U.S. Municipal Bond Market

Our 2022 Municipal Bond Issuance Forecast

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- We expect a record $495 billion of municipal bond market issuance in 2022.
- Supply chain (imbalance) and employment (labor force participation) concerns are the key risks to our forecast. Financial resources are plentiful going into 2022, while materials and specialized workers are not. We are also assuming COVID-19 becomes less and less of an issue going forward.
- Aggressive monetary and fiscal policy decisions in 2020 and 2021 will positively influence economic growth in 2022 and are key reasons why issuance will move on an upward trajectory.
- The municipal friendly elements formerly included in the Democrats' Build Back Better (BBB) draft legislation will not resurface. We expect BBB to eventually become law in late 2021 or early 2022 without them.
- Significant fiscal policy (Rescue Plan Act, bipartisan infrastructure, and BBB) will continue to help municipal credit quality remain strong and will also support, not directly lead to or be an obstruction to, 2022 issuance.
- Year-in-Review (2021): If there is average issuance activity in Nov. and Dec. 2021, the calendar year will total close to $460 billion, which was our revised forecast for 2021.

Anticipating a Record Amount of Municipal Issuance

We expect a record $495 billion of municipal bond market issuance in 2022. There are a whole host of reasons to believe that municipal bond issuance will materially rise. The combination of these factors (which are mostly positive in nature) is the core theme of our forecast. U.S. policymakers jumped to action in 2020 and 2021 in the form of aggressive monetary and fiscal policy.

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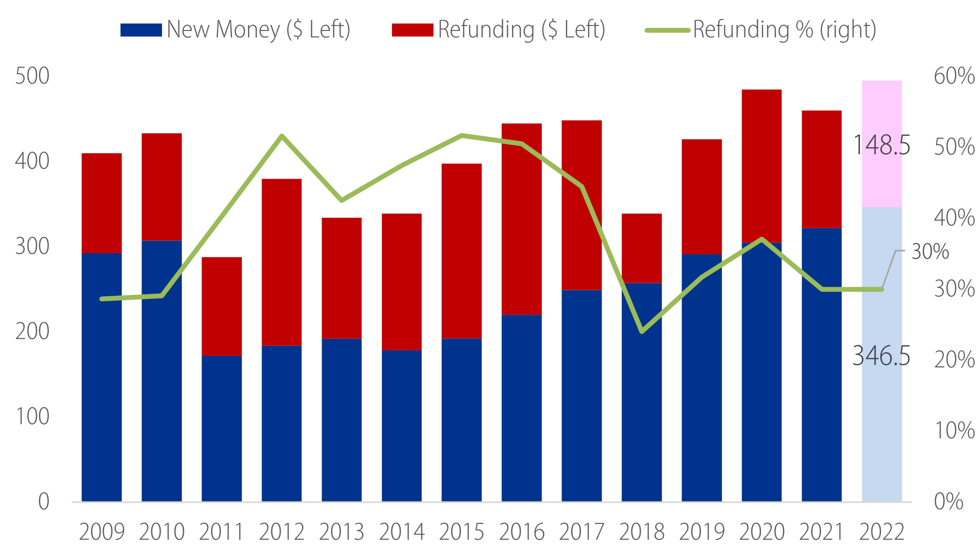
We Expect a Record $495 Billion of Municipal Bond Market Issuance in 2022



Source: Refinitiv, The Bond Buyer, and HilltopSecurities.

Most significantly, the results from their activities will carry over in the form of an outsized rate of U.S. economic growth and positively impact municipal bond market issuance next year.

A long-standing aversion to funding infrastructure and other key projects with municipal bonds will begin to abate in areas where financial constraints, especially worrisome after the Great Recession, have been reduced (not entirely eliminated) in the Golden Age of U.S. Public Finance. The need and transition to a modern economy, accelerated by the COVID-19 crisis, requires a host of new and improved technology. State and local governments, if they have not already begun to transition, will have an opportunity to start next year.

