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U.S. Municipal Bond Market

Three Key Atypical Credit Risks & Market Update

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Summary

- There have been a total of 257,379 coronavirus cases reported in the U.S., 6,558 deaths, and 11,941 recoveries to date;[1]
- Political leaders seem to be succumbing to the advice of health professionals, despite the potential dire economic consequences. In the U.S., nearly 10 million have lost jobs in the last two weeks, more than during the 2008 World Financial Crisis. Forecasts are growing more dire by the day. The St. Louis Fed projects it is possible we see 52 million jobless and an unemployment rate of 32%;
- The reality now is much different that the middle of March, when lawmakers began to put together the elements of the CARES Act, which was nowhere near close to being enough for municipals;
- There are three key atypical risks to state and local governments and other municipal entities now: contagion risk, economic risk, and political risk;
- We believe federal lawmakers need to return to Washington and deliver a significant phase four relief package that includes at least an additional $300-$600 billion of unencumbered aid for state and local governments and other municipal entities as soon as possible;
- Primary municipal market activity remains close to stationary. For the week of April 6, we are seeing a $3.7 billion calendar of potential bond sales and there is still at least $10 billion of issuance that is considered day-to-day;
- This week, Municipal Market Data (MMD) AAA benchmark yields moved sharply higher across the curve. The change Monday to Friday was 12-60 basis points (bps) higher;
- We saw $749 million withdrawn from municipal mutual funds, indicating funds are still dealing with selling pressures;
- Municipal to Treasury (M/T) ratios rose this week: the 2 year M/T ratio rose to 564%, the 10 year M/T ratio rose to 280%, and the 30 year M/T ratio rose to 201%;
- SIFMA priced at a lower 1.83% on April 1, 2020. VRDO pricings were lower this week, but have not normalized; and
- Listed are recent COVID-19 rating agency actions, and we highlight where to find recent COVID-19 disclosures via the MSRB EMMA's site and via Diver by Lumesis' free service.

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Municipal Credit Landscape

"You don't make the timeline, the virus makes the timeline." - COVID-19 in the U.S.

Political leaders seem to be succumbing to the advice of health professionals, despite the potential dire economic consequences. Nearly 10 million people have lost their jobs over the last two weeks. This is more than what the U.S. labor market experienced during the entire 2008 World Financial Crisis.

- Texas Governor Greg Abbott asked for citizens to "stay home," except for those in essential services this week;

Please see disclosure starting on page 6.

- Florida Governor Ron DeSantis issued a stay-at-home order during the middle of this week after pressures were rising amid the spread of COVID-19. He had been concerned about the economic impact such an order would have on the state economy and on its workers' lives;
- Georgia Governor Brian Kemp issued a similar stay-at-home order;
- The city of Laredo, Texas is requiring residents five years of age and older to wear a mask or wrap their faces in public; and
- On Thursday, New York City and Los Angeles advised residents to cover their faces and preserve masks for the healthcare community. On Friday, Pennsylvania offered similar guidance.

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In total, 297 million people in 38 states are being asked to stay home or shelter-in-place.[2] While many want to get back to work as soon as possible, President Trump last weekend announced recommended social distancing guidelines extend to the end of April. Many are wondering when this will end. Will it be April? Or will these shelter-in-place policies extend further? Dr. Anthony Fauci, the director of the National Institute of Allergy and Infectious Diseases, tried to share some perspective during a television appearance when he said,

> "You've got to be realistic, and you've got to understand that you don't make the timeline, the virus makes the timeline."[3]

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There have been a total of 257,379 coronavirus cases reported in the U.S., 6,558 deaths, and 11,941 recoveries to date. The Univ. of Washington's Institute for Health Metrics and Evaluation created a model to project COVID-19 cases and deaths.[4] The projections are based on full social distancing measures continuing until at least May 2020. The projections estimate the peak numbers of deaths from COVID-19 to occur on the following days and in the noted amount:

- United States (total) – April 16, 93,531 estimated deaths;
- California – April 26, 5,068 estimated deaths;
- Florida – May 4, 6,897 estimated deaths;
- Illinois – April 20, 3,386 estimated deaths;
- Maryland – April 28, 1,766 estimated deaths;
- Massachusetts – April 16, 2,381 estimated deaths;
- Michigan – April 11, 3,169 estimated deaths;
- New Jersey – April 9, 2,117 estimated deaths;
- New York – April 10, 16,261 estimated deaths;
- Ohio – April 19, 1,898 estimated deaths;
- Pennsylvania – April 19, 2,023 estimated deaths; and
- Texas – May 6, 6,392 estimated deaths.

