

Weekly Briefing

Executive Summary

Historically, US high yield ETFs have underperformed the most commonly referenced market indices, and typically rank 3rd quartile when comparing risk-adjusted returns to those of a subset of active managers. Additionally, SKY Harbor's analysis suggests ETFs are poorly positioned to take advantage of the key opportunities and defend against the key risks found at the intersection of our top-down and bottom-up research process. As such, we think historical risk-adjusted returns make a compelling case for active management in US high yield, and believe the ability to position portfolios to capture SKY Harbor's highest-conviction market themes – which ETFs are unable to do – will prove beneficial for our relative performance on a go-forward basis.

SKYView: Active vs. Passive Management

In past *Weekly Briefings*, SKY Harbor has compared performance of the largest US high yield ETFs (HYG and JNK, along with short duration subsets SHYG and SJNK) to ICE BofA US High Yield indices (both broad market and short duration), as well as a dataset of active high yield managers, all in an effort to gauge relative performance between active and passive strategies within our market niche. Past analysis found that US high yield ETFs were unfavorable proxies for broad and short duration US high yield market risk, as demonstrated by weak total return capture and heightened volatility in comparison to the ICE BofA US High Yield Index (ticker H0A0) and its short duration high yield subset (ticker JVC4). In this research piece, we update our data set to include a tumultuous 2020, and expand upon this analysis through the identification of key opportunities we believe will drive improved risk-adjusted returns in the current market environment. These opportunities, in our view, stem from pricing inefficiencies within parts of the market largely ignored by ETFs.

By way of background, the two largest ETFs in the US high yield space – iShares iBoxx High Yield Corporate Bond ETF (ticker: HYG) and SPDR Bloomberg Barclays High Yield Bond ETF (ticker: JNK) – have grown materially since inception (late 2007), and together now possess assets in excess of \$32bn. The two largest ETFs in the short duration US high yield space – iShares 0-5 Year High Yield Corporate Bond ETF (ticker: SHYG) and SPDR Bloomberg Barclays Short Term High Yield Bond ETF (ticker: SJNK) – have grown since 2013, and together now possess assets of nearly \$9bn. In aggregate, these four ETFs account for ~ 3% of the size of the US high yield market, with performance data (going back many years and spanning both up and down markets) robust enough to allow for a comparison with appropriate index and active manager return streams.

Short Duration US High Yield ETFs vs. the ICE BofA 1-5 Year BB-B US High Yield Constrained Index (JVC4)

We preface this section of our analysis with the disclosure that neither SHYG nor SJNK use the same benchmark as most active short duration US high yield managers. The benchmark for SHYG is the Markit iBoxx USD Liquid High Yield 0-5 Index, a market capitalization-weighted index consisting of liquid USD high yield bonds maturing within 5 years, while the benchmark for SJNK is the Bloomberg Barclays US High Yield \$350mn Cash Pay 0-5 Yr 2% Capped Index, an index designed to track a more liquid subset of USD-denominated high yield securities. Active high yield managers, on the other hand, typically use one of several short duration high yield market indices created by ICE, or are non-benchmarked strategies (typically seeking a % capture of the broad high yield market returns with limited volatility). For this analysis, we used the ICE BofA 1-5 Year BB-B US High Yield Constrained Index (JVC4), one of the most commonly used benchmarks in the active space, as a proxy for the short duration US high yield index. Since a significant portion of the buyer base may view SHYG and SJNK as alternatives to actively managed short duration high yield exposure, we believe the comparison is a fair one to make.

Using data going back to 2014 (the first full year in which both ETFs have available statistics), SKY Harbor compared performance of the short duration high yield ETFs to JVC4 (index), presented below in terms of relative capture.

