SKY HARBOR
CAPITAL MANAGEMENT

Mike Salice, CFA
Director of Research
msalice@skyhcm.com
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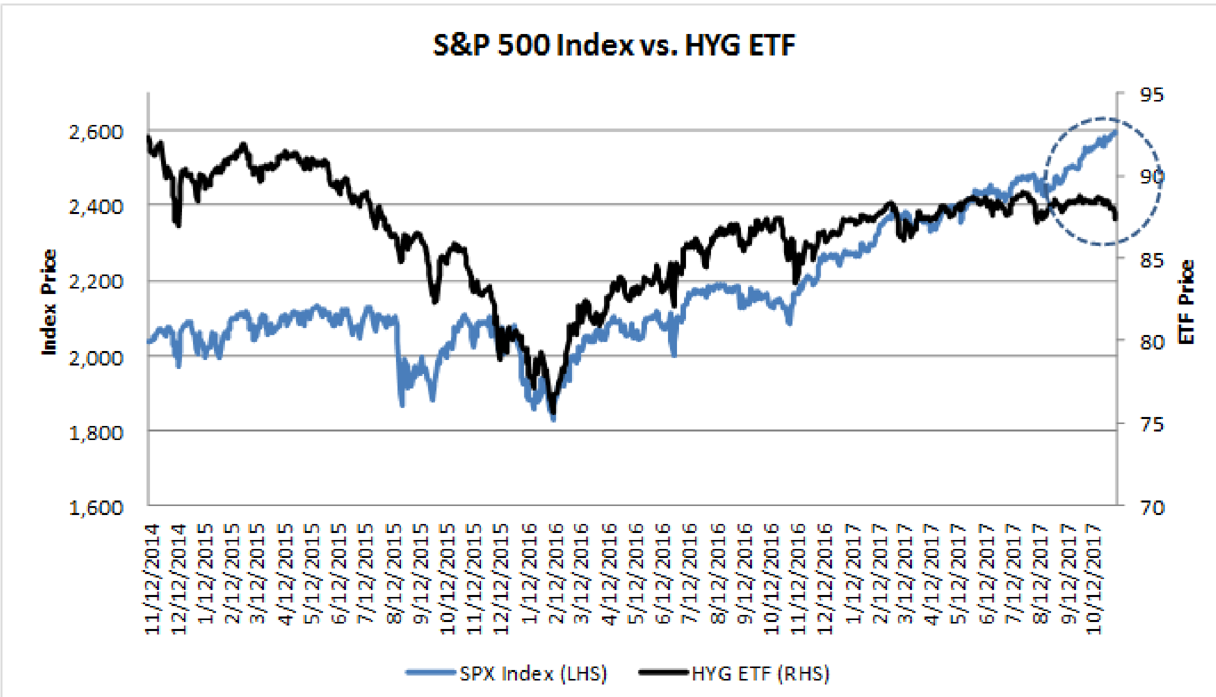
The Disconnect between Recent S&P 500 and HYG ETF Returns

Despite solid performance (and relatively highly correlated returns) for both the S&P 500 Index and the iShares iBoxx $ High Yield Corporate Bond ETF (HYG) on a YTD basis, performance has decoupled over the last few months. As demonstrated in the chart below, HYG index prices have underperformed the S&P 500 Index since the beginning of September.

