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SKY HARBOR
CAPITAL MANAGEMENT

Revisiting our US High Yield Outlook After A Weak Start to 2022

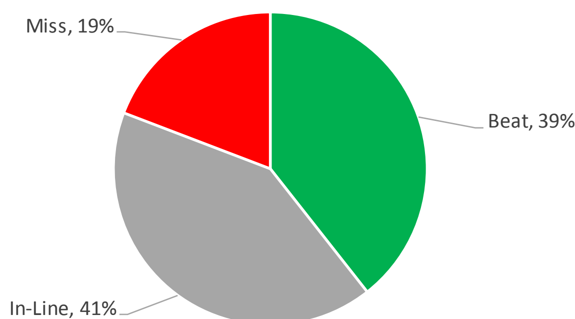
Executive Summary

- Q4'21 earnings beats continue to outpace earnings misses, with above-average EBITDA growth expected for FY22
- We expect index net leverage to improve to 3.6x by the end of 2022 (4.1x now); expect interest coverage to hit an all-time record of 5.6x
- We expect a benign default rate environment to persist, with FYE22 and FYE23 estimates of 1.6% and 2.0%, respectively (4.4% long-term avg)
- Recovery rates on defaulted issuers should remain elevated in the 48% range, above the long-term average of 41%
- Default losses are expected to be ~ 100 bps for the year (broad high yield index); excess spread, assuming 6 rate hikes in '22, should end up being ~ 215 bps; this informs our spread target of 315 bps for the broad index (currently 366 bps)
- The corporate credit curve is very flat; compensation to take on duration risk is near historic lows; credit and liquidity risk better compensated
- We remain OW credit risk (better carry, lower duration, higher spread cushion) and UW duration (rates still expected to rise)
- Dramatic rate moves have pushed year-to-date total returns into negative territory; we expect returns to be positive by the end of the year
- Note that rolling 12-month periods in which interest rates rise and default rates remain below-average have historically been positive (96% of the time for short duration high yield, 94% of the time for broad high yield)
- Our projection model implies +1.7% and +3.7% total returns for broad and short duration indices, respectively, in 2022
- Our projection model implies +6% total returns for both versions of high yield on a 12-month forward-looking basis
- We expect volatility to tick up in 2022 (relative to 2021), but short duration high yield should still offer greater stability (~ 60% capture relative to H0A0 through all market conditions)
- If our market timing is wrong, note that SKY short duration portfolios have rarely exhibited average annualized returns below +2.8% over rolling three-year periods; investing just before acute selloffs rarely causes investor total returns to be negative for more than 8 months
- Key Risk #1: Geopolitical tension – but note that these types of events tend to be short-lived
- Key Risk #2: Fed Mistake – we believe the Fed will continue to be data-dependent, somewhat reducing the potential for a policy mistake
- Key Risk #3: Rising Rates – high yield has typically demonstrated negative empirical duration, with spreads tightening (prices going up) when Treasury yields rise; we believe this relationship should occur in 2022, though a several month lag often arises

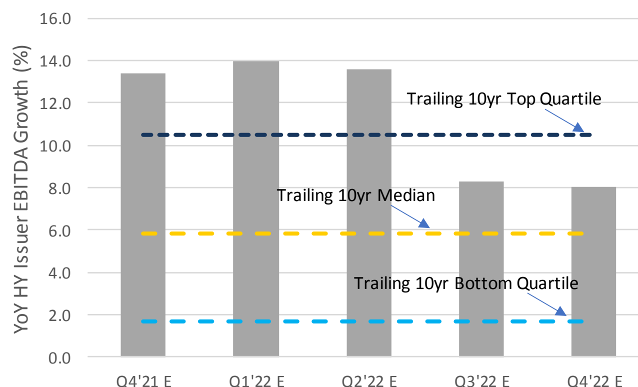
Fundamentals Continue to Improve

At the time of writing, we estimate that ~ 40% of US high yield index constituents (we use the ICE BofA US High Yield Index, ticker H0A0, as our proxy) have reported Q4'21 results. Though nearly 70% of earnings calls thus far have mentioned inflationary headwinds (supply chains, labor, or both), results continue to trickle in that are better than consensus expectations. In fact, only 19% of reports thus far were considered to represent an earnings "miss." Updating our EBITDA growth model, which is highly influenced by measures of CEO confidence, industrial production, shipping indices, and the shape of the yield curve, we continue to envision an above-average type of year. **More specifically, we think EBITDA growth of ~ 10% in 2022 is achievable – only half of what we saw in 2021 (largely due to easy prior year comps), but well above the 10-year median of ~ 6%**. Historically speaking, earnings growth is consistent with credit metric improvement and lower default rates, which positively influence our spread model.

