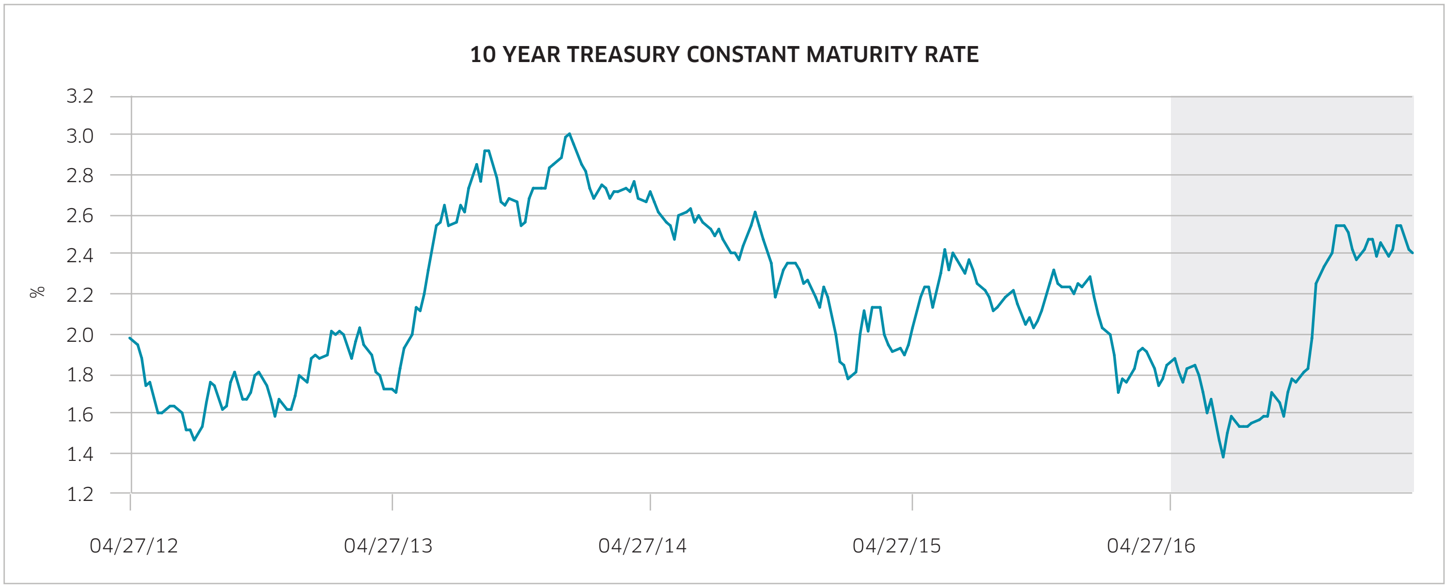
Applying Relative Strength to Fixed Income: A Dynamic Strategy

Dorsey Wright's View into Fixed Income via ETFs

Rising Interest Rates

For many investors, having a Fixed Income allocation is an important part of creating a diversified portfolio. Gaining exposure to the bond market can help reduce volatility and also generate income. Until recently, much of the world had become accustomed to an extremely low interest rate environment since the Financial Crisis of 2008. However, since finding a bottom during July 2016, interest rates, such as the 10 Year Treasury Constant Maturity Rate, have now moved higher by over 100bps. This sharp move in rates, shown in Figure 1, has hindered performance of many traditional bond portfolios, particularly those with exposure to the long end of the US Treasury curve. Recall that bond prices tend to move inversely to interest rates, so if interest rates rise, then bond prices tend to fall. This means that as interest rates have risen, US Treasuries, for example, have fallen in price. Given this rise in interest rates, having an alternative to traditional Fixed Income products is something market participants can take advantage of in order to help improve performance. One strategy that helps investors handle changing trends is relative strength, which is an investment methodology that seeks to tactically guide a portfolio into the stronger areas of the market and out of weaker areas. A tactical approach leverages the observation that not all bonds are created equal and that not all bonds react the same. One index that is designed to follow this methodology is the Dorsey Wright Fixed Income Allocation Index (DWAFIR).