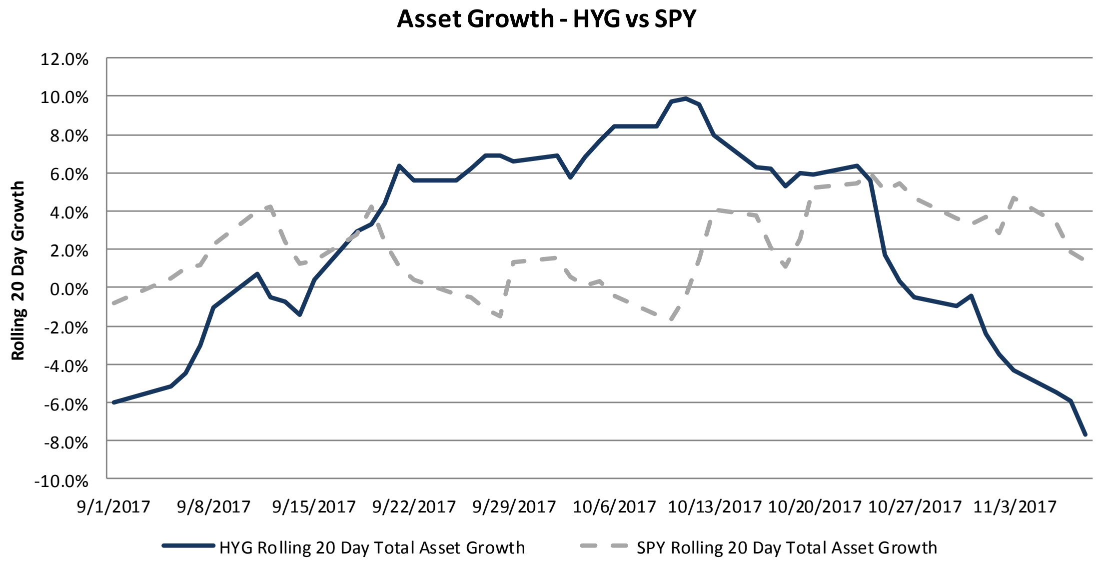


Source: SKY Harbor, Bloomberg

The reason for this divergence is likely multi-faceted. **First, consider changes at the Fed**. President Trump recently nominated Jerome Powell (currently a Fed Governor) as the next Chairman of the Federal Reserve. While in general the Street is interpreting the appointment as a sign of relative consistency on a go-forward basis given views similar to Janet Yellen on monetary policy issues, it does introduce uncertainty into the system, as Powell may operate differently as Fed Chair than he did as a Governor. Exacerbating this change was an announcement this week that William Dudley, the New York Fed president, has decided to retire next year. As such, the Federal Reserve will be without several longstanding officials in 2018, leading to fears of disruption with regard to current monetary policy agenda items (which are viewed as being more pertinent to credit markets than equity markets).

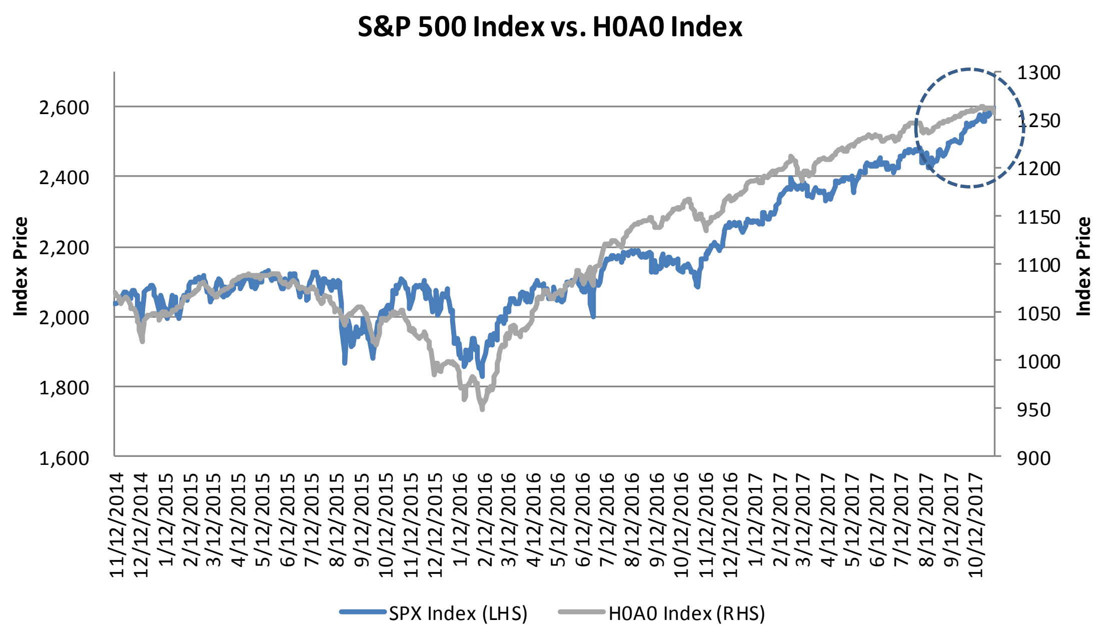
Second, consider recently proposed tax reform legislation. A cut to the corporate tax rate (the proposal contemplates a new rate of 20%, down from the current 35% rate) is disproportionately positive for higher-quality companies that pay at or near the full tax burden, which would include more constituents within the S&P 500 Index than the HYG ETF. Furthermore, part of the proposal includes a cap on interest rate deductibility, a tangible negative for some highly levered companies (more likely held in HYG than in the S&P 500 Index).

