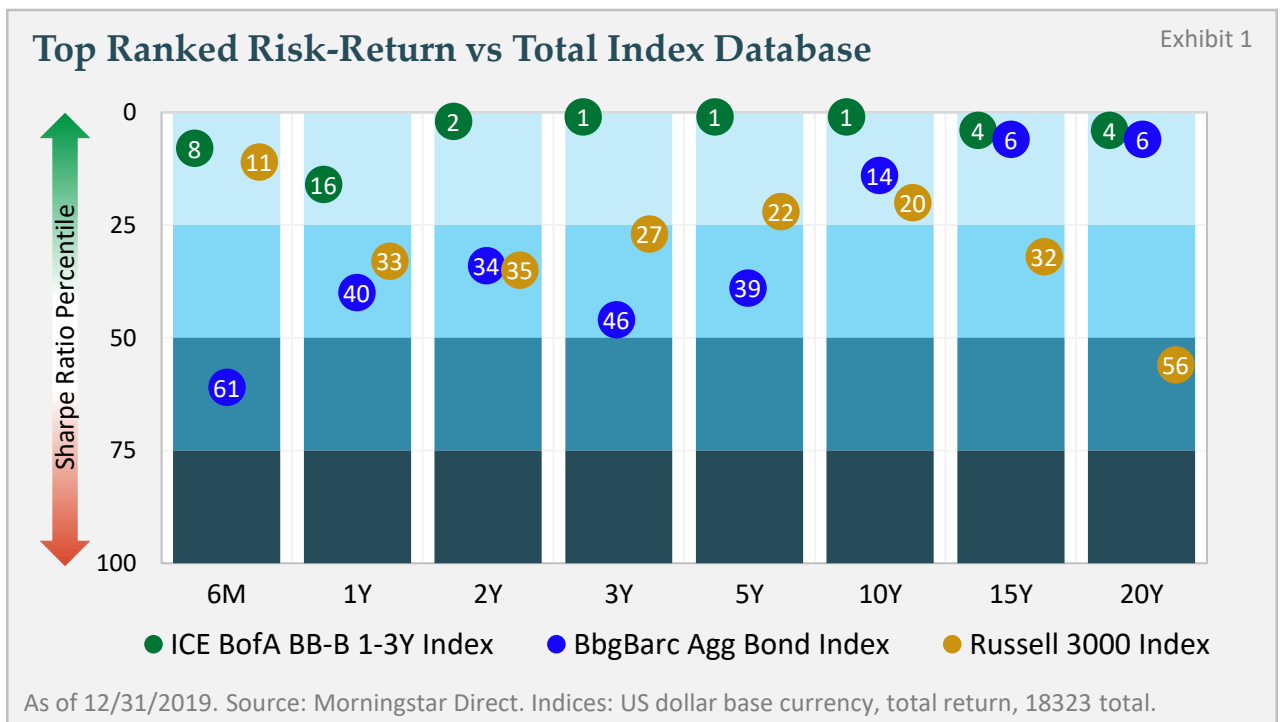


# Top Ranked of 18,323 Indices

Peter Duffy, CFA and Matthew Bogdan

To say that **BB-B rated short duration bonds have outperformed** would be understatement. Of the 18,323\* indices in the Morningstar Direct database, the ICE BofA BB-B 1-3 Year Index has produced a 1<sup>st</sup> percentile ranked Sharpe ratio across a 3-, 5-, and 10-year basis as of 12/31/19. That immense level of risk-return places the asset class well into *anomaly* territory, yet few seem to notice. The following analysis breaks down the outperformance, its underlying drivers, and why we think it will continue.



**Answering 3 key BB-B short duration bond questions.** (1) Why have they outperformed, (2) will it continue, and (3) why are they overlooked?