ICE BofA 1-5 Yr BB-B US High Yield Index (JVC4) vs. iShares 0-5 Yr High Yield Corporate Bond ETF (SHYG) and SPDR Bloomberg Barclays Short Term High Yield Bond ETF (SJNK)

monthly data, since 2014

Returns	2014	2015	2016	2017	2018	2019	2020	U/P vs. Index % of Periods
JVC4 Total Return	1.7%	-3.0%	12.2%	5.4%	0.7%	11.0%	3.6%	
SHYG Capture	19%	125%	102%	95%	3%	90%	89%	86%
SJNK Capture	-73%	209%	116%	98%	-40%	86%	164%	71%

Standard Deviation of Returns	2014	2015	2016	2017	2018	2019	2020	U/P vs. Index % of Periods
SHYG Capture	109%	107%	73%	118%	122%	133%	95%	71%
SJNK Capture	121%	117%	113%	126%	132%	132%	101%	100%

Source: SKY Harbor, ICE BofA Indices, Bloomberg

Note: ETF returns are calculated on a price basis; both JVC4 and ETF returns and standard deviations are calculated using monthly data

As demonstrated above, on an annualized basis using monthly returns from the start of 2014 until the end of 2020, ETF performance has been weak relative to the ICE BofA 1-5 Year BB-B US High Yield Constrained Index. In fact, **over the seven-year data set shown above, SHYG and SJNK underperformed JVC4 in 86% and 71% of annual periods, respectively.** Additionally, we would note that total returns are not the only metric investors are concerned with – the volatility of those returns is also a meaningful part of this comparison. Looking at annualized standard deviation of returns, again using monthly data, we find that both ETFs exposed the buyer to greater volatility relative to JVC4 in most years (all years in the case of SJNK). **In summary, we would conclude that on an annualized basis from 2014 to 2020, ETFs appear to pick up, on average, ~ 85% of JVC4 total returns with ~ 105% of the index volatility.**

We concede, however, that this comparison is somewhat unfair. Investors cannot get direct exposure to the ICE BofA 1-5 Year BB-B US High Yield Constrained Index, and index performance benefits from no management fee, no transaction costs (frictional costs can be quite high, especially in less liquid markets), and an unlimited ability to gain exposure to any and all securities, even those that are illiquid and unavailable for actual purchase. Recognizing this, we attempt to level the playing field, and continue our analysis below, this time comparing ETFs to active managers.

Short Duration US High Yield ETFs vs. Active Managers

Using the eVestment database, SKY Harbor created a data set of > 30 managers with short duration US high yield strategies. Below, we compare returns (net of fees) of the median manager within our data set to both SHYG and SJNK. **The data below shows that short duration ETFs underperformed the median active manager in four of seven years tested (57% of the time), and demonstrated greater volatility in six of seven years (86% of the time).**

Median Active Short Duration HY Manager vs. iShares 0-5 Yr High Yield Corporate Bond ETF (SHYG) and SPDR Bloomberg Barclays Short Term High Yield Bond ETF (SJNK)

monthly data, since 2014

Returns	2014	2015	2016	2017	2018	2019	2020	U/P vs. Index % of Periods
Median Short Duration Manager (net of fees)	1.2%	-0.3%	9.7%	4.7%	0.3%	12.3%	2.3%	
SHYG Capture	28%	1175%	129%	109%	6%	81%	136%	57%
SJNK Capture	-108%	1962%	146%	112%	-79%	77%	250%	57%

