

Third Quarter 2018  
Bond Market Review  
and Outlook

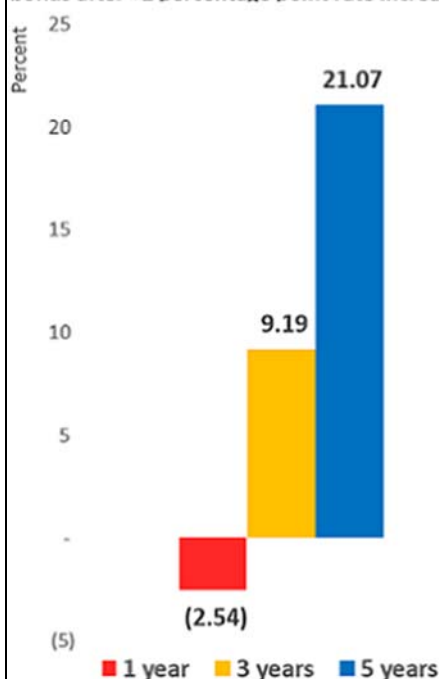


Our Broad Market  
Strategic Income  
Fund: CAMBX

## Don't forget there's good news behind higher bond yields

Interest rates moved higher in the third quarter, and fixed income investors with long-term investment horizons might say, "It's about time." Why? (1) Bond interest delivers an important, ongoing income stream, (2) is important for wealth preservation, and (3) can be a significant element of fixed income returns. The table at the right lists the improved yields

**Hypothetical cumulative returns of corporate bonds after +1 percentage point rate increase**



for CAM's fixed income strategies. The IG and HY strategies offer intermediate durations for prudent fixed income investors with rising rates on their minds. Broad Market delivers a blend of IG/HY credits with a similar duration profile. Investors concerned about rising inflation expectations and 1970s-era bond volatility may find one of the Short Duration strategies a good fixed income choice.

Added returns from higher coupons factor into the gains indicated in the nearby bar chart that models hypothetical returns for the Bloomberg Barclays Corporate Bond Index following an instantaneous 100 basis point rate increase across the entire yield curve with no other rate adjustments. Impressive.

The 10-year U.S. Treasury yield was 3.06% at the end of September, up from 2.86% three months earlier. Higher interest rates came in the face of tighter credit spreads in the quarter in both IG and HY corporate bond markets.

This move to higher interest rates took place in an incremental and orderly manner largely in step with the Federal Reserve's well-telegraphed plan to withdraw accommodation and normalize interest rates after having pursued a Zero Interest Rate Policy (ZIRP) for nearly a decade.

The Fed actions rest on a bedrock of economic optimism. U.S. job gains have remained steady, and the unemployment rate has stayed

CAM Investment strategies	Yield to Maturity (%)	
	9/30/18	12/31/17
<b>Investment Grade (IG)</b>	4.02	3.19
<b>High Yield (HY)</b>	5.72	4.98
<b>Broad Market (IG &amp; HY)</b>	4.57	3.70
<b>Short Duration (IG &amp; HY)</b>	4.28	3.48
<b>Short Duration IG</b>	3.48	2.56

low. Household spending and business investment have grown strongly. On a 12-month basis, measured inflation and inflation expectations are little changed and remain near 2% using the Fed's preferred gauge for core inflation.

The outlook for U.S. economic growth remains robust. The September 2018 economic projections of the Federal Reserve members and Fed bank presidents marked-up median real GDP growth forecasts to 3.1% (2018) and 2.5% (2019) from levels reported just three months ago: 2.8% and 2.4%, respectively. The current WSJ Economic Forecasting Survey of more than 60 economists largely mirrors these current Fed projections. You may have read that IMF forecasts for global growth were recently scaled back for 2018 and 2019. The new IMF projections for U.S. growth in those years now rest at the same levels projected by the

(Continued on page 3)

