THE ILLUSION OF CORPORATE BOND DIVERSIFICATION IN A BALANCED PORTFOLIO

COMMUNITY CAPITAL MANAGEMENT
Revitalizing America

Introduction

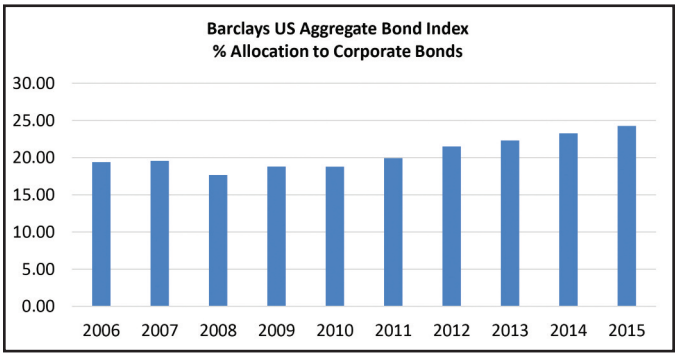
Correlations between equity and corporate fixed income indices have historically been highest during times of negative equity returns, effectively turning corporate bonds into an equity proxy and reducing the benefits of diversification. Taxable municipals can be a great alternative to corporate bonds in diversified portfolios.

When constructing balanced portfolios, asset managers often view each allocation as having a specific and defined role within a portfolio. A generally accepted view is that fixed income has two primary functions: capital preservation and income.

Traditional "core" fixed income strategies are a common choice for investors looking to accomplish the aforementioned goals. Believers in this strategy often highlight diversification among bond sectors as support for their decision. However, core strategies, such as those that track the popular Barclay's US Aggregate Bond Index, typically have significant exposure to corporate bonds.

Figure 1 shows the percentage allocation to corporate bonds in the Barclays US Aggregate Bond Index over the last ten years. In 2008, when volatility increased substantially, benchmark interest rates were reduced to essentially zero and corporate allocations were 17.7%. Since then, corporate allocations have climbed steadily up to 24.3% at year-end 2015. Many active core fixed income managers have a strong incentive to overweight corporates in times of low overall rates in an effort to reach their yield targets or beat their benchmark – often abandoning discipline by investing in lower-rated or longer-dated bonds.

Figure 1



Source: Barclays Live

In a balanced portfolio, replacing corporate bonds, or a percentage allocation to them, with taxable municipals may be the optimal choice from a risk/return perspective because it can provide:

(a) greater diversification benefit and improved capital preservation, especially during volatile down equity markets when it's most important;

(b) superior credit quality; and

(c) favorable yields and relative returns.

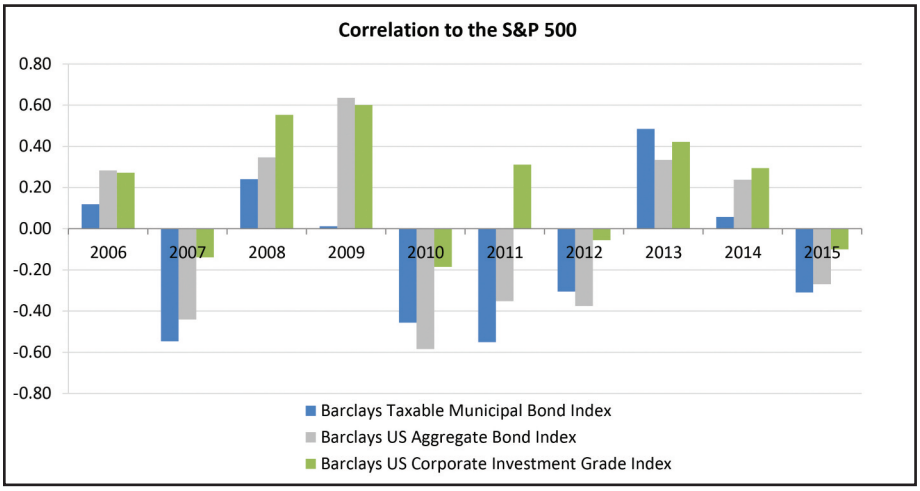
Despite these benefits, the taxable municipal sector is often overlooked by managers and excluded from major indices. Community Capital Management (CCM) sees the taxable municipal sector as an opportunity.

