SKY HARBOR
CAPITAL MANAGEMENT

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Weekly Briefing

SKYView: Stress Test and HY Return Model

As economic uncertainty persists, we have been actively engaged in a variety of dialogues with clients over the last several weeks to discuss our most recent market analyses. Most common among them are stress testing to generate default and credit losses expectations, running total return simulations, and gauging spread level attractiveness in the context of historical periods of peak stress. In this *Weekly Briefing*, **we implement our scenario analysis framework and find reason for optimism in the midst of extraordinary penalization of risk assets**.

As a starting point we include an overview of our previously distributed scenario analysis below (note that we have excluded scenario #5 in this analysis, as we do not think it could reasonably play out in a one-year timeframe):

Scenario	Blended Index Default Rate	Avg. Default Candidate Price (widest x% of index, where x = default rate multiplied by 2)	Est. Recovery Rate	Loss Given Default (bps)	LGD x 2 (stress period avg)	Excess Spread (LT avg.)	Fair Value of Spreads		
#1	4%	51	40%	44	88	300	344	to	388
#2	10%	73	40%	330	660	300	630	to	960
#3	12%	77	40%	444	888	300	744	to	1,188
#4	16%	82	40%	672	1,344	300	972	to	1,644

Source: SKY Harbor estimates

- *Scenario #1*: COVID-19 is contained more quickly than anticipated (in the next month), OPEC/Russia reach an output restriction agreement that ends the current oil price war, and a global recession is avoided. In this scenario, we maintain the 4% default estimate introduced in our *2020 US High Yield Outlook,* published in December '19.
- *Scenario #2*: COVID-19 spreads but is contained by mid-year, OPEC/Russia fail to reach an agreement and the oil price war persists, recession is avoided but the Energy sector suffers recession-like defaults. In this scenario, we assume an Energy sector default magnitude equivalent to the commodity crisis in 2016 while the balance of the index suffers our base case rate of 4%, ultimately leading to a blended default rate of 10%.
- *Scenario #3*: COVID-19 spreads beyond the mid-year point, OPEC/Russia continue down the path of oil price war, but virus and energy-specific stresses fail to spill over into the rest of the economy (so a full recession is avoided). In this scenario, we assume the same Energy crisis default outcome listed above, extrapolate that to sectors susceptible to virus woes (Transportation, Leisure, Basic Materials and Retail), and impose our base case 4% default rate to the balance of the index. In this situation, the blended index default rate goes to 12%.
- *Scenario #4*: COVID-19 is contained and oil prices revert back to normal levels on an OPEC+ agreement, but we slip into a recession anyway. In this case, we use the Great Financial Recession as our guide, and assume index default rates hit 16%.

Credit Losses

Next, we seek to calculate potential index and portfolio losses given the default implications of the various scenarios noted above. Making a few assumptions (all defaults occur before issuers can pay their next coupon, and the average price of default candidates at present is ~ 60, both of which we believe to be highly conservative in nature) we present a sensitivity table that attempts to estimate credit losses on the US high yield universe, noting the location that corresponds to each of four scenarios previously outlined. To the right, we present expected credit losses for SKY Harbor portfolios. Through multiple credit cycles, the firm's founders have demonstrated a strong track record of avoiding defaults, and our current estimates assume the same will hold true on a go-forward basis. Assuming SKY Harbor portfolios, through active management and intense bottom-up credit research, suffer default rates "only" 50% of the magnitude of the index (an amount that greatly exceeds the team's past default experience vs. the index), we present comparative credit losses.