**Yields\* on 9/30/2018**

	<b>Yield*</b>
<b>CAM Broad Market (corporate core plus) Strategy</b> (7.3 year maturity; 5.8 duration)	<b>4.56%</b>
<b>CAM Investment Grade (100% corporate bonds) Strategy</b> (7.5 year maturity; 6.3 duration)	<b>4.02%</b>
<b>CAM High-Yield Strategy (only BB &amp; B rated purchased)</b> (7.0 year maturity; 5.0 duration)	<b>5.65%</b>
<b>CAM Short Duration Strategy</b> (3.7 year maturity; 2.8 duration; 50% IG & 50% HY)	<b>4.15%</b>
<b>CAM Short Duration Investment Grade Strategy</b> (3.5 year maturity; 3.2 duration)	<b>3.48%</b>
<b>Tax Equivalent Muni GO Bond</b> (7 year, 2.55%) Bloomberg Barclays Institutional Index (Yield to right is after 40% tax equivalency and 3-point retail price markup for small buys under \$1 M)	<b>3.34%</b>
<b>U.S. Treasury**</b> (10 year maturity)	<b>3.06%</b>
<b>U.S. Treasury**</b> (5 year maturity)	<b>2.95%</b>
<b>U.S. Treasury**</b> (2 year maturity)	<b>2.82%</b>

\* The lower of yield to maturity or yield to worst call date \*\* Source: Bloomberg Barclays

Contact us: Don Stolper, Artie Awe, Steve Hong, & Bill Sloneker are always available to assist. Ph: (513) 554-8500. Website: [www.cambonds.com](http://www.cambonds.com). Email: [dstolper@cambonds.com](mailto:dstolper@cambonds.com), [aawe@cambonds.com](mailto:aawe@cambonds.com), [shong@cambonds.com](mailto:shong@cambonds.com), & [wsloneker@cambonds.com](mailto:wsloneker@cambonds.com).

**CAM's Key Strategic Elements**

- Bottom-up credit analysis determines value and risk.
- Primary objective is preservation of capital.
- Larger, more liquid issues preferred.
- Target is always intermediate maturity.
- No interest rate forecasting.
- All clients benefit from institutional trading platform and multi-firm competitive bids and offers.

CAM returns are after CAM's average management fee & all transaction costs but before any broker, custody or consulting fees.	Total Return (%)	Annualized Returns (%)			
		3Q '18	1-YEAR	3-YEARS	5-YEARS
<b>CAM Broad Market Strategy—Net</b> 1/3 high yield, 2/3 investment grade	1.16	-1.14	2.62	2.92	5.87
<b>CAM High Yield “Upper Tier” Strategy—Net</b> only purchase BB and B; no purchases of CCC & lower	2.00	0.48	3.80	2.34	6.02
Lipper High Yield Mutual Funds Average	2.40	2.71	6.58	4.27	7.44
<b>CAM Investment Grade Strategy—Net</b> 100% corporate bonds	0.78	-1.88	1.99	3.12	5.79
Lipper A-rated Bond Funds Average	0.34	-1.08	2.62	3.47	4.97
<b>CAM Short Duration Strategy—Net</b> 1/2 investment grade, 1/2 high yield	1.11	0.45	2.18	1.14	4.33
<b>CAM Short Duration Investment Grade Strategy—Net</b> 100% corporate bonds	0.58	-0.78	1.18	1.77	2.38

pared to blended index return -0.20%. These and longer period performance shortfalls relative to the Weighted Benchmark arose when the lowest rated components in both the high yield and investment grade sectors outperformed their respective indices over multi-year periods. The Broad Market Strategy's net performance after CAM's fee ranked in the top quartile of Morningstar's intermediate term General Bond Funds universe (NYT, October 14, 2018) for Q3 and 5 years and above the median over 12 months.