Third, consider valuations. There have been several vocal strategists advocating for equities over credit in the past month – not due to specific negativity in the fixed income space, but rather driven by expectations of greater return potential for equities. While we do not necessarily agree with this positioning, fund flows would imply that many retail investors have implemented this trade. Comparing HYG (the largest US high yield ETF) to SPY (the largest ETF tracking the S&P 500 Index), we see that trailing-20-day fund asset growth trends favor equities (see chart below). In fact, HYG has suffered outflows, while SPY assets continue to accumulate.



Source: SKY Harbor, Bloomberg

In our view, these factors likely explain the recent divergence in performance between HYG and the S&P 500 Index. This phenomenon, however, seems to be unique to the high yield ETF. As demonstrated below, the ICE BofAML US High Yield Index (H0A0) has not seen the same divergence. Rather, relative performance has kept pace with equity markets.



Source: SKY Harbor, Bloomberg, ICE BofAML Index

To more clearly show the disconnect between HYG and H0A0, we ran total returns for both on a YTD, trailing-2-months, and trailing-1-month basis. As shown in the table below, performance for HYG has fallen off more severely over the previous two months relative to the relationship that existed over the first eight months of the year.

Name	Ticker	Total Return Year to Date	Trailing 2 Mos	Trailing 1 Mos
HYG ETF	HYG	5.29%	0.32%	-0.78%
ICE BofAML US High Yield Index	H0A0	6.99%	0.68%	-0.19%
HYG Return Capture (vs. H0A0)		*76%*	*48%*	*NM*
Absolute Difference (H0A0 less HYG), in bps		*170*	*36*	*59*

Source: SKY Harbor, Bloomberg, ICE BofAML Index
Dat as of 11/8/17

We think this divergence can be explained by two key factors – 1) the structure of ETF securities and 2) the underlying differences in holdings between the two vehicles. With regard to structure, we would highlight that ETFs are funds that trade like equities on an exchange, and though they seek to replicate an underlying basket of securities (in this case, a group of high yield bonds), trading patterns can differ substantially. Because of the structure of ETFs, HYG's price and net asset value (NAV) can diverge, quite materially at times, for a variety of reasons. First, timing differences can arise (a most recent trade for certain high yield bonds contained within HYG may not necessarily occur in proximity to the exchange market close). Second, market prices are based on supply and demand, a dynamic that can cause ETFs to trade at either a premium or a discount to their net asset value, particularly during periods of elevated market volatility. Because of these structural differences, and due to the fact that the HYG ETF is quite liquid (more so than most of the securities within H0A0), investors can express a view on the market more rapidly than they could through buying or selling cash bonds. And, due to recent trends in the market – higher-than-average volumes and volatility in HYG, as well as redemptions – an environment currently exists in which price and NAV can differ materially.