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An Aggressive Amount of Fiscal Policy is a Key Reason Municipal Issuance Will Move Higher in 2022

Phase	Became Law (Status)	Legislation	Details	Amount ($ billions)
Phase 1	March 6, 2020	Coronavirus Preparedness and Response Supplemental Appropriations Act	Research and development, health-care services and supplies	$8.30
Phase 2	March 18, 2020	Families First Coronavirus Response Act	Testing funds, paid leave, food stamp funding	192.00
Phase 3	March 27, 2020	Coronavirus Aid, Relief, and Economic Security (CARES) Act	Expanded unemployment, PPP, Fed Reserve & industry loans, payroll tax credits, created MLF, other	2,700.00
Phase (3.5 or) 4	April 24, 2020	Paycheck Protection Program and Healthcare Enhancement Act	Expanded PPP, hospital & testing funding	733.00
Phase 5	Dec. 27, 2020	The $1.4 trillion Consolidated Appropriations Act, 2020 was a federal govt. funding measure & included $910 billion of COVID-19 relief provisions	Unemployed. relief, PPP, funds for education, transportation, health care, vaccine distribution, etc., but no direct unencumbered state and local govt. relief	910.00
Phase 6	March 11, 2021	American Rescue Plan Act of 2021	$1,400 payments, $350B state & local govt. aid, expanded unemployed relief	1,900.00
Infrastructure & Jobs	Nov. 15, 2021	Infrastructure Investment & Jobs Act of 2021 (bi-partisan)	Funding for roads, bridges, rail, mass transit, ports, airports, water, broadband, and more	1,200.00
Social Spending	Passed House, has not passed Senate	Build Back Better	Clean energy, climate invest, child care, pre-school, home care, housing, SALT cap repeal	1,950.00
			Total	**$9,593.30**

Source: HilltopSecurities.

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New and upgraded skills, knowledge, educational opportunities, as well as new technology and equipment are required for the transition. Governments and public entities will be able to sprint toward these challenges with enhanced, if only temporary, resources. They will need to prioritize various needs that include, but are not limited to, the shift to account for new weather patterns, the need for carbon transition, cyber needs, a shift to remote work or work-from-anywhere, general infrastructure, broadband access, and other infrastructure upgrades, among others.

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A potential fifth wave of COVID-19 could rise in November and December of 2021 and last into the first month or two of 2022. However, if this is the case, with rising vaccination rates, we assume the economy will have settled into a post-COVID-19 condition and can handle COVID-19 flare-ups.

The Context and Breakdown of Our $495 Billion Forecast

The total market is likely to see about $460 billion (matching our 2021 forecast) of issuance in 2021. So, $495 billion in 2022 would be an important increase of almost 8%. This higher move alone is important to appreciate considering we are coming out of a period of uncertainty that lacked deficit reduction measures previously made popular at the beginning of the last decade. This time, policymakers, rightly or not, responded aggressively with supportive monetary policy, federal government relief, and bipartisan infrastructure focused spending. There could also be social fiscal spending if the Democrats' Build Back Better (BBB) legislation passes, which we are assuming does pass. We are not assuming the BBB package includes municipal friendly elements. Not only were they jettisoned during negotiations, but they were never a core part of the Progressive Democrats' agenda. If they were going to be included in successful legislation, they would have been included in the infrastructure bill. We do not see them making a comeback.

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2022 U.S. Municipal Bond Issuance Forecast, Nov. 22, 2021 *($ milllions)*

	2022 Forecast	2022 Forecast (% of Total)	2021 (through Oct. 2021)	Through Oct. 2021 (% Total)
New Money	$346,500	70%	$281,849	71%
Refunding	148,500	30%	112,837	29%
Total	**$495,000**	**100%**	**$394,686**	**100%**
Tax-Exempt	$376,200	76%	$297,011	75%
Taxable	118,800	24%	97,675	25%
Total	**$495,000**	**100%**	**$394,686**	**100%**

Source: Refinitv, The Bond Buyer, and HilltopSecurities.

This federal government aid, in aggregate, is going to support, not stymie municipal bond issuance in 2022 and even thereafter. The aid is boosting credit quality overall and that will help leaders in multi-year planning. This relationship is an important driving factor and contrasts significantly with state and local governments' positions in the wake of the Great Recession and especially from 2011 to 2014. State and local governments were struggling to repair their balances sheets for years after the Great Recession. Housing values fell, there was uncertainty related to revenues and for years state and local governments reduced their workforce to balance budgets. This is one of the key reasons why new money issuance was so low from 2011 to 2015. Issuers were concerned about their balance sheets. Public entities were looking for opportunities to cut overall spending, and they were not in a position to add

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This dynamic is very different this time around. In 2020, downgrades briefly outpaced upgrades but the pendulum quickly swung in the favor of municipal entities mostly as a result of federal aid. Upgrades have outnumbered downgrades over the first three quarters of 2021, and we expect this trend to continue in 2022 by a healthy margin.