We noted that President Trump extended guidance for U.S. social distancing measures until the end of April. But, these numbers point to the idea that it is likely these policies continue at least through May, and perhaps longer.

Economic Impact, Projections, and Reality

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And now the St. Louis Federal Reserve is projecting the number of jobless could rise to 52 million and the unemployment rate could grow to 32%, exceeding the Great Depression's 25% unemployment rate.[5] These are also astounding numbers.

The $2.2 trillion 2020 CARES Act was signed into law on Friday, May 27, and its content was based on what lawmakers saw in the world as of the week of March 16.

It's hard to believe how quickly life has changed in that time but there is a significant difference in reality today versus three weeks ago. During the week of March 16, lawmakers were only recently convinced of the magnitude of the health crisis the country faced. They expected social distancing to last for two weeks to a month, maybe. The relief package focused on workers and business, and barely scratched the surface of what state and local government and other municipal entities would need. It definitely did not consider what state and local government and other municipal entities would need if the entire economy was essentially shut down for not just weeks, but months. That is the reality now.

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Municipal Credit Landscape

There is not much to be optimistic about now. The CARES Act was an all-around letdown, and not reflective of the reality the country faces now or what it is likely to be facing in only a matter of weeks. Social distancing measures are regularly extended and while talk of a fourth phase of relief is happening, the U.S. Congress is not planning on being back in session until April 20, which is almost two and a half weeks from now. Consider how much the world changed over the last three weeks, and then contemplate about what the world is going to look like on Monday, April 20. We indicated above that the Univ. of Washington's projected number of deaths are just going to be peaking in some areas of the country, and they will still be rising in others. Millions of jobs will also be lost between now and then. There is not much to be optimistic about now.

To begin the month of April, we believe there are three key atypical risks to consider for municipal credit:

The CARES Act was an all-around letdown, and not reflective of the reality the country faces now or what it is likely to be facing in only a matter of weeks.

1. Contagion Risk: We are waiting for the healthcare community to tell us when it is safe for the country to get back to work. Dr. Fauci said, "You've got to understand that you don't make the timeline, the virus makes the timeline." But, let us please finally acknowledge the fact that this timeline is continually pushing back, and these guidelines are likely to continue to be pushed back further.
2. Economic Risk: 10 million lost their jobs in the last two weeks and 52 million may all-in, and unemployment could rise to 32%. This would be a tragic reality, but it is possible, if not likely considering the current course. But, what are leaders thinking is going to happen to the economic indicators and job market in an economy that is told to effectively stop. There is a significant economic risk to these social distancing guidelines, as necessary as they are to contain the spread of the virus.
3. Political Risk: A key risk to the credit quality of state and local government and other municipal entities is now political. It is the risk that the fourth phase of relief/stimulus is not enough for municipals. The greatest risk is that a fourth phase does not occur at all. And, this is not entirely out of the question. In the beginning of 2010, many were calling for and some expecting that there would be a Recovery Act Part II, but no additional relief or stimulus came. It was shot down for political reasons.

Now, the reality we are going to face in two and a half weeks is likely going to be so devastating (and potentially long-lasting) that something is going to have to be done, but that also begs the questions:

- "Why are federal lawmakers not taking the current circumstances more seriously?"
- "Why are they still not planning on returning until April 20?"

The lack of lawmaker action in 2010, and then the lack of willingness to compromise during the debt ceiling crisis of 2011, does not instill a high amount of confidence.

Two and a half weeks is a long time. Even if there has been some work on details and if there is a consensus gaining for a phase four like the sentiments indicated in this article, "Consensus starts to grow on 'Phase 4' coronavirus relief," why does it seem lawmakers are not taking it more seriously? It could still be too little, too late. The lack of lawmaker action in 2010, and then the lack of willingness to compromise during the debt ceiling crisis of 2011, does not instill a high amount of confidence.