The Illusion of Corporate Bond Diversification in a Balanced Portfolio

The theoretical benefit of a diversified portfolio comes from distinct and independent movement of the individual allocations as measured by correlation, so that as value declines in one asset class, the losses can be partially offset by gains in other asset classes. Traditional wisdom suggests that a balanced equity and fixed income portfolio consisting of primarily core indexed products provides sufficient diversification for smaller portfolios.

However, data indicates that the inclusion of corporate bonds in balanced portfolios may be detrimental to the intended diversification benefits. Corporate credit exposure can actually reduce the diversification benefit of fixed income securities in a mixed equity and bond

Figure 2



Source: eVestment Alliance (eA)

portfolio. This is especially true in times of high volatility, when the diversification benefit is most important. Correlations between equity and corporate fixed income indices have historically been highest during times of negative equity returns, effectively turning corporate bonds into an equity proxy and reducing the benefits of diversification.

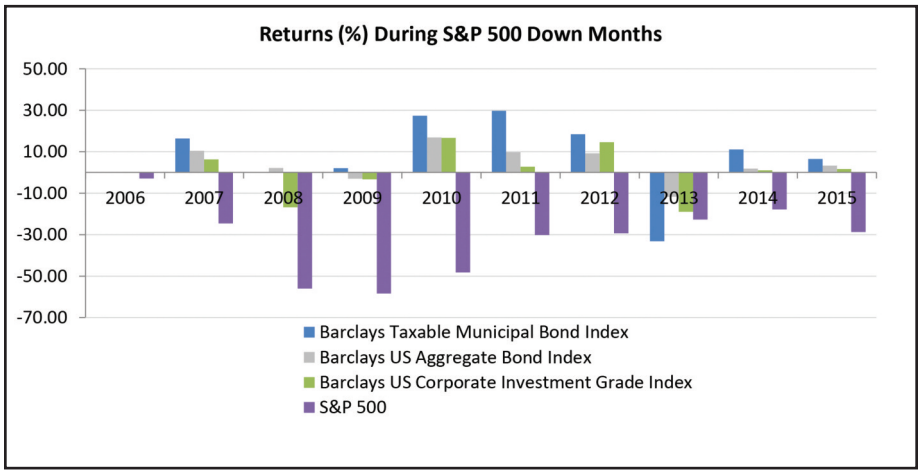
Figure 2 shows the correlation coefficients versus the S&P 500 Index over the last ten years for three different bond indices – the Barclays Taxable Municipal Bond Index, the Barclays US Aggregate Bond Index, and the Barclays US Corporate Investment Grade Index.

Greater diversification benefit for a mixed equity and fixed income portfolio is represented by a lower correlation coefficient between the two asset classes.

A higher correlation means that the assets tend to move together, reducing the benefit of diversification. Of the three indices included in this data, the Barclays US Corporate Investment Grade Index had the highest correlation to equities in seven out of the last ten years providing the least diversification benefit from a total portfolio perspective.

Figure 3 shows the annualized monthly returns for the same three indices, plus the S&P 500, over the last ten years during months in which the S&P 500 had a negative return. The importance of diversification is magnified when markets experience sharp down moves. When equities fall, the ability of bond allocations to preserve capital is most critical. In nine out of the last ten years, the Barclays Taxable Municipal Bond Index generated better performance, and hence better preserved capital, during the S&P 500 down months, compared to the Barclays US Corporate Investment Grade Index. This result is not surprising due to the correlations previously discussed.

Figure 3



Source: eVestment Alliance (eA)

Superior Credit Quality

Municipals have historically exhibited a stronger credit profile than their corporate counterparts with similar ratings, further strengthening the argument that taxable municipals are a better choice to corporate bonds for balanced portfolios.

Moody's published a research report in July, 2015[1], providing significant data surrounding the comparable credit quality of corporate and municipal debt issuance. Figures 4 and 5 show the average one-year transition (upgrade/ downgrade) rates for municipal and corporate issuers over the last 44 years.

Each cell shows the percentage of debts that held a given row's rating at the beginning of the period, and the column's rating at the end of the period. The diagonal yellow cells represent the debts that held the same rating at the beginning and end of the period. The green cells to the left represent the percent of debts upgraded, and the red cells to the right represent the percent that were downgraded.

The data indicates that, in aggregate, municipal bond ratings were more stable over time and across all levels maintaining their ratings at a much higher frequency compared to similar quality corporates. In addition, corporate bonds were downgraded more frequently when compared to similar quality municipals.

The Moody's report also provided cumulative default rates for corporate and municipal issuers over the same 44-year time period.

