MONTHLY REVIEW

November 2018

MAINLINE WEST

November 2018 Muni Market Monthly Report – "Fund Spotlight on Basis Risk"

The muni market regained its footing in November, as mid-term election concerns dissipated and fund flows returned to positive. Munis are back on the strong fundamental path we have seen in 2018. We anticipate an orderly year-end, as issuance remains manageable and credit news positive.

In this month's Municipal Credit Review, we put a spotlight on the Funds. As we are talking with investors about Fund VI, one of the topics that is always highly discussed with the Funds is Basis Risk. We also like to think of it as "Basis Opportunity". In this month's credit review, we will discuss the threat and opportunity that basis risk provides to the Funds and how our investment strategy looks to mitigate this risk, while potentially enhancing the Funds' returns by taking advantage of it.

Muni Market Review

November saw munis outperform Treasuries. The mid-term elections brought no surprises, fund flows have turned back positive, and munis appear to be back on solid ground. More specifically:

- Muni yields decreased from 16 to 24 bps with the intermediate part of the curve outperforming.
- Taxable yields decreased from 10 to 15 bps with the curve flattening.
- Year-to-date, muni issuance remains low versus 2017 (-16%) and over the last five years (-3%). Early year 2019 estimates show lower than average levels, and close to 2018.
- Since the beginning of 2018, muni yields have increased roughly 80% of taxables. Annual muni yield increases are as follows:
    - 5 years 46 bps
    - 10 years 53 bps
    - 25 years 67 bps

We anticipate an orderly year-end for the muni market, as issuance remains low and credit news positive.

Market News and Credit Update

- Depending on your tax needs, and when you bought bonds, the conditions may be right for investors to engage in **tax swap losses prior to year-end.** This involves the selling and realizing of losses from a municipal bond, and then reinvesting in a new one. Not only does this help manage your tax bill, it also allows you to reinvest in higher municipal book yields and, if needed, readjust your portfolio's risk profile. If you have interest, please feel free to call us.
- **California credit quality continues to improve.** The general fund surplus is budgeted to reach $14 billion by 2020, as the economy remains solid. Some analysts are predicting a credit upgrade in the near future. The state is currently rated AA-/Aa3.
- **Rebuild America Bonds?** An idea to have the US Government guarantee $300 billion of debt to be used to fix our aging infrastructure and provide a long-term fixed income investment for pension plans is getting some interest in DC. "Better than nothing" we say here at MainLine West, but let's also combine it with a program the states can control and police.
- **USD Libor market** continues to show rates higher than historically given the relationships with other short-term investments. There appears to be a shortage of dollars overseas, as US corporations have returned USD to the USA after the corporate tax reforms. The artificially high 3-month Libor is providing extra return to the MainLine West Tax Advantaged Opportunity Funds. At 2.81%, we have no problems with that here.

MAINLINE WEST FUND SPOTLIGHT – BASIS RISK/OPPORTUNITY

Introduction:

Definition: In fixed income markets, basis risk arises from changes in the relationship between interest rates for different market sectors. For example, if a portfolio holds tax-exempt municipal bonds hedged with taxable Libor swaps, it is exposed to basis risk due to possible changes in the yield spread/difference of muni bonds over/versus Libor swaps.

Basis risk is one of the ***biggest risk*** components for the MainLine West Tax Advantaged Opportunity Funds. Part of the Fund's strategy is to buy municipal bonds and hedge the change in prices/rates with USD Libor indexed swaps as both investments' prices move in opposite directions when interest rates change. Basis risk can be a double-edged sword, providing the single biggest price risk to the fund, but can also provide one of its ***biggest opportunities.***

In this month's credit review, we will discuss the threat and opportunity that basis risk provides the Funds and how our investment strategy looks to mitigate this risk and use it to enhance Fund returns.

MAINLINE WEST FUND SPOTLIGHT – BASIS RISK/OPPORTUNITY (cont'd)

Analysis:

Easiest way is to show basis risk is with several investment examples. We will analyze two scenarios, one good for the Fund, the other bad:

1. ***Bad Basis Risk:*** Muni credit and liquidity becomes a concern in a flight to quality market move and the muni/swap ratio widens from 100% to 119%. This is caused by swap rates going down, muni rates going up. This means the Fund losses money on both investments; the swap and the bond.

2. ***Good Basis Risk:*** Muni supply becomes restricted and fewer bonds are being issued, demand is strong due to an increase in cash and the muni/swap ratio tightens from 100% to 85%. This is caused by muni yields going down, swap rates going up as rates are increasing. This means the Fund makes money on the swap and the muni bond.