The CAM **Short Duration Strategy (SD)** blends equal weights of IG and HY short duration bonds. The strategy's total return in the quarter ended September 30 was 1.19% while its benchmark, a similar blend of the intermediate components of Bloomberg Barclays IG and HY corporates, returned 1.49%. At September 30, the 12-month return was 0.79% compared to the blended benchmark return of 1.59%. Relative to Morningstar's universe of short-term General Bond Funds, net performance after CAM's fee ranked in the top quartile for Q3, above the median over 12 months, and below the median over 5 years (NYT, October 14, 2018).

The **Short Duration Investment Grade Strategy (SD-IG)** slightly outperformed in the quarter ended September 30, 2018, compared to its benchmark, the Bloomberg Barclays U.S. Credit 1-5 Index. SD-IG returned 0.64% compared with the benchmark's 0.63%. Over a 12-month period, SD-IG delivered -0.54% versus benchmark return of 0.06% and achieved a return of 1.45% over 3 years compared to its benchmark's 1.55%. SD-IG outperformed over 5 years and 7 years and since inception. SD-IG's net performance after CAM's fee ranked above the median of Morningstar's short-term General Bond Fund universe for Q3, in the bottom quartile for 12 months, and in the top quartile for years (NYT, October 14, 2018).

**Performance Review 9/30/2018**

CAM's **Investment Grade Strategy (IG)** produced a return of 0.84% in the quarter ended September 30, 2018, compared to 0.97% for the Bloomberg Barclays U.S. Corporate Index. The 12-month return for the CAM IG strategy was -1.65% compared to the index returns of -1.20%. IG's Q3 performance and 12-month performance lagged its benchmark when BBB-rated corporate bonds outperformed in both periods relative to other investment grade bonds. IG's investment policy caps BBB-rated bonds at 30%, generally in favor of holding more A-rated issues. The index weighting for BBB-rated bonds exceeds 49%. Over 12-months, A-rated corporates performed worse than other IG credit cohorts did. IG outperformed over 10 years and since inception. After CAM's fee, IG net performance ranked in the top quartile of the Morningstar's intermediate term General Bond Fund universe for Q3 and 5-year periods. It ranked in the bottom quartile over the trailing 12 months. IG invests exclusively in corporate bonds. (NYT, October 14, 2018)

The **High Yield Strategy (HY)** delivered 2.09% in the Q3 while the Bloomberg Barclays High Yield Index returned 2.40%. The HY 12-month return for Q3 was 0.82% while the Bloomberg Barclays High Yield Index returned 3.05%. HY's 3-month performance trailed because of outperformance in "CCC" and lower credit subsectors of the Index. HY is always underweight these low credit subsectors believing their credit profiles and price volatility are inappropriate for many investors. HY trailed in the 12-month period because of the outperformance of these weaker credit subsectors. HY's net performance after CAM's fee ranked below the median of the Morningstar's High Yield Bond Fund universe for Q3 and in the bottom quartile for 12 months and 5 years (NYT, October 14, 2018).

Our **Broad Market Strategy** – a 67%-33% blend of IG-HY bonds – produced a return of 1.23% for the quarter ended September 30 compared to 1.44% for its Bloomberg Barclays blended benchmark. The 12-month return for the CAM Broad Market strategy was -0.85% com-

**Better Asset Allocation Might Result from More Exacting Analysis**

The chart to the right shows that BB rated bonds returned approximately 40% of S&P 500 stocks for the 5-year period, almost 70% over 10 years, and exceeded the returns of the S&P 500 over the last 20-years. Lower rated CCC bonds have consistently underperformed the S&P 500, while the lowest rated (CC & D) have produced negative returns. Both BB and B rated bonds outperformed the Bloomberg Barclays US Aggregate Index for all periods.

The chart also indicates that CCC rated securities underperformed BB rated and B rated bonds for the 20-year period. For shorter 5-year and 10-year periods, the lower credit CCC cohort outperformed. Not shown in the table is the pronounced and extreme volatility that has characterized the CCC sector. For example, during 2008, when the High Yield Index was down 26%, CCC rated bonds were down 44%, and during 2009, the Index was up 58% while CCC bonds were up 91%. In each calendar year since 1997, CCC rated bonds ranked either best or worst in Annual Excess Return Rankings for US corporate credit tiers, a trend that continued in 2Q2018. The CCC longer term results were achieved with significantly more volatility than the Index.