Figure 1: 10 Year Treasury Constant Maturity Rate (Weekly) (April 27, 2012 – June 30, 2017



(Source: Board of Governors of the Federal Reserve System (US))

Dorsey Wright Fixed Income Allocation Index

Does the opportunity to follow market driven trends effectively within the Fixed Income asset class exist? Opportunity is measured by tracking dispersions within and across the marketplace. Dispersion can be calculated through various means – cross-sectional portfolio volatility, correlation, or performance differential, i.e.: the difference between the best and worst performing asset in an investment universe. Today, the focus is on performance differentials and correlation to measure dispersion. Relative strength-based strategies will tend to offer excess return over their benchmark more readily when the dispersions are wide within a given asset class. On the other hand, relative strength-based strategies will tend to underperform when the dispersion is narrower. It is a misconception that dispersions are not wide enough within the Fixed Income space to offer tactical opportunities. That said, looking at the dispersions for broad Fixed Income sectors over the past seven year period, there have been some years with more dispersion than others. The average dispersion over this time period has been 17.61%, a timeframe which has favored allocations geared towards toward US High Yield and US Long Term Treasuries as shown below.

Figure 2: Fixed Income Broad Sectors – Dispersion

2010	2011	2012	2013	2014	2015	2016	OVERALL
US High Yield 14.22%	US Long Treas. 30.40%	US High Yield 13.47%	US High Yield 5.86%	US Long Treas. 25.32%	US Corp. Bond 0.44%	US High Yield 14.43%	US Long Treas. 59.16%
US Long Treas. 8.74%	Aggregate Bonds 7.90%	US Corp. Bond 8.38%	US Short Treas. -0.09%	Aggregate Bonds 5.98%	Aggregate Bonds 0.35%	US Corp. Bond 4.16%	US High Yield 55.00%
US Corp. Bond 7.15%	US Corp. Bond 5.84%	Aggregate Bonds 3.92%	US Corp. Bond -0.57%	US Corp. Bond 4.45%	US Short Treas. -0.13%	Aggregate Bonds 2.37%	US Corp. Bond 33.54%
Aggregate Bonds 6.26%	US High Yield 5.09%	US Long Treas. 2.86%	Aggregate Bonds -2.13%	US High Yield 0.77%	US Long Treas. -1.65%	US Long Treas. 0.92%	Aggregate Bonds 26.96%
US Short Treas. -0.04%	US Short Treas. -0.04%	US Short Treas. -0.04%	US Long Treas. -12.26%	US Short Treas. -0.07%	US High Yield -6.77%	US Short Treas. 0.11%	US Short Treas. -0.30%
Difference Best/Worst	Difference Best/Worst	Difference Best/Worst	Difference Best/Worst	Difference Best/Worst	Difference Best/Worst	Difference Best/Worst	Average Dispersion
14.26%	30.44%	13.51%	18.12%	25.39%	7.21%	14.32%	17.61%

*Data is from 12/31/2009 to 12/31/2016. The performance numbers are total returns, not inclusive of fees or all potential transaction costs. Past performance is not indicative of future results. Potential for profits is accompanied by possibility of loss. The returns are based upon exchange traded products designed to track the following indices: Barclays Capital High Yield Bond, Barclays Capital Long Term Treasury, Barclays Capital Aggregate Bond, Barclays Capital Intermediate Term Credit Bond, and Barclays 1-3 Month T-Bill.

Another way to illustrate some of the capabilities of a tactical approach within the Fixed Income asset class is through exploring the correlations of sub-sectors compared to rates themselves. Inverse correlations to rates will portend “sensitivity” that is hardly attractive in a rising rate environment. The opposite can be said for those products with a more positive correlation to interest rates. In Figure 3, the five year correlations of the different Fixed Income subsectors, represented in the State Street Fixed Income ETF lineup, to the CBOE US 10 Year Treasury Yield Index (TNX), which tracks the interest rate of 10 year notes, are displayed. Within the inventory of ETFs there are varying degrees of sensitivities to interest rates. Some areas, such as Long Term Treasuries, Aggregate Bonds, and Long Term Corporate Bonds, will be more sensitive to interest rates. Other sectors, such as Convertible Bonds or Senior Loans, will be less sensitive to interest rates. Thus, during different interest rate environments, i.e. rising or falling, tactical strategies employing relative strength can shift exposure from highly sensitive to less sensitive Fixed Income sectors. More importantly, a strategy that can pull from a diverse range of sectors will be able to better handle a changing interest rate environment going forward.

