

one Point of View

Create Better 'Barbells' With Bond ETFs

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Many investors expect the return streams from bond ETFs to behave like the direct purchase of a bond, essentially providing current income with the likely return of principle at a future date. Although the expansion of ETFs has provided investors access to bonds, and at a reasonable cost, the performance behavior of these ETFs are often very different from the direct purchase of individual bonds.

The top five* bond ETFs by assets include:

ETF	Ticker
Vanguard Total Bond Market ETF	BND
iShares Core U.S. Aggregate Bond ETF	AGG
iShares Global High Yield Corp Bond ETF	HYG
iShares iBoxx \$ Investment Grade Corporate Bond ETF	LQD
Vanguard Short-Term Bond ETF	BSV

*Source: Bloomberg. Data as of May 31, 2015

These ETFs represent about \$104 billion in assets and have an average current yield of 3.37 percent and an average duration of 5.11 years. So, like a direct purchase in a bond investors can expect that a 100 bps rise in interest rates may likely cause a 5 percent reduction in principal, wiping out over a year and a half of the average income.

The major difference between the ETF structure and the direct purchase is that the ETF investor may never recover the 5 percent principal at maturity because the index does not mature.

The lineup of BulletShares target date maturity bond ETFs from Guggenheim has tried to provide a solution to this conundrum, but they are still subject to the second inefficiency. The future income distribution of the ETF is not locked in at purchase at the current yield; the yield changes as the constituents of the index change.

Toroso's conclusion is that some of the traditional metrics of evaluating bonds, like current yield and average maturity, are inadequate relative to the ETF structure. That said, we have devised a methodology for income ETF security selection that we believe is more consistent with the behavior of bond ETFs. Additionally, Toroso uses an asset-allocation methodology for bond ETFs that behaves more like a direct purchase of a bond.

Security Selection

With the threat of rising interest rates looming, how can investors evaluate the risk associated with bond ETFs if metrics like maturity and coupon do not apply to the ETF structure? We believe this all boils down to maximizing income, with the minimal amount of volatility possible. To assist in this, we use a methodology we call the Risk Adjusted Excess Income Ratio (RAEI). We take the principals of the Sharpe Ratio, and seek out excess output above a risk-free rate per unit of volatility but, instead of return, we focus on income. The formula is below:

$$\text{Risk Adjusted Excess Income Ratio} = \frac{(\text{Yield} - \text{Risk-free Yield})}{3\text{-Yr Standard Deviation}}$$

The formula allows us to evaluate the excess yield per unit of volatility. Positive ratio outputs, relative to similar investments, are indicative of an attractive investment. This combined with other efficient metrics, like duration; assist us in choosing optimal bond ETFs.

In a table on page 2 of this Commentary, we analyzed the five largest bond ETFs, as well as two securities used within Toroso's strategies, and used the 12-month yield of the iShares 1-3 Year Treasury Bond ETF (SHY) as our risk-free yield (0.42%). But first, let's discuss the Barbell Allocation Technique.

Asset Allocation

One of the techniques Toroso uses to address the inefficiencies of bond ETFs is to build an "Income Barbell Portfolio."

One example of this approach combines equal weightings of cash-like ETFs like the Guggenheim Enhanced Short Duration Bond ETF (GSY) and income-oriented ETFs such as the PowerShares CEF Income Composite Portfolio (PCEF). Using the two, we can synthetically

construct a potentially higher-yielding and less-volatile portfolio than investors can find with traditional bond ETFs. As shown in the table, both ETFs score favorably on the RAEI Ratio. And, further, their combination creates a

*"Given the current
challenge in the world of
bonds, a bit of outside-the-
box thinking is in order."*

-Mike Venuto

attractive yield of 4.67 percent with duration of 1.57 years, and a RAEI Ratio of 1.25.

Ticker	Yield	3Yr STDV	RAEI Ratio	Duration
BND	2.45	2.98	0.68	5.62
AGG	2.28	2.90	0.64	5.29
HYG	5.37	4.59	1.08	4.19
LQD	3.37	5.22	0.56	7.75
BSV	1.23	1.18	0.68	2.67
GSY	1.33	0.29	3.29	0.25
PCEF	7.93	6.49	1.16	2.87
PCEF/GSY	4.67	3.48	1.25	1.57

Beyond the Traditional Barbell

Historically, when pursuing a bond barbell strategy, investors purchase short-term and long-term bonds only. Theoretically, this provides the best of both worlds. At the high end of the barbell, you lock in higher rates. On the short end of the

barbell, investors have less interest rate and credit risk. And when short-term bonds mature, investors use their proceeds to reinvest.

An "Income Barbell Portfolio" expands the potential universe of income-oriented investments. Toroso constructs the risk end of the income barbell by combining ETFs consisting of bonds, closed-end funds, preferred stocks, dividend producing common stocks, REITs and income-oriented MLPs.

Meanwhile the safety component, which consists of cash equivalent ETFs, seeks to reduce volatility and provide a compounding base to protect principal.