### 1) Why have they outperformed? Rating agency and market inefficiencies.

- Rating Agency Maturity Inefficiencies: Agencies rely on oversimplified rating methods to promote stability and ease of communication, and don't take maturity into account. A firm with a 2-year bond exhibiting BBB-like risk and a 10-year bond exhibiting CCC-like risk could receive a BB rating on both. The resulting 2-year bond exhibits BBB risk with a BB yield and rating, but is avoided by investment grade bond mandates.
- Total Return Market Dynamics: Bonds approaching their maturity tend to exhibit less uncertainty/risk, and therefore less yield and potential for capital appreciation. High yield bond mandates, seeking to maintain higher total return, sell short maturity names. This selling pressure helps keep short maturity bond yields at more attractive levels.

### 2) Will it continue? Likely yes, inefficiencies magnifying, not reversing.

- Less Fundamental Research: Bonds are receiving less research coverage amid industry cost-cutting, increasing the potential for maturity inefficiencies.
- Passives and Largest Firms: Passive strategies and large investment firms rely on large, scalable, and liquid strategies. While excellent for core portfolio assets, they are ineffective at targeting small-scale, less liquid inefficiencies such as BB-B short duration bonds, a mere \$143bn asset class which they avoid.

### 3) Why are they overlooked? Behavioral finance and a lack of marketability.

- Behavioral Finance: Investors tend to over-focus on the most and least risky asset classes in a phenomenon called *layering*, or the division of a behavioral portfolio into mental account *buckets*. For example, having a downside protection bucket and an upside capture bucket. BB-B short duration bonds fall in the oft-ignored middle area.
- Lack of Recognition: Little research is produced on the subject as large investment firms and passives ignore the asset class. Its sub-investment grade rating can spook unfamiliar investors, despite exhibiting volatility in line with the BbgBarc US Agg Bond Index.

**Winning by not losing.** A periodic table analysis highlights the outperformance and durability of BB-B short duration bonds versus traditional asset classes. Each asset class exhibits top and bottom performance years, which are notoriously difficult to forecast. BB-B short duration bonds remained above average while avoiding extreme tops/bottoms, resulting in a top ranked risk-return profile.

