portfolio Theory (MPT) in his seminal 1952 paper, "Portfolio Selection". A number of other papers from the same period on probability, risk, and utility by Samuelson, Arrow, Friedman and others probably set the way.

Prior to Markowitz, investing was, and still is, largely based on Graham and Dodd's 1934 book "Security Analysis".

Fixed Income investing is still largely based on a Graham and Dodd framework – security selection and relative value choices made by Yield, Yield Spread, and Duration of bonds, with spreads and duration indicating Risk.

My quantitative interests and studies in computer science as an undergraduate, and operations research and econometrics in graduate school at UChicago, combined with the flaws in Fixed Income Market Structure and investing that I have observed and experienced in over 30+ years in markets, have resulted in my seeking a better way to invest in Fixed Income.

I have been researching Macro and Market Risk since 1988 and have concluded that historical securities covariance has predictive power in Fixed Income, making Markowitz ideal for Fixed Income.

I have been developing and testing such an MPT framework since 2016, creating Active Fixed Income Model Portfolios. This has evolved into ARAM's "Direct Risk Targeting" for Active Fixed Income Portfolio construction.

Markowitz portfolio construction views Risk as volatility or standard deviation of returns, and has 2 steps:

1. Identify Market Risk – the Risk Target - and also Identify the Risk of individual securities (to build a covariance matrix), using historical returns data
2. Construct an Optimal Portfolio using Portfolio Optimization to match Market Risk

We modify Markowitz Optimization into ARAM's 3-step "Direct Risk Targeting":

1. **Identify Market Risk using a Benchmark Security or Index, Portfolio, or Macro input, and also construct a covariance matrix based on the historical risk of securities to be used – we select these using parameters for liquidity, sector, etc**
2. **ARAM's innovation: Our eCIO module algorithmically computes a "Direct Risk Target" based on every period's Market Risk input from Step 1, which imposes an Environment Risk Suitability condition to the portfolio's target risk. This is based on our experience over many cycles and can differ significantly than the computed Market Risk input.**
3. **The Direct Risk Target is then used as the input to an optimizer to construct an Optimal Portfolio and generate weights for security selection and portfolio construction**

We rebalance periodically, repeating Step 1, to stay ahead of Risk decay, making our portfolios Active and able to respond to changes in Risk.

While Macro Risk can be predictive, it becomes unnecessary to monitor when one rebalances frequently.

Our Active portfolios are constructed Systematically, with no biases, emotions, or interference, unlike human CIOs and portfolio managers.

The predictive power of Markowitz in Fixed Income, combined with rebalancing allows a quantitative Systematic Active approach to Fixed Income to generate significant Alpha and Returns, while reducing Risk, and increasing the number of months with positive returns – positive skewness – when comparted to Fixed Income Benchmarks.