Finally, not only have BB rated bonds approximated the S&P 500 for the 20-year period, but they have done so with about half the volatility of that Index (Ibbotson), suggesting that better credit quality high yield bonds deserve consideration as a core holding in an investor's portfolio allocation.

**Performance of High-Yield Bonds by Credit Quality**

(periods ended 9/30/2018) Source: Credit Suisse First Boston  
(annualized %)

High-Yield Bond Sectors	5-years	10-years	20-years
<b>BB-rated bonds</b>	5.51	8.49	7.69
<b>B-rated bonds</b>	4.67	7.79	6.73
<b>CCC-rated bonds</b>	6.29	10.37	6.45
<b>CC &amp; D-rated bonds</b>	-9.33	-0.20	-5.63

**Performance of Other Asset Classes**

(periods ended 9/30/2018) Source: Bloomberg Barclays & Lipper

<b>S &amp; P 500 Stocks</b>	13.95	11.91	7.41
<b>Bloomberg Barclays U.S. Aggregate</b>	2.16	3.77	4.48

Absolute spreads for all credit subsectors remain below the long-term averages but have risen from the lows of 1Q2018. The September 30 spread levels (indicated at the right) enhance the value of corporate bonds versus U.S. Treasuries. The 10-year U.S. Treasury ended the Q3 at 3.06% compared to recent year-ends: 2.45% (2016) and 2.41% (2017). With the U.S. Treasury yield curve flatter following Federal Reserve actions to remove monetary policy accommodation, active corporate bond managers may find opportunistic values with credit spreads wider than earlier this year.

\*1981-2017 Average for A and BBB

Credit Rating	1987-2017 average spread	9/30/2018	12/31/2017	12/31/2016	12/31/2015	Tightest this decade
A*	1.20%	0.85%	0.73%	1.01%	1.22%	N/A
BBB*	1.87%	1.36%	1.24%	1.60%	2.24%	N/A
BB	3.56%	2.06%	2.11%	2.70%	4.17%	1.30%
B	5.35%	3.12%	3.43%	3.82%	6.54%	2.28%
CCC	10.26%	5.84%	6.15%	8.07%	13.51%	3.78%