## Periodic Table Analysis – Sharpe Ratio by Asset Class

Exhibit 2

2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	3Y	5Y	10Y	20Y
Treas 2.3	Corp 1.6	Gbl Agg 2.6	Loans 7.2	Loans 5.2	Loans 2.1	Loans 3.2	EM Equity 1.8	Treas 1.8	Loans 5.4	BB-B SD 3.7	Agg 3.3	BB-B SD 6.7	US Equity 3.9	Muni 3.9	Muni 1.4	BB-B SD 3.5	DM Equity 6.8	BB-B SD 0.1	Corp 3.0	BB-B SD 1.9	BB-B SD 1.6	BB-B SD 2.0	BB-B SD 1.0
Agg 1.8	Agg 1.2	Agg 2.2	HY 4.7	BB-B SD 3.1	EM Equity 1.5	BB-B SD 3.0	Treas 1.1	Agg 0.6	BB-B SD 5.0	Loans 2.3	Muni 3.1	Loans 4.1	Cnvt 3.6	Agg 2.6	Treas 0.2	Loans 2.9	EM Equity 5.6	Cnvt -0.2	BB-B SD 2.7	Muni 1.2	Loans 1.1	Loans 1.3	Agg 1.0
Muni 1.5	BB-B SD 1.0	Treas 1.7	BB-B SD 4.4	HY 2.5	DM Equity 1.2	HY 2.8	DM Equity 1.1	Gbl Agg 0.3	HY 4.5	Corp 2.3	Treas 2.7	HY 4.1	Loans 3.2	Treas 2.5	Agg 0.2	HY 2.8	US Equity 5.2	Treas -0.3	HY 2.3	Cnvt 1.2	HY 0.9	Corp 1.3	Corp 0.8
Corp 0.7	Treas 0.6	Corp 1.7	Cnvt 4.4	DM Equity 2.0	US Equity 0.3	DM Equity 2.0	Gbl Agg 1.0	Muni -0.6	Cnvt 4.0	Agg 2.2	Corp 1.7	Corp 3.1	BB-B SD 2.9	Corp 2.4	US Equity 0.0	Corp 1.1	Cnvt 4.2	Muni -0.4	Muni 2.3	Corp 1.2	Corp 0.9	HY 1.2	Muni 0.8
BB-B SD -0.5	Loans 0.2	Muni 1.4	EM Equity 3.6	EM Equity 1.5	Muni 0.2	US Equity 1.6	Agg 0.8	Corp -0.6	Corp 3.0	HY 2.2	Gbl Agg 1.1	Agg 2.1	HY 1.5	US Equity 1.4	BB-B SD 0.0	US Equity 1.1	BB-B SD 4.1	US Equity -0.5	Cnvt 2.2	HY 1.1	Cnvt 0.8	Agg 1.1	Treas 0.7
Gbl Agg -0.5	Muni 0.2	BB-B SD 0.7	DM Equity 2.8	Gbl Agg 1.4	BB-B SD 0.1	Cnvt 1.5	BB-B SD 0.1	BB-B SD -1.2	EM Equity 2.7	Cnvt 1.4	BB-B SD 0.9	Muni 1.8	DM Equity 1.4	BB-B SD 1.2	Corp -0.2	Cnvt 1.0	Loans 3.6	Loans -0.5	US Equity 2.1	US Equity 1.0	Muni 0.8	Muni 1.1	HY 0.6
Cnvt -0.7	HY 0.1	Loans 0.1	US Equity 2.6	US Equity 1.3	HY -0.1	EM Equity 1.4	US Equity 0.0	HY -1.3	Muni 2.1	Treas 1.3	HY 0.4	Cnvt 1.8	EM Equity -0.2	Cnvt 1.2	Loans -0.3	EM Equity 0.6	Corp 3.1	Agg -0.6	Loans 1.9	Loans 0.9	US Equity 0.8	Cnvt 1.0	Loans 0.5
US Equity -0.8	EM Equity -0.2	HY -0.3	Gbl Agg 1.5	Cnvt 1.2	Treas -0.1	Gbl Agg 0.4	Cnvt 0.0	EM Equity -1.4	Agg 1.7	EM Equity 0.9	Loans 0.2	US Equity 1.5	Corp -0.3	Loans 0.8	Cnvt -0.3	Agg 0.6	HY 2.9	Gbl Agg -0.8	Agg 1.9	Agg 0.8	Agg 0.6	US Equity 1.0	Gbl Agg 0.5
Loans -0.9	Gbl Agg -0.4	EM Equity -0.4	Corp 1.0	Corp 0.8	Agg -0.3	Muni 0.0	Corp 0.0	Cnvt -1.5	DM Equity 1.6	US Equity 0.8	US Equity 0.1	Gbl Agg 1.4	Gbl Agg -0.5	HY 0.5	DM Equity -0.4	DM Equity 0.3	Gbl Agg 2.3	EM Equity -1.0	DM Equity 1.5	DM Equity 0.7	DM Equity 0.4	Treas 0.7	Cnvt 0.4
DM Equity -1.4	Cnvt -0.5	Cnvt -0.8	Muni 0.7	Muni 0.8	Cnvt -0.3	Corp -0.2	HY -0.4	DM Equity -1.6	US Equity 1.2	Gbl Agg 0.8	Cnvt -0.4	DM Equity 1.0	Muni -0.6	Gbl Agg 0.1	HY -0.7	Gbl Agg 0.2	Muni 2.2	HY -1.2	Gbl Agg 1.2	EM Equity 0.7	Treas 0.3	Gbl Agg 0.4	US Equity 0.3
HY -1.7	US Equity -0.7	DM Equity -0.9	Agg 0.6	Agg 0.7	Corp -0.3	Agg -0.3	Loans -0.6	US Equity -1.7	Gbl Agg 0.8	DM Equity 0.5	DM Equity -0.7	EM Equity 0.9	Agg -0.7	EM Equity -0.1	EM Equity -0.8	Treas 0.2	Agg 1.7	DM Equity -1.2	EM Equity 1.0	Gbl Agg 0.7	EM Equity 0.3	DM Equity 0.3	EM Equity 0.2
EM Equity -2.1	DM Equity -1.2	US Equity -1.1	Treas 0.2	Treas 0.4	Gbl Agg -1.9	Treas -0.7	Muni -0.7	Loans -1.9	Treas -0.7	Muni 0.5	EM Equity -0.7	Treas 0.7	Treas -1.1	DM Equity -0.3	Gbl Agg -1.0	Muni 0.0	Treas 0.8	Corp -1.3	Treas 1.0	Treas 0.4	Gbl Agg 0.3	EM Equity 0.2	DM Equity 0.1

As of 12/31/2019. Source: Morningstar Direct.