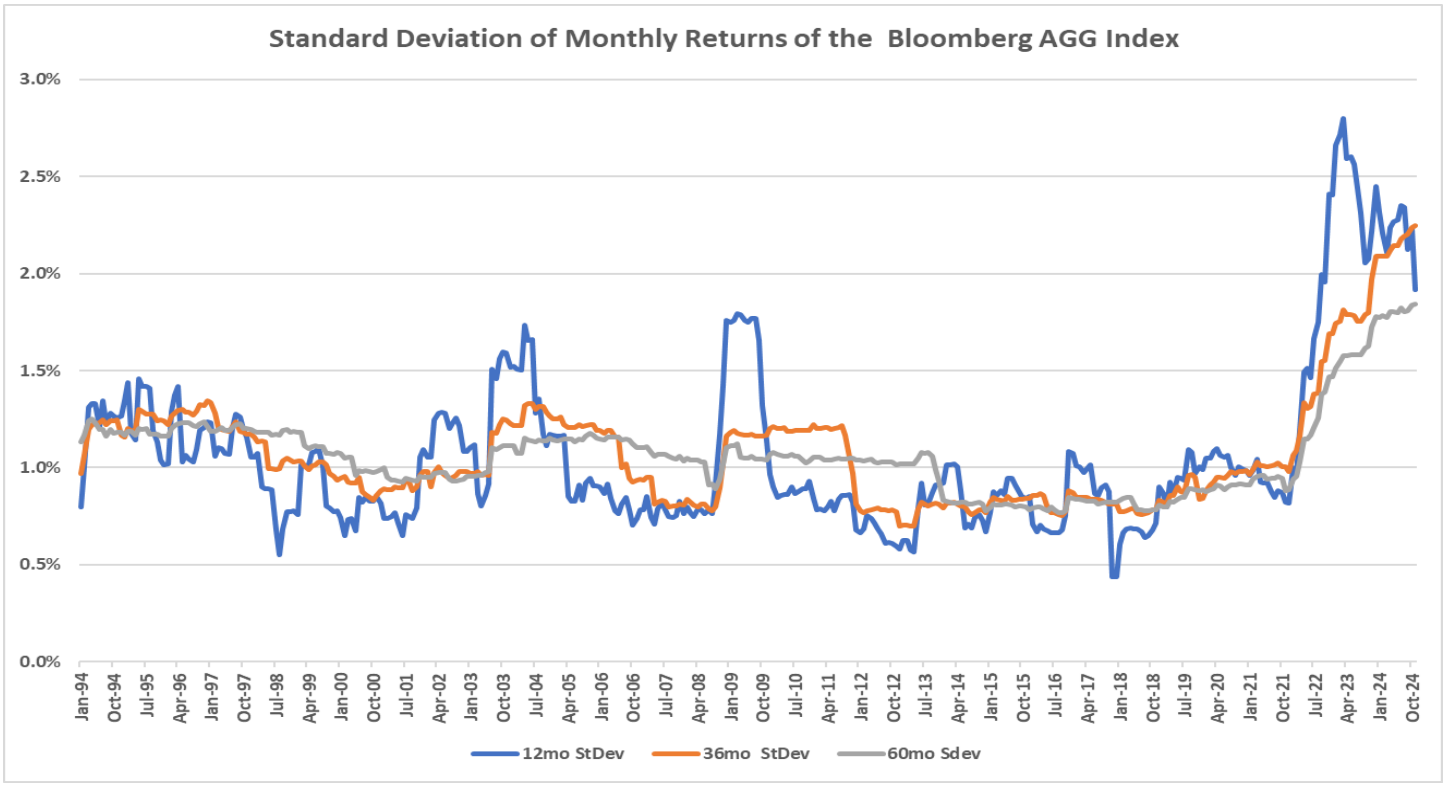
Market Risk

I posted the following graph on Linkedin last month, and it led to some interesting conversations. **This time frame of this chart covers the work experience of almost all current Fixed Income managers.**

The basic points are that most Fixed Income PMs have never experienced such risk, and have been getting whipsawed by the recent rise in risk, resulting in almost 0% 3-yr, 5-yr and 10-yr annualized returns in almost all Fixed Income portfolios.

I attribute this poor performance of Fixed Income to managers continuing to apply a Graham-Dodd framework for portfolio construction without questioning whether that is still an appropriate framework in a higher risk environment.

Fixed Income has Never Been Riskier



Yield-Spread based G-D portfolio construction can be thought of as a special case of Risk-Targeting, which works only when Fixed Income risk is low, as it has been since the 1980s due to a secular decades-long decline in interest rates (with the occasional spike in risk being rationalized as a 'Black Swan event').

The evidence of recent returns shows that it does not work in the current high volatility/risk environment.

Switching to a Risk-Targeting frameworks creates a generalized All-Weather solution to Fixed Income portfolio construction.

Descriptions of the Model Portfolios

Baseline

This is our primary recommended Active model portfolio. It includes ETFs of most asset classes that are used by other 'Active' Fixed Income funds – basically IG plus High Yield.