Bloomberg charts ETFs and calculates returns on a price basis, which may deviate materially from NAVs in certain time periods. Recalculating returns using both approaches, we see that ~ 36 bps of the 59 bps deviation between H0A0 and HYG over the past one month was driven by differences in price and NAV return methodologies. As such, much of the recent divergence between HYG and H0A0 (or S&P 500) returns (as depicted in the first graph) has been driven by what is likely a short-term disconnect between HYG price and NAV calculations.

		Total Return		
Name	**Ticker**	**Year to Date**	**Trailing 2 Mos**	**Trailing 1 Mos**
HYG ETF - Price Return	HYG	5.29%	0.32%	-0.78%
HYG ETF - NAV Return	H0A0	5.76%	0.33%	-0.42%
Absolute Difference, H0A0 less HYG - Price Return (bps)		*170*	*36*	*59*
Absolute Difference, H0A0 less HYG - NAV Return (bps)		*123*	*36*	*23*

Source: SKY Harbor, Bloomberg, ICE BofAML Index
Data as of 11/8/17

The second factor deals with differences in underlying securities between HYG and H0A0. HYG requires a minimum issue size of $400mm and aggregate issuer debt of at least $1bn in order to be included in the fund, giving the H0A0 index a larger, more diversified set of constituents. Different benchmarks and different construction methodologies also cause a certain degree of tracking error, over time, between the two vehicles. Below we run performance attribution between HYG and H0A0 returns on a trailing-30-day basis (note that the trailing-1-month return on the ETF is in line with the NAV return calculated above).

ISHARES IBOXX $ HI vs (H0A0) ICE B by level 3 to lev in USD Tim
Model Excess Return Unit Percenta... Curve Swap

Name	Avg % Wgt			Tot Rtn		
	Port	Bmrk	+/-	Port	Bmrk	+/-
ISHARES IBOXX $ HIGH YIELD ...	100.00	100.00	0.00	-0.43	-0.19	-0.25

Source: SKY Harbor, Bloomberg, ICE BofAML Index

This analysis shows that 25 bps of underperformance (HYG relative to H0A0) over the past month is due to poor allocation and security selection. A large overweight in the Healthcare sector (particularly to Community Health Systems, which recently reported disappointing 3Q17 results), an underweight to Basic Industries (underweight many of the smaller issuers that have outperformed), an overweight in the Media sector (particularly to DISH Network, which recently reported disappointing 3Q17 results), and an overweight in the Telecom sector (largely due to an overweight in Frontier) drove much of the underperformance. In general, some of the larger capital structures in the index (which happen to be tickers that HYG is disproportionately exposed to) have struggled during 3Q17 earnings season, and bonds have underperformed.

ISHARES IBOXX $ H vs (H0A0) ICE E by level 3 to le in USD Time Custo 10/06/17 - 11/08/17
Mo... Total Return Unit Percent... Curve Swap