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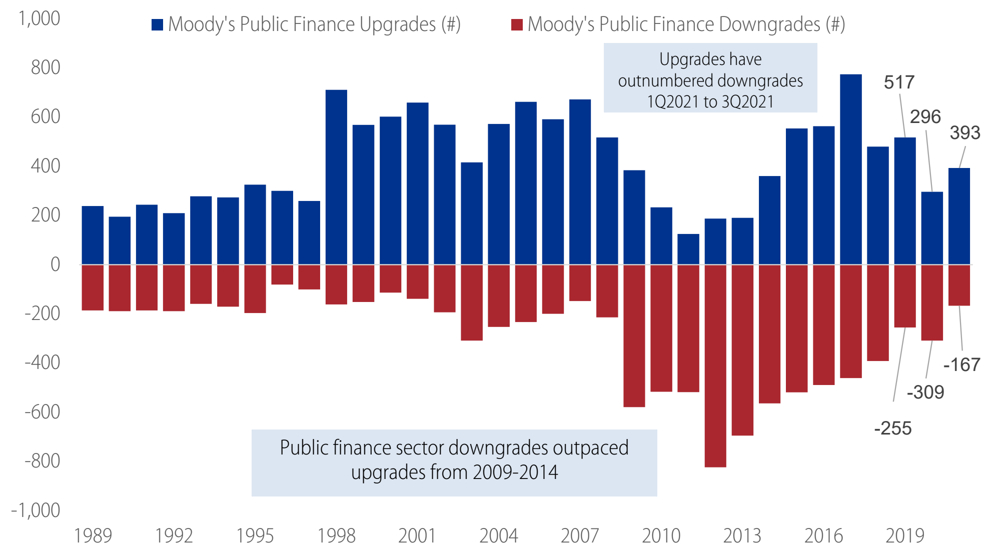
Credit Quality is Rising (Moody's Public Finance Upgrades and Downgrades)



Source: Moody's Investors Service and HilltopSecurities.

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New Money Will Rise in 2022

New money bond issuance will rise in 2022, and there is no reason to think otherwise. Here are a few of the reasons we believe new money issuance will rise, in addition to those we included above.

- Credit quality, in this Golden Age of Public Finance, is on an upswing;
- Municipal bond issuance has always had a strong relationship with overall economic growth. Economic growth is expected to remain above its post-Great Recession range in 2022, according to estimates from Moody's Analytics;
- Federal aid will support, not replace municipal issuance;
- Multi-year support of municipal bonds through elections has been strong. Off-year results like we saw this year are not indicative of a drop in new money issuance. Bond issuance materializes over a number of years as a result of bond referendums. 2020 bond measure results were healthy;
- Interest rates will remain historically low even when the Fed begins to raise its target rate; and
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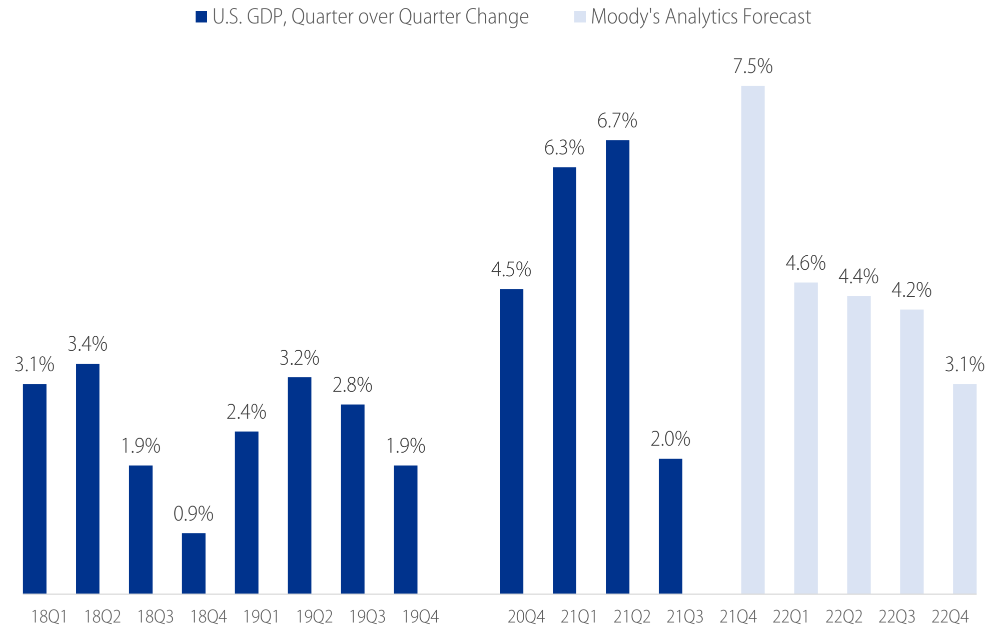
GDP Has Always Been An Important Driver of Municipal Bond Issuance



Source: BEA, Moody's Analytics (MA), and HilltopSecurities. MA assumes BBB becomes law. (2020 Q1-Q3 omitted)

Refunding issuance will remain about 30% of overall issuance in 2022. Interest rates will remain relatively low in 2022 allowing for plentiful taxable and tax-exempt refundings.

