MONTHLY REVIEW

July 2018

July 2018 Muni Market Monthly Report – "Munis – Slow and steady wins the race"

The muni market has turned three quiet months into a quiet summer. Slow outperformance and improving market fundamentals should have muni investors feeling good. In fact, MainLine is taking advantage of this positive market and is in the process of winding down its *Tax Advantaged Opportunity Fund III*. It has been invested for five years, and has exceeded its objectives. We will share its final total return numbers next month.

We have been bragging about muni outperformance for most of 2018, and figured it was time to look at the numbers versus other US asset classes. We took the easy way by using the Bloomberg/Barclays indices and tried to fix some of the flaws in comparing 10-year total returns. MainLine is not active in indexing and comparing results; we feel each portfolio should be designed for that investor's objective, but it is always good to see how munis stack up as an asset class. The results did not surprise us, but may surprise the uneducated investor. An investment does not have to be first in total return every year to be the best over the last ten years. *Sometimes, slow and steady wins the race!*

Muni Market Review

Another uneventful month in munis has now led to a quiet summer. Munis continue to slightly outperform, and headlines remain positive. Highlights for the month of July:

- Muni yields changed from -2 to -4 bps for munis less than 10 years in maturity, + 5 to +8 bps for longer-term munis. The curve steepened roughly 10 bps, reflecting the strong demand for bonds in the short-end of the curve.
- Taxable yields increased across the curve 15 to 9 bps, with the curve flattening.
    - Munis are now looking rich from 7 years and in, fair value at 10 years, cheap 15 years and longer.
- Issuance remains down 15% versus year-to-date 2017, but may finally be picking up.
- Credit ratings on the state of Illinois and Chicago have finally stabilized, according to the rating agencies. Illinois has a stable outlook; Chicago was upgraded.

Market News and Credit Update

- **Texas is preparing to sell the largest muni note deal in over 5 years**. Demand is strong for short-term munis, and has Texas deciding to offer $7.2 billion in tax and revenue anticipation notes (TRANS). Some analysts use the issuance size of TRANS as a reflection on the budget imbalance that a state is managing. In this case, it appears Texas is trying to be a bit more strategic in its debt management process.
- **California bonds are becoming more scarce and investors are having to pay up for them**. Issuance of California bonds is down 30% year-to-date (versus 14% for total issuance). Recent bond deals have yields on California issuers (rated AA) priced 5 to 15 bps lower in yield than AAA rated bonds from other states with maturities from 2 to 10 years.
- **In its 2019 budget, Chicago is projecting the smallest budget gap since 2007**, but this appears to be short-lived as pension costs are due to accelerate. Chicago's progress is representative of many municipalities with high unfunded pension balances. Credit quality appears to be stable and improving, due to a steady economy, but the growing liabilities are on the horizon. Chicago and other municipalities need to find a way to get reforms in place now, and money available, before they get too "weighted down". Moody's did reward the city with an upgrade to Ba1.

Monthly Municipal Credit Review July 31, 2018 - Slow and Steady, Wins the Race

Introduction:

I don't believe total return comparisons between different investment asset classes are ever 100% correct. It is virtually impossible to get a true one to one comparison. There are just too many flaws in the calculations and assumptions that need to be made. In the end, we feel good performance relates back to the objective of the investor and how well does the investment meet them. It is hard to find an index that can fully match these objectives. For example, different investment horizons, different principal risk preferences, different tax adjustments, fees, and reinvestment assumptions can twist and influence results.

Monthly Municipal Credit Review July 31, 2018 - Slow and Steady, Wins the Race (cont'd)

For full disclosure, MainLine does not manage its individual portfolios to benchmarks. We build personalized portfolios based on the investor's objectives, and not that of an index. Maximizing income while meeting objectives like liquidity needs, efficient tax and risk management, and reinvestment preference of each investor is more important than beating an index. There is no benchmark that will do this; it is unique for each investor, but ***if an investor wants us to manage to an index, we have taken that challenge and will do it again, anytime.***

That being said, when we sit down with potential new clients not familiar with municipal bonds, they always want to know how munis have performed versus other investments. We did a review on this several years ago using data from Thornburg Asset Management dated 12/31/2010. Adjusting for taxes, it showed munis to be a top performing assets class over the last 30 years. Results were as follows:

Asset Class	Index	Real Rates of Return 30 yrs(1)
US Large Cap	S&P 500	5.23%
Corporate Bond	Barclays US Corp Index	4.54%
Long-term US Govt	20 yr Treas	2.92%
Intermed US Govt	5 Yr Treas	1.71%
Municipal Bonds	Barclays Index	3.89%
Municipal Bonds	Adjusted (2)	5.43%

(1)Time Frame of 12/31/80 to 12/31/10
(2) Calculated as follows: 5% yield divided by 1 minus: top federal income tax rate for the year, state exemption 2.5%.

It has been 7 years now since this study was done and it now seems like a good time to do it again. I thought we would take a quick look back over the last 10 years and try to keep things simple. We used the well published Bloomberg Barclays indices to run total returns over the last 10 years for several different USA investment classes. We also looked at the year to year returns, over the last 10 years for each.

