BERNARDI SECURITIES INC.

MUNICIPAL BOND SPECIALISTS

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Winter Market Review

2017 had its fair share of headline volatility starting with protests following President Trump's swearing in ceremony on January 20, 2017 and culminating with North Korea launching a missile over Japanese territory. Markets largely took each headline in stride. Equity markets continued to push higher, with volatility remaining muted. Valuations rose in tandem. The Schiller P/E ratio reached its second highest level ever, as did domestic equity market cap to GDP. The Fed continued to tighten by increasing the overnight rate and slowly reducing its $4.4 trillion balance sheet by $10 billion per month. Based on the projected pace, the market expects a "normalized" balance sheet size to be realized in 2020. The Fed's actions pushed up short term rates, but did not cause any dramatic sell off in fixed income markets.

Volatility has since crept back into the market, despite many analysts' predictions for continued gains in equities. Investors grew weary in late-January of increasing interest rates, coupled with better than expected wage growth as wages in the U.S. rose at the fastest pace since 2009. This dynamic, along with strong GDP growth (compared to the past 5 years) and low unemployment, has led to a dramatic selloff in equities over the past week with the S&P 500 Index and the MSCI EFA Index both down over 7%.

The Federal Reserve aims to hike interest rates three times this year. Fed fund futures are basically pricing in 2.5 hikes, with the first projected to occur in March. Economists are forecasting a PCE Price Index reading of 1.8% next year, up from 1.7% in 2017. Our view is in-line with the fed fund futures of 2 to 3 rate hikes, with risk to the upside should inflation data points continue to surprise to the upside. We also expect tax-free municipal bonds to continue to provide attractive after-tax yields compared to other taxable counterparts for higher tax bracket individuals.

Yield Curve Dynamics

The yield curve continued to flatten at the end of 2017 into the start of 2018. As the Federal Reserve proceeded to tighten and pushed up short-term rates, inflation and growth expectations remained subdued holding down longer term rates. The 2-year/10-year Treasury spread decreased from 125 basis points (1.25%) at the start of the year to 59 basis points by year-end (0.59%). This has since widened, but remains at 69 basis points as of 2/5/2018. To note, this spread was flat to negative for almost two years beginning in 2005 as the Greenspan-led Fed tightened to keep inflation at bay and wean the economy off an easy monetary policy. The Fed began tightening in the summer of 2004, lifting the overnight rate from 1.00% to 5.25% by the summer of 2006.

Greenspan Fed Tightening (6/04-6/06)

Source: Bloomberg

Since growth and inflation expectations drive long-term rates, we expect a continued flattening of the curve (e.g. short-term rates increase faster than long term rates) without a discernable increase in these metrics. This does not necessarily mean a decrease in long term yields, but that their rise will not be as significant as the front end.

That said, if there is an uptick in sustainable growth and inflation metrics, we expect long term yields to move higher at a greater pace than the short end. The chart below shows various points along the Treasury and municipal yield curves as of 9/30/17 and 02/05/18.

Treasury

Maturity	Treasury Yield (9/30/17)	Treasury Yield (02/05/18)	% Change
2-Year 1.	47%	2.08%	**+41.50%**
5-Year 1.	92%	2.50%	**+30.21%**
10-Year 2.	33%	2.77%	**+18.88%**
30-Year 2.	86%	3.04%	**+6.29%**

Source: Bloomberg

Municipal

Maturity	AA Muni Yield (09/30/17)	AA Muni Yield (02/05/18)	% Change
2-Year 1.	04%	1.60%	**+53.85%**
5-Year 1.	45%	2.04%	**+40.69%**
10-Year 2	20%	2.69%	**+22.27%**
30-Year 3	07%	3.25%	**+5.86%**

Source: MMD

On the municipal front, we see a similar dynamic with a strong move upward in shorter-term yields and smaller moves in mid and longer term yields. Strong demand for longer term municipals continues to hold them steady.

Arrivederci Advanced Refunding

One of the most significant impacts from the Tax Cut and Jobs Act was the elimination of issuers' ability to advance refund outstanding bond issues. This allowed issuers to call debt prior to the 90-day window before the call date and lock in lower yields, often times with lower coupon structures. The percentage of new issue supply used for this purpose has been especially significant over the last ten years as interest rates have moved lower.