US High Yield Index Est. Credit Losses Over Next 12 Mos (in bps)

assumes default candidates trade at an average price of 60 at present

Expected Default Rate

Expected Recovery Rate	4.0%	6.0%	8.0%	10.0%	12.0%	14.0%	16.0%	18.0%	20.0%
55%	33	50	67	83	100	117	133	150	167
50%	67	100	133	167	200	233	267	300	333
45%	100	150	200	250	300	350	400	450	500
40%	133	200	267	333	400	467	533	600	667
35%	167	250	333	417	500	583	667	750	833
30%	200	300	400	500	600	700	800	900	1000
25%	233	350	467	583	700	817	933	1050	1167

Scenario #1 Scenario #2 Scenario #3 Scenario #4

Assumptions: * All defaults happen before issuer can pay another coupon
* Average price of default candidates is ~ 60

SKY Harbor Est. Credit Losses Over Next 12 Mos (in bps)

assumes default candidates trade at an average price of 60 at present

Expected Default Rate

Expected Recovery Rate	2.0%	3.0%	4.0%	5.0%	6.0%	7.0%	8.0%	9.0%	10.0%
55%	17	25	33	42	50	58	67	75	83
50%	33	50	67	83	100	117	133	150	167
45%	50	75	100	125	150	175	200	225	250
40%	67	100	133	167	200	233	267	300	333
35%	83	125	167	208	250	292	333	375	417
30%	100	150	200	250	300	350	400	450	500
25%	117	175	233	292	350	408	467	525	583

Scenario #1 Scenario #2 Scenario #3 Scenario #4

Assumptions: * All defaults happen before issuer can pay another coupon
* Average price of default candidates is ~ 60
* SKY suffers defaults ~ 50% as severe as the index

Source: SKY Harbor estimates, ICE BofA Indices

Returns Less Credit Losses

Next, we generate a similarly sensitized range of total return outcomes, after accounting for credit losses within both the broad US high yield index (H0A0) and the short duration US high yield index (JVC4). Again, a few assumptions were made. First, we use current yields as of March 17, 2020 for our income component, and assume no changes in index OAS or underlying Treasury rates over the next 12 months. Additionally, we also assume the short duration market suffers the same magnitude of defaults that the broad market suffers (i.e., issuers default quickly and so do not migrate out via a downgrade to CCC, which is excluded from JVC4). Finally, we assume defaults happen before any additional coupons can be paid, and thus adjust current yields to exclude default candidates. The tables below (left side) provide the same sensitivity analysis, this time calculating total return excluding credit losses for the broad and short duration indices. To the right, we calculate return less credit losses for SKY Harbor portfolios, using the same assumptions.

US HY Index (H0A0)

Current Yield	723	723	723	723	723	723	723	723	723
Yld ex Defaults	694	680	665	651	636	622	607	593	578

Estimated Returns After Credit Losses (Next 12 Months)

assumes default candidates trade at an average price of 60 at present

Expected Default Rate

Expected Recovery Rate	4.0%	6.0%	8.0%	10.0%	12.0%	14.0%	16.0%	18.0%	20.0%
55%	6.6%	6.3%	6.0%	5.7%	5.4%	5.1%	4.7%	4.4%	4.1%
50%	6.3%	5.8%	5.3%	4.8%	4.4%	3.9%	3.4%	2.9%	2.5%
45%	5.9%	5.3%	4.7%	4.0%	3.4%	2.7%	2.1%	1.4%	0.8%
40%	5.6%	4.8%	4.0%	3.2%	2.4%	1.6%	0.7%	-0.1%	-0.9%
35%	5.3%	4.3%	3.3%	2.3%	1.4%	0.4%	-0.6%	-1.6%	-2.5%
30%	4.9%	3.8%	2.7%	1.5%	0.4%	-0.8%	-1.9%	-3.1%	-4.2%
25%	4.6%	3.3%	2.0%	0.7%	-0.6%	-1.9%	-3.3%	-4.6%	-5.9%

Scenario #1 Scenario #2 Scenario #3 Scenario #4

SKY Harbor Broad HY (SKY BHYM)

Current Yield	619	619	619	619	619	619	619	619	619
Yld ex Defaults	607	600	594	588	582	576	569	563	557