Figure 4

Average One-Year Rating Transition Rates, 1970-2014, Municipal vs. Corporate Issuers

Municipal Issuers

From/To:	Aaa	Aa	A	Baa	Ba	B	Caa-C	Default	Withdrawn
Aaa	94.71%	1.59%	0.15%	0.04%	0.01%	0.00%	0.00%	0.00%	3.50%
Aa	0.42%	95.58%	1.46%	0.04%	0.01%	0.00%	0.00%	0.00%	2.48%
A	0.03%	1.73%	92.95%	0.68%	0.07%	0.01%	0.00%	0.00%	4.52%
Baa	0.02%	0.04%	1.61%	91.16%	0.58%	0.06%	0.01%	0.01%	6.51%
Ba	0.05%	0.07%	0.47%	4.45%	82.23%	3.01%	0.55%	0.27%	8.89%
B	0.00%	0.12%	0.63%	1.73%	4.00%	79.05%	4.70%	2.83%	6.94%
Caa-C	0.00%	0.00%	0.27%	0.77%	1.51%	2.34%	74.70%	7.40%	13.01%
	Aggregate Upgrade		20.26%		Aggregate Downgrade		12.97%		

Source: Moody's Investors Service[1]

Figure 5

Average One-Year Rating Transition Rates, 1970-2014, Municipal vs. Corporate Issuers

Corporate Issuers

From/To:	Aaa	Aa	A	Baa	Ba	B	Caa-C	Default	Withdrawn
Aaa	87.34%	8.13%	0.62%	0.00%	0.03%	0.00%	0.00%	0.00%	3.87%
Aa	0.89%	84.55%	8.45%	0.50%	0.07%	0.02%	0.01%	0.02%	5.50%
A	0.05%	2.41%	86.14%	5.54%	0.54%	0.11%	0.04%	0.06%	5.12%
Baa	0.04%	0.16%	3.96%	85.42%	3.84%	0.71%	0.16%	0.16%	5.55%
Ba	0.01%	0.05%	0.33%	5.60%	75.78%	7.33%	0.65%	1.00%	9.27%
B	0.01%	0.03%	0.11%	0.29%	4.42%	73.57%	6.62%	3.45%	11.51%
Caa-C	0.00%	0.01%	0.02%	0.09%	0.36%	7.80%	65.02%	14.12%	12.58%
	Aggregate Upgrade		43.37%		Aggregate Downgrade		26.64%		

Source: Moody's Investors Service[1]

[1]*US Municipal Bond Defaults and Recoveries, 1970-2014, Moody's Investors Service*

Figures 6 and 7 show the resulting data providing further support that municipals have less credit risk than comparable-quality corporate bonds. In fact, in every time period for investment grade issues (yellow highlight), municipal issuers had significantly lower cumulative default rates.

The data shows a clear advantage, from a credit risk perspective, to municipals as opposed to corporate bonds in balanced portfolios. This is supported by favorable metrics related to ratings transitions as well as cumulative default rates over an extended period of time.

In addition, Moody's notes that municipal ratings generally had greater levels of accuracy than corporate ratings in differentiating defaulters from non-defaulters.

Figure 6

Cumulative Default Rates, Average over the Period 1970-2014, Municipal vs. Corporate Issuers										
Municipal Issuers										
Rating	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Aaa	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Aa	0.00%	0.00%	0.00%	0.00%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%
A	0.00%	0.01%	0.02%	0.02%	0.03%	0.03%	0.04%	0.05%	0.06%	0.06%
Baa	0.01%	0.04%	0.08%	0.11%	0.15%	0.19%	0.24%	0.29%	0.33%	0.37%
Ba	0.28%	0.81%	1.27%	1.85%	2.39%	2.80%	3.24%	3.59%	3.88%	4.11%
B	2.92%	5.57%	8.03%	10.26%	12.38%	13.82%	14.66%	15.44%	16.30%	17.48%
Caa-C	7.83%	11.01%	12.99%	14.12%	14.71%	15.21%	15.76%	16.37%	16.88%	16.88%
Investment-Grade	0.00%	0.01%	0.02%	0.03%	0.04%	0.05%	0.06%	0.07%	0.08%	0.08%
Speculative-Grade	1.31%	2.42%	3.36%	4.29%	5.13%	5.74%	6.26%	6.72%	7.13%	7.52%
All Rated	0.02%	0.03%	0.05%	0.06%	0.08%	0.09%	0.11%	0.12%	0.13%	0.14%