First we will set up the trade. Below is a chart showing the initial values of the muni bond and swap. We are assuming the following:

- Instantaneous change in yields +/- 25 bps.
- Yields change for each Investment the same amount but in different directions.

Beginning

Investment	Cpn	YTW Date	Par/Notional	Mkt Val	YTW
Muni Bond	5.00%	12/1/2028	1,000,000	1,177,150	2.95%
Libor USD Swap	2.95%	12/1/2028	1,000,000	0	2.95%
NAV = 1.00			Muni/Swap Ratio		100.00%

Observations:

- Muni/Swap ratio begins at 100%, both investments have yields of 2.95%.
- Initial NAV of investments is $1.00, since there has been no change in market value yet.
- Muni bond has a market value of $1.17 mln, the $1.0 mln swap is at the market and has no initial value.

MAINLINE WEST FUND SPOTLIGHT – BASIS RISK/OPPORTUNITY (cont'd)

Scenario #1:

50 bps Basis Risk (Ratio Widens 50 bps = +25 bps for muni -25 bps for the swap)

Investment	YTW	New Mkt Val	Chge Mkt Val
Muni Bond	3.20%	1,153,630	-23,520
Libor USD Swap	2.70%	-20,980	-20,980
Net	118.65%	1,132,650	-44,500
NAV			0.96

Observations:

- Muni yields increase 25 bps to 3.20%, swaps yields decrease 25 bps to 2.70%
- Muni/Swap ratio widens to 118.7%.
- NAV of investments declines 4 cents to .96 as both investments have lower market values and lose money.

Scenario #2:

50 bps Basis Risk (Ratio Tightens 50 bps = -25 bps for muni +25 bps for swap)

Investment	YTW	New Mkt Val	Chge Mkt Val
Muni Bond	2.70%	1,201,240	24,090
Libor USD Swap	3.20%	22,200	22,200
Net	84.45%	1,223,440	46,290
NAV			1.04

Observations:

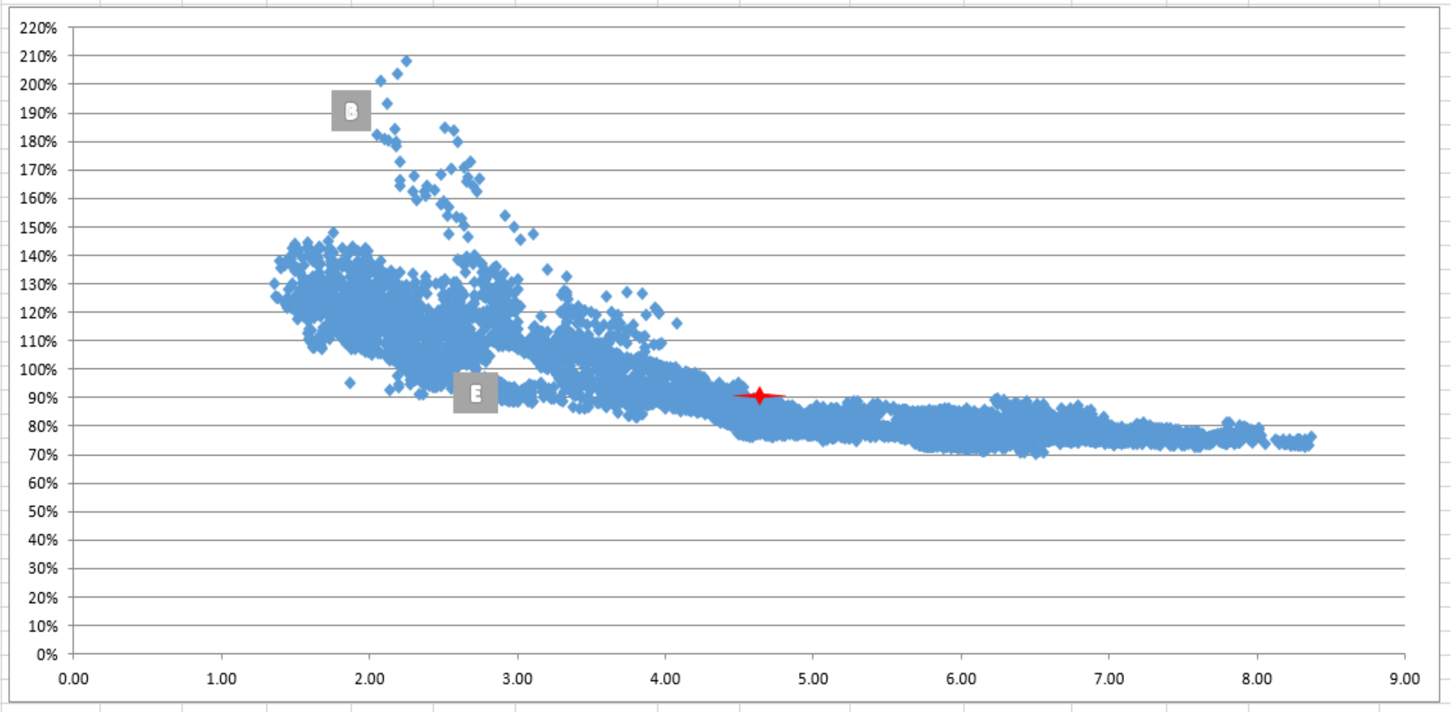
- Muni yields decrease 25 bps to 2.70%, swaps yields increase 25 bps to 3.20%
- Muni/Swap ratio tightens to 84.5%.
- NAV of investments increases 4 cents to $1.04 as both investments have higher market values and make money.