Estimated Returns After Credit Losses (Next 12 Months)

assumes default candidates trade at an average price of 60 at present

Expected Default Rate

Expected Recovery Rate	2.0%	3.0%	4.0%	5.0%	6.0%	7.0%	8.0%	9.0%	10.0%
55%	5.9%	5.8%	5.6%	5.5%	5.3%	5.2%	5.0%	4.9%	4.7%
50%	5.7%	5.5%	5.3%	5.0%	4.8%	4.6%	4.4%	4.1%	3.9%
45%	5.6%	5.3%	4.9%	4.6%	4.3%	4.0%	3.7%	3.4%	3.1%
40%	5.4%	5.0%	4.6%	4.2%	3.8%	3.4%	3.0%	2.6%	2.2%
35%	5.2%	4.8%	4.3%	3.8%	3.3%	2.8%	2.4%	1.9%	1.4%
30%	5.1%	4.5%	3.9%	3.4%	2.8%	2.3%	1.7%	1.1%	0.6%
25%	4.9%	4.3%	3.6%	3.0%	2.3%	1.7%	1.0%	0.4%	-0.3%

Scenario #1 Scenario #2 Scenario #3 Scenario #4

US Short Dur HY Index (JVC4)

Current Yield	677	677	677	677	677	677	677	677	677
Yld ex Defaults	650	636	623	609	596	582	569	555	542

Estimated Returns After Credit Losses (Next 12 Months)

assumes default candidates trade at an average price of 60 at present

Expected Default Rate

Expected Recovery Rate	4.0%	6.0%	8.0%	10.0%	12.0%	14.0%	16.0%	18.0%	20.0%
55%	6.2%	5.9%	5.6%	5.3%	5.0%	4.7%	4.4%	4.1%	3.7%
50%	5.8%	5.4%	4.9%	4.4%	4.0%	3.5%	3.0%	2.6%	2.1%
45%	5.5%	4.9%	4.2%	3.6%	3.0%	2.3%	1.7%	1.1%	0.4%
40%	5.2%	4.4%	3.6%	2.8%	2.0%	1.2%	0.4%	-0.4%	-1.3%
35%	4.8%	3.9%	2.9%	1.9%	1.0%	0.0%	-1.0%	-1.9%	-2.9%
30%	4.5%	3.4%	2.2%	1.1%	0.0%	-1.2%	-2.3%	-3.4%	-4.6%
25%	4.2%	2.9%	1.6%	0.3%	-1.0%	-2.3%	-3.6%	-4.9%	-6.3%

Scenario #1 Scenario #2 Scenario #3 Scenario #4

SKY Harbor Short Dur HY (SKY SDHY)

Current Yield	728	728	728	728	728	728	728	728	728
Yld ex Defaults	713	706	699	692	684	677	670	662	655

Estimated Returns After Credit Losses (Next 12 Months)

assumes default candidates trade at an average price of 60 at present

Expected Default Rate

Expected Recovery Rate	2.0%	3.0%	4.0%	5.0%	6.0%	7.0%	8.0%	9.0%	10.0%
55%	7.0%	6.8%	6.7%	6.5%	6.3%	6.2%	6.0%	5.9%	5.7%
50%	6.8%	6.6%	6.3%	6.1%	5.8%	5.6%	5.4%	5.1%	4.9%
45%	6.6%	6.3%	6.0%	5.7%	5.3%	5.0%	4.7%	4.4%	4.1%
40%	6.5%	6.1%	5.7%	5.2%	4.8%	4.4%	4.0%	3.6%	3.2%
35%	6.3%	5.8%	5.3%	4.8%	4.3%	3.9%	3.4%	2.9%	2.4%
30%	6.1%	5.6%	5.0%	4.4%	3.8%	3.3%	2.7%	2.1%	1.6%
25%	6.0%	5.3%	4.7%	4.0%	3.3%	2.7%	2.0%	1.4%	0.7%

Scenario #1 Scenario #2 Scenario #3 Scenario #4

Source: SKY Harbor estimates, based on representative Broad High Yield Market and Short Duration High Yield strategy portfolios, ICE BofA Indices.
SKY Harbor estimates reflect projected gross performance Net performance would be lower. See integral full disclosure at end of this presentation.

