SKYView: A Sharp(e) Rebound in High Yield

In comparing the broad high yield market (we use the ICE BofA US High Yield Index, ticker H0A0 as our proxy) to its shorter-duration subset (we use the ICE BofA 1-5yr BB-B US High Yield Constrained Index, ticker JVC4 as our proxy), we find that over a cycle the former tends to generate superior absolute returns, while the latter generates superior risk-adjusted returns. Over the short run, however, this relationship can change, as has been the case over the last several months. On a year-to-date basis through the end of April, the shorter duration subset of the US high yield universe has outperformed, in our view driven by the fear of rising interest rates and disproportionate downside capture at the start of the pandemic. In this *Weekly Briefing* we examine broad and short duration high yield return trends over time, identifying optimal asset allocation shifts on the basis of prevailing market conditions.

Over the last twenty years, broad high yield (again, we use index H0A0 as our proxy) returns have outpaced the short duration high yield subset (we use index JVC4 as our proxy) by just over 75 basis points (bps) on an annualized basis. At the same time, the volatility capture of JVC4 has been ~ 70% of H0A0, leading to a superior Sharpe Ratio¹ (0.65 and 0.79 for H0A0 and JVC4, respectively) as demonstrated below (left chart). Though performance varies throughout the cycle, **the broad market total return advantage (rolling 12-month returns of H0A0 less JVC4) tends to increase as a recession end date approaches, and accelerates through the early phases of a recovery. The short duration subset of the market, however, tends to outperform in late expansionary periods and through recessionary troughs, with both trends visible in the chart below (right side). While clearly beneficial to be in the higher-beta / broad high yield market when the economy is recovering, and to be in the more resilient / less volatile short duration high yield market in periods of stress, the time in between - which makes up the majority of trading days within a business cycle – is a bit more nuanced.**

Over Long Run, H0A0 Better Absolute Returns, JVC4 Better Risk-Adjusted Returns; Timing of Recession Drives Return Advantage trailing 20-year annualized return and volatility metrics using monthly data; recessions shaded grey



Source: SKY Harbor, ICE Data Indices

As noted above, the short duration high yield index (JVC4) tends to capture ~ 90% of the total return and ~ 70% of the volatility of the broad high yield index (H0A0) over the cycle, but the relationship can vary dramatically depending on market conditions. To demonstrate this dynamic, we calculated rolling 12-month Sharpe ratios of H0A0 and JVC4 over time, with the differential (JVC4 less H0A0) plotted below and to the right in blue. As is evident in the chart, **the risk-adjusted return advantage for JVC4 tends to accelerate in times of stress – including both recessionary and non-recessionary periods – before moderating and ultimately dropping below average upon an economic inflection.** The most recent COVID-induced recession was an exception, as we believe the rapid pace of the market selloff and subsequent correction, the latter aided by government intervention, disguised the historical resiliency of shorter-duration high yield bonds.



Rolling 12mo Sharpe Ratio Differential (JVC4 less H0A0) monthly data since Jan '97, recessions shaded grey



Source: SKY Harbor, ICE Data Indices, National Bureau of Economic Research, Bloomberg

As previously stated, while it is clearly beneficial to be taking higher-beta / broad high yield market risk when the economy is recovering, and to favor the more resilient / less volatile short duration high yield market in periods of stress, the time in between - which makes up the majority of days in most business cycles – is less clear-cut. Odds favor outperformance of the broad high yield market over the short duration subset when a recession is unlikely, as demonstrated

¹ We use the ICE BofA US 3-Month Treasury Bill Index to approximate the risk-free rate in our Sharpe Ratio calculation

in the charts below, but it is far from a foregone conclusion. Even the longest expansion in US history – the 128 months between the end of the global financial crisis and the start of the COVID pandemic – had significant periods of time (nearly 40% of months) in which JVC4 outperformed H0A0. Having already experienced a rapid post-pandemic correction, and with fiscal and monetary policy unlikely to result in a double-dip recession, that "in-between" period in which the return advantage can swing in either direction is now at hand.



Expansionary Period Statistics: H0A0 vs. JVC4		
	H0A0	JVC4
Monthly Outperformance	61%	39%
Annualized Returns	9.1%	7.3%
Sharpe Ratio	1.37	1.66

Source: SKY Harbor, ICE Data Indices, Bloomberg. GFC is the Global Financial Crisis.