Q4'21 EBITDA Surprise
~ 40% of index has reported thus far



Elevated Constituent EBITDA Growth Expected to Persist
SKY Harbor Estimates

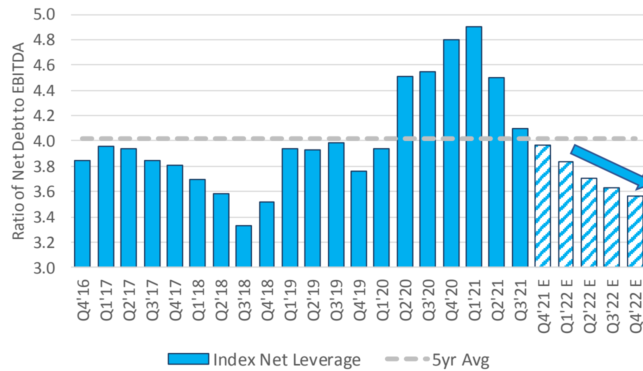


Source: SKY Harbor, BofA Merrill Lynch, JP Morgan, ICE Data Indices, Bloomberg, Capital IQ

Index net leverage, which had declined to ~ 4.1x at the end of Q3'21 earnings season, should soon fall below the pre-pandemic level of 3.9x. Assuming only modest amounts of incremental debt (to fund conservative dividends and growth capex projects), anticipated EBITDA growth should push index net leverage down to 3.6x by year end, well below long-run average levels. At the same time, **the index coverage ratio should exceed 5.6x before the end of 2022, even after factoring in modest headwinds associated with the impact of higher rates on corporate interest expense**. Should our estimates prove accurate, interest coverage metrics – the strongest determinant of future default rates – would reach the loftiest level in our historical data set (goes back to Q1'00).

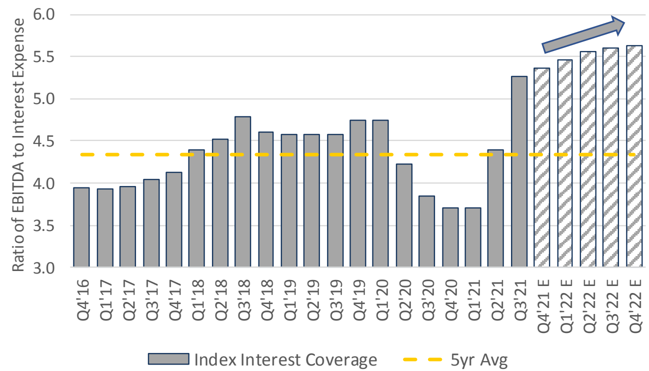
US High Yield Net Leverage Ratio

5 year time series; striped bars are SKY Harbor projections



US High Yield Coverage Ratio

5 year time series; striped bars are SKY Harbor projections

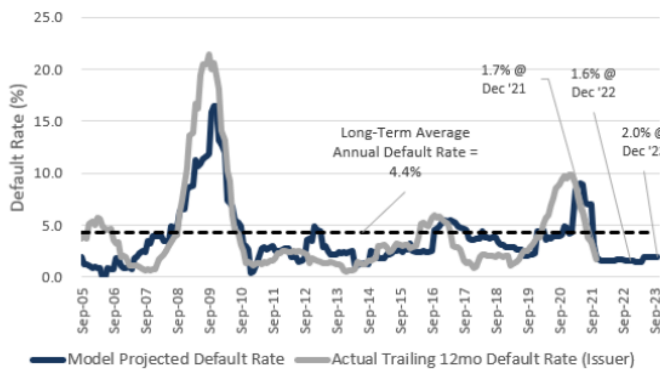


Source: SKY Harbor, BofA Merrill Lynch, Bloomberg, Capital IQ

A function of credit metric trends (improving), the index distress ratio (low), fallen angel / rising star migration rates (skewed to upgrades), and lending conditions (currently quite loose), **we project index default rates will remain quite benign over the next 8 quarters, with only slight upward pressure between now (~ 1.7%) and the end of 2023 (~ 2.0%).** Furthermore, recovery rates on defaulted issues are expected to remain elevated, consistent with historical trends when the absolute default rate remains low and observed defaults are not concentrated in one or two sectors.