Refunding Issuance in 2022, New Factors to Consider

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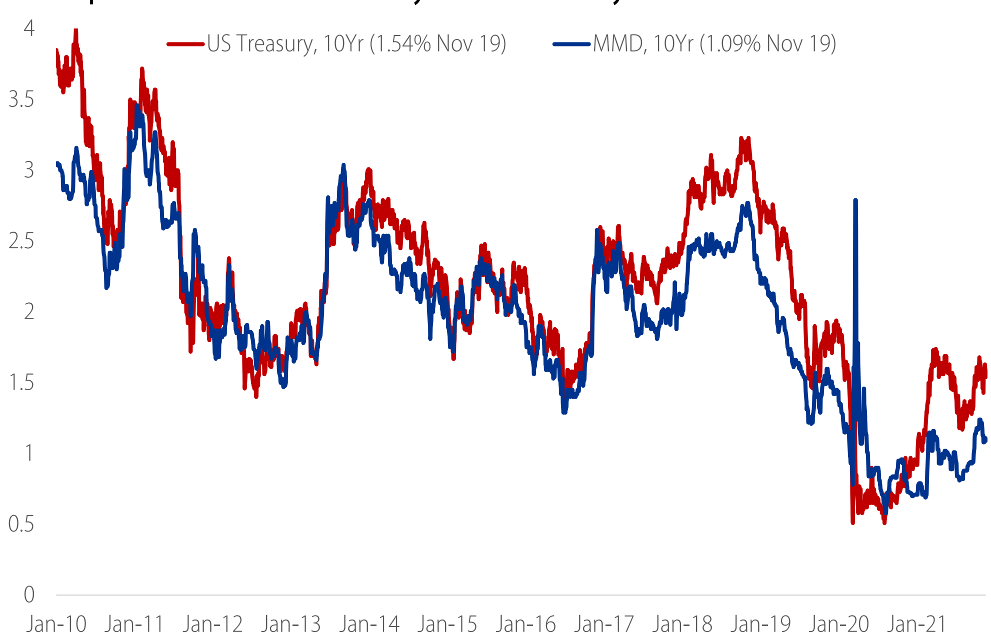
Municipal Yields are Still Relatively Low Historically



Source: Refinitiv and HilltopSecurities.

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While it is possible rising rates could limit refunding activity, we are taking a different approach this year because of the unique dynamic. President Biden announced Monday morning (Nov. 22) that he was renominating current Fed Chair Jerome Powell to serve as Fed Chair again. This was the expected course of action even though Lael Brainard was gaining traction in recent weeks. This will likely have a neutral impact on our issuance forecast. Most are expecting the Fed to begin reducing asset purchases in the first half of 2022 and begin raising rated by the beginning of the second half of next year.

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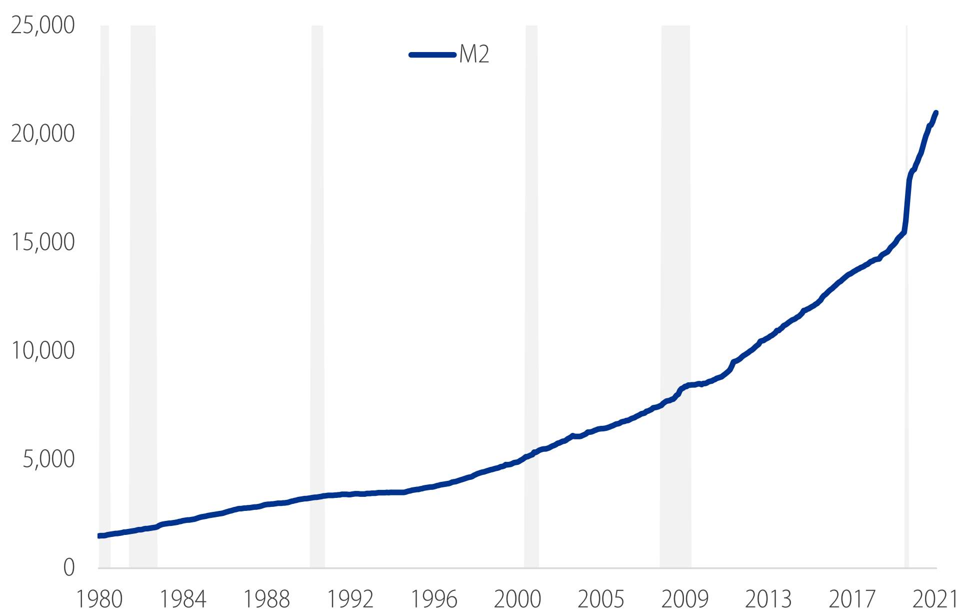
We expect refunding issuance to remain active and close to our forecast even when the Fed begins to raise its target rate mid-year. This is because of the relatively unique market dynamic that has transpired since the COVID-19 pandemic. We believe that overall interest rates could remain relatively attractive for refundings, and the yield curve could stay flat even as the target rate rises. This would largely be a result of the general amount of money in the financial system, and investable funds specifically, that exist going into 2022. Anecdotal and actual evidence point to this as a strong possibility in 2022.