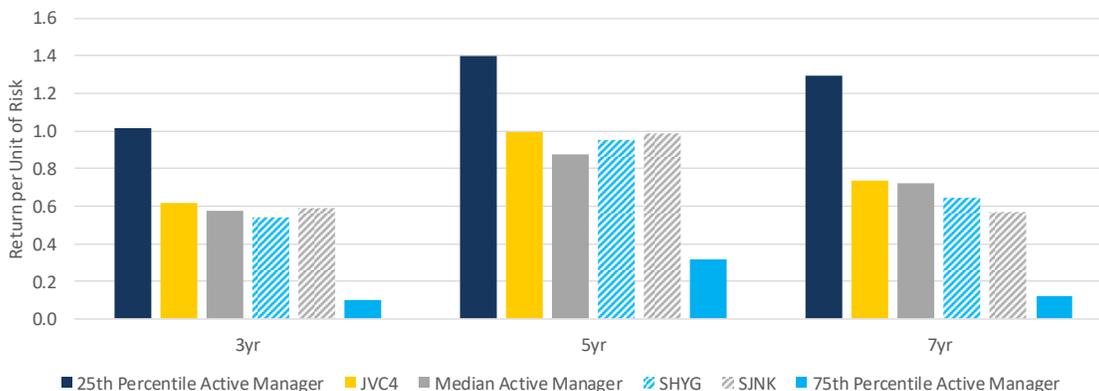
Standard Deviation of Returns	2014	2015	2016	2017	2018	2019	2020	U/P vs. Index % of Periods
SHYG Capture	121%	151%	107%	135%	140%	127%	91%	86%
SJNK Capture	135%	165%	167%	145%	152%	127%	97%	86%

Source: SKY Harbor, ICE BofA Indices, Bloomberg, eVestment Global Database; data through December 31, 2020
 Note: ETF returns are calculated on a price basis; JVC4, ETF, and manager returns and standard deviations are calculated using monthly data

Below, we compare risk-adjusted ETF returns to the index and the median active manager from our data set, and further augment our comparison to include 25th and 75th percentile active managers (gateway to top and bottom quartiles). On a rolling basis through the end of 2020, both SHYG and SJNK have provided weaker risk-adjusted returns in all periods relative to the 25th percentile manager and index in our data set. **As such, we would say that short duration high yield ETF risk-adjusted returns are in line with 3rd quartile active manager performance over the long run.**

Risk-Adjusted Returns

monthly data through December 31, 2020



Source: SKY Harbor, ICE Data Indices, Bloomberg, eVestment Global Database; data through December 31, 2020

US Broad Market High Yield ETFs vs. the ICE BofA US High Yield Index (H0A0)

We turn our attention now to the broad market US High Yield ETFs (US HY ETFs not constrained by duration). Once again, we preface this section of our analysis with the disclosure that neither HYG nor JNK use the same benchmark as most active US high yield managers. The benchmark for HYG is the iBoxx USD Liquid High Yield Index, a market capitalization-weighted index consisting of liquid USD high yield bonds, while the benchmark for JNK is Bloomberg Barclays High Yield Very Liquid Index, an index designed to track a more liquid subset of USD-denominated high yield securities. Active high yield managers, on the other hand, typically use one of several broad high yield market indices created by ICE, Barclays, JP Morgan, or Citi. For this analysis, we used the ICE BofA US High Yield Index (H0A0), one of the most commonly used benchmarks in the active space, as a proxy for the US high yield index. Since a significant portion of the buyer base views HYG and JNK as an alternative to active high yield management exposure, we believe the comparison is a fair one to make.

Using data going back to 2008 (the first full year of broad market ETF returns available), we compare performance of the high yield ETFs to H0A0, presented below in terms of relative capture.

ICE BofA US High Yield Index (H0A0) vs. iShares iBoxx High Yield Corporate Bond ETF (HYG) and SPDR Bloomberg Barclays High Yield Bond ETF (JNK)
monthly data, since 2008

Returns	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	U/P vs. Index % of Periods
H0A0 Total Return	-26.4%	57.5%	15.2%	4.4%	15.6%	7.4%	2.5%	-4.6%	17.5%	7.5%	-2.3%	14.4%	6.2%	
HYG Capture	67%	50%	78%	154%	75%	78%	76%	108%	77%	81%	89%	98%	73%	77%
JNK Capture	94%	65%	93%	117%	86%	79%	31%	146%	82%	87%	145%	103%	80%	77%