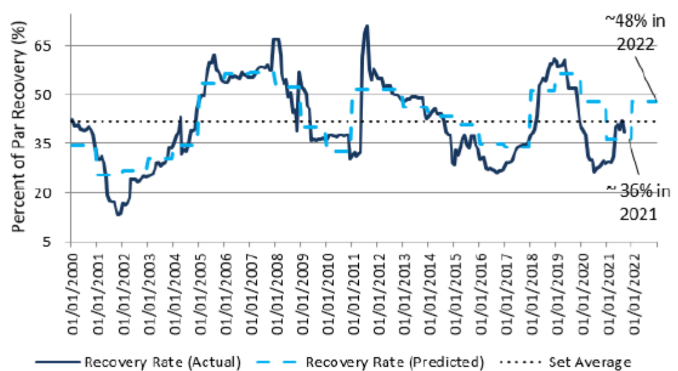
US HY Default Rates Expected to Remain Modest

monthly data



US HY Recovery Rates Expected to Improve

monthly data



Source: SKY Harbor, ICE Data Indices, BofA Merrill Lynch, Federal Reserve, Moody's

Rates Continue to Influence Asset Valuations

Theoretically speaking, high yield spreads should compensate investors for expected credit losses, which in our market equates to the default rate multiplied by the loss given default (i.e. 1 - recovery rate). So, by the end of 2022, the default loss expectation embedded in spread levels – using our projection models – should be 2.0% (the SKY '23 default rate model estimate) multiplied by 50% (1 minus the SKY '23 recovery rate estimate of 50%). **Note that this level of expected default loss (~ 100 bps) is unchanged from our internal estimates over the last several months**.

Historically, investors have demanded, on average, another 300 or so basis points of excess spread above and beyond what is associated with expected default losses. This premium, however, can vary widely through the cycle. As demonstrated below, H0A0 excess spread has ranged from -134 to +717, with both a median and mean of ~ 300 bps, over the last decade. The trailing 5yr and 3yr averages have been lower, at 255 bps and 200 bps, respectively. At extreme levels, excess spreads are likely impacted by market technicals, along with investor error in estimating expected default and/or recovery rates on a go-forward basis. However, after excluding tail events, we find excess spread levels to be more readily projectable based on economic and market variables. Using statistical analysis on our monthly dataset collected over the last decade, we find that excess spread demanded by the market is typically a function of prevailing risk-free rates, yields offered by ancillary assets classes, FX hedging costs, and credit fundamentals. Incorporating estimates for these values into our model, **we think excess spreads should be ~ 215 bps by the end of the year, a value admittedly below the long-run average of 300 bps, but consistent with trailing 3-year averages (~ 200 bps).** Note that this value has risen since we published our 2022 HY Outlook (~ 180 bps, as of December '21), largely due to a consensus view that we will see the Fed implement more rate hikes by year end.

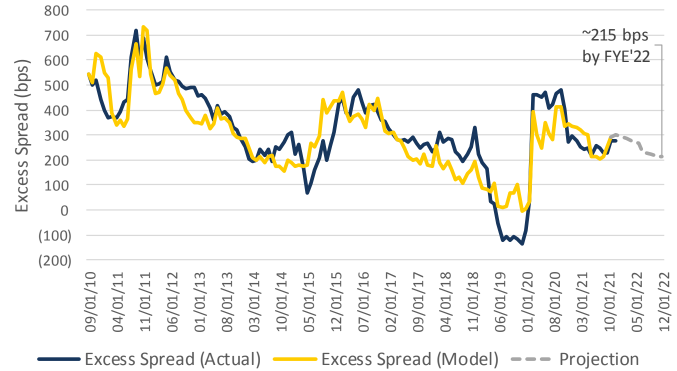
SKY Harbor Default Loss Sensitivity Analysis

principal loss, in bps (default rate * 1-recovery rate)

2022	Default Rate						
Recovery Rate	0.9%	1.1%	1.4%	1.6%	1.9%	2.1%	2.4%
55.5%	36	47	57	68	79	89	100
53.0%	38	50	61	72	83	95	106
50.5%	40	52	64	76	88	100	112
48.0%	43	55	68	80	93	105	118
45.5%	45	58	71	84	97	110	123
43.0%	47	61	74	88	102	116	129
40.5%	49	63	78	92	106	121	135
2023	**Default Rate**						
Recovery Rate	1.3%	1.5%	1.8%	2.0%	2.3%	2.5%	2.8%
57.5%	53	64	74	85	96	106	117
55.0%	56	68	79	90	101	113	124
52.5%	59	71	83	95	107	119	131
50.0%	63	75	88	100	113	125	138
47.5%	66	79	92	105	118	131	144
45.0%	69	83	96	110	124	138	151
42.5%	72	86	101	115	129	144	158