Annual Excess Return Rankings - USD Corporate Credit Ratings Tiers																
2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	YTD	
US CCC	US CCC	US B	US CCC	US AAA	US AAA	US CCC	US CCC	US AAA	US CCC	US CCC	US BB	US AAA	US CCC	US CCC	US CCC	
58.5%	13.2%	17%	15.2%	-2.3%	-9.3%	97.4%	13.2%	-2.2%	18.7%	14.4%	0.7%	0.0%	35.2%	9.6%	7.4%	
High Yield	High Yield	US BB	High Yield	US AA	US AA	High Yield	High Yield	US BB	High Yield	High Yield	US A	US AA	High Yield	High Yield	US B	
25.6%	7.9%	0.8%	8.3%	-4.4%	-14.0%	58.7%	9.8%	-2.5%	13.6%	9.5%	0.0%	0.0%	16.2%	6.1%	4.3%	
US B	US B	High Yield	US B	High Grade	High Grade	US B	US B	US B	US B	US B	High Grade	US A	US B	US BB	High Yield	
23.5%	7.5%	0.6%	7.8%	-5.0%	-21.3%	48.7%	9.0%	-2.6%	13.2%	9.2%	0.0%	-0.3%	15.7%	5.6%	3.4%	
US BB	US BB	US AA	US BB	US BBB	US A	US BB	US BB	High Yield	US BB	US BB	US AA	High Grade	US BB	US B	US BB	
16.9%	6.0%	0.1%	6.5%	-5.4%	-22.4%	46.8%	8.3%	-3.3%	12.2%	7.8%	-0.1%	-1.6%	11.9%	5.4%	1.7%	
US BBB	US BBB	US AAA	US BBB	US A	US BBB	US BBB	US BBB	US AA	US BBB	US BBB	US BBB	US BB	US BBB	US BBB	US AAA	
9.1%	2.3%	0.1%	1.6%	-5.5%	-25.6%	35.0%	4.0%	-3.6%	9.4%	3.3%	-0.1%	6.9%	4.6%	0.4%		
High Grade	High Grade	US A	High Grade	US B	US BB	High Grade	High Grade	High Grade	High Grade	High Grade	US	US	High Grade	High Grade	US	
5.9%	1.7%	-0.2%	1.3%	-6.4%	-31.5%	23.5%	2.8%	-4.1%	7.9%	2.8%	-0.4%	-3.2%	4.7%	3.8%	0.3%	
US A	US A	High Grade	US A	US BB	High Yield	US A	US A	US BBB	US A	US A	High Yield	High Yield	US A	US AAA	US AA	
3.6%	1.4%	-0.8%	1.2%	-7.3%	-38.1%	20.0%	2.3%	-4.3%	7.5%	2.2%	-1.3%	-5.9%	3.2%	3.3%	0.2%	
US AAA	US AAA	US BBB	US AAA	High Yield	US B	US AA	US AA	US A	US AA	US AA	US B	US B	US AA	US A	High Grade	
2.6%	1.1%	-2.0%	1.1%	-7.3%	-39.6%	12.4%	1.5%	-4.3%	5.3%	1.9%	-2.0%	-6.3%	2.4%	3.1%	0.1%	
US AA	US AA	US CCC	US AA	US CCC	US CCC	US AAA	US AAA	US CCC	US AAA	US AAA	US CCC	US CCC	US AAA	US AA	US A	
2.0%	1.0%	-2.4%	1.0%	-9.2%	-48.7%	4.1%	1.3%	-7.6%	2.1%	1.0%	-5.2%	-16.2%	2.3%	2.4%	-0.2%	

Source: CreditSights, ICE BofAML Indexes data through 09/30/2018 (Excess return = the total return of the asset class minus the total return of a duration matched basket of government securities. Essentially the excess return metrics remove the yield curve piece of the return picture. In its basic form, it is mainly a function of coupon differentials and spread changes).

**Bloomberg Barclays Bond Indices Returns vs. CAM Gross (annualized %)**

(Continued from page 1)

Periods ended 9/30/2018	10-yrs	20-yrs
<b>U.S. Aggregate</b>	<b>3.77</b>	<b>4.48</b>
<b>U.S. Corporate</b>	<b>6.36</b>	<b>5.28</b>
<b>CAM Investment Grade Strategy</b>	<b>6.06</b>	<b>5.28</b>

Fed members and bank presidents and WSJ survey economists.

This current economic expansion commenced in June 2009 and ranks as the second longest on record. The #1 spot awaits after June 2019. It's hard to imagine what might derail that accomplishment, but a few lonely pessimists cite a trade war

as the most obvious risk. That concern seems reasonable, if unlikely. It was, after all, reduced U.S. exports that the Federal Reserve Bank of Atlanta previously cited in scaling back its GDPNow forecast for real GDP growth (seasonally adjusted annual rate) in Q3 to 4.2%.

And global trade tensions with China did rise in Q3 even as differences with other trading partners diminished. As September ended, Canada agreed to join the U.S. and Mexico in NAFTA 2.0 (officially the United States-Mexico-Canada Agreement). Separately, discussions in July between the U.S. and the EU were widely seen as calming trade tensions between those parties. A formal trade agreement is the anticipated outcome of that detente.

Since its founding in 1989, CAM's bottom-up research-driven investment process has aimed at superior risk-adjusted returns. That approach stresses preservation of capital, diversification and high investment income.

Fidelity to these trifurcated principles has clashed with some unintended consequences of post-ZIRP capital markets. Near-zero rates led many corporate borrowers to issue bonds – sometimes lots of bonds. At the end of September, BBB-rated corporate borrowers were responsible for 49% of outstanding corporate bond indebtedness.