Figure 3: Five Year Correlation to US Treasury 10 Year Yield Index – (Weekly Data, ending June 30, 2017)

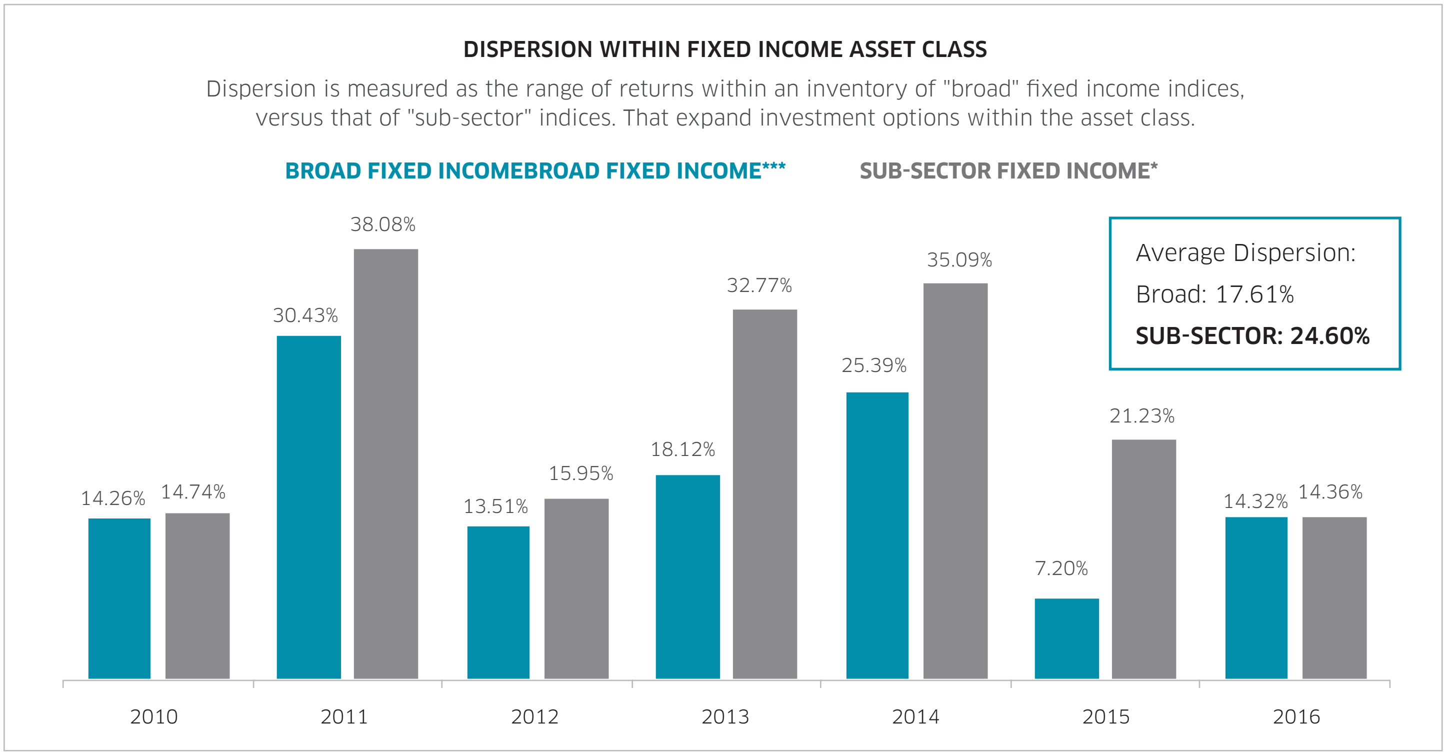
Fixed Income Sub-Sector Indices (correlation to US Treasury 10 Year Yield Index (TNX))	
Barclays Long Term Treasury	-0.93
Barclays Intermediate Term Treasury	-0.92
Barclays Aggregate Bond	-0.91
Barclays Long Term Corporate Bond	-0.81
Barclays TIPS	-0.78
Barclays Intermediate Term Credit Bond	-0.76
Barclays Mortgage Backed Bond	-0.73
Nuveen Barclays Municipal Bond	-0.73
Barclays International Treasury Bond	-0.58
Nuveen Barclays Short Term Municipal Bond	-0.51
Barclays Short Term Corporate Bond	-0.47
Citi International Government Inflation-Protected Bond	-0.44
Wells Fargo Preferred Stock	-0.35
Barclays Emerging Markets Local Bond	-0.31
Barclays International Corporate Bond	-0.30
Barclays Short Term International Treasury Bond	-0.28
Barclays 1-3 Month T-Bill	-0.06
Barclays High Yield Bond	0.00
Barclays Investment Grade Floating Rate	0.02
Barclays Convertible Bond	0.19
Blackstone / GSO Senior Loan	0.21