So, what factors influence our internal asset allocation views? We find that JVC4's total return capture of H0A0 is highly correlated to the magnitude of H0A0 returns. Using total return data for both indices going back to 1998, **JVC4 outperformance of H0A0 (y-axis) hits breakeven levels and eventually turns positive when H0A0 quarterly returns (x-axis) are 1.35% or lower**. Annualized, this would approximate 5.4% total returns for the broad high yield index, a modestly sub-coupon type of year on an historical basis, and consistent with what we expect to see in 2021. In fact, year-to-date total returns through April 30 favor JVC4 over H0A0 (2.4% vs. 2.0%, respectively), and our FY21 estimated total return model (see **Appendix Table #1** for further details) similarly favors JVC4 over H0A0 (6.0% and 5.2%, respectively).





using quarterly return data since 1997

Source: SKY Harbor, ICE Data Indices

We next augmented our data set of return differentials (the short duration high yield index, or JVC4, <u>less</u> the broad high yield index, H0A0) with two additional variables - spread levels at the beginning of the rolling 12-month return period <u>and</u> the change in 10-year treasury yields during the 12-month return period. For simplicity, we will call rolling 12-month return periods that begin with spreads in the bottom quartile of historical observations (< 376 bps) as "Low OAS (Option-Adjusted Spread)" periods, and rolling 12-month return periods during which Treasury yields rise by a top quartile amount (> 31 bps) as "Rising Rate" periods.

Using the full data set (all 280 observations, going back to January '98), rolling 12-month returns favor H0A0 by ~ 60 bps, and volatility capture of JVC4 is approximately two-thirds of the broad high yield market. When we limit the dataset to only "Low OAS" periods (70 observations), rolling 12-month returns favor H0A0 by only 2 bps, and volatility capture of JVC4 is reduced to 58%. When we further limit the data set to concurrent "Low OAS" and "Rising Rate" periods (14 observations), JVC4 has a return advantage of ~ 38 bps and captures only 56% of the return volatility of H0A0. As such, we would say that **H0A0's subsequent total return advantage over JVC4 (on average ~ 60 bps per 12-month rolling period) erodes almost entirely when starting spreads are weakest quartile ("Low OAS" environments), and turns into a return <u>dis</u>advantage when you further add rising rates into the outlook ("Low OAS" <u>and</u> "Rising Rate" environments). Furthermore, we find that JVC4 volatility capture remains low (50% to 70%) in all periods. This dynamic underpins our bias toward short duration high yield at present, as H0A0 spreads are currently bottom quartile (328 bps at the end of April '21), and consensus expectations call for the 10-year Treasury yield to rise ~ 35 bps in the coming quarters.**

Rolling 12-month Return Differentials (JVC4 less H0A0)

based on monthly returns since January 1998







Source: SKY Harbor, Ice Data Indices, Bloomberg

Over the very long run, broad high yield (we use index H0A0 as our proxy) returns have outpaced the short duration high yield subset (we use index JVC4 as our proxy) by ~ 75 bps on an annualized basis. At the same time, the volatility capture of JVC4 has been ~ 70% of H0A0, leading to a superior Sharpe Ratio. Though performance varies throughout the cycle, the broad market (H0A0) total return advantage tends to increase as a recession end date approaches, and accelerates through the early phases of a recovery. The short duration subset of the market (JVC4) tends to outperform in late expansionary periods and through recessionary troughs. Performance in between the two cycle extremes is a bit more nuanced, but our analysis suggests that JVC4 is best positioned (generating better absolute and risk-adjusted returns) in rising rate environments that begin with high yield spreads in the tightest quartile of historical observations. This dynamic underpins our bias toward short duration high yield over the next year, as H0A0 spreads are currently bottom quartile (328 bps at the end of April '21), and consensus expectations call for the 10-year Treasury yield to rise ~ 35 bps in the coming quarters.

Definitions of Indexes and Terms

Basis points (bps) refer to a common unit of measure for interest rates and other percentages in finance. One basis point is equal to 1/100th of 1%, or 0.01%, or 0.0001, and is used to denote the percentage change in a financial instrument.

Beta is a measure of the volatility, or systematic risk, of a security or a portfolio in comparison to the market as a whole. A beta of 1 indicates that the security's price will move with the market. A beta of less than 1 means that the security will be less volatile than the market. A beta of greater than 1 indicates that the security's price will be more volatile than the market. For example, if a stock's beta is 1.2, it's theoretically 20% more volatile than the market.

Duration is a measure of the sensitivity of the price of a bond or other debt instrument to a change in interest rates.

ICE BofA 1-5 Year BB-B US Cash Pay High Yield Constrained Index (ticker JVC4) contains all securities in The ICE BofA US Cash Pay High Yield Index that are rated BB1 through B3, based on an average of Moody's, S&P and Fitch, with a maturity less than five years, but caps issuer exposure at 2%. ICE BofA US High Yield Index: An index (ticker H0A0) that tracks the performance of US dollar denominated below investment grade rated corporate debt publicly issued in the US domestic market. The index is further defined by sub-indexes associated with credit ratings (e.g., the CCC sub-index). Option-Adjusted Spread (OAS) is the measurement of the spread of a fixed income security rate and the risk-free rate of return, which is then adjusted to take into account an embedded option.

Sharpe Ratio is a risk-adjusted measure developed by William F. Sharpe, calculated using annualized standard deviation and excess return to determine reward per unit of risk. The higher the Sharpe Ratio, the better the fund's historical risk-adjusted performance (assumed risk-free rate is 0%).

Important Disclosures and Disclaimers

Past performance does not guarantee future results. The referenced indices are shown for informational purposes only and are not meant to represent the AXS Investments Funds. Investors cannot directly invest in an index.

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