Standard Deviation of Returns	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	U/P vs. Index % of Periods
HYG Capture	117%	152%	134%	127%	166%	120%	117%	104%	81%	90%	102%	115%	90%	77%
JNK Capture	135%	161%	139%	129%	174%	117%	128%	113%	90%	96%	108%	121%	97%	77%

Source: SKY Harbor, ICE Data Indices, Bloomberg
Note: ETF returns are calculated on a price basis; both H0A0 and ETF returns and standard deviations are calculated using monthly data

As demonstrated above, on an annualized basis using monthly returns from the start of 2008 until the end of 2020, ETF performance has been weak relative to the ICE BofA US High Yield Index. In fact, **over the thirteen-year data set shown above, HYG and JNK only outperformed the index in three periods (they underperformed 77% of the time)**. Additionally, we would note that annualized standard deviation of returns for ETFs expose the buyer to greater volatility relative to H0A0 in every year except 2016, 2017, and 2020 (i.e., ETFs are more volatile than the index 77% of the time). **In summary, we would conclude that on an annualized basis through the duration of our data set, broad market US high yield ETFs appear to pick up, on average, ~ 75% of the index return, with ~ 115% of the index volatility.**

For the same reasons as cited in our short duration high yield analysis, we must again concede that this comparison is somewhat unfair given inherent advantages of indices (no management fee, no transaction costs, and an ability to gain exposure to any and all securities, even those that are illiquid and unavailable for actual purchase). Again, we attempt to level the playing field, and continue our analysis below, this time comparing broad market US high yield ETFs to active managers.

US Broad Market High Yield ETFs vs. Active Managers

Using the eVestment database, SKY Harbor created a data set of > 40 managers with broad US high yield strategies. Below, we compare returns (net of fees) of the median manager within our data set to both HYG and JNK. **The data below shows that broad high yield ETFs underperformed the median active manager in at least ten of thirteen years tested (77% and 85% of the time for HYG and JNK, respectively), and demonstrated greater volatility in most periods.**

Median Active High Yield Manager vs. iShares iBoxx High Yield Corporate Bond ETF (HYG) and SPDR Bloomberg Barclays High Yield Bond ETF (JNK)
monthly data, since 2008

Returns	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	U/P vs. Index % of Periods
H0A0 Total Return	-22.6%	48.5%	14.8%	4.0%	15.3%	7.5%	2.3%	-3.9%	14.4%	7.1%	-2.9%	14.7%	5.6%	
HYG Capture	78%	59%	80%	169%	76%	76%	83%	129%	93%	85%	69%	96%	80%	77%
JNK Capture	109%	77%	96%	128%	88%	78%	34%	173%	100%	91%	111%	101%	88%	85%

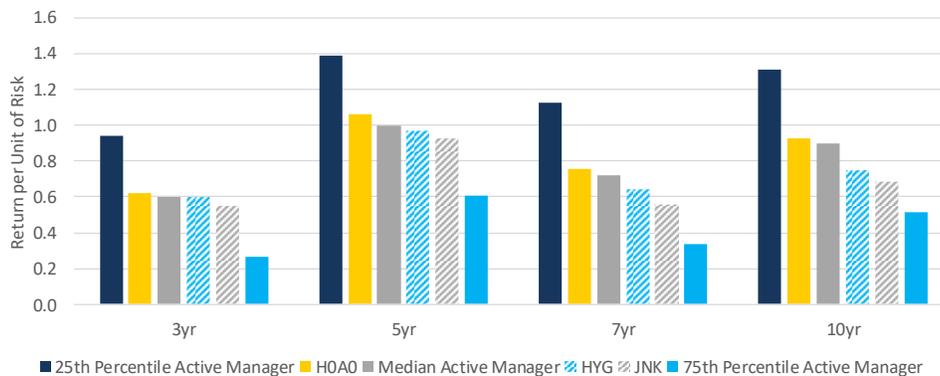
Standard Deviation of Returns	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	U/P vs. Index % of Periods
HYG Capture	141%	194%	132%	130%	160%	119%	118%	107%	92%	93%	101%	118%	92%	77%
JNK Capture	162%	206%	137%	131%	167%	117%	130%	117%	103%	99%	107%	123%	100%	92%