Aggressive

This adds Convertibles to the Baseline portfolio construction, as many Active funds and ETFs use this sector in their portfolios for more 'yield'.

Scalable – IG (Investment Grade)

This model portfolio uses very large Benchmark Sector ETFs from only IG sectors, matching the definition of the Agg Index. I think this has more capacity than most investors in Fixed Income will need – many Billions.

Scalable – Broad

This model portfolio adds High Yield to the Scalable IG construction. With HYG being very liquid and very diversified, it takes away most arguments for not using High Yield.

SPY-FI IG

This is our first Active Multi Asset Portfolio, constructed as a replacement for the ubiquitous 60/40 SPY-AGG portfolio. We measure the Risk of the 60-40 returns, and construct portfolios using the SPY ETF and the Fixed Income ETFs in the Scalable-IG construction. It can also be used as a SPY substitute.

SPY-FI Broad

This model portfolio uses SPY and the Fixed Income ETFs in the Scalable-Broad model construction.

WE CUSTOMIZE MODEL PORTFOLIOS BASED ON YOUR REQUIREMENTS!

Our Active Model Portfolios are available on Schwab's iRebal, Interactive Brokers, and Indexone.io.

Our Model Portfolios are ideal for independent Wealth Managers and RIAs who are not limited to the offerings from their custody platforms.

We also use our algorithms to create Active model portfolios using an individual Advisor's fund products (eg Vanguard, JP Morgan, Blackrock, PIMCO, Capital Research, etc). These Advisor portfolios significantly outperform an Advisor's own Active and Multi Asset funds created by their internal groups. We have supplements to our decks for these Advisor-specific products.

These can be used by Advisors and other investor types like Foundations, who are limited to their custody platform's products, but are Fiduciaries and want to deliver returns. We are also looking to be Sub-Advisors for the Advisors, creating funds from the model portfolios described above.

We can customize portfolios for specific needs. Our Model Portfolios are starting points for a conversation about a customized portfolio.

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eCIO GEN 3.6 Risk Targeting Algorithm vs Gen 3.5

This outperforms the prior GEN 3.5 Algo (which only lasted a few months) in every possible way. The new model features improved responsiveness to market Risk changes, and captures Regime changes very well. In addition, we have also improved the resulting portfolio Direct Risk Target generated by the eCIO algorithm, which is used to select the weights of ETFs to be incorporated in the portfolios. The rebalancing routines remain unchanged.

Results:

- **Improvement in drawdowns, now in line with passive benchmarks**
- **Faster recovery from drawdowns, with even higher returns in volatile years such as 2020**
- **Significant improvements in Annual Alpha (+0.9%-2.2%), and historical cumulative returns (4% to 44%), most notable in 3yr and 5yr returns.**
- **The differences are dramatic in the Aggressive and Scalable-IG Model Portfolios**

GEN 3.6 vs GEN 3.5: The following table summarizes the differences between the models:

	Improvements of GEN 3.6 over GEN 3.5				
	Alpha	Max Draw-down	3-yr Return	5-yr Return	Cum Return
Baseline	0.9%	4.2%	7.4%	11.6%	14.1%
Aggressive	2.2%	8.5%	20.3%	30.2%	43.9%
Scalable - IG	0.9%	0.0%	12.5%	16.4%	9.1%
Scalable - Broad	0.4%	1.7%	-2.9%	4.4%	4.0%

The next two tables are the raw returns results of the two Risk Targeting Algos

	GEN 3.6 Risk Targeting Algorithm				
	Alpha	**Max Draw-down**	**3-yr Return**	**5-yr Return**	**Cum Return**
Baseline	**5.5%**	**-5.0%**	**14.7%**	**38.4%**	**71.9%**
Aggressive	**10.2%**	**-5.4%**	**15.1%**	**78.9%**	**154.2%**
Scalable - IG	**2.7%**	**-6.8%**	**7.3%**	**20.5%**	**38.0%**
Scalable - Broad	**3.0%**	**-6.8%**	**7.8%**	**15.9%**	**39.7%**