The Data:

Since there is no easy way to make the comparisons of the indices consistent for all of the risk and return variables, I tried to present it in a straightforward manner. The table below compares the total returns of the various Bloomberg Indices by grouping them by investment term, principal risk, and then made only one change to the return numbers. I think it is only fair to adjust muni returns for taxes.

Monthly Municipal Credit Review July 31, 2018 - Slow and Steady, Wins the Race (cont'd)

In adjusting the muni returns, I took the top Federal tax rate for that year, and applied it to the interest income component of the return to give it a tax equivalent. Otherwise, the returns of the various indices are recorded below right from Bloomberg/Barclays:

Index (1)	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	10 Yr
General Composite											
Muni Comp	-2.47%	12.91%	2.38%	10.70%	6.78%	2.55%	8.99%	3.30%	0.25%	5.45%	4.46%
Muni Comp Adj (2)	*0.12%*	*15.75%*	*4.87%*	***13.40%***	*9.21%*	*13.69%*	***12.04%***	*6.13%*	*10.60%*	*8.30%*	***6.37%***
US Treasury Comp	**13.74%**	**-3.57%**	5.87%	9.81%	**2.14%**	**-2.75%**	**5.06%**	0.84%	**1.04%**	**2.31%**	**3.31%**
US Agency Comp	8.20%	5.89%	5.37%	6.23%	2.59%	-1.36%	6.19%	**6.19%**	1.67%	2.47%	3.84%
US Corp Comp	**-4.94%**	**18.68%**	**9.00%**	8.15%	**10.15%**	-1.53%	7.46%	-0.68%	6.11%	6.42%	5.65%
US Stocks	-4.59%	1.65%	**1.15%**	**5.54%**	5.91%	**27.45%**	9.59%	**-2.33%**	**13.42%**	**25.16%**	**6.42%**
Intermediate Term											
Muni Inter Adj	3.33%	8.92%	2.72%	10.51%	4.76%	-1.82%	6.78%	3.40%	-0.27%	4.88%	4.26%
Muni Inter Adj (2)	*5.83%*	*11.44%*	***5.03%***	***12.99%***	*6.99%*	*0.78%*	***9.58%***	***6.08%***	*2.28%*	*7.60%*	***6.80%***
US Treasury Inter	**11.35%**	**-1.41%**	5.29%	6.57%	**1.71%**	**-1.35%**	**2.58%**	1.49%	**1.06%**	**1.14%**	**2.75%**
US Corp Inter	**-4.82%**	**18.56%**	**8.27%**	**5.52%**	**8.96%**	0.08%	4.35%	1.08%	4.04%	3.92%	4.82%
US Stocks	-4.59%	1.65%	**1.15%**	5.54%	5.91%	**27.45%**	**9.59%**	**-2.33%**	**13.42%**	**25.16%**	6.42%
High Yield											
Muni HY	-17.82%	24.53%	5.60%	9.84%	13.47%	-4.26%	11.92%	2.43%	1.90%	7.98%	4.98%
Muni HY Adj (2)	*-15.25%*	*28.64%*	*8.68%*	***13.07%***	***16.55%***	***-1.05%***	***15.75%***	*5.92%*	*5.07%*	*11.19%*	***7.91%***
US Corp HY	**-26.16%**	**58.07%**	**15.12%**	**4.98%**	15.81%	7.45%	**2.45%**	**17.13%**	**-4.47%**	**7.51%**	**8.03%**
US Stocks	**-4.59%**	**1.65%**	**1.15%**	5.54%	**5.91%**	**27.45%**	9.59%	**-2.33%**	**13.42%**	**25.16%**	**6.42%**

Notes:
(1) All indices are from Bloomberg Barclays Indices
(2) Adjusted returns by tax adjusting the coupon payments by the current tax rate top federal income tax rate.

The Results:

Ten Year Comparisons:

- General Composite: munis adjusted for Federal taxes finished **second** to stocks at 6.37% versus 6.42%
- Intermediate Term: munis adjusted for taxes finished **first** versus stocks at 6.80% versus 6.42%.
- High Yield: munis adjusted for taxes finished **second** versus high yield corporate bonds at 7.91% versus 8.03%.

Monthly Municipal Credit Review July 31, 2018 - Slow and Steady, Wins the Race (cont'd)

Annual Comparisons:

In the chart on the previous page, I shaded the top performing investment class in that category with green shading, the worst performing with orange. Amongst the three categories:

- Munis were the worst performing asset only once (high yield munis in 2013). This is out of 30 different data points (3 categories, 10 years).
- Munis were the top performing asset 8 times out of 30.

Conclusions:

As the chart shows, as a top performing asset class year-by-year, munis are about average (eight out of thirty). It is when we look at the worst performing asset class, that munis (one out of thirty) really look good. ***Munis have remained steady and have shown a lot less volatility in annual returns than the other asset classes. As the ten years tally up, munis come out looking very strong: top performer for the intermediate term (our 80/50 investment theme), close second as a general composite, and high yield.*** We have even included US stocks in this analysis, which doesn't really have comparable investment objectives. Stocks are perceived as the best way to build a nest egg over the long-term. Versus munis, in the two studies above, stocks do not look very special.

Now how about I leave you with one more variable we could inject to skew these results? *What if fifty percent of the income derived from muni investments was also exempt from state taxes and we applied that to the above returns?*

Munis, slowly and steadily, are winning the total returns race.