All state and local government and municipal entities are at risk to a degree the longer these social distancing measures remain in place. The COVID-19 contagion is an enemy of the United States, and it is threatening to extinguish the strongest economy in the world and the livelihoods of millions of American citizens. It is further threatening the delivery of essential services that state and local government and municipal entities deliver daily. We believe federal lawmakers need to return to Washington, D.C. and deliver a significant phase four relief package that includes at least an additional $300-$600 billion of unencumbered aid for state and local governments and other municipal entities as soon as possible.

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Market Activity

Primary Municipal Market Activity Remains Close to Stationary

There was optimism coming into this week that the primary market would open up some and allow municipal issuers to price debt issues. Some activity occurred, but it really only occurred around the periphery. Just a few weeks ago, we saw calendars of $9 billion and $11 billion, and now only a small fraction of that is able to price. There has been a small amount of activity, but the municipal market pricing engine is running close to stationary at this point. The calendar to begin this week of March 30 was only $3.3 billion, and we saw about $2.4 billion finalize pricings. For the week of April 6, we are seeing a $3.7 billion calendar of potential bond sales, and there is still at least $10 billion of issuance that is considered day-to-day.

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Municipal Market Indicators

The MMD AAA benchmark yields moved sharply higher across the curve this week. The change Monday to Friday was 12-60 bps higher. Friday yields fell 10-15 bps.

AAA MMD Moved Sharply Higher

Date	2 Year (%)	10 Year (%)	30 Year (%)
3/30/2020	1.06	1.24	1.84
3/31/2020	1.06	1.33	1.99
4/1/2020	1.16	1.68	2.49
4/2/2020	1.28	1.78	2.59
4/3/2020	1.18	1.63	2.44
Change from: 3/30 to 4/3	**0.12**	**0.39**	**0.60**

Source: Thomson Reuters and HilltopSecurities.

Flows into municipal funds were negative again this week. We saw $749 million withdrawn from municipal mutual funds, indicating funds are still dealing with selling pressures. This is one of the leading reasons we did not see the market open up as we would have liked to have seen. This was the fifth straight week investments flowed out of municipal funds, for a total of almost $29 billion. That negates the money that flowed into municipal funds going back to the beginning of November 2019.

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- The 2 year M/T ratio rose to 564%, up from Monday's 465%;
- The 10 year M/T ratio rose to 280%, up from Monday's 181%; and
- The 30 year M/T ratio rose to 201%, up from Monday's 143%.

SIFMA Pricing Update

- April 1: 1.83%
- March 25: 4.71%
- March 18: 5.20%
- March 11: 1.28%
- March 4: 1.25%
- Recent high before March 18, 2020 of 1.61% on Dec. 25, 2019

VRDO Resets Settling Down

Pricing in the municipal variable rate demand obligation (VRDO) market is on the way to "as-expected," but they have not normalized yet. In previous weeks, selling pressures were causing pricing resets in the 4-7% range. Some now are lower, or closer to SIFMA, but there is still elevated pricing in the 3-5% range, and some even as high as 7% still.

Relevant Recent Moody's Investor Service Sector Actions and Reports:

- March 30: State and Local government tax revenue will weaken as coronavirus slows economy and travel
- March 27: State government - Coronavirus-driven filing extension will delay income tax revenue, but states have resources to bridge the gap
- March 26: Lowered outlook on Non-Profit sector to "Negative"
- March 25: Lowered outlook on U.S. Ports sector to "Negative"
- March 24: State and local government - 2020 pension investment losses poised to inflict material credit damage
- March 20: Lowered outlook on Toll Road sector to "Negative"
- March 20: Lowered outlook on Airport sector to "Negative"
- March 19: State and local government - Coronavirus challenges will test credit strength
- March 18: Lowered outlook on Non-Profit and Public Healthcare sector to "Negative"
- March 18: Lowered outlook on Higher-Education sector to "Negative"

Relevant Recent Moody's Investor Service Rating Activity:

- April 2: University of Pittsburgh Medical Center, PA downgraded to A2 from A1
- April 1: New York City outlook on Aa1 GO lowered to "Negative"
- April 1: New York state's outlook on Aa1 GO (and related) lowered to "Negative"

SP Global: "Negative" Outlook for All U.S. Public Finance

- SP Global Ratings assigned "Negative" outlooks to each of its U.S. Public Finance sectors "due to COVID-19 and the swift onset of recession." This was communicated in an April 1, 2020 report titled, "All U.S. Public Finance Sector Outlooks Are Now Negative."