SKY Harbor Excess Spread Model

OAS after accounting for credit losses



100 bps of credit losses + **215 bps** excess spread = **315 bps** spread target

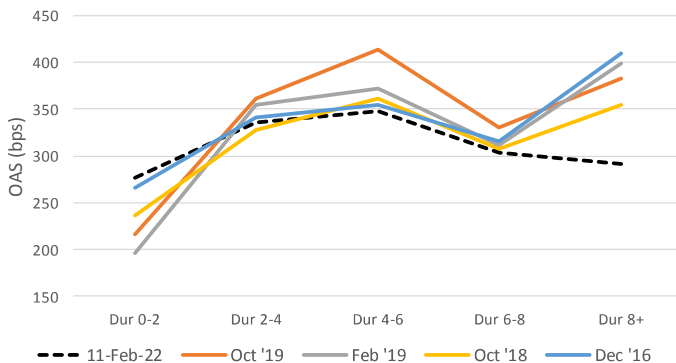
Source: SKY Harbor, ICE Data Indices

Prefer to Stay Shorter Duration; Willing to Take Credit Risk

The corporate credit curve is exceptionally flat at present, particularly when compared to other points in time in which the average level of index OAS is about the same as it is today. At the same time, our factor model (below and to the right) shows that compensation to take on term risk has increased since December 31, largely the result of longer-duration underperformance during the January/February selloff. However, **term risk compensation remains below the trailing 5-year average, and bottom quartile over the longer run**. As such, we view the recent rates-led high yield selloff as providing an opportunity to reduce our duration underweight via the purchase of some of the most penalized bonds, but still believe **an overall underweight to duration in general as being appropriate given higher anticipated Treasury yields and limited term risk compensation**.

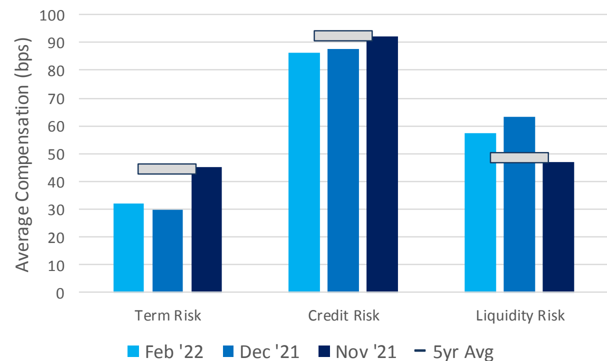
Credit Curve Flatter Now Than in Prior Periods of Similar Index OAS

point in time, constrained index (H0A4)



Term Risk Compensation Up from Dec But Still Below Average

regression-implied spread compensation by risk factor

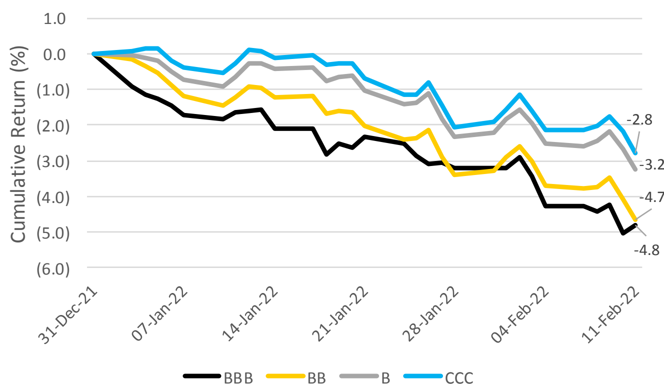


Source: SKY Harbor, ICE Data Indices

This trade, we would add, has worked out well thus far in 2022. As demonstrated below, **factor penalization has been most prevalent for duration, which accounts for most of the YTD negative total return for the index**. Note, however, that greater credit risk and smaller issues – two overweights in our portfolio – have been additive to total returns, a trend we expect to persist.

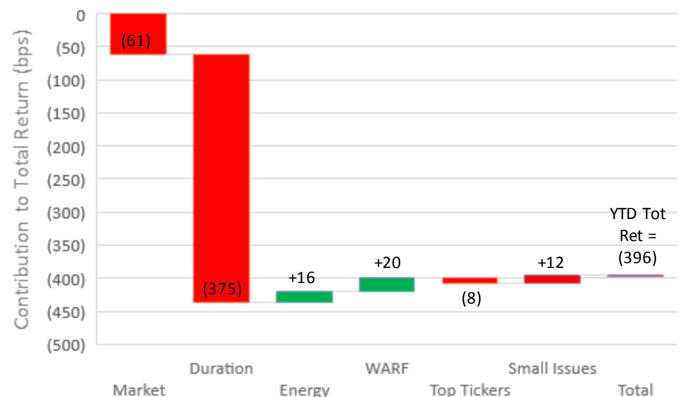
Negative Year-to-Date Returns; Lower-Quality Faring Best