Agg	BbgBarc Aggregate Bond	Gbl Agg	BbgBarc Global Aggregate Bond
BB-B SD	ICE BofA BB-B 1-3Y Bond	HY	ICE BofA High Yield Bond
Cnvt	ICE BofA Convertible Bond	Loans	S&P/LSTA Leveraged Loan
Corp	ICE BofA Corporate Bond	Muni	ICE BofA Municipal Bond
DM Equity	MSCI ACWI ex USA Equity	Treas	ICE BofA Treasury Bond
EM Equity	MSCI Emerging Market Equity	US Equity	Russell 3000 Equity

## Periodic Table Analysis – Return by Asset Class

Exhibit 3

2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	3Y	5Y	10Y	20Y
Muni 17.1	BB-B SD 11.1	Gbl Agg 16.5	EM Equity 56.3	EM Equity 26.0	EM Equity 34.5	EM Equity 32.6	EM Equity 39.8	Treas 14.0	EM Equity 79.0	EM Equity 19.2	Muni 11.2	EM Equity 18.6	US Equity 33.6	US Equity 12.6	Muni 3.6	HY 17.5	EM Equity 37.8	BB-B SD 2.2	US Equity 31.0	US Equity 14.6	US Equity 11.2	US Equity 13.4	EM Equity 7.0
Treas 13.4	Corp 10.7	Treas 11.6	DM Equity 41.4	DM Equity 21.4	DM Equity 17.1	DM Equity 27.2	DM Equity 17.1	Agg 5.2	HY 57.5	US Equity 16.9	Treas 9.8	DM Equity 17.4	Cnvt 24.9	Muni 9.8	Treas 0.8	US Equity 12.7	DM Equity 27.8	Muni 1.0	Cnvt 23.2	EM Equity 12.0	Cnvt 8.5	Cnvt 10.1	HY 7.0
Agg 11.6	Agg 8.4	Muni 10.7	US Equity 31.1	US Equity 11.9	US Equity 6.1	US Equity 15.7	Gbl Agg 9.5	Gbl Agg 4.8	Loans 51.6	Cnvt 16.8	Agg 7.8	US Equity 16.4	DM Equity 15.8	Cnvt 9.4	Agg 0.5	EM Equity 11.6	US Equity 21.1	Treas 0.8	DM Equity 22.1	Cnvt 11.9	HY 6.1	HY 7.5	BB-B SD 7.0
Corp 9.1	Treas 6.7	Agg 10.3	HY 28.1	HY 10.9	Loans 5.1	Cnvt 12.8	Treas 9.1	Muni -4.0	Cnvt 49.1	HY 15.2	Corp 7.5	HY 15.6	HY 7.4	Corp 7.5	US Equity 0.5	BB-B SD 10.8	Cnvt 13.7	Loans 0.4	EM Equity 18.9	DM Equity 10.4	DM Equity 6.0	BB-B SD 6.0	US Equity 6.4
Loans 4.9	HY 4.5	Corp 10.2	Cnvt 27.1	Cnvt 9.6	Muni 3.9	HY 11.8	Agg 7.0	Corp -6.8	BB-B SD 42.2	DM Equity 11.6	Gbl Agg 5.6	Cnvt 15.0	BB-B SD 6.5	Treas 6.0	BB-B SD 0.0	Cnvt 10.4	HY 7.5	Cnvt 0.2	HY 14.4	HY 6.3	EM Equity 6.0	Corp 5.6	Corp 6.1
BB-B SD 4.1	Muni 4.5	BB-B SD 6.1	BB-B SD 17.0	Gbl Agg 9.3	BB-B SD 3.5	BB-B SD 8.0	US Equity 5.1	BB-B SD -15.4	DM Equity 42.1	BB-B SD 11.2	HY 4.4	Corp 10.4	Loans 5.3	Agg 6.0	Corp -0.6	Loans 10.2	Gbl Agg 7.4	Agg 0.0	Corp 14.2	Corp 5.9	BB-B SD 5.2	DM Equity 5.4	Corp 6.1