Source: Moody's Investors Service[1]

Figure 7

Cumulative Default Rates, Average over the Period 1970-2014, Municipal vs. Corporate Issuers										
Corporate Issuers										
Rating	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Aaa	0.00%	0.01%	0.01%	0.04%	0.10%	0.17%	0.24%	0.31%	0.39%	0.48%
Aa	0.02%	0.07%	0.14%	0.26%	0.40%	0.54%	0.67%	0.78%	0.88%	0.99%
A	0.06%	0.20%	0.43%	0.67%	0.95%	1.26%	1.60%	1.97%	2.36%	2.72%
Baa	0.17%	0.48%	0.86%	1.32%	1.78%	2.27%	2.75%	3.23%	3.78%	4.41%
Ba	1.07%	2.96%	5.18%	7.55%	9.70%	11.70%	13.44%	15.18%	16.90%	18.69%
B	3.71%	8.86%	14.14%	18.82%	23.11%	27.11%	30.82%	33.94%	36.72%	39.16%
Caa-C	14.96%	25.68%	34.29%	41.18%	46.97%	51.21%	54.73%	58.01%	61.26%	63.77%
Investment-Grade	0.09%	0.27%	0.51%	0.78%	1.09%	1.41%	1.73%	2.07%	2.43%	2.81%
Speculative-Grade	4.34%	8.92%	13.29%	17.15%	20.52%	23.48%	26.08%	28.36%	30.47%	32.41%
All Rated	1.66%	3.37%	4.95%	6.32%	7.49%	8.51%	9.39%	10.17%	10.90%	11.58%

Source: Moody's Investors Service[1]

The cumulative default ratings over time were higher across the board, at every rating level, for like-rated corporate issues when compared to municipal issues.

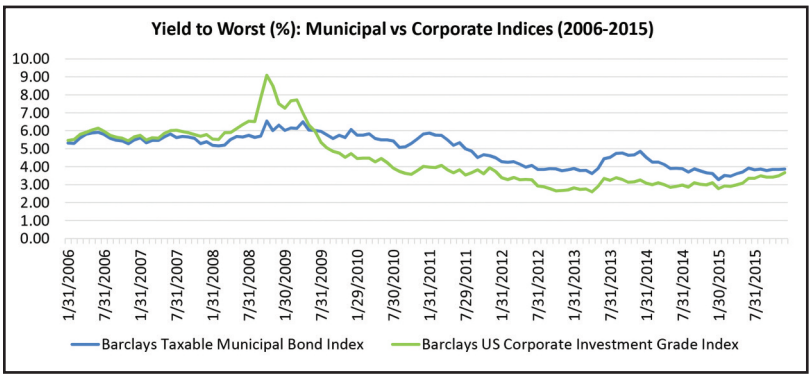
Favorable Yields and Relative Returns

Taxable municipals are often overlooked by market participants despite yields that are comparable and often better than corporate bonds.

Figure 8 shows the monthly yield to worst for the Barclays Taxable Municipal Bond Index and the Barclays US Corporate Investment Grade Index, respectively, over the last ten years. The Barclays Taxable Municipal Bond Index generated a superior yield advantage compared to the Barclays US Corporate Investment Grade Index in every month since 2010 and in the majority of months over the last ten years.

Figure 9 shows the annual total returns for the same three indices mentioned earlier over the last ten years. The simple average returns over this period are comparable between the Barclays Taxable Municipal Bond Index and the Barclays US Corporate Investment Grade Index, with the Barclays Taxable Municipal Bond Index outperforming by 0.76% with an average return of 6.24%. During the months when equity returns were negative (see figure 3), the difference in return was magnified considerably – the Barclays Taxable Municipal Bond Index generated an average return of 7.40% compared to 0.38% for the Barclays US Corporate Investment Grade Index.