YTD total return through Feb 11, 2022



US High Yield Factor Contribution to Return

YTD data through February 11, 2022

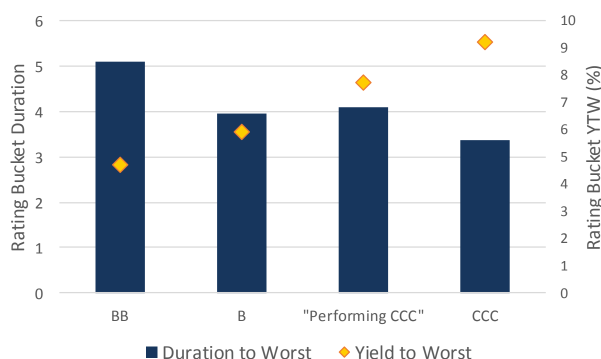


Source: SKY Harbor, ICE Data Indices

Our bias to lower-rated credit is driven by several factors. First, the average duration of the BB sub-index far exceeds both single-Bs and CCCs. The resulting spread cushion (percentage of yield that is made up of spread), historically an important determinant of whether or not high yield credit can absorb higher rates, is also stronger outside of the highest-rated portion of the market. Finally, carry is superior among lower-rated credits, particularly important as we think carry – not capital gain – will be the dominant driver of total return in 2022.

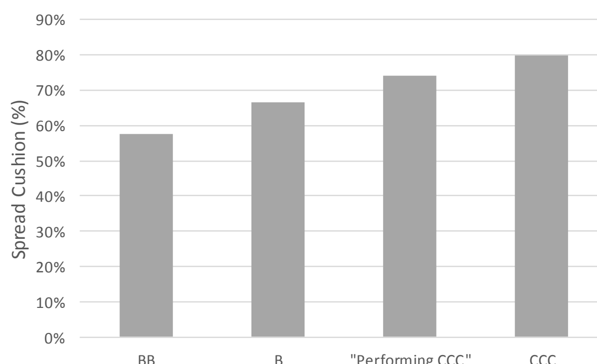
BB-rated Credit Has Higher Duration, Lower Carry

data as of February 11, 2022



Spread Cushion is Weakest for BB-rated Credit

percentage of yield that is made up of spread; data as of February 11, 2022



Source: SKY Harbor, ICE Data Indices

Total Return Simulation and Volatility Outlook

As always, we present the BofA Merrill Lynch total return model below, though we populate unknown datapoints with our internal projections for FYE22. Also, note that these return projections are for the broad US high yield market (the ICE BofA US High Yield Index, ticker H0A0) and the short duration US high yield market (the ICE BofA 1-5yr BB-B US Cash Pay High Yield Constrained Index, ticker JVC4), and not our internal portfolios. **Despite a difficult start to 2022, we still anticipate positive index total returns for the full year.**

ICE BofAML US High Yield Index - H0A0	HY	5yr Trsy
Current Spread	366	186
Target	315	205
Predicted Change	-51	19
Duration	4.1	
Index Price	98.4	
Avg Par Coupon	567	
Tsy Change	19	
Total Change in Yield	-32	
Capital Gain	128	
Period Multiplier	0.88	
Current Yield	566	
Default Rate	1.60	
Price (default universe)	84.8	
Credit Loss	69	
Expected Periodic Return (2/11/22 to 12/31/22)	5.7 %	
YTD Return @ 2/11/22	-4.0	
Implied Total Return (FY2022)	**1.7 %**	

ICE BofAML 1-5 Year BB-B US Cash Pay High Yield Constrained Index - JVC4	SD HY	3yr Trsy
Current Spread	322	172
Target	280	180
Predicted Change	-42	8
Duration	2.3	
Index Price	101.6	
Avg Par Coupon	609	
Tsy Change	8	
Total Change in Yield	-34	
Capital Gain	77	
Period Multiplier	0.88	
Current Yield	593	
Rating Migration Rate	1.00	
Price (downgrade universe)	95.0	
Downgrade Loss	26	
Expected Periodic Return (2/11/22 to 12/31/22)	5.8 %	
YTD Return @ 2/11/22	-2.1	
Implied Total Return (FY2022)	**3.7 %**	

Source: BofA Merrill Lynch Model, SKY Harbor variable estimates

On a 12-month forward-looking basis, we think returns can be even stronger, by virtue of a wider starting spread relative to the beginning of 2022, and markets pricing in treasury yields that have come increasingly closer to consensus expectations. See our return walk below, which incorporates our model simulation from Feb 11, 2022 to Feb 10, 2023.