Observing this trend, *The Economist* magazine noted in August 2018, "Many established firms have chosen to load up on debt to buy

(Continued on page 4)

**Footnotes and disclosure**

Cincinnati Asset Management, Inc., ("CAM") an independent privately held corporation established in 1989, is registered with the United States Securities and Exchange Commission as an investment advisor. The CAM High Yield, Investment Grade, Broad Market, and Short Duration composites consist of all discretionary portfolios under management, including all securities and cash held in the portfolios, and have been appropriately weighted for the size of the account. All accounts are included after they are substantially invested.

Returns are calculated monthly in U.S. dollars and include reinvestment of dividends and interest. Figures for periods of less than one year are cumulative returns. All other figures represent average annual returns. Past performance is no guarantee of future results.

When compared to mutual funds' performance, CAM results are after deduction of all transaction costs and CAM advisory fees. CAM advisory fees used are the composite averages. Accounts managed through brokerage firm programs usually will include additional fees. "Net of fees" herein refers only to CAM's management fee. Returns audited annually. Most recent audit available upon request.

Mutual fund averages and S&P 500, as published quarterly in Barron's as supplied by Lipper Analytics.

The indices and information shown for comparative purposes are based on or derived from information generally available to the public from sources believed to be reliable. No representation is made to its accuracy or completeness.

High yield bonds may not be suitable investments for all individuals. Before investing a thorough reading of all materials and consultation with an independent third party financial consultant may be appropriate. Fixed Income securities may be sensitive to changes in prevailing interest rates. When rates rise the value generally declines. For example, a bond's price drops as interest rates rise. For a depository institution, there is also risk that spread income will suffer because of a change in interest rates. The Indices are referred to for informational purposes only and the composition of the Index is different from the composition of the accounts included in the performance shown above. Index returns do not reflect the deduction of fees, trading costs or other expenses.

This material was not intended or written to be used, and it cannot be used, by any taxpayer, for the purpose of avoiding penalties that may be imposed on the taxpayer under U.S. federal tax laws.

This information is intended solely to report on investment strategies and opportunities identified by CAM. Opinions and estimates offered constitute our judgment and are subject to change without notice, as are statements of financial market trends, which are based on current market conditions. This material is not intended as an offer or solicitation to buy, hold or sell of any financial instrument. References to specific securities and their issuers are for illustrative purposes only and are not intended to be, and should not be interpreted as, recommendations to purchase or sell such securities.

(Continued from page 3)

back their shares in order to boost shareholder returns or, more recently, to pay for mergers.” The magazine continued that some corporate borrowers will no doubt find they’ve issued too much debt, possibly with dire consequences for investors. The magazine concluded that it’s essential for investors to “do their homework.” And CAM concurs.

That caution crosses underpins the CAM internal investment policy that caps BBB-rated bonds at 30% of the CAM Investment Grade Strategy portfolios .

There is HY *homework*, too. The quilt chart of excess returns for USD Corporate Credit Ratings Tiers on the right illustrates the extreme volatility of CCC-rated high yield bonds. That credit cohort has ranked first or last in each of the last 15 years and is on track to repeat for year 16. Few investors are comfortable with that extreme volatility, and CAM’s HY strategy excludes CCC-rated bond purchases from HY portfolios. Others recognize the CCC risks. J.P. Morgan published research in July citing Standard & Poor’s analysis that found 50% of CCC-rated bonds default within 10 years! From time to time, you may read of CAM’s CCC exclusion in discussions reconciling CAM’s HY strategy to its benchmark. Then, you can recall that this risk metric arose from CAM’s core investment principles earning kudus more often than not.

Finally, the chart on the right illustrates a point previously made in this space. Returns normally rise in tandem with risk. Historically, high yield has outperformed high grade in 13 of 21 years represented in the chart with the high grade sector similarly outperforming the U.S. Government sector in 13 of 21 calendar years, as well.