COVID-19 Related Disclosures

Currently there are two sources we have found that include disclosure municipal market participants are making.

- The Municipal Securities Rulemaking Board's EMMA website includes notes and resources here; and
- Diver by Lumesis has a free service that also includes the latest disclosure filings here at their website.

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April 1: New York City outlook on Aa1 GO lowered to "Negative."

[1] Please see Worldometers.info/coronavirus for data updated hourly, last accessed 4/3/20 10:38am central time.
[2] Mervosh, Sarah; Denise Lu; and Vanessa Swales; See Which States and Cities Have Told Residents to Stay Home; The New York Times; April 2, 2020.
[3] Budryk, Zach; Fauci: 'You don't make don't make the timeline. The virus makes the timeline'; The Hill; March 26, 2020.
[4] Srikanth, Anagha; Here's when the coronavirus will peak in your state; The Hill; April 2, 2020.
[5] Faria-e-Castro, Miguel; Back-of-the-Envelope Estimates of Next Quarter's Unemployment Rate; Federal Reserve Bank of St Louis; March 24, 2020.

Recent HilltopSecurities COVID-19 Municipal Commentary

- Mass Transit - From Here to There, April 2, 2020
- Public Higher Education - A Closer Look, April 1, 2020
- Private Higher Education - Impact from Social Distancing, March 31, 2020
- U.S. Airport Sector View - A Month into COVID-19, March 30, 2020
- Four Weeks in March, March 27, 2020
- House Speaker Pelosi Wants More for State and Local Governments in Potential Fourth Phase, March 26, 2020
- Agreement on the $2+ Trillion CARES Act, Not Nearly Enough for State and Local Governments, March 25, 2020
- Still Waiting on Congress, Looking for State and Local Government Stimulus, March 24, 2020
- Congress Working on $2+ Trillion of Stimulus; Fed Provides More Targeted Support for Municipals, March 23, 2020
- Tax Deferrals Could Create a Cashflow Crunch; Market Needs Help With Liquidity; Federal Government Provided Some, Working on More Targeted Support, March 20, 2020
- $12 Billion Flows Out of Municipal Funds,Recent Monetary & Fiscal Policy, March 19, 2020
- March 18 Market Activity – A Focus on the Significant Pressure in the VRDO Market, March 18, 2020
- March 17 Market Activity, March 17, 2020
- March 16 Market Activity: HilltopSecurities Lowers Credit Outlooks Due to Unprecedented Steps Taken to Contain COVID-19, March 16, 2020
- Municipal Market Update: Week of March 16 Playbook, March 16, 2020
- Municipal Market Update: COVID-19 Impact Worsens, March 12, 2020
- Lowered Airport Sector Outlook: Recent COVID-19 Impact, March 11, 2020
- Falling Confidence and No Federal Stimulus Increase to Start the Week, March 9, 2020
- Uncertainty – What the Municipal Market Knows and Doesn't Know About COVID-19, March 4, 2020
- Bracing for the Worst; the Coronavirus Market Effect – Status of the Coronavirus Impact on the US Municipal Bond Market (page 2), Feb 26, 2020

Recent HilltopSecurities COVID-19 Economic Commentary

- March Payrolls Plunge, April 3, 2020
- Sifting Through Irrelevant Data, April 1, 2020
- Help is on the Way as Massive Relief Bill Passes the Senate, March 26, 2020
- Staying Afloat Until the Storm Passes, March 23, 2020
- Government Goes Big on Latest Rescue Plan, March 19, 2020
- Serious Support on the Horizon, March 16, 2020
- Waiting on Fiscal Policy as Aggressive Fed Move Falls Flat, March 16, 2020
- Stocks Rebound as Central Banks Respond, March 13, 2020
- On the Edge of Recession, March 12, 2020
- Central Banks Rush to Mitigate Pandemic Fallout, March 11, 2020
- Untying the Knot, March 10, 2020
- Runaway Markets Ignore Massive Payroll Number, March 6, 2020
- Bracing for Zero, March 5, 2020