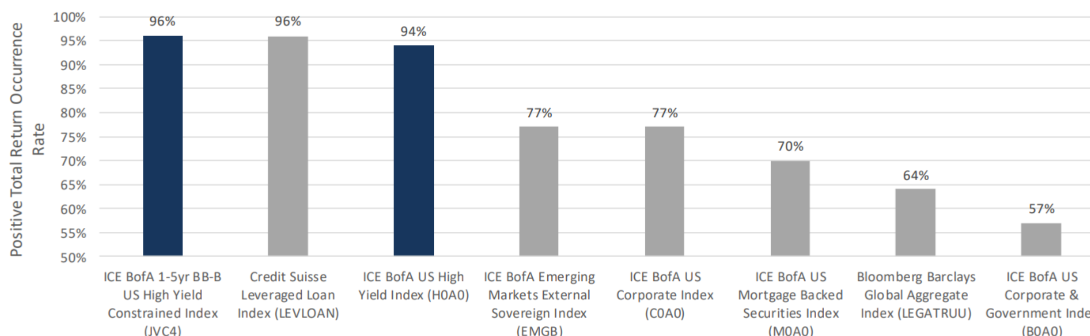
ICE BofAML US High Yield Index - H0A0	HY	5yr Trsy
Current Spread	366	186
Target	312	212
Predicted Change	-54	26
Duration	4.1	
Index Price	98.4	
Avg Par Coupon	567	
Tsy Change	26	
Total Change in Yield	-28	
Capital Gain	112	
Period Multiplier	1.00	
Current Yield	565	
Default Rate	1.80	
Price (default universe)	84.8	
Credit Loss	78	
Expected Periodic Return (2/11/22 to 2/10/2023)	**6.0 %**	

ICE BofAML 1-5 Year BB-B US Cash Pay High Yield Constrained Index - JVC4	SD HY	3yr Trsy
Current Spread	322	172
Target	278	192
Predicted Change	-44	20
Duration	2.3	
Index Price	101.6	
Avg Par Coupon	609	
Tsy Change	20	
Total Change in Yield	-24	
Capital Gain	54	
Period Multiplier	1.00	
Current Yield	590	
Rating Migration Rate	1.50	
Price (downgrade universe)	95.0	
Downgrade Loss	39	
Expected Periodic Return (2/11/22 to 2/10/2023)	**6.0 %**	

Source: BofA Merrill Lynch Model, SKY Harbor variable estimates

Clearly, returns have not followed the expected pattern thus far in 2022. However, **there seems to be a strong consensus view that rates will rise and defaults will remain below average this year, a market environment that typically leads to lower-rated credit outperformance**. Furthermore, we do not anticipate total returns will remain negative for the balance of 2022. In fact, we examined historical data going back to January 2000, identifying all rolling 12-month periods in which rates increased and defaults remained below the long-run average of 4.4%. In total, those two conditions were met 83 times, or approximately 1/3 of all rolling periods in our time series. Encouragingly, we found that 12-month total returns during those periods were almost always positive for the short duration high yield index (80 of 83 periods, 96%), and nearly as strong for broad high yield (94% of periods).

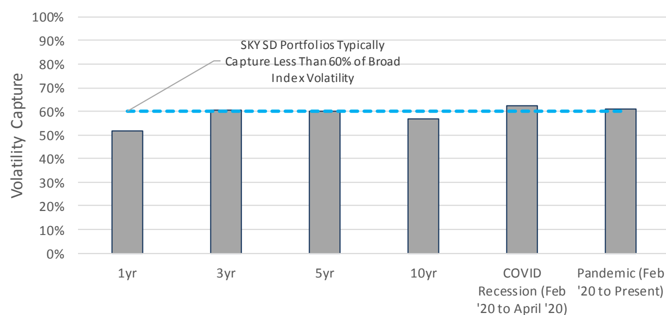
Proliferation of Positive Total Return Periods
odds of positive total return in 12-month periods in which rates were rising and defaults remained below average