as of 6/30/17, 5 Years weekly correlation

*The sub-sector Fixed Income universe consists of exchange traded products designed to track the following indices: Barclays Capital Long Term Treasury, Barclays Capital Intermediate Term Treasury, Barclays Capital TIPS, Barclays 1-3 Month T-Bill, Barclays Capital Aggregate Bond, Citi International Government Inflation-Protected, Barclays Capital International Treasury, Barclays Capital Convertible Bond, Wells Fargo Preferred Stock, Barclays Capital Long Term Corporate Bond, Barclays Capital High Yield Bond, Barclays Capital Intermediate Term Credit Bond, Barclays Capital International Corporate Bond, Barclays Capital Short Term Corporate Bond, Barclays Capital Short Term International Treasury Bond, Barclays Capital Mortgage Backed Bond, Barclays Capital Emerging Markets Local Bond, Barclays Capital Short Term Municipal Bond, Barclays Capital Municipal Bond, Barclays Emerging Markets Local Bond, Barclays Investment Grade Floating Rate.

What's interesting, however, is that if one adds Fixed Income sub-sectors to the mix, the dispersions widen even further, rising from 17.61% to 24.60%. In other words, the value of using relative strength increases with a larger inventory of Fixed Income sectors.

Figure 4: Fixed Income Broad Sector and Sub-sector Dispersions



Data is from 12/31/2009 to 12/31/2016. The performance numbers are total returns, not inclusive of all fees or potential transaction costs. Past performance is not indicative of future results. Potential for profits is accompanied by possibility of loss.

**The broad Fixed Income universe consists of exchange traded products designed to track the following indices: Barclays Capital High Yield Bond, Barclays Capital Long Term Treasury, Barclays Capital Aggregate Bond, Barclays Capital Intermediate Term Credit Bond, and Barclays 1-3 Month T-Bill.

*The sub-sector Fixed Income universe consists of exchange traded products designed to track the following indices: Barclays Capital Long Term Treasury, Barclays Capital Intermediate Term Treasury, Barclays Capital TIPS, Barclays 1-3 Month T-Bill, Barclays Capital Aggregate Bond, Citi International Government Inflation-Protected, Barclays Capital International Treasury, Barclays Capital Convertible Bond, Wells Fargo Preferred Stock, Barclays Capital Long Term Corporate Bond, Barclays Capital High Yield Bond, Barclays Capital Intermediate Term Credit Bond, Barclays Capital International Corporate Bond, Barclays Capital Short Term Corporate Bond, Barclays Capital Short Term International Treasury Bond, Barclays Capital Mortgage Backed Bond, Barclays Capital Emerging Markets Local Bond, Barclays Capital Short Term Municipal Bond, Barclays Capital Municipal Bond, Barclays Emerging Markets Local Bond, Barclays Investment Grade Floating Rate.