Compare to:

	GEN 3.5 Risk Targeting Algorithm				
	Alpha	**Max Draw-down**	**3-yr Return**	**5-yr Return**	**Cum Return**
Baseline	**4.6%**	**-9.2%**	**7.3%**	**26.8%**	**57.8%**
Aggressive	**8.0%**	**-13.9%**	**-5.2%**	**48.7%**	**110.3%**
Scalable - IG	**1.8%**	**-6.8%**	**-5.2%**	**4.1%**	**28.9%**
Scalable - Broad	**2.6%**	**-8.5%**	**10.7%**	**11.5%**	**35.7%**

Fixed Income Sector Results – this was formerly in our main table on page 1

Fixed Income Sector Benchmark Passive Fixed Income Indices

	Monthly Net Return Stats							**Stats to Bloomberg Aggregate Index**				
U.S. Treasury	-1.54%	0.6%	0.6%	-8.4%	-3.4%	8%	48%	-0.5%	-0.6%	0.92	1.00	0.1
Govt-Related	-1.41%	1.7%	1.7%	-4.3%	0.1%	17%	62%	0.5%	0.6%	0.83	1.00	0.4
Corporate	-1.94%	2.1%	2.1%	-6.6%	1.5%	28%	59%	1.0%	0.8%	1.06	0.99	0.4
Securitized	-1.56%	1.5%	1.5%	-5.8%	-2.9%	9%	56%	-0.4%	0.1%	1.10	1.00	0.3
MBS	-1.65%	1.2%	1.2%	-6.2%	-3.6%	8%	55%	-0.5%	-0.2%	1.14	1.00	0.2
High Yield	-0.43%	8.2%	8.2%	9.0%	22.9%	73%	69%	5.3%	7.4%	0.53	0.96	2.4

We have a new deck that I can supply on request that has details on how our portfolios are created, and why this generates Alpha while traditional Fixed Income fails to do so.

The title of the deck is "Unlocking the Potential of Fixed Income".

We believe that our process is the future of Fixed Income. The end game for fixed income will be ETFs that represent Risk Factors, with PMs and market makers to manage the ETFs, with Risk Targeting processes to construct portfolios from Factor ETFs. Fixed Income will finally resemble Equities.

Fixed Income investors deserve Returns and Liquidity, with reduction of Risk, and our Model Portfolios deliver these.

None of our model portfolios use any leverage.

The Alpha of our portfolios is generated through systematic Active Management, by using the portfolio construction process and algorithms derived from our research on FI market structure and behavioral biases.

All the model back-test total returns are 'out-of-sample', with implied fees, after systematic rebalancing creates the following period's portfolio. The only risk to these return numbers that we can identify come from execution risk.

We believe this is the only true Active Fixed Income strategy offered in the market – our research on the Active Fund universe is available in our paper 'Are "Active" Fixed Income Funds Active?'.

Quick takeaway – if a fund is truly 'Active', it will have volatile Beta and low correlation with its benchmark.

Our strategy was conceived in 2016 as a result of our research into Behavioral Biases in Fixed Income and Flaws in the Market Structure. **Our systematic solution takes advantage of biases and flaws** in Fixed Income management to realize the potential returns available in Fixed Income, and to capture the attendant benefits to portfolio construction and asset allocation (low correlations, positive skewness, higher Sharpes).

The long-term Alpha is significant. The Risk Targeting algorithms are continuously improved, and the Alpha has been persistent.

Unlike many quant strategies, we expect the Alpha in our Systematic Fixed Income Strategy to remain persistent.

We are seeking institutions, wealth managers and TAMPs that might have interest in licensing our customizable Model Portfolios.

Please call with questions.

Regards, Samir

January 17, 2025

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