Source: SKY Harbor, ICE BofA Indices, Bloomberg, eVestment Global Database; data through December 31, 2020
Note: ETF returns are calculated on a price basis; H0A0, ETF, and manager returns and standard deviations are calculated using monthly data

As further demonstrated below, both HYG and JNK have provided weaker risk-adjusted returns in all rolling periods relative to the 25th percentile active manager (gateway to top quartile) and the H0A0 index. **As such, we would say that high yield ETF risk-adjusted returns are in line with 3rd quartile active manager performance over the long run.** Also, note that active manager performance data is net of management fees, so the comparison accurately represents USD-denominated realized returns from the perspective of an investor.

Risk-Adjusted Returns

monthly data through December 31, 2020



Source: SKY Harbor, ICE Data Indices, Bloomberg, eVestment Global Database; data through December 31, 2020

SKY Harbor F.A.S.S.T. Process Output: Key Risks & Opportunities

SKY Harbor uses the output of our monthly FASST meeting to identify key risks and opportunities in the current market environment. While there are numerous risks on the horizon – most notably those associated with rising interest rates, inflation, and geopolitical tensions – we remain focused on what we believe are significant opportunities in the US high yield space that remain insulated from factors that investors are most concerned about. In particular, we have positioned our portfolios to benefit from the following three themes:

- Favor small bonds (<\$350mm in size) over large bonds (>\$1bn in size) given historic spread dislocation
- Favor sectors with disproportionate leverage to manufacturing growth relative to foreign revenue exposure
- Favor the shorter duration subset of the high yield index given the threat of rising rates and meager term risk compensation relative to historical norms

In our view, high-conviction risk taking in the context of overweighting these macro themes should generate alpha in the coming quarters, giving active managers an advantage over passive funds. In fact, due to both constraints and preferences, we find ETFs (we use HYG and JNK, the two largest, as proxies) structurally underweight some of these themes.

Summary Conclusion

- SKY Harbor's examination of US High Yield ETF performance leaves us biased toward active management; ETFs have consistently underperformed indices and have historically been 3rd quartile performers in the context of active manager risk-adjusted returns
- On an annualized basis through the time period included in our data set, we find Short Duration US High Yield ETFs (SHYG, SJNK) have captured ~ 85% of the total return of the ICE BofA 1-5yr US High Yield Constrained Index (JVC4) with ~ 105% of the volatility
- In comparison to a database of Short Duration US High Yield active managers, SHYG and SJNK have typically generated 3rd quartile risk-adjusted returns
- On an annualized basis through the time period included in our data set, we find Broad Market US High Yield ETFs (HYG, JNK) have captured ~ 75% of the total return of the ICE BofA US High Yield Index (HOAO) with ~ 115% of the volatility
- In comparison to a database of Broad Market US High Yield active managers, HYG and JNK have typically generated 3rd quartile risk-adjusted returns
- SKY Harbor's analysis suggests ETFs are poorly positioned to take advantage of the key opportunities and defend against the key risks in the market as we see them
- Key opportunities in the current market environment - as identified through SKY Harbor's F.A.S.S.T. process - include attractive premiums for smaller bonds and upside earnings potential for credits with disproportionate leverage to manufacturing growth
- Key risks in the current market environment - as identified through SKY Harbor's F.A.S.S.T. process - include rising geopolitical uncertainty, insufficient compensation for term risk amidst inflationary pressures, and rising tax rates to fund infrastructure programs
- SKY Harbor believes historical risk-adjusted returns make a compelling case for active management in US high yield, and we believe the ability to position portfolios to capture our highest-conviction market themes will prove beneficial over the intermediate term (and note that ETFs are unable to position in this manner).

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