Name	Avg % Wgt			CTR			Tot Rtn			Tot Attr	Alloc	Selec	Curr
	Port	Bmrk	+/-	Port	Bmrk	+/-	Port	Bmrk	+/-				
ISHARES IBOXX $ HIGH YIELD ...	100.00	100.00	0.00	-0.43	-0.19	-0.25	-0.43	-0.19	-0.25	-0.25	-0.15	-0.10	0.00
Automotive	2.25	2.32	-0.07	0.00	0.00	0.00	0.00	0.10	-0.10	0.00	0.00	0.00	0.00
Banking	2.57	3.37	-0.79	0.02	0.04	-0.02	0.69	1.14	-0.46	-0.02	-0.01	-0.01	0.00
Basic Industry	8.44	12.11	-3.67	0.03	0.08	-0.05	0.34	0.65	-0.31	-0.06	-0.03	-0.03	0.00
Bonds	0.14	0.00	0.14	0.00		0.00	-0.28		-0.28	0.00	0.00	0.00	0.00
Capital Goods	5.08	5.38	-0.30	0.03	0.03	0.00	0.54	0.56	-0.03	0.00	0.00	0.00	0.00
Cash	-0.19	0.00	-0.19	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00
Consumer Goods	2.19	2.53	-0.34	-0.01	-0.02	0.01	-0.67	-0.81	0.14	0.01	0.00	0.01	0.00
Energy	13.40	13.94	-0.54	0.24	0.25	-0.01	1.81	1.78	0.03	0.00	0.00	-0.01	0.00
Financial Services	4.04	3.83	0.21	0.01	0.03	-0.01	0.34	0.69	-0.35	-0.01	0.00	-0.01	0.00
Funds	0.90	0.00	0.90	0.00		0.00	0.08		0.08	0.00	0.00	0.00	0.00
Healthcare	11.85	9.77	2.08	-0.26	-0.19	-0.07	-2.18	-1.93	-0.25	-0.07	-0.04	-0.03	0.00
Insurance	0.52	0.94	-0.42	0.01	0.01	0.00	1.53	1.02	0.51	0.00	0.00	0.00	0.00
Leisure	4.68	4.47	0.21	0.00	0.01	-0.01	0.09	0.25	-0.16	-0.01	0.00	-0.01	0.00
Media	14.20	11.45	2.75	-0.20	-0.15	-0.06	-1.41	-1.27	-0.14	-0.05	-0.04	-0.01	0.00
Pfd-Banking	0.07	0.00	0.07	0.00		0.00	-0.04		-0.04	0.00	0.00	0.00	0.00
Real Estate	0.46	0.64	-0.18	0.00	0.00	0.00	0.09	0.42	-0.33	0.00	0.00	0.00	0.00
Retail	3.75	4.77	-1.02	-0.05	-0.05	0.00	-1.32	-1.07	-0.25	0.00	0.02	-0.02	0.00
Services	4.62	5.32	-0.69	0.00	0.00	0.00	-0.01	-0.10	0.09	0.00	0.00	0.00	0.00
Technology & Electronics	6.57	6.07	0.49	-0.01	0.00	-0.01	-0.13	-0.02	-0.11	-0.01	0.00	-0.01	0.00
Telecommunications	10.90	9.60	1.30	-0.29	-0.27	-0.03	-2.69	-2.83	0.14	-0.02	-0.04	0.01	0.00
Transportation	0.55	0.93	-0.38	0.00	0.01	-0.01	0.57	1.50	-0.92	-0.01	-0.01	0.00	0.00
Utility	2.99	2.56	0.43	0.05	0.04	0.01	1.71	1.43	0.28	0.02	0.01	0.01	0.00

Source: SKY Harbor, Bloomberg, ICE BofAML Index

In aggregate, we can account for essentially all of the 59 bps difference between HYG and H0A0 returns over the past month (36 bps from the divergence of price and NAV return calculations, and 25 bps from unfavorable allocation & security selection), and attribute the disconnect between HYG and H0A0 to issues related to the structure and underlying holdings of the high yield ETF. Additionally, we would note that fees (0.50% for HYG) and underlying transaction costs will have a negative impact on ETF returns, given the lack of similar drags on equity and fixed income indices.

In conclusion, we believe the recent disconnect between HYG and S&P 500 performance to be driven by a variety of factors, including changes at the Federal Reserve, the Tax Reform debate and differing views on valuations (and subsequent fund flows). However, the disconnect is more prevalent between HYG and the S&P 500 Index, as the underlying US high yield index has not suffered the same performance downturn. In this case, a growing gap between price and NAV returns, as well as issues surrounding allocation and selection (some securities over-represented in HYG have suffered weak 3Q17 earnings) appear to be responsible for HYG underperforming H0A0.

Important Disclosures and Disclaimers