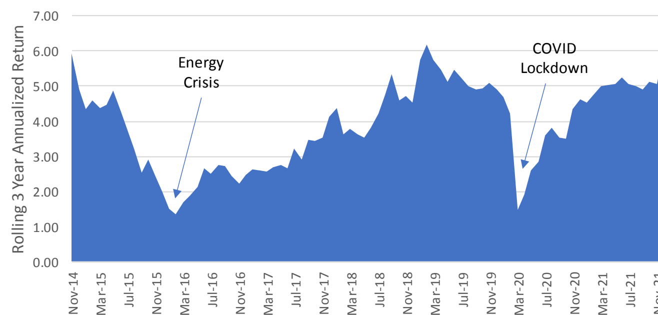
Source: SKY Harbor, ICE Data Indices, Credit Suisse

We suspect, however, that volatility will increase in 2022, a function of a less clear path for spread tightening (more of the re-open is behind us, prior year earnings have become more difficult comps, there are no shortage of geopolitical tensions on the horizon, etc.). However, given our view of spread tightening in the coming quarters, **we view periods of high yield weakness as a buying opportunity**. As has historically been the case, we also anticipate short duration high yield will generate less volatility than the broad high yield index, and note below that, on a rolling 3-year basis, there has never been a time since the inception of our SKY Harbor short duration funds in which investors have not achieved a positive annualized return. We concede that past performance is not necessarily indicative of future results and as we set forth below in more detail a number of things could go wrong, which could result in a departure from historical experience. We do not think anything fundamental has changed that would alter this outlook, however.

SKY Harbor Short Duration Composite vs. ICE BofA US High Yield Index (H0A0)
monthly return data, gross of fees



SKY Short Duration Strategy Rarely Generates Sustained Negative Returns
rolling 3 year annualized returns



Source: SKY Harbor, ICE Data Indices

What Could Go Wrong?

Risks to our thesis are varied, but the three things that immediate come to mind would include geopolitical tensions, a Fed mistake, and the overall threat of rising rates. With regard to **geopolitical tensions**, we noted in our most recent *Weekly Briefing* that shocks to risk assets stemming from such events – with the exception of the 9/11 attacks – have typically been short-lived, and more often than not resulted in less than 20 bps of spread widening.

Spread Pressure From Geopolitical Events Have Typically Been Short-Lived
estimated spread reaction and time to recovery

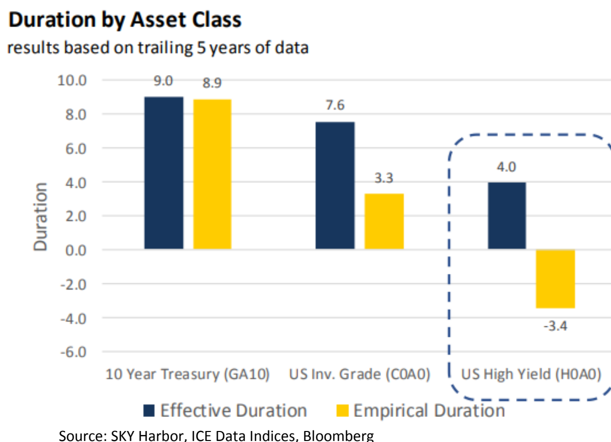
Single Day / Discrete Events			
Date	Event	Est. OAS Reaction (bps)	Est. Time to Recovery (days)
Apr '13	Boston Marathon Bombing	4	6
Nov '15	Paris Terror Attacks	15	4
Nov '15	Turkey Shoots Down Russian Jet	6	7
Jun '16	EU Referendum (Brexit)	74	13
Jul '16	Failed Coup in Turkey	3	4
Apr '17	Retaliatory Missile Strike in Syria	21	11
Sep '19	Saudi Aramco Drone Strike	2	4

Multi-Day Events			
Date	Event	Est. OAS Reaction (bps)	Est. Time to Recovery (days)
Sep '01	9/11 Attacks	196	53
Mar '03	US-led coalition invades Iraq	12	8
Feb '11	Libya / Arab Spring	64	36
Jan '14	ISIS Captures Fallujah	3	5
Jul '17	N. Korea Successful ICBM Launch	41	44
	Full Set Median	**14**	**8**
	Full Set Mean	**37**	**16**

Source: SKY Harbor, ICE Data Indices, Bloomberg

A Fed mistake, however, appears to have weighed more heavily on risk assets as of late. A hawkish Fed has caused an increasingly large number of rate hikes to be priced into market levels, rising from ~ 2.5 in mid-November '21, to ~ 3.0 in late-December '21, to ~ 5.0 at the end of January '22, and to nearly 7.0 today (February 14, 2022). In our view, the Fed will continue to be data-dependent, and can change course should too rapid a hiking cycle risk pushing the economy into a recession. Furthermore, we are beginning to see signs of supply chain repair, the continuation of which could ease some of the pressure currently being placed on Fed officials to boost rates quickly. An uptick in female participation in the workforce (had fallen back to 1970's era levels with some schools opting for remote learning during the pandemic) and technology (automation) should also counteract inflationary headwinds.