By selecting bond ETFs by evaluating their excess yield adjusted for their past volatility combined with an barbell allocation, Toroso believes that an ETF portfolio can produce results similar to a direct investment in a bond.

In the Appendix is the risk adjusted excess income calculation for the 10 largest bond ETFs, cash like ETFs, and dividend equity ETFs, as well as the top 10 alternative ETFs: all ranked by highest RAEI. The first 3 categories were generated based on overall AUM as all 3 categories focus on generating income.

Appendix

Comparison of the Ten Largest* Bond ETFs Ranked by RAEI Ratio	Ticker	Yield	3Yr STDV	RAEI Ratio	Duration
SPDR® Barclays High Yield Bond ETF	JNK	5.77	4.91	1.09	4.21
iShares iBoxx \$ High Yield Corporate Bond ETF	HYG	5.37	4.59	1.08	4.23
iShares Intermediate Credit Bond ETF	CIU	2.40	2.65	0.75	4.19
Vanguard Total Bond Market ETF	BND	2.45	2.98	0.68	5.62
iShares Core US Aggregate Bond ETF	AGG	2.28	2.90	0.64	5.29
iShares iBoxx \$ Invst Grade Crp Bond ETF	LQD	3.37	5.22	0.56	7.75
Vanguard Intermediate-Term Bond ETF	BIV	2.70	4.27	0.53	6.51
iShares MBS ETF	MBB	1.65	2.39	0.51	4.33
iShares 7-10 Year Treasury Bond ETF	IEF	2.00	5.18	0.30	7.63
iShares TIPS Bond ETF	TIP	1.42	5.19	0.19	7.62

*Source: Bloomberg. Data as of May 31, 2015

Ten Largest* Cash-like ETFs

	Ticker	Yield	3Yr STDV	RAEI Ratio	Duration
PowerShares Senior Loan ETF	BKLN	3.92	2.29	1.53	
SPDR® Barclays Short Term Hi Yld Bd ETF	SJNK	5.18	3.16	1.50	2.24
PIMCO 0-5 Year High Yield Corp Bd ETF	HYS	4.35	3.18	1.23	1.80
PIMCO Enhanced Short Maturity Active ETF	MINT	0.72	0.29	1.01	0.34
SPDR® Barclays Short Term Corp Bd ETF	SCPB	1.22	0.80	1.00	1.99
Vanguard Short-Term Corporate Bond ETF	VCSH	1.83	1.57	0.90	2.85
iShares 1-3 Year Credit Bond ETF	CSJ	0.97	0.73	0.74	1.89
Vanguard Short-Term Bond ETF	BSV	1.23	1.18	0.68	2.67
iShares Floating Rate Bond ETF	FLOT	0.46	0.45	0.08	0.15
iShares 1-3 Year Treasury Bond ETF	SHY	0.42	0.55	0.00	1.94

Ten Largest* Dividend Equity ETFs

	Ticker	Yield	3Yr STDV	RAEI Ratio	Duration
iShares International Select Dividend ETF	IDV	5.06	13.459	0.34	
iShares Core High Dividend ETF	HDV	3.40	9.098	0.33	
WisdomTree Emerging Markets Eq Inc ETF	DEM	4.75	14.416	0.30	
iShares Select Dividend ETF	DVY	3.06	8.929	0.30	
Vanguard High Dividend Yield ETF	VYM	2.83	8.631	0.28	
Schwab US Dividend Equity ETF™	SCHD	2.68	8.687	0.26	
WisdomTree LargeCap Dividend ETF	DLN	2.48	8.279	0.25	
WisdomTree MidCap Dividend ETF	DON	2.39	9.193	0.21	
SPDR® S&P Dividend ETF	SDY	2.23	8.967	0.20	
Vanguard Dividend Appreciation ETF	VIG	2.12	9.143	0.19	

Ten Largest* Alternative ETFs Ranked by RAEI Ratio

	Ticker	Yield	3Yr STDV	RAEI Ratio	Duration
PowerShares CEF Income Composite ETF	PCEF	7.93	6.49	1.16	2.87
UBS ETRACS 2xLvg Lng WF Busn Dev Co ETN	BDCL	17.86	21.78	0.80	
Arrow Dow Jones Global Yield ETF	GYLD	7.91	10.23	0.73	
iShares Morningstar Multi-Asset Income	IYLD	5.08	6.63	0.70	7.75
iPath® GEMS ETN	JEM	4.43	6.69	0.60	
SPDR® Barclays Convertible Secs ETF	CWB	4.19	6.48	0.58	
iShares Core Conservative Allocation	AOK	2.07	3.35	0.49	5.47
UBS ETRACS 2xM Lvg Lng Alrn MLP Infr ETN	MLPL	11.76	26.09	0.43	
SPDR® SSgA Income Allocation ETF	INKM	3.25	6.74	0.42	10.22
UBS ETRACS Mthly Py 2xLvg DJ Sel Div ETN	DVYL	7.59	17.79	0.40	

*Source: Bloomberg. Data as of May 31, 2015

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