Gbl Agg 3.2	Loans 4.2	Loans 1.9	Gbl Agg 12.5	BB-B SD 6.5	Treas 2.8	Loans 6.7	BB-B SD 5.0	HY -26.4	US Equity 28.3	Loans 10.1	BB-B SD 4.2	BB-B SD 9.8	Corp -1.5	HY 2.5	Loans -0.7	Corp 6.0	Corp 6.5	Gbl Agg -1.2	BB-B SD 8.8	BB-B SD 5.2	Corp 4.6	Loans 5.0	Muni 5.5
HY -5.1	Gbl Agg 1.6	HY -1.9	Loans 10.0	Muni 5.5	HY 2.7	Gbl Agg 6.6	Corp 4.6	Loans -29.1	Corp 19.8	Corp 9.5	Loans 1.5	Loans 9.7	Agg -2.0	BB-B SD 2.1	Cnvt -3.0	DM Equity 5.0	Muni 5.4	Corp -2.2	Agg 8.7	Muni 4.7	Loans 4.4	Muni 4.5	Agg 5.0
US Equity -7.5	EM Equity -2.4	EM Equity -6.0	Corp 8.3	Corp 5.4	Agg 2.4	Muni 5.0	Cnvt 4.5	Cnvt -35.7	Muni 14.5	Agg 6.5	US Equity 1.0	Muni 7.3	EM Equity -2.3	Loans 1.6	Gbl Agg -3.2	Agg 2.6	BB-B SD 4.9	HY -2.3	Loans 8.6	Loans 4.3	Muni 3.6	EM Equity 4.0	Loans 4.9
Cnvt -10.0	Cnvt -4.4	Cnvt -8.6	Muni 6.2	Loans 5.2	Corp 2.0	Corp 4.4	Muni 3.3	US Equity -37.3	Gbl Agg 6.9	Treas 5.9	Cnvt -5.2	Gbl Agg 4.3	Gbl Agg -2.6	Gbl Agg 0.6	HY -4.6	Gbl Agg 2.1	Loans 4.1	US Equity -5.2	Muni 7.7	Gbl Agg 4.3	Agg 3.0	Agg 3.7	Treas 4.7
DM Equity -15.1	US Equity -11.5	DM Equity -14.7	Agg 4.1	Agg 4.3	Cnvt 1.0	Agg 4.3	HY 2.2	DM Equity -45.2	Agg 5.9	Gbl Agg 5.5	DM Equity -13.3	Agg 4.2	Muni -2.9	EM Equity -1.8	DM Equity -5.3	Treas 1.1	Agg 3.5	DM Equity -13.8	Treas 7.0	Agg 4.0	Treas 2.4	Treas 3.2	Gbl Agg 4.5
EM Equity -30.6	DM Equity -19.5	US Equity -21.5	Treas 2.3	Treas 3.5	Gbl Agg -4.5	Treas 3.1	Loans 2.1	EM Equity -53.2	Treas -3.7	Muni 2.3	EM Equity -18.2	Treas 2.2	Treas -3.3	DM Equity -3.4	EM Equity -14.6	Muni 0.4	Treas 2.4	EM Equity -14.2	Gbl Agg 6.8	Treas 3.4	Gbl Agg 2.3	Gbl Agg 2.5	DM Equity 4.3

As of 12/31/2019. Source: Morningstar Direct.

**BB-B short duration bonds** have shown a rare mix of durability and return potential across a wide range of environments; bull/bear markets, rising/falling interest rates, widening/tightening spreads, geopolitical events. The bonds have exhibited lower sensitivity to traditional interest rate, credit, and market risks, all of which are highly prevalent in the current environment. This allows for a simpler and far less volatile factor to drive returns: yield.

For more info on short duration BB-B bonds, [our research can be found here.](#)

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