More Flexible Scenarios

Highlighting again that return estimates above incorporate a limited set of assumptions, we attempt to develop a more nuanced approach below. At March 17, 2020, spread levels for the broad and short duration high yield indices (H0A0 and JVC4) were 90th and 93rd percentile, respectively. As time goes on and the market develops a greater sense of conviction around which scenario is likely to play out, we would anticipate that default candidates will trade down in price (toward recovery levels) and the balance of the index will begin to look increasingly attractive. **If we assume the non-default candidates tighten to 75th percentile OAS levels (this doesn't seem like a stretch given current levels above the 90th percentile range and spreads at the start of the year below the 20th percentile range), returns less credit losses can plausibly enter double-digit territory**. Furthermore, we expect the Energy sector to suffer the greatest magnitude of defaults in most of our scenarios. Given our bias away from the sector, a greater avoidance of defaults relative to our 50% estimate is most likely, thus putting upward pressure on returns over the next 12 months.

SKY Harbor Broad HY (SKY BHYM)

Current Yield	619	619	619	619	619	619	619	619	619
Yld ex Defaults	607	600	594	588	582	576	569	563	557

Estimated Returns After Credit Losses + Survivor Spread Tightening to 75th %ile (Next 12 Months)

assumes default candidates trade at an average price of 60 at present

Expected Recovery Rate \ Expected Default Rate	2.0%	3.0%	4.0%	5.0%	6.0%	7.0%	8.0%	9.0%	10.0%
55%	12.5%	12.2%	12.0%	11.8%	11.6%	11.4%	11.2%	11.0%	10.8%
50%	12.3%	12.0%	11.7%	11.4%	11.1%	10.8%	10.5%	10.2%	9.9%
45%	12.1%	11.7%	11.4%	11.0%	10.6%	10.2%	9.8%	9.5%	9.1%
40%	12.0%	11.5%	11.0%	10.6%	10.1%	9.6%	9.2%	8.7%	8.3%
35%	11.8%	11.2%	10.7%	10.2%	9.6%	9.1%	8.5%	8.0%	7.4%
30%	11.6%	11.0%	10.4%	9.7%	9.1%	8.5%	7.8%	7.2%	6.6%
25%	11.5%	10.7%	10.0%	9.3%	8.6%	7.9%	7.2%	6.5%	5.8%

Scenario #1 Scenario #2 Scenario #3 Scenario #4

SKY Harbor Short Dur HY (SKY SDHY)

Current Yield	728	728	728	728	728	728	728	728	728
Yld ex Defaults	713	706	699	692	684	677	670	662	655

Estimated Returns After Credit Losses + Survivor Spread Tightening to 75th %ile (Next 12 Months)

assumes default candidates trade at an average price of 60 at present

Expected Recovery Rate \ Expected Default Rate	2.0%	3.0%	4.0%	5.0%	6.0%	7.0%	8.0%	9.0%	10.0%
55%	11.2%	11.0%	10.8%	10.6%	10.4%	10.2%	10.0%	9.8%	9.6%
50%	11.1%	10.8%	10.5%	10.2%	9.9%	9.6%	9.4%	9.1%	8.8%
45%	10.9%	10.5%	10.2%	9.8%	9.4%	9.1%	8.7%	8.3%	8.0%
40%	10.7%	10.3%	9.8%	9.4%	8.9%	8.5%	8.0%	7.6%	7.1%
35%	10.6%	10.0%	9.5%	9.0%	8.4%	7.9%	7.4%	6.8%	6.3%
30%	10.4%	9.8%	9.2%	8.5%	7.9%	7.3%	6.7%	6.1%	5.5%
25%	10.2%	9.5%	8.8%	8.1%	7.4%	6.7%	6.0%	5.3%	4.6%