As the scenarios above show, the return on these investments (which are the inherent in the Funds' returns), is influenced by the change in the muni/swap ratio, also referred to as ***"Basis Risk"***. How does this influence the Fund? And what do we mean by it being an opportunity?

Let's use Tax Advantaged Opportunity Fund III, that was recently liquidated, to show how the tightening of the muni/swap ratio added to the Fund's final return through NAV appreciation.

MAINLINE WEST FUND SPOTLIGHT – BASIS RISK/OPPORTUNITY (cont'd)

Below is a scatter graph showing the 15 yr muni/10 yr Libor ratio (Y-axis) versus the yield on the 10 yr US Treasury (X-axis) for the last +15 years.



Observations:

- In times of higher interest rates, the muni/swap ratio is lower. When the 10-year US Treasury is yielding from 6% to 8%, the ratio has been from 70% to 90%.
- In times of lower interest rates, the muni/swap ratio is higher. When the 10-year US Treasury is yielding from 2% to 3%, the ratio has been mainly from 90% to 140%.
- The "outlying" blue dots, at 200% are from market crisis moments that impacted the muni market adversely.
- The red star represents the long-term average of the ratio at 93%.

MAINLINE WEST FUND SPOTLIGHT – BASIS RISK/OPPORTUNITY (cont'd)

The Story Behind the Total Return of Fund III.

Investment results for Fund III that was liquidated in August 2018 were as follows:

Returns For Fund III			
Cash Payout	IRR	Tax Equiv	Term
7.59%	10.49%	16.36%	5.25 yrs

Fund III Muni/Swap Ratio			
	Muni	Swap	Ratio
Beg 5/2013 –"B"	3.57%	1.84%	194.02%
End 8/2018 – "E"	2.61%	2.98%	87.58%
Difference	0.96%	-1.14%	106.44%

On the scatter graph above, we have labeled the muni/swap ratio when Fund III began in May 2013 with a **"B"** (194%). Then, we labeled where the ratio was when we terminated Fund III In August with an **"E"** (88%). This tightening in muni/swap ratio of 106 bps is what provided the fund the additional return above the cash payout. So for Fund III, this additional NAV return was equal to 10.5% minus 7.6% **(or 2.9%)**.

The comparison of the Fund III ratios to those on the scatter graph do have some inconsistencies, but the direction and impact is visually well depicted in the above graph. Some items of inconsistences:

- Bonds in Fund III traded at a spread to the muni index rates used, so they were a bit higher in yield than those on the graph. Swap yields are pretty consistent to the index used. This means muni yields are overstated, making the ratio higher than it should be by roughly 50 bps.
- As munis roll down the curve, they tighten in spread to the swap market, which is an arbitrage opportunity the Fund takes advantage of. The muni/swap ratio will decrease each year, due to the nature of muni demand and supply as the bonds roll down the curve.

Conclusion:

The biggest and most important risk component to the Funds is ***Basis Risk***. The 200% in the scatter graph is where Fund I had to call in its deleveraging capital as the ratio hit all-time highs. Yet, as you review the graph, you can also see the opportunity. If the Fund can get invested at the higher end of the ratio (120% or greater), and the relationship between munis and swaps normalize (90% to 100%), the Fund gains in value. This is why the three Funds we have liquidated have been able to average 3.9% of NAV appreciation.

We cannot guarantee that the Funds will make money due to the change in basis risk, but we can tell you it is part of our strategy, which is why they are called ***"opportunity funds"***. We will not invest the Fund's capital until we see the ratio is in the higher end of its range, giving it a good chance for long–term NAV appreciation.