

(Last month, S-Network published an article entitled, "The Efficacy of Indexation -- A Case Study." The article examined the various methodologies that went into the construction of the S-Network Composite Closed-End Fund Index (TICKER: CEFX). The article attracted a great deal of positive feedback and requests for information about other S-Network Closed End Fund Indexes, including whether we published a closed end fund index covering municipal bond closed end funds. As a result, we are pleased to offer the following article.)

The Efficacy of Indexation II

S-Network Composite Municipal Closed-End Fund Index (CEFMX — A Case Study)

The S-Network Composite Municipal Bond Closed-End Fund Index (TICKER: CEFMX) comprises 63 closed-end funds that invest in municipal bonds. As of March 31, 2019, CEFMX was yielding approximately 4.9% per annum on a federally tax-free basis. It serves as the basis of an ETF offered by VanEck Market Vectors (TICKER: XMPT) which holds nearly \$150 million in assets.

Why Municipal Bond Closed-End Funds

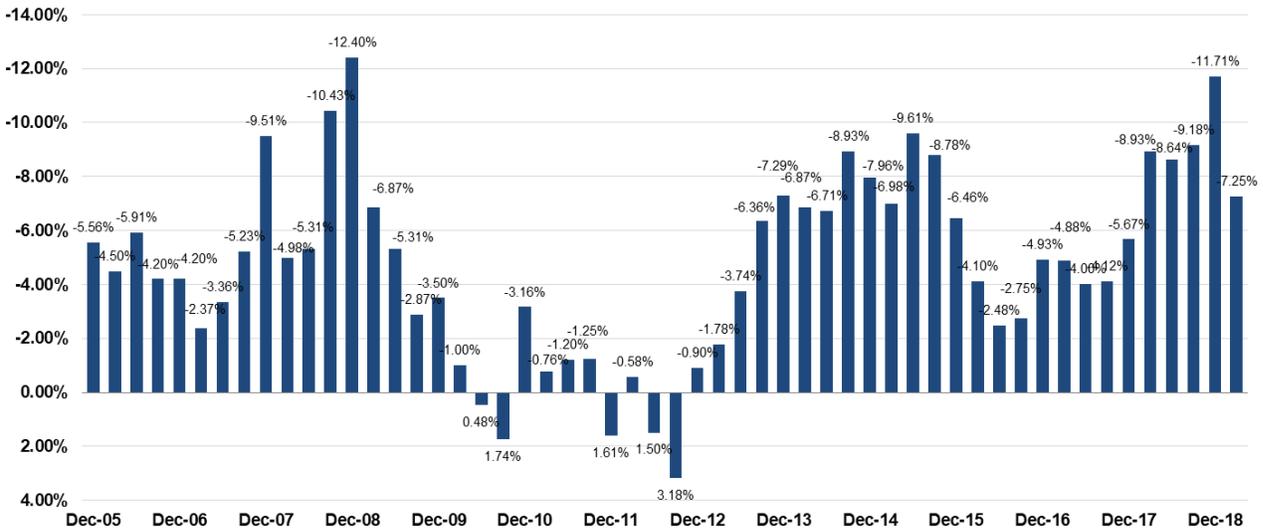
The most unique characteristic of CEFMX is the exposure it provides — municipal bond closed-end funds (MCEFs). As a result, the dividend income derived from CEFMX is free from federal income taxes.

But like its cousin CEFX, CEFMX offers a number of additional benefits. Because MCEFs are not required to make redemptions, they do not need to hold cash in reserve for such occasions. By the same token, they can invest in less-liquid securities, including private placements, which typically offer slightly higher yields and are less subject to the ups and downs of market turbulence.

Most MCEFs are actively managed, which is another important characteristic, because the managers employ proprietary investment strategies aimed at enhancing yield. Many MCEFs employ leverage, whereby they borrow against their assets to buy additional assets in order to enhance yield.

A possible downside of MCEFs is that they often trade at discounts to their NAVs. These discounts occur precisely because the MCEFs do not offer redemptions at their NAVs. But there is also opportunity to be found in these discounts. In turbulent markets, the discounts tend to widen. But then, when market stability is restored, the discounts tend to narrow. Buying MCEFs at a discount actually increases the yield on their market prices and can provide additional return when discounts narrow.