### Sharpe Ratios (risk & reward relative value) Inception-Q3 2018

**CAM Investment Grade Strategy 0.93**  
Bloomberg Barclays U.S. Corp Bonds 0.89

**CAM High Yield Strategy 0.54**  
Bloomberg Barclays High Yield Corp Bonds 0.52

**CAM Short Duration 0.51**  
Bloomberg Barclays Weighted Benchmark (1/2 Interm. HY & 1/2 U.S. Interm. Credit I-5) 0.38

**CAM Short Duration IG Strategy 0.97**  
Bloomberg Barclays U.S. Interm. Credit I-5 Yr 0.95

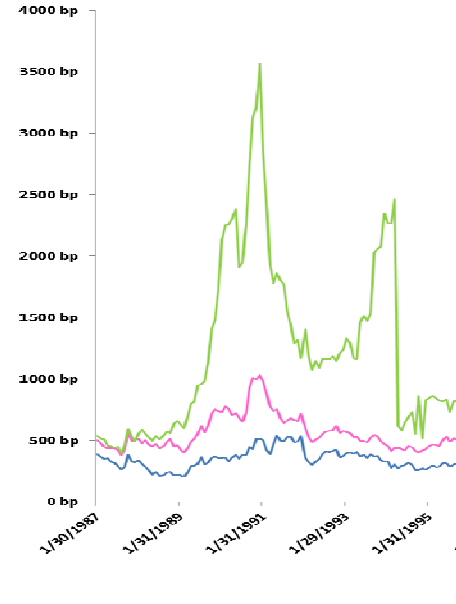
**CAM Broad Market Strategy 0.77**  
Bloomberg Barclays Weighted Benchmark (2/3 Corporate and 1/3 High Yield) 0.79

An important objective for all Cincinnati Asset Management investment strategies is to deliver superior risk-weighted returns. A quantitative indication of our success is the Sharpe Ratio that calculates total return per unit of risk. The data on the left indicate we have been largely successful. Sharpe Ratios of the Investment Grade and High Yield Strategies each exceeded their respective benchmarks by 4%. The Short Duration Strategy’s Sharpe Ratio exceeded its benchmark’s ratio by 34%, and Short Duration Investment Grade exceeded its benchmark’s by 2%. The Broad Market Strategy produced a Sharpe Ratio almost equal to the benchmark’s ratio.