The Relative Strength Process

In order to take advantage of the opportunity depicted above, relative strength analysis is applied to help identify the leaders from the laggards within the universe. The goal is to orient the Index towards the outperformers, while avoiding the areas that are underperforming within the universe. To determine the relative strength of the Fixed Income assets, the Index utilizes a Point and Figure Relative Strength Matrix. The Index seeks to own strongest areas within Fixed Income, holding four Fixed Income ETFs at all times. The actual securities are identified by reviewing the universe of 21 State Street Fixed Income ETF's (as listed in Figure 5) within the investable inventory.

The Dorsey Wright Fixed Income Allocation Index (DWAFIR) is a rules-based, transparent, tactical strategy that uses relative strength to compare and rank many of State Street's Fixed Income ETFs. The Index was launched in February 2016 and currently employs a defined universe of 21 ETFs that include exposure to floating rate notes, senior bank loans, U.S. municipal bonds, U.S. convertible securities, U.S. and non-U.S. treasury bonds, corporate bonds, high yield bonds, and inflation-protected bonds, among other sub-sectors. The Index inventory is reviewed and can change as new product is launched, or existing product needs to be removed. At any given time, DWAFIR holds four ETFs from the SPDR product lineup that display the most powerful relative strength characteristics. The inventory is evaluated each week for changes in market leadership, and has the capability to rotate into any combination of the funds within the investable inventory.

Figure 5: Dorsey Wright Fixed Income Allocation Index Inventory

US Government

- SPDR Bloomberg Barclays 1-3 Month T-Bill ETF [BIL]
- SPDR Bloomberg Barclays Intermediate Term Treasury ETF ITE]
- SPDR Bloomberg Barclays Long Term Treasury ETF [TLO]
- SPDR Bloomberg Barclays TIPS [IPE]

Municipal

- SPDR Nuveen Bloomberg Barclays Municipal Bon ETF [TFI]
- SPDR Nuveen Bloomberg Barclays Short Term Municipal Bond ETF [SHM]

US Investment Grade Corporates

- SPDR Bloomberg Barclays Long Term Corporate Bond ETF [LWC]
- SPDR Bloomberg Barclays Intermediate Term Credit Bond ETF [ITR]
- SPDR Bloomberg Barclays Short Term Corporate Bond ETF [SCPB]
- SPDR Bloomberg Barclays Investment Grade Floating Rate ETF [FLRN]

International

- SPDR Barclays Short Term International Treasury Bond ETF [BWZ]
- SPDR Barclays International Treasury Bond ETF [BWX]
- SPDR Bloomberg Barclays International Corporate Bond ETF [IBND]
- SPDR Bloomberg Barclays Emerging Markets Local Bond ETF [EBND]
- SPDR Citi International Government Inflation Protected Bond ETF [WIP]

High Yield

- SPDR Bloomberg Barclays High Yield Bond ETF [JNK]

Hybrids

- SPDR Wells Fargo Preferred Stock ETF [PSK]
- SPDR Barclays Convertible Bond ETF [CWB]

Multi-Sector Bond

- SPDR Bloomberg Barclays Aggregate Bond ETF [BNDS]

US Mortgage

- SPDR Bloomberg Barclays Mortgage Backed Bond ETF [MBG]