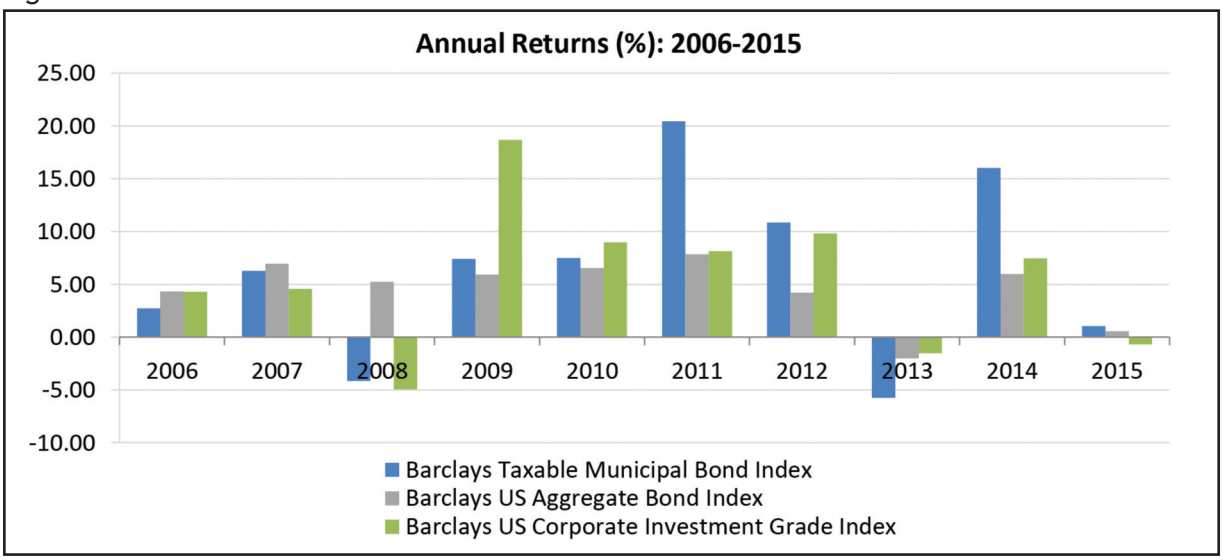
Figure 8



Source: eA and Barclays Live

The perceived yield advantage of corporate bonds over municipals is a misconception. In the last ten years, overall, taxable municipals generated favorable income and total return.

Figure 9



Source: eA and Barclays Live

Conclusion

There are consistent themes looking ahead into 2016 and beyond. The most common appears to be that the beginning of the Fed raising rates signals a significant policy shift, introducing new variables and uncertainties into the market. As a result, expectations for 2016 are muted while volatility is expected to increase. Questions, risks, and market considerations include the timing and pace of follow-up rate increases, bond market liquidity, junk bond deterioration, depressed commodity prices, and international instability.

With that forecast in mind, this report is especially timely. Relative to corporate bonds, taxable municipals have historically offered: (a) greater diversification and capital preservation, especially during volatile down equity markets when it's needed most; (b) superior credit quality; and (c) favorable yields and relative returns.

As part of a balanced portfolio, the taxable municipal sector can offer investors an ideal surrogate, or complement, to corporate bond allocations.

About CCM

CCM is a privately-held registered investment advisor with the Securities and Exchange Commission. Headquartered in Weston, Florida with offices in Charlotte, North Carolina and Boston, Massachusetts, the firm was founded in 1998 and manages over $2 billion in assets. CCM's flagship intermediate fixed income impact investing strategy is available as a separate account or via a mutual fund (CRA Qualified Investment Fund). For more information, please visit www.ccmfixedincome.com or call 877-272-1977.

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Glossary:

Balanced Portfolio: a method of portfolio allocation designed to provide both income and capital appreciation while avoiding excessive risk.

Barclays US Aggregate Bond Index: covers the US investment grade fixed rate bond market, with index components for government and corporate services, mortgage pass-thru securities and asset-backed securities.

Barclays Taxable Municipal Bond Index: a rules-based, market-value-weighted index engineered for the long-term taxable bond market.

Barclays US Corporate Investment Grade Index: an unmanaged index consisting of publicly issued US Corporate and specified foreign debentures that are registered with the Securities and Exchange Commission and meet specific maturity, liquidity, and quality requirements.

Correlation Coefficient: a correlation coefficient is a number between -1 and 1 that measures the co-movement (linear association) between two random variables. The lower the correlation coefficient, the greater the diversification benefits.

eVestment Alliance (eA): eA provides a flexible suite of easy-to-use, cloud-based solutions to help the institutional investing community identify and capitalize on global investment trends, better select and monitor investment managers and more successfully enable asset managers to market their funds worldwide.

Standard & Poor's (S&P 500): the S&P 500 is an index of 500 of the most widely held stocks on the New York Stock Exchange.

Yield to Worst: the lowest potential yield that can be received on a bond without the issuer actually defaulting.