Annual Relative Total Return Ranking - USD Multi-Asset Class

Year	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	YTD
S&P 500	33.3%	40.2%	86.1%	26.4%	9.9%	0.7%	55.8%	31.6%	34.3%	35.1%	39.7%	14.0%	78.9%	12.1%	12.1%	12.1%	12.1%	12.1%	12.1%	12.1%	12.1%	12.1%
Mid Cap	32.2%	28.5%	66.5%	17.5%	0.7%	11.6%	50.8%	26.0%	26.6%	32.5%	10.7%	8.3%	57.5%	26.8%	9.8%	8.6%	38.8%	5.4%	7.1%	20.7%	29.7%	16.6%
Russell 2000	22.4%	9.1%	36.0%	9.7%	9.8%	10.7%	17.3%	8.3%	12.2%	13.3%	9.1%	17.1%	52.5%	26.6%	8.3%	13.3%	33.5%	2.8%	2.8%	2.8%	2.8%	2.8%
CCMP	22.2%	9.2%	23.6%	8.2%	8.1%	9.2%	37.1%	8.5%	12.0%	15.8%	8.0%	4.0%	45.6%	9.2%	8.2%	17.8%	32.4%	13.7%	13.7%	13.7%	13.7%	13.7%
REITs	20.3%	10.0%	21.3%	14.7%	7.0%	9.4%	35.6%	15.1%	15.1%	15.1%	7.0%	1.0%	45.3%	8.1%	12.1%	12.1%	12.1%	12.1%	12.1%	12.1%	12.1%	12.1%
Conv	15.5%	8.7%	21.0%	0.4%	6.7%	9.4%	28.7%	0.9%	5.3%	11.8%	11.8%	6.4%	-0.2%	38.3%	6.7%	6.7%	6.7%	6.7%	6.7%	6.7%	6.7%	6.7%
EM Gov	7.2%	7.2%	11.3%	4.8%	7.7%	25.1%	10.9%	4.9%	5.6%	5.6%	5.6%	5.6%	37.3%	5.2%	4.4%	6.0%	9.7%	13%	13%	13%	13%	13%
High Yield	0.3%	7.1%	16.5%	9.8%	4.5%	3.8%	27.6%	0.3%	4.5%	0.6%	4.8%	-25.2%	28.0%	5.1%	4.2%	15.6%	2.9%	7.5%	0.8%	9.6%	10.0%	18%
Munis	10.9%	9.7%	4.7%	9.8%	2.6%	2.6%	23.0%	0.3%	3.9%	0.3%	4.6%	-26.4%	27.2%	4.1%	4.1%	6.5%	0.0%	7.3%	0.6%	9.5%	8.7%	13%
High Grade	9.6%	5.6%	4.1%	6.0%	4.1%	1.7%	9.8%	3.0%	8.1%	4.4%	4.4%	4.4%	27.1%	2.9%	2.9%	2.9%	2.9%	2.9%	2.9%	2.9%	2.9%	2.9%
Prefs	10.0%	5.1%	4.1%	5.1%	3.3%	3.3%	9.8%	5.5%	2.8%	6.9%	3.9%	-29.4%	26.4%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
US Gov	9.6%	3.0%	1.6%	-3.1%	2.5%	-3.1%	9.4%	5.4%	2.7%	6.6%	6.6%	3.3%	20.1%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%
Mtges	9.3%	-2.5%	-1.9%	-5.1%	-0.6%	-0.9%	9.8%	5.3%	2.6%	5.3%	2.2%	2.2%	9.8%	9.5%	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%
Loans	7.5%	-6.3%	-2.4%	-7.5%	-2.4%	-1.5%	6.2%	5.1%	2.1%	5.0%	2.0%	-37.0%	5.9%	5.7%	5.7%	5.7%	5.7%	5.7%	5.7%	5.7%	5.7%	5.7%
Cash	5.3%	-9.5%	-4.4%	-2.9%	-2.9%	-20.5%	3.3%	4.7%	4.0%	4.8%	-16%	-37.7%	5.8%	5.7%	5.7%	5.7%	5.7%	5.7%	5.7%	5.7%	5.7%	5.7%
EM Equity	-11.6%	-24.2%	-4.6%	-30.7%	-11.9%	-22.1%	2.3%	3.5%	10%	4.4%	4.4%	-11.3%	2.3%	-4.2%	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%
EM Corp	na	-4.3%	-39.2%	-20.8%	-31.2%	1%	1.3%	3%	-0.2%	3.1%	3.1%	-53.2%	-3.7%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%

Source: CreditSights, ICE BofAML, S&P/LSTA, Bloomberg EM Equity is USD MSCI Emerging Market Index, Mid Cap is S&P Mid Cap 400 Index, CCMP = NA SDAQ EM Sov is USD EM Sovereign <= BBB Index, EM Corp is USD EM Corporate Plus Index, Cash = 0-3 US Treasury Bill Index, REITs = FTSE NAREIT equity REIT Index data as of Sep 30, 2018



Rating	BB	B	CCC
<b>Avg Spread</b>	353	531	1016
<b>Std. Dev.</b>	150	206	536
<b>9/30/2018</b>	<b>206</b>	<b>312</b>	<b>584</b>
<b>Lowest Spread</b>	130	228	378

**Spreads to Treasuries by Credit Rating**  
show significantly lower risk of BB and B rated bonds. Source: Credit Suisse First Boston Global HY Indices 01/30/87 to 12/31/96; Bloomberg Barclays Capital 01/31/97 to 9/30/2018)