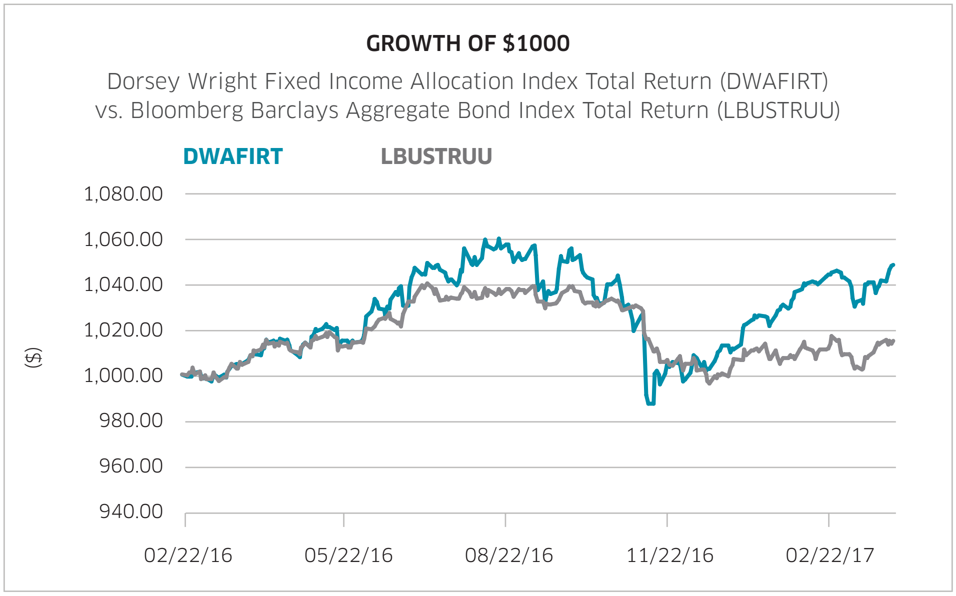
Senior Loan

SPDR Blackstone / GSO Senior Loan ETF [SRLN]

Having more than 20 different bond investment options at its disposal means the strategy is able to adapt from being sensitive to relatively insensitive in relationship to U.S. 10-year rates. As with equity markets, there is typically an “open door,” or trend somewhere within the Fixed Income that can provide investors with opportunity. One simply needs to ensure there is a diverse stable of “doors” to consider and a disciplined process for selecting which to walk through. In this sense, the long-term success of a tactical approach is largely based upon its ability to follow market driven trends effectively, rather than upon a projection of what interest rates will or won’t do in the future. This is not a feature of most traditional Fixed Income indexes and investment products which are typically designed to provide a very specific allocation within debt markets.

Historical performance of the Dorsey Wright Fixed Income Allocation Index since the Index’s inception on February 22, 2016 is shown in Figure 6. Since the Index’s launch, DWAFIRT (Total Return) has gained 7.93% (thru 6/30/17), compared to 2.99% from the benchmark, Bloomberg Barclays Aggregate Bond Index Total Return (LBUSTRUU). From a volatility standpoint, the index has a current standard deviation of 5.39% versus the benchmark at 3.20% (1 Year – Daily Standard Deviation, ending 6/30/17). Finally, during the first six months after the launch, both the index and the benchmark were tracking each other fairly closely up until dispersions in the Fixed Income market widened in late 2016. Since then, the index has diverged from its benchmark.

Figure 6: Total Return Performance of the Dorsey Wright Fixed Income Index (February 22, 2016 – June 30, 2017)



Past performance is not a guarantee of future results. You cannot invest directly in an index. Indexes have no fees. Performance of an index is not illustrative of any particular investment.

Conclusion

Arguably, one of the greatest benefits of tactical Fixed Income rotation is illustrated during trends of rising yields and low returns for traditional Fixed Income markets. It is times such as these that present an opportunity to seek alpha in some of the lesser-used areas of the bond market, which most traditional Fixed Income allocations simply aren't conditioned to employ. By comparing and ranking a diverse inventory of Fixed Income sectors, the opportunity exists for a relative strength based strategy, such as DWAFIR (Dorsey Wright Fixed Income Allocation Index), to provide investors with a tactical approach to follow market driven trends in the Fixed Income asset class. Finally, utilizing such a strategy may enhance existing Fixed Income portfolios and enable investors to adapt to changing interest rate environments going forward.

State Street offers an ETF that seeks to track the DWAFIR Index. The SPDR Dorsey Wright Fixed Income Allocation ETF (DWFI) is listed on the Nasdaq stock exchange. For more information on the ETF, visit the State Street site here: https://us.spdrs.com/en/etf/spdr-dorsey-wright-fixed-income-allocation-etf-DWFI

More Information

For more information on the Dorsey Wright Fixed Income Allocation Index (DWAFIR), please email dwa@dorseywright.com or visit https://indexes.nasdaqomx.com/Index/Overview/DWAFIR