Scenario #1 Scenario #2 Scenario #3 Scenario #4

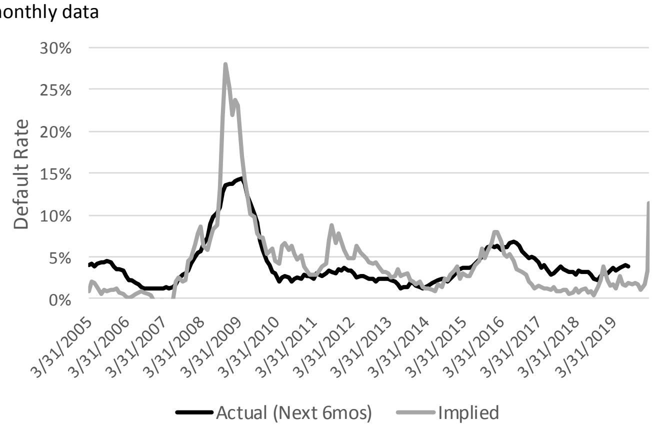
Source: SKY Harbor estimates, based on representative Broad High Yield Market and Short Duration High Yield strategy portfolios.
Estimates reflect projected gross performance. Net performance would be lower. See integral full disclosure at end of this presentation.

Historical Performance

Over the long run, OAS-implied default rates have been relatively consistent with actual defaults six months into the future. This dynamic, however, tends to break down in periods of stress. As demonstrated below, **the market typically overestimates the underlying risk of default by a factor of 1.5x when spreads are above 600 bps**. Similarly, spreads at present (nearing 1,000 bps) imply an eventual default rate in excess of 11% over the next 12 months, an outcome well in excess of our base case assumption.

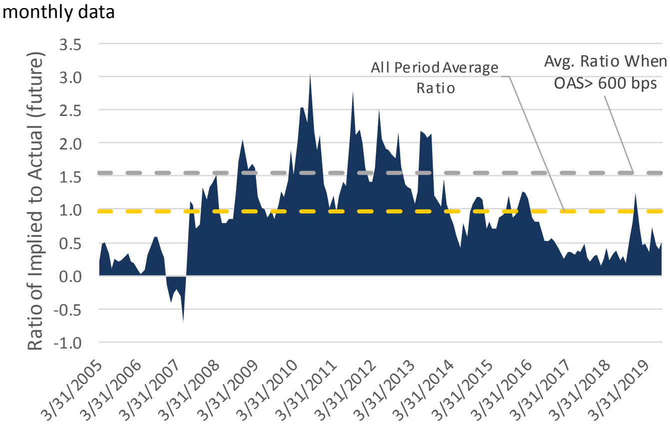
Market Usually Over-Estimates Eventual Default Rate

monthly data



Ratio of Implied to Actual (future) Defaults

monthly data



Source: SKY Harbor, ICE BofA Indices, BofA Merrill Lynch

Have we hit a spread peak? We do not know, and the track record for investors attempting to time the market has been less than stellar. What we do know is that **US high yield index spreads breaching 900 bps have in the past marked pivotal moments for risk-taking, with strong returns following even if 900 bps is well below ultimate peak levels**. For example, H0A0 spreads breached 900 bps on September 16, 2008 for the first time since recovering from the early 2000's recession. Spreads would continue to widen from the 900 bps points level before hitting a peak on December 15, 2008 (2,147 bps) and remained above 1,000 bps until July 31, 2009. However, an investment in the high yield index at the time of crossing (September 16, 2008) would have led to annualized returns over the next 12, 24 and 36 month periods of 12.8%, 16.0% and 12.5%, respectively. The track record is similarly impressive when we include all periods in which H0A0 breached the 900 bps threshold. **Short duration high yield index returns (JVC4) have been nearly as impressive, and both flavors of high yield have outperformed the S&P 500 Index** (using investment dates as determined by H0A0 climbing above 900 bps).