S-Network Municipal Bond Closed-End Fund Index: Historical Discounts/Premiums



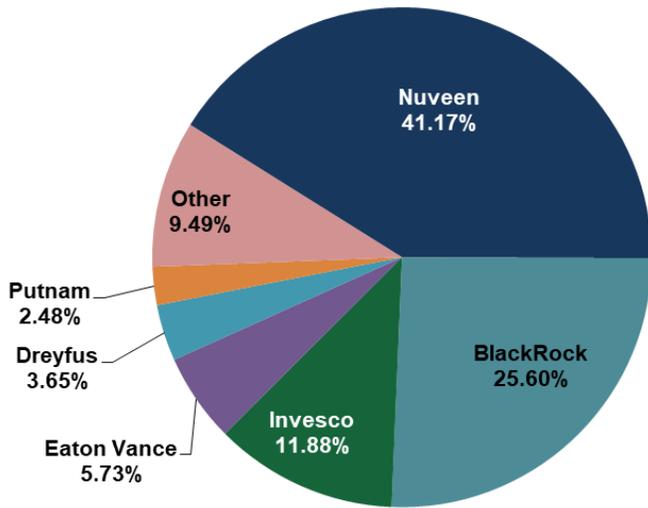
Diversifying Risk

The biggest problem with MCEFs, however, is the age-old investment problem of picking the right MCEF to include in one’s portfolio. A MCEF that cuts its dividend, for example, is likely to experience a decline in price, thus negating the higher yield that the MCEF might have provided.

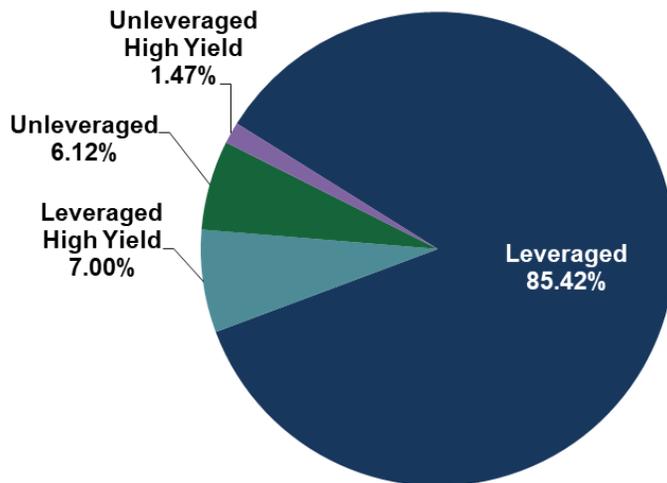
The main benefit of CEFMX is the diversification it offers. The portfolio currently consists of 63 individual MCEFs, managed by 14 of the most prominent asset managers in active municipal bond investing, such as BlackRock, Nuveen, Invesco and Eaton Vance. Each manager employs their own unique investment strategy.

Constituent weights in CEFMX are capped at 8%, so individual MCEF risk is substantially mitigated. Of course, diversification comes at a price. It is certainly possible to get lucky, pick a single MCEF and enjoy a slightly higher yield than CEFMX offers. That is a personal decision based on risk preferences and the analytic resources at one’s disposal.

**S-Network Municipal Bond Closed-End Fund Index:
Manager Distribution**



**S-Network Municipal Bond Closed-End Fund Index:
Sector Distribution**



Constituents Chosen Based on Objective Criteria

As a composite index, CEFMX includes every US-listed MCEF with AUM greater than \$100 million that fits into its selection criteria. Further screens are applied to define criteria for liquidity, expense ratio and discount/premium to NAV. The index rules governing all of the factors that are applied to the selection of constituent funds provide another valuable dimension of risk mitigation.

Index performance can be compromised, however, through high levels of turnover. This is especially true in the MCEF market, where liquidity is often limited. To deal with this factor, CEFMX employs buffers that prevent high turnover rates related to its semi-annual reconstitutions. For example, an MCEF constituent must have at least \$100 million in AUM to be selected for inclusion in CEFMX, but once in the index, the constituent's AUM must fall below \$90 million to be dropped from the index. Similar buffers for liquidity criteria are also applied. As a result, CEFMX has maintained very low turnover rates throughout its history, thereby mitigating performance drag.

Importantly, MCEFs with high expense ratios are excluded from the index, using a dynamic threshold based on the 30-day LIBOR. This keeps the expense ratios — including the cost of leverage — from exceeding industry norms by an excessive amount.

Capitalizing on Discounts

The CEFMX rules for selection produce a dependable and cost-efficient index. Rules governing the weightings of CEFMX constituents are also applied. Unlike most stock market indexes, which weight constituents based on their market capitalizations, CEFMX weights its constituents based on their Total Net Assets. Since most MCEFs trade at a discount to NAV, this weighting methodology produces a more accurate representation of the holdings while a traditional market cap weighting would favor MCEFs selling at premiums or rich relative valuations.