Rising rates represent another risk factor on the horizon. While effective (or analytical) duration is the most commonly cited metric to gauge the expected price change of a bond (or index) given a certain change in interest rates, this formulaic approach rarely aligns with actual observations. Empirical duration, calculated using actual (historical) price sensitivity in various interest rate environments, can differ dramatically from effective duration for some asset classes, particularly those in which the relative proportion of embedded credit risk far surpasses interest rate risk. As demonstrated below, US high yield has demonstrated negative empirical duration (prices have historically risen when Treasury yields rise), as the rationale for higher rates (most often a strengthening economy, which reduces credit risk) is a more significant driver of price than the impact of higher interest rates in and of themselves. Though high yield has not demonstrated negative empirical duration thus far in 2022, we would note that the dynamic often takes a month or two to fully play out.



Source: SKY Harbor, ICE Data Indices, Bloomberg

If we are wrong, and the environment for risk proves less sanguine than we anticipate, we further highlight below that **high yield has historically been quick to recover, even if an investment is made at an incredibly inopportune time**. Short duration high yield (JVC4) has proven even more resilient than broad high yield (H0A0), with less severe drawdowns resulting in quicker recoveries to breakeven investment levels.

High Yield Quick to Recover, Even if You Invest at the Worst Possible Time

based on monthly data

		Short Duration HY Index (JVC4)			Broad HY Index (H0A0)		
Event	Date	1-Month Total Return	Max Drawdown	Time to Recovery (Months)	1-Month Total Return	Max Drawdown	Time to Recovery (Months)
Sep. 11 Terrorist Attacks	Sep '01	-3.9%	-3.9%	6	-6.9%	-6.9%	7
Lehman Bankruptcy	Sep '08	-6.1%	-22.5%	10	-8.3%	-29.7%	11
Sovereign Debt Crisis	May '10	-1.9%	-1.9%	3	-3.5%	-3.5%	3
Black Monday (US Debt Downgrade)	Aug '11	-2.7%	-5.3%	6	-4.0%	-7.5%	6
Commodity Crisis	Sep '15	-1.9%	-4.8%	8	-2.6%	-6.2%	8
COVID-19 Shutdown	Mar '20	-10.8%	-10.8%	5	-11.8%	-11.8%	5

Source: SKY Harbor, ICE Data Indices

In conclusion, we remain optimistic for high yield despite admittedly disappointing index returns on a year-to-date basis. More specifically, we like short duration high yield risk, and believe the asset class is well positioned in the current market environment (fundamental improvement, low defaults, higher interest rates, etc.). Underpinning our enthusiasm is historical data, which shows that 12-month total returns for short duration high yield have been positive 96% of the time when rates were on the rise and defaults remained low, two (nearly) universally agreed upon themes that are expected for the balance of the year. Additionally, we expect an uptick in volatility for the high yield market in 2022, but would note that SKY short duration portfolios have historically captured less than 60% of the standard deviation of total returns as the broad index (H0A0). Finally, if we are completely wrong, and an acute period of risk-off sentiment were to materialize in the near term, we would note that historical recovery periods tend to be quite short for high yield in general (even shorter for short duration high yield). On balance, we view short duration high yield as offering attractive carry, spread compression potential (or at least absorption of higher treasury yields) and reduced volatility relative to other risk asset classes should market sentiment remain weak. Based on historical data in the context of our market outlook, negative year-to-date returns are unlikely to persist, and so we believe the current environment is attractive for net new investment into the asset class.

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Gross performance results do not reflect the deduction of investment advisory fees, which would reduce an investor’s actual return. For example, assume that $1 million is invested in an account with the Firm, and this account achieves a 6% compounded annualized return, gross of fees, for five years. At the end of five years that account would grow to $1,338,226 before the deduction of management fees. Assuming management fees of 0.55% per year are deducted annually from the average annual AUM, the value of the account at the end of five years would be $1,302,846, which is the equivalent of an annual compounded rate of 5.43%. For a ten-year period, the ending dollar values before and after fees would be $1,790,848 and $1,697,408, respectively. SKY Harbor’s asset-based fees are generally billed monthly or quarterly in arrears. Please refer to the SKY Harbor’s ADV Part 2A or applicable Offering Documents for more information on fees. Consultants supplied with gross results are to use this data in accordance with SEC, CFTC, NFA or the applicable jurisdiction’s guidelines.

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