The elimination of this tool has two major impacts for the municipal market:

1. Increases cost for municipalities
2. Reduces supply of municipal bonds

By eliminating refunding's on a tax-free basis, costs for municipalities will increase. Reducing their ability to lower debt service costs earlier means these cost savings will no longer be available to a) reinvest in other infrastructure initiatives or b) pass onto taxpayers. As our nation's infrastructure continues to age, removing a tool used to help municipality's lower costs or generate funds for new projects will hamper efforts to update our nation's infrastructure.

Additionally, because of the elimination of this mechanism some analysts have predicted municipal supply to be 15-20% lower in coming years. Should interest rates hold steady or move lower over the coming years, municipal issuers will be prevented from realizing savings otherwise available. From a demand perspective, we project demand for municipals to remain strong as individual taxpayer tax rates saw insignificant decreases at the upper-bounds. Specialty state demand will increase given the SALT limitations imposed by the new tax law. Additionally, demographic trends and asset allocation rebalancing (should stocks continue to climb) will establish a floor for demand.

These technicals, combined with the elimination of advanced refunding's, will serve as the foundation of municipal demand for the years ahead.

Adding Value by Lowering Portfolio Volatility – UPDATE

Over the past three years, we have run various regressions to determine the relationship between tax-exempt municipal yields and taxable U.S. Treasury yields. The overarching goal was to see if a relationship between the two existed and if one type of security experienced less volatility than the other. Since the last analysis was completed in the fall of 2016, we decided it was time for a refresh.

The previous two studies showed a strong positive relationship between taxable Treasury yields and tax-free municipal bond yields. Although there was a positive relationship (high R^2), municipal yields were less volatile than their Treasury counterparts. We refreshed our study using the time period of 01/01/2006 to 12/31/2017.

The findings were similar as the previous studies. There continued to be a strong positive relationship between Treasury and municipal yields ($R^2 = 91\%$) and municipals were less volatile than their Treasury counterparts. For every 100 basis point increase (1.00%) in the 10-year Treasury yield, the mean increase of the 10 year tax-exempt municipal yield was **69 basis points (0.69%).** Our previous reading was 0.62%, which covered a period since 2003. Municipals continue to be an attractive investment for clients fixed income portfolios in all respects: safety of principal, higher after-tax income, *and lower volatility*. This dynamic is especially important in a rising rate environment.

We decided to change our time period to reflect only the past two years (12/31/15 – 12/31/17). The past two years have seen brief moments of volatility in interest rates (post-U.S. election in 2016, pre/post U.S. tax reform in 2017), with more of a gradual increase in short term rates as the Federal Reserve has begun to implement various monetary tightening methods.

The findings are surprising. The positive relationship continues to exist between the asset types. However, our regression analysis showed us if the 10-Year Treasury yield were to increase 100 basis points, 10-year municipal yields would only increase by 13 basis points (0.13%). Between the end of 2015 and the end of 2017, the 10-year Treasury increased 0.14%. The average 10-year municipal bond yield only increased 0.02%.

What explains this dynamic? One explanation, which was mentioned in our fall 2016 study, is the tax-exempt feature of municipal bonds. Municipal investors are attracted to the tax-exempt income and therefore are more prone to be “hold-to-maturity” investors reducing volatility within the asset class. Additionally, in recent years, an increase in demand for tax-free municipals, compounded with a manageable supply, has kept yield levels steady.

It is also important to keep in mind limitations to the study above. We are only comparing 10-year bonds. The dynamic between shorter term and longer term Treasuries vs. municipals could be different. This is a dynamic we will look to explore in future studies. The last study also takes into account a very short time period. Extending the analyzed time period from 2 years to 10 years significantly changed the results. Lastly, a potential decrease in municipal supply given the elimination of tax-free advance refunding’s has the potential to change the dynamic between treasuries and municipals. This will take time to play out, however.

Despite the limitations, it is clear to see the value that tax-free municipals offer. They provide tax-free income, preservation of capital, and lower volatility than other taxable counterparts. We expect this dynamic to continue with the recent tax changes and the Federal Reserve moving forward with its tightening policy. On a risk adjusted basis, municipals continue to be an extremely attractive choice for you and your clients’ portfolios.

If you have any questions, please reach out to your Investment Specialist or Portfolio Manager.