CEFMX also builds a smart beta component into its weighting methodology. Simply put, weights are adjusted (at quarterly rebalancing) to give the CEFs with the highest discounts the highest weights and to reduce the weights of CEFs trading at a premium to NAV. This is a technique often used by professional CEF investors, because CEFs trading at a discount tend to revert to the mean.

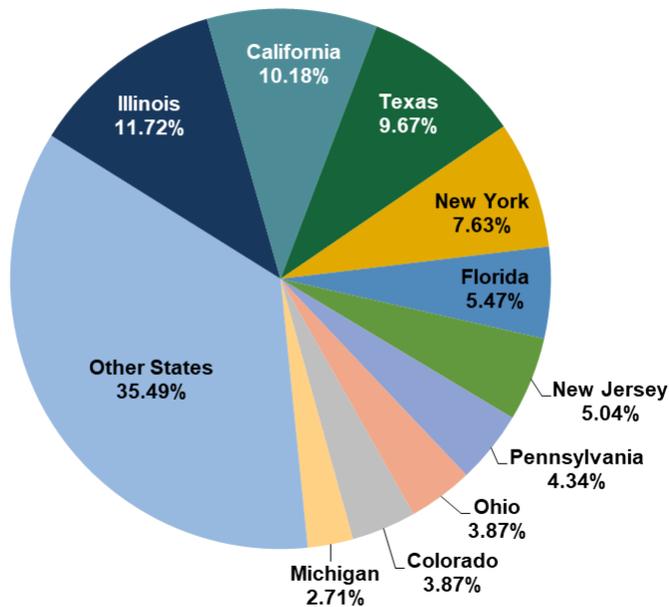
Discount	Threshold	Adjustment Factor
Discount	> 6%	30% increase
Discount	> 3% and < 6%	20% increase
Discount	> 0% and < 3%	10% increase
Premium	Threshold	Adjustment Factor
Premium	> 6%	30% decrease
Premium	> 3% and < 6%	20% decrease
Premium	> 0% and < 3%	10% decrease

What Does It All Mean

The overall architecture of CEFMX uses custom rules-based indexing methodology to capitalize on the advantages inherent in MCEFs, while diminishing the impact of their flaws. The resulting characteristics of CEFMX offer broad diversification, in terms of jurisdictional exposure and quality, which tilts strongly toward investment grade.

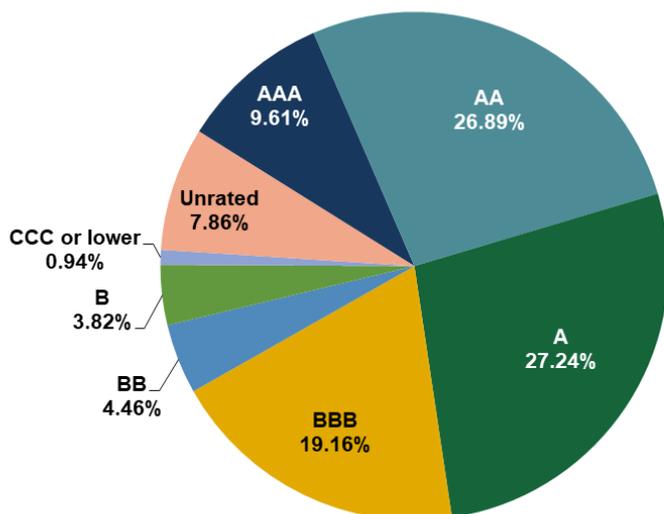
As of March 31, 2019, the highest single-state exposure in CEFMX was to Illinois at 11.72%, followed by California at 10.18% and Texas at 9.67%. Exposure to Puerto Rico was a mere 0.73%.

**S-Network Municipal Bond Closed-End Fund Index:
State Distribution**



Furthermore, CEFMX maintains high standards of credit quality, with approximately 64% of the underlying holding maintaining credit ratings of A, AA or AAA.

S-Network Municipal Bond Closed-End Fund Index: Credit Quality Distribution



Conclusion

CEFMX is a composite index, including all the municipal bond closed-end funds that meet its general listing, size and liquidity requirements. The index does not limit the components that may come from a particular municipality or manager, nor does it pick them based on the highest yield. CEFMX instead casts a wide net, maintaining representation of the bulk of the US municipal bond market, and improves performance using its weighting methodology, which modifies the net-asset weighting of the closed-end funds according to their discounts or premiums.

Perhaps most importantly, CEFMX is not a municipal bond index per se. A municipal bond index would hold individual municipal issues chosen in a mechanistic way. Such an approach might leave one vulnerable to spikes in interest. Because each of the underlying MCEF constituents of CEFMX is actively managed, interest rate risk is addressed, thereby providing some added degree of protection.