ICE BofA US High Yield Index Returns Strong After 900bps OAS Threshold Crossed; US HY Outperforms US Equities

daily occurrences since index inception (1996)

	Annualized Returns (Broad US HY, H0A0)			Annualized Returns (Short. Dur. US HY, JVC4)			Annualized Returns (US Equities, S&P 500 Index)		
Date Crossed	Next 12 mos	Next 24 mos	Next 36 mos	Next 12 mos	Next 24 mos	Next 36 mos	Next 12 mos	Next 24 mos	Next 36 mos
30-Nov-2000	7.7	1.7	9.5	11.8	7.3	10.9	(12.2)	(14.4)	(5.5)
4-Dec-2000	8.1	2.0	9.9	12.0	7.3	11.1	(12.5)	(15.6)	(5.4)
21-Dec-2000	4.4	1.2	9.4	10.7	7.2	11.0	(9.0)	(14.9)	(3.6)
31-Dec-2000	4.5	1.2	9.5	11.1	7.4	11.1	(11.9)	(17.2)	(4.1)
24-Apr-2001	3.7	5.1	8.8	7.8	7.5	9.3	(8.4)	(11.8)	(0.3)
14-Sep-2001	(4.1)	9.4	10.7	1.2	9.2	9.7	(17.3)	(1.8)	2.7
26-Jun-2002	21.4	15.6	13.8	14.7	11.9	10.1	3.1	9.8	8.9
3-Jul-2002	23.2	16.8	14.6	16.2	12.8	10.7	5.2	10.5	9.7
10-Jul-2002	22.9	16.7	14.4	15.9	12.7	10.5	9.4	11.9	11.6
29-Nov-2002	27.1	19.3	13.6	18.4	13.7	10.0	15.1	14.4	12.3
9-Dec-2002	28.8	19.7	13.8	19.7	14.0	10.2	21.0	17.2	14.1
19-Dec-2002	28.1	19.3	13.5	19.2	13.6	10.0	25.4	18.3	14.8
24-Dec-2002	28.1	19.2	13.4	19.1	13.6	10.0	24.8	18.5	14.5
16-Sep-2008	12.8	16.0	12.5	11.1	13.3	10.6	(9.5)	(1.4)	2.3
19-Aug-2009	23.5	15.4	14.5	17.7	12.3	11.5	10.1	8.3	14.8
18-Mar-2020	?	?	?	?	?	?	?	?	?
Average	16.0	11.9	12.1	13.8	10.9	10.5	2.2	2.1	5.8
Median	21.4	15.6	13.4	14.7	12.3	10.5	3.1	8.3	8.9
% Positive	93%	100%	100%	100%	100%	100%	53%	53%	67%

Source: SKY Harbor, ICE BofA Indices, Bloomberg

Conclusion

While uncertainty remains high, and every investor must determine their own risk tolerances, we believe high yield spreads have grown increasingly attractive at current levels. Current yields now appear to offer positive total return opportunities for broad market and short duration high yield over the next year, even in the absence of complete default avoidance and spread tightening. Assuming active managers can avoid at least a portion of defaults, and assuming bond prices stop their recent slide and rally to 75th percentile OAS levels, double-digit returns are possible over the next 12 months. Looking back at index behavior after spread levels have risen to such levels (not necessarily having peaked), subsequent returns have been similarly attractive.

We hasten to reiterate, however, that our views are based on the assumptions cited above, some of which are based on past investment experience projected forward (e.g., assumptions of default experience). We do not purport to have included all possible assumptions that could have also been included in our model. And while we believe the analyses underlying these conclusions are reasonable based on current market conditions, they are, nevertheless, forward-looking statements of opinion subject to model risk, biases and uncertainties beyond our control that may cause actual results to differ substantially from the expectations herein. Investment in high yield securities involves risk of loss of both income and principal, and past performance is not necessarily indicative of future results. The SKY Harbor portfolios cited here are as of the date of this Briefing and subject to change without notice in accordance with market conditions.

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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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