Record U.S. Money Supply (M2) Will Help Keep Rates Down as Fed Raises Target *($ billions)*



Source: BEA, MA, and HilltopSecurities.

Refunding issuance activity has lagged historical levels in recent months in 2021. We do not think that is an indicator that refunding candidates have dried up, but mostly because issuers were hoping that the municipal friendly elements were going to be included in the BBB legislation.

A Note About Recent Refunding Activity

Refunding issuance activity has lagged historical levels in recent months in 2021. We do not think that is an indicator that refunding candidates have dried up, but mostly because issuers were hoping that the municipal friendly elements were going to be included in the BBB legislation. Issuers would have utilized tax-exempt bonds to execute advance refundings, and there is still the possibility that some issuers wait. This is because hope remains alive, if ever so slightly, that those municipal elements could be included. This fact could continue to keep refunding activity low by historical standards for at least another month or two. When issuers finally realize that tax-exempt advance refundings are not going to be reinstated, we believe the

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How 2021 Issuance Will End; Closing Our Forecast

Municipal bond issuance forecasts, like most forecasts, are difficult and complex. There are macro and micro factors to consider. There are also municipal- and public finance-specific historical trends that sometimes repeat themselves and other times do not materialize. 2021 was a unique year because we began the year thinking that municipal revenues were going to be lower than historical experience. No one thought otherwise, and it was not until the numbers came in that we realized the reality. Also, hardly anyone thought to begin the year that Democrats would be able to win both Georgia run-off elections in January. But the Democrats defied the election odds and took both seats, which gave them the political ability to ram the Rescue Act through via budget reconciliation in March. These momentous events (revenues and the Georgia election results) allowed municipal issuance to remain healthy. If they would not have occurred, overall issuance would have been significantly lower. However, because of these events we revised our 2021 issuance forecast to $460 billion. If November 2021 and December 2021 issuance remains close to historical levels, $460 billion (very close to our revised forecast) is near where market issuance will end 2021.

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Monthly Municipal Bond Issuance *($ billions)*

Month	2020	2021	9-Year Average
Jan.	$32.793	$28.260	-
Feb.	42.229	36.604	-
March	20.262	47.642	-
April	31.650	36.892	-
May	30.994	34.989	-
June	52.390	50.008	-
July	47.782	37.318	-
Aug.	43.408	42.609	-
Sept.	53.513	44.404	31.348
Oct.	73.448	35.960	43.854
Nov.	21.359	**30.000**	31.763
Dec.	34.822	**30.000**	33.690
	$484.650	$394.686	Sum through Oct.
		$454.686	Potential 2021 total

Source: Refinitiv, The Bond Buyer, and HilltopSecurities.

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Recent HilltopSecurities Municipal Commentary

- Employee Retirement – An Unexpected But Very Real Obstacle for State & Local Governments, Nov. 18, 2021
- House Passed $1.2 Trillion Infrastructure Plan on Friday, Boosting What We Deemed (in March) as the Golden Age of Public Finance, Nov. 8, 2021
- Dems Step Closer to Finalizing Infrastructure & Build Back Better After White House Tactics, Public Finance Elements Dropped, Oct. 29, 2021
- Municipal Friendly Elements are Out, Oct. 28, 2021
- A New Decade & The Threat to the Municipal Bond Tax-Exemption, Oct. 22, 2021
- Lawmakers Shift to Compromise, Some Spending Jettisoned, Municipal Elements Remain if Only For Now, Oct. 20, 2021

Readers may view all of the HilltopSecurities Municipal Commentary here.